Application Data Sheet 37 CFR 1.76	Attorney Docket Number	33320.03087.US2E/3087K
	Application Number	
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.

Inventor Information:

Inventor 1

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Ge		Wei	

Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service

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Postal Code	92131	**Country**	US

Inventor 2

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
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Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service

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Postal Code	97478	**Country**	US

Inventor 3

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
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Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service

City	San Diego	State/Province	CA	Country of Residence	US

Mailing Address of Inventor:

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	33320.03087.US2E/3087K
	Application Number	
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF	

Address 2			
City	San Diego	State/Province	CA
Postal Code	92131	Country	US

Inventor 4

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Robert	James	Connor	

Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service

City	Oceanside	State/Province	CA	Country of Residence	US

Mailing Address of Inventor:

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Address 2			
City	San Diego	State/Province	CA
Postal Code	92057	Country	US

All Inventors Must Be Listed – Add Additional Inventor Information blocks for each inventor.

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).	
Customer Number	**13565**
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Application Information:

Title of the Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF		
Attorney Docket Number	33320.03087.US2E/3087K	Small Entity Status Claimed	☐
Application Type	☒ Nonprovisional ☐ Provisional		
Subject Matter	☒ Utility ☐ Plant ☐ Design		
Total Number of Drawing Sheets (if any)	13	Suggested Figure for Publication (if any)	

Representative Information:

Please Select One:	☐ Customer Number	☒ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)

Prefix	Given Name	Middle Name	Family Name	Suffix
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Registration Number:	33,779			
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	Frank	J.	Miskiel	
Registration Number:	53,332			

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	33320.03087.US2E/3087K
	Application Number	
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF	

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

Present Application No.	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
This application	is a Divisional of	**17/327,568**	2021-05-21
Prior Application No. 17/327,568 - Status:		☐ Patented ☒ Pending ☐ Abandoned ☐ Expired	

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/327,568	is a Continuation of	**16/912,590**	2020-06-25	11,066,656	2021-07-20
Prior Application No. 16/912,590 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			
16/912,590	is a Continuation of	**15/226,489**	2016-08-02	10,865,400	2020-12-15
Prior Application No. 15/226,489 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			
Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
15/226,489	is a Divisional of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			

Application Number	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	**61/796,208**	2012-11-01
Prior Application No. 61/796,208- Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	
Application Number	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**
13/694,731	claims priority to	**61/631,313**	2011-12-30
Prior Application No. 61/631,313 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/327,568	also is a Continuation of	**16/824,572**	2020-03-19	11,041,149	2021-06-22
Prior Application No. 16/824,572 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			
Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
16/824,572	is a Continuation of	**15/226,489**	2016-08-02	10,865,400	2020-12-15
Prior Application No. 15/226,489 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			
Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
15/226,489	is a Divisional of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	**61/796,208**	2012-11-01
Prior Application No. 61/796,208 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	
Application Number	**Continuity Type**	**Prior Application Number**	**Filing Date (YYYY-MM-DD)**

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	33320.03087.US2E/3087K
		Application Number	
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF		

13/694,731	claims priority to	61/631,313	2011-12-30
Prior Application No. 61/631,313 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/327,568	also is a Continuation of	15/226,489	2016-08-02	10,865,400	2020-12-15
Prior Application No. 15/226,489 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			
Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15/226,489	is a Divisional of	13/694,731	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	61/796,208	2012-11-01
Prior Application No. 61/796,208 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	61/631,313	2011-12-30
Prior Application No. 61/631,313 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/327,568	also is a Continuation of	13/694,731	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	61/796,208	2012-11-01
Prior Application No. 61/796,208 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	61/631,313	2011-12-30
Prior Application No. 61/631,313 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	33320.03087.US2E/3087K
	Application Number	
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF	

Present Application No.	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
This application	also is a Divisional of	**17/327,586**	2021-05-21
Prior Application No. 17/327,586 - Status:	☐ Patented ☒ Pending ☐ Abandoned ☐ Expired		

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/327,586	is a Continuation of	**16/912,590**	2020-06-25	11,066,656	2021-07-20
Prior Application No. 16/912,590 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
16/912,590	is a Continuation of	**15/226,489**	2016-08-02	10,865,400	2020-12-15
Prior Application No. 15/226,489 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
15/226,489	is a Divisional of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				

Application Number	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	**61/796,208**	2012-11-01
Prior Application No. 61/796,208- Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired		
Application Number	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**
13/694,731	claims priority to	**61/631,313**	2011-12-30
Prior Application No. 61/631,313 - Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired		

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/327,586	also is a Continuation of	**16/824,572**	2020-03-19	11,041,149	2021-06-22
Prior Application No. 16/824,572 status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
16/824,572	is a Continuation of	**15/226,489**	2016-08-02	10,865,400	2020-12-15
Prior Application No. 15/226,489 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
15/226,489	is a Divisional of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				

Application Number	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	**61/796,208**	2012-11-01
Prior Application No. 61/796,208- Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired		
Application Number	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**
13/694,731	claims priority to	**61/631,313**	2011-12-30
Prior Application No. 61/631,313 - Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired		

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	33320.03087.US2E/3087K
	Application Number	
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF	

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/327,586	is a Continuation of	**15/226,489**	2016-08-02	10,865,400	2020-12-15
Prior Application No. 15/226,489 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
15/226,489	is a Divisional of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application Number	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**		
13/694,731	claims priority to	**61/796,208**	2012-11-01		
Prior Application No. 61/796,208- Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired				
Application Number	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**		
13/694,731	claims priority to	**61/631,313**	2011-12-30		
Prior Application No. 61/631,313 - Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired				

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/327,586	also is a continuation of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application Number	**Continuity Type**	**Prior Application Number**	**Filing Date (YYYY-MM-DD)**		
13/694,731	claims priority to	**61/796,208**	2012-11-01		
Prior Application No. 61/796,208 - Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired				
Application Number	**Continuity Type**	**Prior Application Number**	**Filing Date (YYYY-MM-DD)**		
13/694,731	claims priority to	**61/631,313**	2011-12-30		
Prior Application No. 61/631,313 - Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired				

Present Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
This application	is a Divisional of	**16/912,590**	2020-06-25	11,066,656	2021-07-20
Prior Application No. 16/912,590 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
16/912,590	is a Continuation of	**15/226,489**	2016-08-02	10,865,400	2020-12-15
Prior Application No. 15/226,489 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
15/226,489	is a Divisional of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application No.	**Continuity Type**	**Prior Application Number**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	33320.03087.US2E/3087K
	Application Number	
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF	

16/912,590	also is a Divisional of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				

Application Number	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	**61/796,208**	2012-11-01
Prior Application No. 61/796,208- Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired		

Application Number	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	**61/631,313**	2011-12-30
Prior Application No. 61/631,313 - Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired		

Present Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
This application	is a Divisional of	**16/824,572**	2020-03-19	11,041,149	2021-06-22
Prior Application No. 16/824,572 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16/824,572	is a Continuation of	**15/226,489**	2016-08-02	10,865,400	2020-12-15
Prior Application No. 15/226,489 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15/226,489	is a Divisional of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16/824,572	also is a Divisional of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	**61/796,208**	2012-11-01
Prior Application No. 61/796,208 - Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired		

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	**61/631,313**	2011-12-30
Prior Application No. 61/631,313 - Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired		

Present Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
This application	is a Continuation of	**15/226,489**	2016-08-02	10,865,400	2020-12-15
Prior Application No. 15/226,489 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15/226,489	is a Divisional of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	33320.03087.US2E/3087K
	Application Number	
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF	

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	61/796,208	2012-11-01
Prior Application No. 61/796,208 - Status:		☐ Patented ☐ Pending	☐ Abandoned ☒ Expired
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	61/631,313	2011-12-30
Prior Application No. 61/631,313 - Status:		☐ Patented ☐ Pending	☐ Abandoned ☒ Expired

Present Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
This application	also is a Divisional of	13/694,731	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			
Application Number	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)		
13/694,731	claims priority to	61/796,208	2012-11-01		
Prior Application No. 61/796,208- Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired			
Application Number	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)		
13/694,731	claims priority to	61/631,313	2011-12-30		
Prior Application No. 61/631,313 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired			

Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55.

Application Number	Country	Filing Date (YYYY-MM-DD)	Priority Claimed		Access Code (if applicable)
			☐ Yes	☐ No	

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications:

☐ If checked, this application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant must opt-out of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	33320.03087.US2E/3087K
	Application Number	
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF	

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h) (1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby grants the USPTO authority to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ **A.** Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ **B.** Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

☒ Assignee	☐ Legal Representative under 35 U.S.C. 117	☐ Joint Inventor
☐ Person to whom the inventor is obligated to assign	☐ Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:		
☐ Deceased	☐ Legally incapacitated	
Name of the Deceased or Legally Incapacitated Inventor:		
If the Applicant is an Organization check here.	☒	

Organization Name:	**HALOZYME, INC.**		
Mailing Address Information For Applicant:			
Address 1	11388 Sorrento Valley Road		
Address 2			
City	San Diego	**State/Province**	CA
Country	US	**Postal Code**	92121
Phone Number		**Fax Number**	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	33320.03087.US2E/3087K
		Application Number	
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF		

Email Address	
If needed, Additional Applicant Data may be added within this form.	

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications					
Signature	/Stephanie Seidman/			Date (YYYY-MM-DD)	2022-12-19
First Name	Stephanie	Last Name	Seidman	Registration Number	33,779
Additional Signatures may be added within this form.					

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Application Number: 18068418

Reviewed by: cSmvAsj2Eeg/p9KRnlQ7Xvx6SK8jnDazOz1UmNPrTuL7Ou65e6sKHw==

Note: This validation report concerns the sequence listing filed 12-19-2022 19:09:12 and indicates that NO errors were found by the USPTO during validation of the sequence listing. This validation report should not be construed as meaning that the sequence listing complies with all of the requirements of 37 CFR §§ 1.821-1.825, 37 CFR §§ 1.831-1.835 and 1.839, WIPO Standard ST.25, or WIPO Standard ST.26.

For any sequence listing related questions or concerns, the Applicant is invited to contact the USPTO Sequence Listing Help Desk at 571-272-2510 or SequenceHelpDesk@USPTO.GOV.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s)	:	Wei *et al.*	Art Unit	:	Not yet assigned
Serial No.	:	18/068,418	Examiner	:	Not yet assigned
Filed	:	December 19, 2022	Conf. No.	:	5769
			Cust. No.	:	13565
Title	:	**PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF**			

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT IN ACCORDANCE WITH 37 C.F.R. §§ 1.97-1.98

Dear Sir:

Because this Information Disclosure Statement is filed before the receipt of a First Office Action on the Merits for the above-captioned application, a fee is not required. If a fee for filing these papers is required, the Commissioner is authorized to charge the fee to Deposit Account No. 50-0911.

In accordance with the duty of disclosure imposed by 37 C.F.R. § 1.56 to inform the Patent Office of all information known by Applicant or Applicant's representative that may be material to the examination of the subject application, Applicant's representative hereby provides this Information Disclosure Statement that is prepared in accordance with 37 C.F.R. §§ 1.97-1.98. Forms PTO-1449 (25 pages) and copies of the cited non-U.S. patent documents listed thereon are provided herewith in connection with the above-captioned application. The documents cited comprise the references cited in the application and incorporated by reference, and any additional information of which those associated with the prosecution are aware.

In accordance with 37 C.F.R. § 1.98(d), copies of the references listed on the Forms PTO-1449 that are marked with a double asterisk (**) are not provided herewith as they have been previously provided in connection with U.S. Patent Application Serial No. 13/694,731, 15/226,489, 16/824,572, 17/327,568 and/or 17/327,586, which is relied upon for an earlier filing date in accordance with 35 U.S.C. § 120.

The documents cited on the Forms PTO-1449 are in the English Language with the exception of the items noted below. Item GB (CN 102065886A) is in the Chinese Language and an English Language equivalent is listed (Item GR). Item GI (JP 2007-153797) is in the Japanese Language and an English Language Abstract is listed (Item IM). Item GJ (KR 10-2020-0017538) is in the Korean Language and an English Language equivalent is listed (Item GG). Hence, in

CERTIFICATE OF TRANSMISSION VIA EFS-WEB
I hereby certify that this paper is being transmitted via the Electronic Filing System (EFS-WEB) to the United States Patent and Trademark Office on **March 16, 2023.**

/Anh Nguyen /
Anh Nguyen

accordance with the requirements of 37 C.F.R. § 1.98, no further explanation of the listed items is necessary.

Applicant also makes known to the Examiner the following pending U.S. Applications that have one or more common inventors and/or an owner in common.

Examiner's Initials	U.S.S.N.	Filing Date	Publ. No.	Publ. Date	Docket No.
	16/930,766	07/16/2020	2020/0368330	11/26/2020	3066D
	17/062,425	10/02/2020	2021/0023184	01/28/2021	3051M
	17/327,568	05/21/2021	2021/0284985	09/16/2021	3087E
	17/327,586	05/21/2021	2021/0277376	09/09/2021	3087F
	17/850,903	06/27/2022	2022/0372151	11/24/2022	3122B
	18/064,886	12/12/2022	n.a.	n.a.	3087G
	18/066,960	12/15/2022	n.a.	n.a.	3087H
	18/068,218	12/19/2022	n.a.	n.a.	3087I
	18/068,327	12/19/2022	n.a.	n.a.	3087J
	18/068,443	12/19/2022	n.a.	n.a.	3087L
	18/069,651	12/21/2022	n.a.	n.a.	3087M

Although these documents and applications are made known to the Patent and Trademark Office in compliance with Applicant's duty of disclosure, such disclosure is not to be construed as an admission by Applicant or Applicant's representative that any of the documents, singly or in any combination thereof, is effective as prior art against the subject application. In accordance with 37 C.F.R. §§ 1.97(g) and (h), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 C.F.R. § 1.56(b) exists.

Applicant respectfully requests that the Examiner review the foregoing documents and they be made of record in the file history of the above-captioned application.

Respectfully submitted,

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Reg. No. 33,779

Attorney Docket No.: 33320.03087.US2E/3087K
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Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No. 33320.03087.US2E/3087K	Application No. 18/068,418
List of Patents and Publications for Applicant's Information Disclosure Statement (37 CFR §1.98(b))		Inventor(s) Wei *et al.*	
		Filing Date December 19, 2022	Group Art Unit Not yet assigned

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Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	3,536,809	10/27/1970	Applezweig	424	28	02/17/1969
	AB	3,598,123	08/10/1971	Zaffaroni	128	268	04/01/1969
	AC	3,630,200	12/28/1971	Higuchi	128	260	06/09/1969
	AD	3,710,795	01/16/1973	Higuchi et al.	128	260	09/29/1970
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	AG	4,002,531	01/11/1977	Royer	195	68	01/22/1976
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	AN	4,952,496	08/28/1990	Studier et al.	435	91	12/29/1986
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	BK	5,900,461	05/04/1999	Harris	525	54.11	02/23/1998

Examiner Signature	Date Considered
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No. 33320.03087.US2E/3087K	Application No. 18/068,418
List of Patents and Publications for Applicant's Information Disclosure Statement		Inventor(s) Wei *et al.*	
(37 CFR §1.98(b))		Filing Date December 19, 2022	Group Art Unit Not yet assigned

U.S. Patent Documents

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	BO	5,985,263	11/16/1999	Lee et al.	424	85.2	12/19/1997
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	BV	6,340,742	01/22/2002	Burg et al.	530	351	06/28/2000
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Examiner Signature	Date Considered
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

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(37 CFR §1.98(b))		Filing Date December 19, 2022	Group Art Unit Not yet assigned

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Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
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	DF	10,016,491	07/10/2018	Bookbinder et al.	424	94.62	11/09/2015
	DG	10,328,130	06/25/2019	Frost et al.	424	094.620	02/22/2012
	DH	10,588,983	03/17/2020	Bookbinder et al.	435	069.100	02/23/2018
	DI	11,041,149	06/22/2021	Wei et al.	435	069.100	03/19/2020
	DJ	11,066,656	07/20/2021	Wei et al.	435	069.100	06/25/2020
	DK	2001/0021763	09/13/2001	Harris	528	75	04/02/2001
	DL	2001/0044526	11/22/2001	Shen	530	409	02/21/2001
	DM	2001/0046481	11/29/2001	Bentley et al.	424	78.18	04/21/2001
	DN	2002/0052430	05/02/2002	Harris et al.	523	406	11/05/2001
	DO	2002/0072573	06/13/2002	Bentley et al.	525	409	02/08/2002
	DP	2002/0156047	10/24/2002	Zhao	514	58	01/22/2002
	DQ	2003/0017108	01/23/2003	Zamora et al.	424	001.490	04/30/2002
	DR	2003/0114647	06/19/2003	Harris et al.	530	402	04/10/2002
	DS	2003/0143596	07/31/2003	Bentley et al.	435	6	11/07/2002
	DT	2003/0158333	08/21/2003	Roberts et al.	530	402	10/09/2002
	DU	2003/0220447	11/27/2003	Harris	528	322	12/12/2002
	DV	2004/0013637	01/22/2004	Bentley et al.	424	78.17	02/10/2003
	DW	2004/0235734	11/25/2004	Bossard et al.	514	12	02/26/2004
	DX	2004/0268425	12/30/2004	Bookbinder et al.	800	18	03/05/2004
	DY	2005/0054048	03/10/2005	Grasso et al.	424	133.100	07/29/2004
	DZ	2005/0114037	05/26/2005	Desjarlais et al.	702	19	09/30/2004
	EA	2005/0171328	08/04/2005	Harris	528	322	02/04/2005
	EB	2005/0209416	09/22/2005	Harris	525	523	04/22/2005
	EC	2005/0260186	11/24/2005	Bookbinder et al.	424	094.610	02/23/2005
	ED	2006/0104968	05/18/2006	Bookbinder et al.	424	094.610	09/27/2005
	EE	2007/0067855	03/22/2007	Jarvis et al.	800	13	04/28/2006
	EF	2007/0189962	08/16/2007	Pastan et al.	424	133.100	04/11/2007
	EG	2009/0028829	01/29/2009	Gruskin et al.	424	093.7	05/17/2004

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Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No. 33320.03087.US2E/3087K	Application No. 18/068,418
List of Patents and Publications for Applicant's Information Disclosure Statement (37 CFR §1.98(b))		Inventor(s) Wei *et al.*	
		Filing Date December 19, 2022	Group Art Unit Not yet assigned

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	EI	2009/0123367	05/14/2009	Bookbinder et al.	424	001.490	10/09/2008
	EJ	2009/0181032	07/16/2009	Bookbinder at al.	424	141.1	02/20/2009
	EK	2009/0214505	08/27/2009	Bookbinder at al.	424	94.1	04/16/2009
	EL	2009/0253175	10/08/2009	Bookbinder at al.	435	69.1	06/03/2009
	EM	2009/0304665	12/10/2009	Frost et al.	424	94.5	04/28/2009
	EN	2009/0305982	12/10/2009	Jensen et al.	435	069.100	06/11/2009
	EO	2009/0311237	12/17/2009	Frost	424	094.620	04/14/2009
	EP	2010/0003238	01/07/2010	Frost et al.	424	94.62	04/14/2009
	EQ	2010/0074885	03/25/2010	Schiff et al.	424	130.100	03/16/2009
	ER	2010/0143457	06/10/2010	Wei et al.	424	450	12/09/2009
	ES	2010/0172892	07/08/2010	Uvarkina et al.	424	94.62	12/15/2009
	ET	2011/0053247	03/03/2011	Baker et al.	435	201	11/09/2010
	EU	2011/0066111	03/17/2011	Teschner et al.	514	183	09/16/2010
	EV	2011/0152359	06/23/2011	Bookbinder et al.	435	200	12/21/2010
	EW	2012/0020951	01/26/2012	Shepard et al.	424	130.1	07/15/2011
	EX	2012/0093770	04/19/2012	Bookbinder et al.	424	094.620	12/15/2011
	EY	2012/0148555	06/14/2012	Bookbinder et al.	435	200	12/28/2011
	EZ	2012/0171153	07/05/2012	Frost et al.	424	94.62	02/22/2012
	FA	2012/0213767	08/23/2012	Wei et al.	424	450	02/21/2012
	FB	2012/0251517	10/04/2012	Frost et al.	424	094.500	05/18/2012
	FC	2012/0251620	10/04/2012	Bookbinder et al.	424	450	05/16/2012
	FD	2012/0294830	11/22/2012	Bookbinder et al.	424	85.2	07/06/2012
	FE	2013/0011378	01/10/2013	Yang et al.	424	094.300	06/15/2012
	FF	2013/0022588	01/24/2013	Yang et al.	424	094.300	06/15/2012
	FG	2013/0022592	01/24/2013	Vaughn et al.	424	094.620	06/15/2012
	FH	2013/0058893	03/07/2013	Bookbinder et al.	435	200	10/18/2012
	FI	2013/0071394	03/21/2013	Troyer et al.	435	071.100	09/14/2012
	FJ	2013/0101577	04/25/2013	Wei et al.	424	450	02/21/2012
	FK	2013/0202583	08/08/2013	Jiang et al.	424	094.620	10/24/2012
	FL	2013/0251786	09/26/2013	Li et al.	424	094.620	02/19/2013
	FM	2013/0302275	11/14/2013	Wei et al.	424	094.620	12/28/2012
	FN	2013/0302400	11/14/2013	Maneval et al.	435	195	03/15/2013
	FO	2014/0037613	02/06/2014	Bookbinder et al.	424	094.620	09/25/2013
	FP	2014/0105824	04/17/2014	Shepard et al.	424	009.200	10/16/2013
	FQ	2014/0135682	05/15/2014	Frost et al.	424	094.500	09/24/2013
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	FS	2015/0010529	01/08/2015	Wei	424	94.62	07/03/2014
	FT	2016/0362670	12/15/2016	Wei et al.	424	094.620	08/02/2016
	FU	2017/0290796	10/12/2017	Maneval et al.	435	195	06/16/2017
	FV	2019/0336587	11/07/2019	Frost et al.	424	78.17	05/21/2019
	FW	2020/0255814	08/13/2020	Wei et al.	435	069.100	03/19/2020
	FX	2020/0318091	10/08/2020	Wei et al.	424	094.620	06/25/2020
	FY	2020/0368330	11/26/2020	Frost et al.	424	078.170	07/16/2020
	FZ	2021/0277376	09/09/2021	Wei et al.	424	094.620	05/21/2021
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					Yes	No
	GB**	CN 102065886A	05/18/11	CN		X* (Item GR)
	GC**	EP 0400472	12/05/90	EP		
	GD**	EP 0822199	09/22/04	EP		
	GE**	EP 1064951	08/22/07	EP		
	GF**	EP 3130347	09/18/19	EP		
	GG**	EP 3636752	04/15/20	EP		
	GH**	EP 3785701	03/03/21	EP		
	GI**	JP 2007-153797	06/21/07	JP		X** (Item IM)
	GJ**	KR 10-2020-0017538	02/18/20	KR		X (Item GG)
	GK**	WO 1992/16640	10/01/92	WIPO		
	GL**	WO 1994/028024	12/08/94	WIPO		
	GM**	WO 2000/002017	01/13/00	WIPO		
	GN**	WO 2001/087925	11/22/01	WIPO		
	GO**	WO 2002/049673	06/27/02	WIPO		
	GP**	WO 2004/056312	07/08/04	WIPO		
	GQ**	WO 2005/000360	01/06/05	WIPO		
	GR**	WO 2009/128917	10/22/09	WIPO		
	GS**	WO 2009/134380	11/05/09	WIPO		
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		Filing Date December 19, 2022	Group Art Unit Not yet assigned

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Translation Yes	Translation No
	GU**	WO 2010/149772	12/29/10	WIPO		
	GV**	WO 2012/136768	10/11/12	WIPO		
	GW**	WO 2012/174478	12/20/12	WIPO		
	GX**	WO 2013/102144	07/04/13	WIPO		
	GY**	WO 2015/003167	01/08/15	WIPO		

** = Copies not provided herewith as they have been previously provided in connection with U.S. Patent Application Serial No. 13/694,731, 15/226,489, 16/824,572, 17/327,568 and/or 17/327,586, which are relied upon for an earlier filing date in accordance with 35 U.S.C. §120.
X* = An English language equivalent has been previously provided in connection with U.S. Serial No. 13/694,731.
X** = An English Abstract (Item IM) for Japanese Publication No. JP 2007-153797 has been previously provided in connection with with U.S. Serial No. 13/694,731.
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	HB**	Alexander et al., "Expression of the c-*myc* oncogene under control of an immunoglobulin enhancer in Eμ-*myc* transgenic mice," Mol. Cell. Biol. 7(4):1436-1444 (1987).
	HC**	Ansel, H. C., Introduction to Pharmaceutical Dosage Forms, Lea & Febiger, Philadelphia, PA, Fourth Edition, p.126 (1985).
	HD**	Anttila et al., "High levels of stromal hyaluronan predict poor disease outcome in epithelial ovarian cancer," Cancer Res. 60(1):150-155 (2000).
	HE**	Arming et al., "*In vitro* mutagenesis of PH-20 hyaluronidase from human sperm," Eur. J. Biochem. 247(3):810-814 (1997).
	HF**	Atkinson, M. and E. Leiter, "The NOD mouse model of type 1 diabetes: as good as it gets?" Nature Med. 5:601-604 (1999).
	HG**	Auvinen et al., "Hyaluronan in Peritumoral Stroma and Malignant Cells Associates with Breast Cancer Spreading and Predicts Survival," Am. J. Pathol. 156(2):529-536 (2000).
	HH**	Baumgartner et al., "Phase I study in chemoresistant loco-regional malignant disease with hyaluronidase," Reg. Cancer Treat. 1:55-58 (1988).
	HI**	Beckenlehner et al., "Hyaluronidase enhances the activity of adriamycin in breast cancer models in vitro and in vivo," J. Cancer Res. Oncol. 118:591-596 (1992).
	HJ**	Benhar et al., "Pseudomonas exotoxin A mutants. Replacement of surface-exposed residues in domain III with cysteine residues that can be modified with polyethylene glycol in a site-specific manner," J. Biol. Chem. 269:13398-13404 (1994).
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	HQ**	Brinster et al., "Regulation of metallothionein-thymidine kinase fusion plasmids injected into mouse eggs," Nature 296:39-42 (1982).
	HR**	Brown et al., "Codon utilisation in the pathogenic yeast, Candida albicans," Nucleic Acids Res. 19(15):4298 (1991).
	HS**	Brumeanu et al., "Derivatization with monomethoxypolyethylene glycol of Igs expressing viral epitopes obviates adjuvant requirements," J. Immunol. 154:3088-3095 (1995).
	HT**	Caliceti, P. and Veronese, F. M., "Pharmacokinetic and biodistribution properties of poly(ethylene glycol)-protein conjugates,"Adv. Drug Deliv. Rev. 55(10):1261-1277 (2003).
	HU**	Carrillo, H. and Lipman, D., "The multiple sequence alignment problem in biology," SIAM J. Applied Math. 48(5):1073-1082 (1988).
	HV**	Cefalu, W., "Animal models of type 2 diabetes: clinical presentation and pathophysiological relevance to the human condition," ILAR Journal 47(3):186-198 (2006).
	HW**	Chapman et al., "Therapeutic antibody fragments with prolonged in vivo half-lives," Nature Biotech. 17:780-783 (1999).
	HX**	Cheng et al., "PEGylated adenoviruses for gene delivery to the intestinal epithelium by the oral route," Pharm. Res. 20(9):1444-1451 (2003).
	HY**	Cherr et al., "The dual functions of GPI-anchored PH-20: hyaluronidase and intracellular signaling," Matrix Biol., 20(8):515-525 (2001).
	HZ**	Cherr et al., "The PH-20 protein in cynomolgus macaque spermatozoa: identification of two different forms exhibiting hyaluronidase activity," Dev. Biol. 175:142-153 (1996).
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	IB**	Chowpongpang et al., "Cloning and characterization of the bovine testicular PH-20 hyaluronidase core domain," Biotechnol. Lett. 26(15):1247-52 (2004).
	IC**	Colbere-Garapin et al., "A new dominant hybrid selective marker for higher eukaryotic cells," J. Mol. Biol. 150:1-14 (1981).
	ID**	Conserved domain search from US Application No. 10/795,095 of SEQ ID NO:6, Primakoff et al. US 5,721,348, performed on the NCBI website on August 5, 2008.
	IE**	Csoka et al., "Hyaluronidases in tissue invasion," Invasion Metastasis 17:297-311 (1997).
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(37 CFR §1.98(b))		Filing Date December 19, 2022	Group Art Unit Not yet assigned

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	IJ**	De Salegui et al., "A Comparison of Serum and Testicular Hyaluronidase," Arch. Biochem. Biophys. 121:548-554 (1967).
	IK**	De Boer et al., "The *tac* promoter: a functional hybrid derived from the *trp* and *lac* promoters," Proc. Natl. Acad. Sci. USA 80:21-25 (1983).
	IL**	Delpech et al., "Enzyme-linked hyaluronectin: a unique reagent for hyaluronan assay and tissue location and for hyaluronidase activity detection," Anal. Biochem. 229:35-41 (1995).
	IM**	Derwent English abstract for Japanese Publication No. JP 2007-153797, published Jun. 21, 2007, entitled "Therapeutic Agent And Preventive Agent Of Autoimmune Disease, Inflammation, And Nervous Disease," 3 pages.
	IN**	Dorfman, A. and M. Ott, "A turbidimetric method for the assay of hyaluronidase," J. Biol. Chem. 172:367-375 (1948).
	IO**	D'Souza et al., "In vitro cleavage of hepatitis C virus polyprotein substrates by purified recombinant NS3 protease," J. Gen. Virol. 76:1729-1736 (1995).
	IP**	Duttaroy et al., "Development of a long-acting insulin analog using albumin fusion technology," Diabetes 54(1):251-258 (2005).
	IQ**	Elder et. al, "Intra-arterial hyaluronidase in severe peripheral arterial disease," Lancet 1(8169):648-649 (1980).
	IR**	Ernst et al., "Enzymatic degradation of glycosaminoglycans," Crit. Rev. Biochem. Mol. Biol. 30(5):387-444 (1995).
	IS**	Eskens et al., "Enzymatic glycocalyx treatment impairs insulin-mediated recruitment of microvascular blood volume and decreases insulin sensitivity in rats," FASEB Journal 25: 1023.13 (2011) (Abstract).
	IT**	European Pharmacopoeia, Chapter 5.1.3, "Efficacy of antimicrobial preservation," pp. 447-449 (2005).
	IU**	Fankhauser, N. and Mäser, P., "Identification of GPI anchor attachment signals by a Kohonen self-organizing map," Bioinformatics 21(9):1846-1852 (2005).
	IV**	Felix et al., "Pegylated peptides IV. Enhanced biological activity of site-directed pegylated GRF analogs," Int. J. Peptide Protein Res. 46:253-264 (1995).
	IW**	Few, B., "Hyaluronidase for treating intravenous extravasations," MCN Amer. J. Matern. Child Nurs. 12(1):23 (1987).
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	IY**	Forsburg, S.L., "Codon usage table for Schizosaccharomyces pombe," Yeast 10(8):1045-1047 (1994).
	IZ**	Fransson et al., "Solvent effects on the solubility and physical stability of human insulin-like growth factor I," Pharm. Res. 14(5):606-12 (1997).
	JA**	Frost, G. I. and Stern, R., "A microtiter-based assay for hyaluronidase activity not requiring specialized reagents," Anal. Biochem. 251:263-269 (1997).
	JB**	Gardner et al., "The complete nucleotide sequence of an infectious clone of cauliflower mosaic virus by M13mp7 shotgun sequencing," Nucleic Acids Res. 9(12):2871-2888 (1981).
	JC**	GenBank Accession No. AAC60607, PH-20 [Homo sapiens], published on 06-05-2000 [online] [retrieved on Dec. 12, 2012][retrieved from the Internet: URL:<ncbi.nlm.nih.gov/protein/AAC60607], 1 page.

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Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
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	JE**	Girish et al., "Hyaluronidase inhibitors: a biological and therapeutic perspective," Curr. Med. Chem. 16(18):2261-2288 (2009).
	JF**	Gmachl et al., "The human sperm protein PH-20 has hyaluronidase activity," FEBS 336(3):545-548 (1993).
	JG**	Good et al., "Hydrogen ion buffers for biological research," Biochemistry 5(2):467-477 (1966).
	JH**	Gribskov, M. and Burgess, R. R., "Sigma factors from *E. coli*, *B. subtilis*, phage SP01, and phage T4 are homologous proteins," Nucl. Acids Res. 14(16):6745-6763 (1986).
	JI**	Grosschedl et al., "Introduction of a μ immunoglobulin gene into the mouse germ line: specific expression in lymphoid cells and synthesis of functional antibody," Cell 38:647-658 (1984).
	JJ**	Guiotto et al., "An improved procedure for the synthesis of branched polyethylene glycols (PEGs) with the reporter dipeptide Met-βAla for protein conjugation," Bioorg. Med. Chem. Lett. 12:177-180 (2002).
	JK**	Guntenhoner et al., "A substrate-gel assay for hyaluronidase activity," Matrix 12:388-396 (1992).
	JL**	Guo et al., "Protein tolerance to random amino acid change," Proc. Nat'l. Acad. Sci. USA, 101:9205-9210, 2004.
	JM**	Hahm et al., "Generation of a novel poliovirus with a requirement of hepatitis C virus protease NS3 activity," Virology 226:318-326 (1996).
	JN**	Haller et al., "Escaping the Interstitial Matrix With Enzyme-Mediated Drug Delivery," Drug Delivery Technology, 5(5):1-6 (2005).
	JO**	Hamatake et al., "Establishment of an in vitro assay to characterize hepatitis C virus NS3-4A protease trans-processing activity," Intervirology 39:249-258 (1996).
	JP**	Hammer et al., "Diversity of alpha-fetoprotein gene expression in mice is generated by a combination of separate enhancer elements," Science 235:53-58 (1987).
	JQ**	Hanahan, D., "Heritable formation of pancreatic β-cell tumours in transgenic mice expressing recombinant insulin/simian virus 40 oncogenes," Nature 315(6015):115-122 (1985).
	JR**	Harris, J. and R. Chess, "Effect of pegylation on pharmaceuticals," Nat. Rev. Drug Discov. 2(3):214-221 (2003).
	JS**	Hartman S. and R. Mulligan, "Two dominant-acting selectable markers for gene transfer studies in mammalian cells," Proc. Natl. Acad. Sci. 85:8047-8051 (1988).
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	JY**	Holash et al., "VEGF-Trap: a VEGF blocker with potent antitumor effects," Proc. Natl. Acad. Sci. U. S. A. 99(17):11393-11398 (2002).

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Other Documents (include Author, Title, Date, and Place of Publication)		
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	JZ**	Hooper, N. M., "Determination of glycosyl-phosphatidylinositol membrane protein anchorage" Proteomics 1:748-755 (2001)
	KA**	Horn et al., "Intravesical chemotherapy of superficial bladder tumors in a controlled trial with cis-platinum versus cis-platinum plus hyaluronidase," J. Surg. Oncol. 28:304-307 (1985).
	KB**	Huang et al., "Recombinant Human Hyaluronidase PH20 Does Not Stimulate an Acute Inflammatory Response and Inhibits Lipopolysaccharide-Induced Neutrophil Recruitment in the Air Pouch Model of Inflammation," (2014) J. Immunol. 192(11):5285-5295.
	KC**	Huang, X. and W. Miller., "A time-efficient, linear-space local similarity algorithm," Adv. Appl. Math. 12:337-357 (1991).
	KD**	Hunnicut et al., "Structural relationship of sperm soluble hyaluronidase to the sperm membrane protein PH-20," Biol. Reprod. 54(6):1343-1349 (1996).
	KE**	Infante et al., "Phase 1 trials of PEGylated recombinant human hyaluronidase PH20 in patients with advanced solid tumours," Br. J. Cancer 118(2):153-161 (2018).
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	KG**	IUPAC-IUB Commission on Biochemical Nomenclature, "A One-Letter Notation for Amino Acid Sequences: Tentative Rules," J. Biol. Chem. 243(13):3557-3559 (1968).
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	KI**	Jadin et al., "A comprehensive model of hyaluronan turnover in the mouse," Matrix Biol. 31(2):81-89 (2012).
	KJ**	Jay et al., "Construction of a general vector for efficient expression of mammalian proteins in bacteria: use of a synthetic ribosome binding site," Proc. Natl. Acad. Sci. USA 78(9):5543-5548 (1981).
	KK**	Karvinen et al., "Hyaluronan, CD44 and versican in epidermal keratinocyte tumours," British Journal of Dermatology 148: 86-94 (2003).
	KL**	Kelsey et al., "Species- and tissue-specific expression of human α_1-antitrypsin in transgenic mice," Genes And Devel. 1:161-171 (1987).
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	KR**	Krupers et al., "Complexation of poly(ethylene oxide) with poly(acrylic acid-co-hydroxyethyl methacrylate)s," Eur. Polym J. 32(6):785-790 (1996).
	KS**	Kyte et al., "A Simple Method for Displaying the Hydropathic Character of a Protein" J. Mol. Biol. 157:105-132 (1982).
	KT**	Lalancette et al, "Characterization of an 80-kilodalton bull sperm protein identified as PH-20," Biol. Reprod. 65(2):628-636 (2001).

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	KU**	Lam et al., "The effect of benzyl alcohol on recombinant human interferon-gamma," Pharm. Res. 14(6):725-729 (1997).
	KV**	Lammerts van Bueren et al., "The antibody zalutumumab inhibits epidermal growth factor receptor signaling by limiting intra- and intermolecular flexibility," Proc. Natl. Acad. Sci. U. S. A. 105(16):6109-6114 (2008).
	KW**	Lathrop et al., "cDNA cloning reveals the molecular structure of a sperm surface protein, PH-20, involved in sperm-egg adhesion and the wide distribution of its gene among mammals," J. Cell Biol. 111(6 Pt 2):2939-2949 (1990).
	KX**	Laurent, T. and J. Fraser, "Hyaluronan," FASEB J 6:2397-2404 (1992).
	KY**	Leder et al., "Consequences of widespread deregulation of the c-*myc* gene in transgenic mice: multiple neoplasms and normal development," Cell 45:485-495 (1986).
	KZ**	Li et al., "Importance of Glycosylation and Disulfide Bonds in Hyaluronidase Activity of Macaque Sperm Surface PH-20," J. Androl. 23:211-219 (2002).
	LA**	Li et al., "Structural basis for EGF receptor inhibition by the therapeutic antibody IMC-11F8," Structure 16(2):216-227 (2008).
	LB**	Liang et al., "Prediction of antigenic epitopes on protein surfaces by consensus scoring," BMC Bioinformatics 10:302 (2009), 10 pages.
	LC**	Lin et al., "A hyaluronidase activity of the sperm plasma membrane protein PH-20 enables sperm to penetrate the cumulus cell layer surrounding the egg," J. Cell Bio. 125(5):1157-1163 (1994).
	LD**	Lin et al., "Molecular cloning of the human and monkey sperm surface protein PH-20," Proc. Natl. Acad. Sci. USA 90:10071-10075 (1993).
	LE**	Lipponen et al., "High stromal hyaluronan level is associated with poor differentiation and metastasis in prostate cancer," Euro. J. Can. 37(3):849-856 (2001).
	LF**	Locke et al., "ENHANZE® drug delivery technology: a novel approach to subcutaneous administration using recombinant human hyaluronidase PH20," Drug Deliv. 26(1):98-106 (2019).
	LG**	Louveau, I. and F. Gondret, "GH and insulin affect fatty acid synthase activity in isolated porcine adipocytes in culture without any modifications of sterol regulatory element binding protein-1 expression," J. Endocrin. 181:271-280 (2004).
	LH**	Lowe et al., "Flexible eating and flexible insulin dosing in patients with diabetes: Results of an intensive self-management course," Diabetes Res. Clin. Pract. 80(3):439-443 (2008).
	LI**	Lu, H. and E. Wimmer., "Poliovirus chimeras replicating under the translational control of genetic elements of hepatitis C virus reveal unusual properties of the internal ribosomal entry site of hepatitis C virus," Proc. Natl. Acad. Sci. USA 93:1412-1417 (1996).
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	LK**	Lu, Y. A. and Felix, A. M., "Pegylated peptides II. Solid-phase synthesis of amino-, carboxy- and side-chain pegylated peptides," Int. J. Peptide Protein Res. 43:127-138 (1994).
	LL**	M3WD76 Felca (2015, updated) Hyaluronidase/PH20 from Felis catus, 3 pages.
	LM**	Ma et al., "Fucosylation in prokaryotes and eukaryotes" Glycobiology 16(12):158R-184R (2006)
	LN**	Maa and Hsu, "Aggregation of recombinant human growth hormone induced by phenolic compounds," Int. J. Pharm. 140(2):155-168 (1996).
	LO**	MacDonald, R. J., "Expression of the pancreatic elastase I gene in transgenic mice," Hepatology 7(1):42S-51S (1987).

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	LP**	Magram et al., "Developmental regulation of a cloned adult β-globin gene in transgenic mice," Nature 315:338-340 (1985).
	LQ**	Marković-Housley et al., "Crystal structure of hyaluronidase, a major allergen of bee venom," Structure 8: 1025-1035 (2000).
	LR**	Maksimenko et al., "Resistance of dextran-modified hyaluronidase to inhibition by heparin" Biochemistry (Mosc.) 66(4):456-463 (2001).
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	LT**	McIlvaine, W. B., "A buffer solution for colorimetric comparison," J. Biol. Chem. 49:183-186 (1921).
	LU**	Mehvar, R., "Modulation of the pharmacokinetics and pharmacodynamics of proteins by polyethylene glycol conjugation," J. Pharm. Pharmaceut. Sci. 3(1):125-136 (2000).
	LV**	Menzel, E. and C. Farr, "Hyaluronidase and its substrate hyaluronan: biochemistry, biological activities and therapeutic uses," Cancer Lett. 131:3-11 (1998).
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	MA**	Mizutani et al., "Characterization of hepatitis C virus replication in cloned cells obtained from a human T-cell leukemia virus type 1-infected cell line, MT-2," J. Virol. 70:7219-7223 (1996).
	MB**	Mizutani et al., "Inhibition of hepatitis C virus replication by antisense oligonucleotide in culture cells," Biochem. Biophys. Res. Commun. 212:906-911 (1995).
	MC**	Molineux, G., "Pegylation: engineering improved biopharmaceuticals for oncology," Pharmacotherapy 23 (8 Pt 2):3S-8S (2003).
	MD**	Monfardini et al., "A branched monomethoxypoly(ethylene glycol) for protein modification," Bioconjugate Chem. 6:62-69 (1995).
	ME**	Nadjsombati et al., "Dose-range developmental toxicity of rHuPH20 in mice," Matrix Biology Vol. 27, December 2008, Page 23.
	MF**	Nakayama et al., "CD15 expression in mature granulocytes is determined by α1,3-fucosyltransferase IX, but in promyelocytes and monocytes by α1,3-fucosyltransferase IV," J. Biol. Chem. 276(19):16100-16106 (2001).
	MG**	NCBI Reference Sequence XP_011728213.1, Macaca nemestrina (pig-tailed macaque) PH-20 hyaluronidase. Published on Apr. 24, 2018. Retrieved from URL:<ncbi.nlm.nih.gov/protein/795324051/ [retrieved on Apr. 20, 2020], 2 pages.
	MH**	Needleman, S. B. and Wunsch, C. D., "A general method applicable to the search for similarities in the amino acid sequence of two proteins," J. Mol. Biol. 48:443-453 (1970).
	MI**	Nekoroski et al., "A recombinant human hyaluronidase sustained release gel for the treatment of post-surgical edema," Int. J. Dermatol. 53(6):777-785 (2014).
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	ML**	Ostresh et al., "Peptide libraries: determination of relative reaction rates of protected amino acids in competitive couplings," Biopolymers 34:1681-1689 (1994).
	MM**	Padavattan, S., "Crystal structure determination of hyaluronidase : a major bee venom allergen, in complex with an IgG Fab fragment and purification and biophysical characterization of bovine testes hyaluronidase," 2006, PhD Thesis, University of Basel, Faculty of Science. DOI: 10.5451/unibas-004349798, 101 pages.
	MN**	Paul, A. and D. Sochart, "Improving the results of ganglion aspiration by the use of hyaluronidase," J. Hand Surg. 22B(2):219-221 (1997).
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	MP**	Pawlowski et al., "The effects of hyalurodinase upon tumor formation in BALB/c mice painted with 7,12-dimethylbenz-(α)anthracene," Int. J. Cancer 23:105-109 (1979).
	MQ**	Pedersen et al., "Sym004: a novel synergistic anti-epidermal growth factor receptor antibody mixture with superior anticancer efficacy," Cancer Res. 70(2):588-597 (2010).
	MR**	Pham et al., "Large-scale transient transfection of serum-free suspension-growing HEK293 EBNA1 cells: peptone additives improve cell growth and transfection efficiency," Biotechnology and Bioengineering 84(3):332-342 (2003).
	MS**	Phelps et al., "Restricted lateral diffusion of PH-20, a PI-anchored sperm membrane protein," Science 240:1780-1782 (1988).
	MT**	Pierleoni et al., "PredGPI: a GPI-anchor predictor," BMC Bioinformatics 9:392 (2008), 11 pages.
	MU**	Pinkert et al., "An albumin enhancer located 10 kb upstream functions along with its promoter to direct efficient, liver-specific expression in transgenic mice," Genes and Devel. 1:268-276 (1987).
	MV**	Pirinen et al., "Prognostic value of hyaluronan expression in non-small-cell lung cancer: Increased stromal expression indicates unfavorable outcome in patients with adenocarcinoma," Int. J. Cancer 95: 12-17 (2001).
	MW**	Primakoff et al., "Fully effective contraception in male and female guinea pigs immunized with the sperm protein PH-20," Nature 335:543-546 (1988).
	MX**	Prothmann et al., "Sexual size dimorphism predicts rates of sequence evolution of Sperm Adhesion Molecule 1 (SPAM1, also PH-20) in monkeys, but not in hominoids (apes including humans)," Mol. Phy. Ev. 63: 52-63 (2012).
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	MZ**	Reitinger et al., "Designed human serum hyaluronidase 1 variant, HYAL1$^{\Delta L}$, exhibits activity up to pH 5.9," J. Biol. Chem. 284(29):19173-19177 (2009).
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	NC**	Richmond, T., "Precompiled codon-usage tables," Genome Biology 1:reports 241(2000).
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	NF**	Ropponen et al., "Tumor Cell-associated Hyaluronan as an Unfavorable Prognostic Factor in Colorectal Cancer," Cancer Research 58:342-347 (1998).
	NG**	Rosengren et al., "Clinical Immunogenicity of rHuPH20, a Hyaluronidase Enabling Subcutaneous Drug Administration," AAPS J. 17(5):1144-1156 (2015).
	NH**	Sato et al., "Cloning and expression in *Escherichia coli* of the gene encoding the *Proteus vulgaris* chondroitin ABC lyase," Appl. Microbiol. Biotechnol. 41(1):39-46 (1994).
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	NN**	Schuller et al., "Pharmacokinetics of intrahepatic 5-fluorouracil ± preinjected hyaluronidase (Neopermease, N)," Proc. Amer. Assoc. Cancer Res. 32:173, abstract no. 1034 (1991).
	NO**	Schwartz, R. M. and Dayhoff, M. O., eds., "Matrices for Detecting Distant Relationships," Atlas of Protein Science and Structure, National Biomedical Research Foundation, pp. 353-358 (1978).
	NP**	Schwartzman, J., "Hyaluronidase: A Review in Its Therapeutic Use in Pediatrics," J. Pediat. 39:491-502 (1951).
	NQ**	Seaton et al., "Rat sperm 2B1 glycoprotein (PH20) contains a C-terminal sequence motif for attachment of a glycosyl phosphatidylinositol anchor. Effects of endoproteolytic cleavage on hyaluronidase activity," Biol Reprod. 62(6):1667-1676 (2000).
	NR**	Shani, M., "Tissue-specific expression of rat myosin light-chain 2 gene in transgenic mice," Nature 314:283-286 (1985).
	NS**	Sharp et al., "Codon usage patterns in Escherichia coli, Bacillus subtilis, Saccharomyces cerevisiae, Schizosaccharomyces pombe, Drosophila melanogaster and Homo sapiens; a review of the considerable within-species diversity," Nucleic Acids Res. 16(17):8207-8211 (1988).
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	NU**	Shekhar et al., "The Matrix Reloaded: Halozyme's Recombinant Enzyme Helps Injected Drugs Spread Faster," Chem. Biol. 14:603-604 (2007).
	NV**	Shimizu, Y. and H. Yoshikura, "Multicycle infection of hepatitis C virus in cell culture and inhibition by alpha and beta interferons," J. Virol. 68:8406-8408 (1994).
	NW**	Singh et al., "Mechanisms of m-cresol-induced protein aggregation studied using a model protein cytochrome c," J. Pharm. Sci. 100(5):1679-1689 (2011).
	NX**	Smith, T. F. and Waterman, M. S., "Comparison of biosequences," Advances in Applied Mathematics 2:482-489 (1981).
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	NZ**	Steinkuhler et al., "Product inhibition of the hepatitis C virus NS3 protease," Biochem. 37:8899-8905 (1998).
	OA**	Stern, R., "Devising a pathway for hyaluronan catabolism: are we there yet?" Glycobiology 13:105R-115R (2003).
	OB**	Stern et al., "Hyaluronidases: their genomics, structures, and mechnisms of action," Chem. Rev. 106: 818-839 (2006).
	OC**	Sturla et al., "Core fucosylation of N-linked glycans in leukocyte adhesion deficiency/congenital disorder of glycosylation IIc fibroblasts," Glycobiology 15(10):924-934 (2005).
	OD**	Sudo et al., "Establishment of an in vitro assay system for screening hepatitis C virus protease inhibitors using high performance liquid chromatography," Antiviral Res. 32:9-18 (1996).
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	OG**	Takahashi et al., "A fluorimetric Morgan-Elson assay method for hyaluronidase activity," Anal. Biochem. 322:257-263 (2003).
	OH**	Takeshita et al., "An enzyme-linked immunosorbent assay for detecting proteolytic activity of hepatitis C virus proteinase," (1997) Anal. Biochem. 247:242-246.
	OI**	Taliani et al., "A continuous assay of hepatitis C virus protease based on resonance energy transfer depsipeptide substrates," Anal. Biochem. 240:60-67 (1996).
	OJ**	ten Have et al., "Cloning and characterization of the cDNA encoding the PH20 protein in the European red fox Vulpes vulpes," Reprod. Fertil. Dev. 10(2):165-172 (1998).
	OK**	Tkalec et al., "Isolation and expression in *Escherichia coli* of *cslA* and *cslB*, genes coding for the chondroitin sulfate-degrading enzymes chondroitinase AC and chondroitinase B, respectively, from *Flavobacterium heparinum*," Applied and Environmental Microbiology 66(1): 29-35 (2000).
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	OM**	Tsuda et al., "Substrate specificity studies of *Flavobacterium* chondroitinase C and heparitinases towards the glycosaminoglycan—protein linkage region. Use of a sensitive analytical method developed by chromophore-labeling of linkage glycoserines using dimethylaminoazobenzenesulfonyl chloride," Eur. J. Biochem. 262:127-133 (1999).
	ON**	Tung et al., "Mechanism of infertility in male guinea pigs immunized with sperm PH-20," Biol. Reprod. 56(5):1133-1141 (1997).
	OO**	Udenfriend, S. and Kodukula, K., "Prediction of ω site in nascent precursor of glycosylphosphatidylinositol protein," Methods Enzymol. 250:571-582 (1995).
	OP**	UniProt Murine PH20 sequence Retrieved from: <uniprot.org/uniprot/P48794, [retrieved on August 02, 2010], 5 pages.
	OQ**	United States Pharmacopeia. USP <51>. Antimicrobial effectiveness testing. United States Pharmacopeia Convention, Inc, Rockville, MD.Retreived from: <http://www.pharmacopeia.cn/v2920/usp29nf24s0_c51.html, [retreived on Apr. 02, 2013], 5 pages.
	OR**	USP XXII-NF XVII (1990), p. 644-645 United States Pharmacopeial Convention, Inc, Rockville, MD.
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	OT**	Veronese et al., "Branched and Linear Poly(Ethylene Glycol): Influence of the Polymer Structure on Enzymological, Pharmacokinetic, and Immunological Properties of Protein Conjugates," J. Bioactive Compatible Polymers 12:196-207 (1997).
	OU**	Von Sivaraman Padavattan (2006) Thesis of University of Basel, "Crystal structure determination of hyaluronidase, a major bee venom allergen, in complex with an IgG Fab fragment and purification and biophysicial charcterization of bovine testes hyaluronidase," 100 pages.
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List of Patents and Publications for Applicant's Information Disclosure Statement (37 CFR §1.98(b))		Inventor(s) Wei *et al.*	
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	PN**	Bee et al., "Recombinant human PH20 is well tolerated at higher intravenous and subcutaneous doses in cynomolgus monkeys," EUFEPS 2008, Munich, Germany. Poster and individual panels, 9 pages.
	PO**	Bookbinder et al., "Biochemical characterization of recombinant human PH20 (SPAM1) hyaluronidase," Hyaluronan (ISHAS) 2007, Charleston, SC. Abstract, 1 page.
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	RF**	News Release, Halozyme Therapeutics, Inc., "Halozyme Publication In The Journal Clinical Cancer Research Highlights New Nonclinical Data Supporting Multiple Effects Of PEGPH20 On The Tumor Microenvironment," Published Oct. 04, 2018 [online] Retrieved from:<URL: halozyme.com/investors/news-releases/news-release-details/2018/Halozyme-Publication-In-The-Journal-Clinical-Cancer-Research-Highlights-New-Nonclinical-Data-Supporting-Multiple-Effects-Of-PEGPH20-On-The-Tumor-Microenvironment/default.aspx [retrieved on Oct. 05, 2018], 4 pages.
	RG**	News Article, "Alteogen, Inc. challenges to the ethical drug market by utilizing 'Human Hyaluronidase'," Published on Oct. 29, 2018 [online] Retrieved from: <URL:fnnews.com/news/201810290941498520 [Original documents retrieved from the internet and English translation], 6 pages.

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	RJ**	News Release, Halozyme Therapeutics, Inc., "Halozyme Announces Actions To Focus Strategy On ENHANZE® Drug Delivery Technology," Published Nov. 04, 2019 [online], Retrieved from: <URL: halozyme.com/investors/news-releases/news-release-details/2019/Halozyme-Announces-Actions-To-Focus-Strategy-On-ENHANZE-Drug-Delivery-Technology/default.aspx [retrieved on Nov. 11, 2019], 4 pages.
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	RL**	News Article, "Alteogen files a PCT application for subcutaneous pharmaceutical composition," Published on Mar. 24, 2020 [online], retrieved from <URL: medipana.com/news/news_viewer.asp?NewsNum=254556&MainKind=A&NewsKind=5&vCount=12&vKind [retrieved on Mar. 26, 2020] [Original documents retrieved from the internet and English translation], 2 pages.
	RM**	News Article, "MK biotech publishes an article demonstrating the safety of Alteogen's human hyaluronidase (ALT-B4) in germ cells," Published on Apr. 29, 2021 [online], retrieved on Aprl. 29, 2021 from <URL:news.heraldcorp.com/view.php?ud=20210429000267 [Original article in Korean and English translation], 3 pages.
	RN**	Invitation to Pay Additional Fees, sent by facsimile Sept. 9, 2013, in connection with International Patent Application No. PCT/US2012/072182, 6 pages.
	RO**	International Search Report and Written Opinion, mailed Dec. 17, 2013, in connection with International Patent Application No. PCT/US2012/072182, 18 pages.
	RP**	Response, dated March 17, 2014, to Written Opinion, mailed Dec. 17, 2013, in connection with International Patent Application No. PCT/US2012/072182, 94 pages.
	RQ**	Second Written Opinion, mailed May 21, 2014, in connection with International Patent Application No. PCT/US2012/072182, 8 pages.
	RR**	Response, dated July 21, 2014, to second Written Opinion, mailed May 21, 2014, in connection with International Patent Application No. PCT/US2012/072182, 72 pages.
	RS**	Second Written Opinion, mailed July 30, 2014, in connection with International Patent Application No. PCT/US2012/072182, 9 pages.
	RT**	Response, dated Sept. 1, 2014, to second Written Opinion, mailed July 30, 2014, in connection with International Patent Application No. PCT/US2012/072182, 73 pages
	RU**	International Preliminary Report on Patentability, mailed Sept. 12, 2014, in connection with International Patent Application No. PCT/US2012/072182, 11 pages.
	RV**	Office Action, mailed November 2, 2015, in connection with U.S. Patent Application Serial No. 13/694,731, 14 pages.
	RW**	Response, filed April 20, 2016, to Office Action, mailed November 2, 2015, in connection with U.S. Patent Application Serial No. 13/694,731, 43 pages.

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	RX**	Notice of Allowance, mailed May 20, 2016, in connection with U.S. Patent Application Serial No. 13/694,731, 16 pages.
	RY**	Office Action, issued May 15, 2019, in connection with U.S. Patent Application No. 15/226,489, 16 pages.
	RZ**	Response, filed Oct. 15, 2019, to Office Action, issued May 15, 2019, in connection with U.S. Patent Application No. 15/226,489, 30 pages.
	SA**	Office Action, issued Jan. 23, 2020, in connection with U.S. Patent Application No. 15/226,489, 19 pages.
	SB**	Response, filed Apr. 24, 2020, to Office Action, issued Jan. 23, 2020, in connection with U.S. Patent Application No. 15/226,489, 25 pages.
	SC**	Notice of Allowance, issued Jul. 16, 2020, in connection with U.S. Patent Application No. 15/226,489, 13 pages.
	SD**	Office Action, issued Oct. 27, 2020, in connection with U.S. Patent Application No. 16/824,572, 9 pages.
	SE**	Response, filed Jan. 27, 2021, to Office Action, issued Oct. 27, 2020, in connection with U.S. Patent Application Serial No. 16/824,572, 23 pages.
	SF**	Notice of Allowance, mailed Feb. 18, 2021, and Examiner-Initiated Interview Summary, summarizing the interview held on Feb. 10, 2021, issued in connection with U.S. Patent Application Serial No. 16/824,572, 10 pages.
	SG**	Non-final Office Action, issued Dec. 09, 2020, in connection with U.S. Patent Application No. 16/912,590, 12 pages.
	SH**	Response, filed Mar. 17, 2021, to Non-final Office Action, issued Dec. 09, 2020 in connection with U.S. Patent Application No. 16/912,590, 24 pages.
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	SM**	Office Action (claims deemed allowable), dated Oct. 19, 2018, issued in connection with Australian Patent Application No. 2017245352, 7 pages.
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	SO**	Preliminary Office Action, issued April 14, 2021, in connection with Brazilian Patent Application No. BR112014016195-0 [Machine generated English translation and Office Action as issued in Portuguese], 11 pages.
	SP**	Response, filed Jul. 26, 2021, to Preliminary Office Action, published April 27, 2021, in connection with Brazilian Patent Application No. BR112014016195-0 [English instructions for Response and Response as filed in Portuguese], 111 pages.
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	SR**	Response, filed October 24, 2022, to Official Action, dated June 09, 2022 and published on July 26, 2022, in connection with Brazilian Patent Application No. BR 112014016195-0 [English instructions for Response and Response as filed in Portuguese], 57 pages.
	SS	Office Action, dated November 10, 2022 and published on Dec. 06, 2022, in connection with Brazilian Patent Application No. BR 112014016195-0 [Machine generated English translation and Office Action as issued in Portuguese], 6 pages.
	ST	Response, filed February 06, 2023, to Office Action, dated November 10, 2022 and published on Dec. 06, 2022, in connection with Brazilian Patent Application No. BR 112014016195-0 [English instructions for Response and Response as-filed in Portuguese], 33 pages.
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	SV**	Response, filed October 24, 2022, to Official Action, dated June 09, 2022 and published on July 26, 2022, in connection with Brazilian Patent Application No. BR 122021016549-1 [English instructions for Response and Response as filed in Portuguese], 101 pages.
	SW	Office Action, dated Nov. 11, 2022 and published on Dec. 06, 2022, in connection with Brazilian Patent Application No. BR 122021016549-1 [Machine generated English translation and Office Action as issued in Portuguese], 8 pages.
	SX	Response, filed March 06, 2023, to Office Action, dated Nov. 11, 2022 and published on Dec. 06, 2022, in connection with Brazilian Patent Application No. BR 122021016549-1 [English instructions for Response and Response as filed in Portuguese], 170 pages.
	SY**	Examiner's Report, issued March 1, 2016, in connection with Canadian Patent Application No. 2861919, 7 pages.
	SZ**	Response, filed July 14, 2016, to Examiner's Report, issued March 1, 2016, in connection with Canadian Patent Application No. 2861919, 37 pages.
	TA**	Examiner's Report, issued Jan. 24, 2017, in connection with Canadian Patent Application No. 2861919, 4 pages.
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	TE**	Notice of Allowance, dated Dec. 12, 2018, issued in connection with Canadian Patent Application No. 2861919, 1 page.
	TF**	Office Action, issued May 25, 2015, in connection with Chinese Patent Application No. 201280070954.9 [English language translation and original document in Chinese], 7 pages.
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	TH**	Office Action, issued Feb. 3, 2016, in connection with Chinese Patent Application No. 201280070954.9 [English language translation and original document in Chinese], 6 pages.
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	TJ**	Office Action, issued Oct. 17, 2016, in connection with Chinese Patent Application No. 201280070954.9 [English language translation and original document in Chinese], 4 pages.
	TK**	Response, filed Dec. 27, 2016, to Office Action, issued Oct. 17, 2016, in connection with Chinese Patent Application No. 201280070954.9 [English language instructions and document as-filed in Chinese], 18 pages.
	TL**	Letter, dated March 15, 2017, reporting Telephonic Interview with Examiner in connection with Chinese Patent Application No. 201280070954.9, 1 page.
	TM**	Response, filed Mar. 23, 2017 to Telephonic Interview with Examiner in connection with Chinese Patent Application No. 201280070954.9 [English translation of pending claims and original document as filed in Chinese], 10 pages.
	TN**	Notice of Granting Patent Right for Invention, issued April 28, 2017, in connection with Chinese Patent Application No. 201280070954.9 [English translation and original document in Chinese], 4 pages.
	TO**	Notice of Allowance, dated Dec. 7, 2017, issued in connection with Eurasian Patent Application No. 201400772 [English letter and original document in Russian], 2 pages.
	TP**	Communication Pursuant to Rule 71(3) (Intention to Grant), issued April 22, 2016, in connection with European Patent Application No. 12816624.6, 5 pages.
	TQ**	Extended European Search Report, dated Jan. 12, 2017, issued in connection with European Patent Application No. 16189970.3, 11 pages.
	TR**	Response, filed Aug. 15, 2017, to Extended European Search Report, dated Jan. 12, 2017, issued in connection with European Patent Application No. 16189970.3, 55 pages.
	TS**	Examination Report, dated Sept. 14, 2017, issued in connection with European Patent Application No. 16189970.3, 3 pages.
	TT**	Response, dated Oct. 13, 2017, to Examination Report, dated Sept. 14, 2017, issued in connection with European Patent Application No. 16189970.3, 19 pages.
	TU**	Communication Pursuant to Article 94(3) EPC (claims deemed allowable), dated Feb. 26, 2018, issued in connection with European Patent Application No. 16189970.3, 3 pages.
	TV**	Response, filed Sept. 10, 2018, to Communication Pursuant to Article 94(3) EPC (claims deemed allowable), issued Feb. 26, 2018, issued in connection with European Patent Application No. 16189970.3, 821 pages.
	TW**	Communication Pursuant to Article 71(3) EPC (Intention to Grant), dated Apr. 08, 2019, issued in connection with European Patent Application No. 16189970.3, 7 pages.
	TX**	Decision to Grant, issued Aug. 22, 2019, in connection with European Patent Application No. 16189970.3, 2 pages.
	TY**	Examination Report, issued Dec. 4, 2018, in connection with Indian Patent Application No. 6272/DELNP/2014, 6 pages.
	TZ**	Response, filed Sept. 04, 2019, to Examination Report, issued Dec. 4, 2018, in connection with Indian Patent Application No. 6272/DELNP/2014, 79 pages.
	UA**	Hearing Notice, issued Jun. 17, 2020, in connection with Indian Patent Application No. 6272/DELNP/2014, 2 pages.
	UB**	Written Submissions, filed Oct. 09, 2020, responsive to Hearing Notice, issued Aug. 10, 2020, in connection with Indian Patent Application No. 6272/DELNP/2014, 27 pages.
	UC**	Amended claims and abstract, filed Nov. 19, 2020, responsive to Examiner request, in connection with Indian Patent Application No. 6272/DELNP/2014, 22 pages.
	UD**	Certificate of Grant, issued Dec. 28, 2020, in connection with Indian Patent Application No. 6272/DELNP/2014, 1 page.

Examiner Signature	Date Considered

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No. 33320.03087.US2E/3087K	Application No. 18/068,418
List of Patents and Publications for Applicant's Information Disclosure Statement (37 CFR §1.98(b))		Inventor(s) Wei *et al.*	
		Filing Date December 19, 2022	Group Art Unit Not yet assigned

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	UE**	Examination Report, issued Aug. 29, 2022, in connection with Indian Patent Application No. 201918041329, 7 pages.
	UF**	Office Action, dated August 3, 2016, in connection with Israeli Patent Application No. 233192 [English language translation], 3 pages.
	UG**	Response, filed Jan. 3, 2017, to Office Action, dated August 3, 2016, in connection with Israeli Patent Application No. 233192 [English language translation], 32 pages.
	UH**	Office Action, dated Nov. 20, 2017, issued in connection with Israeli Patent Application No. 233192 [English language translation], 2 pages.
	UI**	Response, filed May 21, 2018, to Office Action, dated Nov. 20, 2017, issued in connection with Israeli Patent Application No. 233192 [English language translation], 22 pages.
	UJ**	Office Action (claims deemed allowable), dated Feb. 20, 2019, issued in connection with Israeli Patent Application No. 233192 [English letter reporting Office Action and original document in Hebrew], 5 pages.
	UK**	Certificate of Grant, issued Oct. 01, 2020, in connection with Israeli Patent Application No. 233192, 3 pages.
	UL**	Notification Prior to Acceptance, dated Dec. 14, 2020, issued in connection with Israeli Patent Application No. 274798 [English reporting letter; original document as issued in Hebrew; and English translation of allowed claims], 10 pages.
	UM**	Official Action, issued on Aug. 11, 2021, in connection with Israeli Patent Application No. 280949 [English translation and original document as issued in Hebrew], 6 pages.
	UN**	Response, filed Dec. 05, 2021, to Official Action, issued on Aug. 11, 2021, in connection with Israeli Patent Application No. 280949, 11 pages.
	UO**	Notification Prior to Acceptance, issued Aug. 22, 2022, in connection with Israeli Patent Application No. 280949 [Reporting letter in English and Notification as issued in Hebrew], 6 pages.
	UP**	Official Action, issued Jan. 19, 2016, in connection with Japanese Patent Application No. 2014-550526 [English translation and original document in Japanese], 8 pages.
	UQ**	Response, filed July 15, 2016, to Official Action, issued January 19, 2016, in connection with Japanese Patent Application No. 2014-550526 [English instructions and document as filed in Japanese], 138 pages.
	UR**	Decision to Grant, issued November 22, 2016, in connection with Japanese Patent Application No. 2014-550526 [Letter reporting decision to grant and original document in Japanese], 5 pages.
	US**	Office Action, issued Dec 12, 2017, in connection with Japanese Patent Application No. 2016-247708 [English translation and original document in Japanese], 6 pages.
	UT**	Response, filed May 22, 2018, to Office Action, issued Dec. 12, 2017, in connection with Japanese Patent Application No. 2016-247708 [English instructions with amended claims, documents as filed in Japanese and English translation of claims as-filed], 90 pages.(3087BJP)
	UU**	Decision to Grant, issued Sept. 18, 2018, in connection with Japanese Patent Application No. 2016-247708 [English reporting letter and original document in Japanese], 4 pages.
	UV**	Office Action, dated May 25, 2018, in connection with Mexican Patent Application No. MX/a/2014/007966 [English translation and original document in Spanish], 6 pages.
	UW**	Response, filed Oct. 10, 2018, to Office Action, dated May 25, 2018, in connection with Mexican Patent Application No. MX/a/2014/007966 [English instructions and document as-filed in Spanish], 13 pages.
	UX**	Notice of Allowance, issued Oct. 18, 2018, in connection with Mexican Patent Application No. MX/a/2014/007966 [English reporting letter and original document in Spanish], 4 pages.

Examiner Signature	Date Considered
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified) U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No. 33320.03087.US2E/3087K	Application No. 18/068,418
List of Patents and Publications for Applicant's Information Disclosure Statement (37 CFR §1.98(b))	Inventor(s) Wei *et al.*	
	Filing Date December 19, 2022	Group Art Unit Not yet assigned

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	UY**	Office Action, dated Nov. 15, 2022, in connection with Mexican Patent Application No. MX/a/2018/012394 [English translation and original document in Spanish], 14 pages.
	UZ**	Examination Report, dated March 26, 2015, in connection with New Zealand Patent Application No. 626126, 32 pages.
	VA**	Response, dated May 16, 2016, to Examination Report, dated March 26, 2015, in connection with New Zealand Patent Application No. 626126, 70 pages.
	VB**	Notice of Acceptance, dated June 8, 2016, in connection with New Zealand Patent Application No. 626126, 1 page.
	VC**	Letters Patent, issued Sept. 27, 2016, in connection with New Zealand Patent No. 626126, 1 page.
	VD**	Examination Report, dated July 27, 2017, issued in connection with New Zealand Patent Application No. 720075, 4 pages.
	VE**	Response, filed Feb. 26, 2018, to Examination Report, dated July 27, 2017, issued in connection with New Zealand Patent Application No. 720075, 88 pages.
	VF**	Notice of Acceptance, dated Mar. 10, 2020, issued in connection with New Zealand Patent Application No. 720075, 1 page.
	VG**	Search Report and Written Opinion, dated Dec. 4, 2015, in connection with Singaporean Patent Application No. 11201403714T, 7 pages.
	VH**	Response, filed May 23, 2016, to Search Report and Written Opinion, dated Dec. 4, 2015, in connection with Singaporean Patent Application No. 11201403714T, 21 pages.
	VI**	Written Opinion, dated Sept. 18, 2017, in connection with Singapore Patent Application No. 11201403714T, 9 pages.
	VJ**	Response, filed Oct. 27, 2017, to Written Opinion, dated Sept. 18, 2017, in connection with Singapore Patent Application No. 11201403714T, 6 pages.
	VK**	Notice of Eligibility for Grant and Examination Report, dated Jul. 02, 2018, in connection with Singapore Patent Application No. 11201403714T, 8 pages.
	VL**	Certificate of Grant, dated Oct. 3, 2018, in connection with Singapore Patent Application No. 11201403714T [Grant Certificate and Granted Claims], 6 pages.
	VM**	Search Report and Written Opinion, issued Oct. 20, 2017, in connection with Singapore Patent Application No. 10201604470T, 14 pages.
	VN**	Response, filed Mar. 20, 2018, to Search Report and Written Opinion, issued Oct. 20, 2017, in connection with Singapore Patent Application No. 10201604470T [Response, replacement specification pages, amended claims and cited document], 105 pages.
	VO**	Examination Report, dated Aug. 06, 2018, and Notice of Eligibility for Grant, dated Aug. 07, 2018, issued in connection with Singapore Patent Application No. 10201604470T, 6 pages.
	VP**	English translation of Official Action, issued Mar. 20, 2020, in connection with Korean Application No. 10-2020-7002955, 6 pages.
	VQ**	English Translation of International Search Report and Written Opinion, issued Oct. 29, 2019, in connection with International application No. PCT/KR2019/009215, 10 pages.
** = Copies not provided herewith as they have been previously provided in connection with U.S. Patent Application Serial No. 13/694,731, 15/226,489, 16/824,572, 17/327,568 and/or 17/327,586, which are relied upon for an earlier filing date in accordance with 35 U.S.C. §120.		

Examiner Signature	Date Considered
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Electronic Acknowledgement Receipt

EFS ID:	47695987
Application Number:	18068418
International Application Number:	
Confirmation Number:	5769
Title of Invention:	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF
First Named Inventor/Applicant Name:	Ge WEI
Customer Number:	13565
Filer:	Stephanie L. Seidman/Anh Nguyen
Filer Authorized By:	Stephanie L. Seidman
Attorney Docket Number:	33320.03087.US2E/3087K
Receipt Date:	16-MAR-2023
Filing Date:	
Time Stamp:	19:10:40
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	3087Ktra.pdf	137660 df7751d6d3b70c8d31bd548ed45c24547590ad9d	no	1

Warnings:

Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	3087Kids.pdf	151083 73688f868fb5bb5a7061a59805eb3c0d0aa7e219	no	2
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Information Disclosure Statement (IDS) Form (SB08)	3087Kp49.pdf	520765 5b2c45b152f6750bbbb502a0bbf5cb97f8d4183e	no	25
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
4	Non Patent Literature	GZ.pdf	54404 2f5cee9565735510506f77f73068570132a77305	no	2
Warnings:					
Information:					
5	Non Patent Literature	SS.pdf	457113 69de2c1a2fcdb765b75a89d010e9620774972419	no	6
Warnings:					
Information:					
6	Non Patent Literature	ST.pdf	3010506 58dfd47f4ca54edaafeefa694870cce14c93c2cd	no	33
Warnings:					
Information:					
7	Non Patent Literature	SW.pdf	581605 3345f09f7083c7686aa574be2f11399c2bade5c4	no	8
Warnings:					
Information:					
8	Non Patent Literature	SX.pdf	21207396 e21fef799956ff2b276df12d893728789160 7a85	no	170
Warnings:					

Information:	
Total Files Size (in bytes):	26120532

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s)	:	Wei *et al.*	Art Unit	:	Not yet assigned
Serial No.	:	18/068,418	Examiner	:	Not yet assigned
Filed	:	December 19, 2022	Conf. No.	:	5769
			Cust. No.	:	13565
Title	:	**PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF**			

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT TRANSMITTAL LETTER

Dear Sir:

Transmitted herewith are an Information Disclosure Statement (2 pages), Forms PTO-1449 (25 pages), and cited non-U.S. patent documents in connection with the above-identified application. Because this Information Disclosure Statement is filed before the receipt of a First Office Action on the Merits for the above-captioned application, a fee is not required. However, if a fee for filing these papers is required, the Commissioner is authorized to charge the fee to Deposit Account No. 50-0911, as stated below:

☒ The Commissioner is hereby authorized to charge any fees that may be due in connection with this paper or with this application during its entire pendency to Deposit Account No. 50-0911.

Respectfully submitted,

/Stephanie Seidman/
Stephanie Seidman
Reg. No. 33,779

Attorney Docket No.: 33320.03087.US2E/3087K
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CERTIFICATE OF TRANSMISSION VIA EFS-WEB
I hereby certify that this paper is being transmitted via the Electronic Filing System (EFS-WEB) to the United States Patent and Trademark Office on **March 16, 2023**.

/Anh Nguyen/
Anh Nguyen

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 18/068,418

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	320
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	700
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	800
TOTAL CLAIMS (37 CFR 1.16(i))	35 minus 20 =	* 15			OR	x 100 =	1500
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 minus 3 =	*				x =	0
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						1680
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	3500

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)	OR	RATE($)	ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
18/068,418	12/19/2022		5000	33320.03087.US2E/3087K	35	1

CONFIRMATION NO. 5769

FILING RECEIPT

13565
Dentons US LLP
4655 Executive Drive
Suite 700
San Diego, CA 92121

OC00000055464206

Date Mailed: 03/30/2023

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Ge Wei, San Diego, CA;
H. Michael Shepard, Springfield, OR;
Qiping Zhao, San Diego, CA;
Robert James Connor, Oceanside, CA;

Applicant(s)

Halozyme, Inc., San Diego, CA;

Power of Attorney:

STEPHANIE SEIDMAN -33779
FRANK MISKIEL -53332
JOSHUA GALGANO -74802

Domestic Priority data as claimed by applicant

This application is a DIV of 17/327,568 05/21/2021
which is a CON of 16/912,590 06/25/2020 PAT 11,066,656
which is a CON of 15/226,489 08/02/2016 PAT 10,865,400
which is a DIV of 13/694,731 12/28/2012 PAT 9,447,401
which claims benefit of 61/796,208 11/01/2012
and claims benefit of 61/631,313 12/30/2011
and said 17/327,568 05/21/2021 is a CON of 16/824,572 03/19/2020 PAT 11,041,149
which is a CON of 15/226,489 08/02/2016 PAT 10,865,400
which is a DIV of 13/694,731 12/28/2012 PAT 9,447,401
which claims benefit of 61/796,208 11/01/2012

and claims benefit of 61/631,313 12/30/2011
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which claims benefit of 61/796,208 11/01/2012
and claims benefit of 61/631,313 12/30/2011
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and claims benefit of 61/631,313 12/30/2011
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which is a CON of 16/912,590 06/25/2020 PAT 11,066,656
which is a CON of 15/226,489 08/02/2016 PAT 10,865,400
which is a DIV of 13/694,731 12/28/2012 PAT 9,447,401
which claims benefit of 61/796,208 11/01/2012
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and said 17/327,586 05/21/2021 is a CON of 16/824,572 03/19/2020 PAT 11,041,149
which is a CON of 15/226,489 08/02/2016 PAT 10,865,400
which is a DIV of 13/694,731 12/28/2012 PAT 9,447,401
which claims benefit of 61/796,208 11/01/2012
and claims benefit of 61/631,313 12/30/2011
and said 17/327,586 05/21/2021 is a CON of 15/226,489 08/02/2016 PAT 10,865,400
which is a DIV of 13/694,731 12/28/2012 PAT 9,447,401
which claims benefit of 61/796,208 11/01/2012
and claims benefit of 61/631,313 12/30/2011
and said 17/327,586 05/21/2021 is a CON of 13/694,731 12/28/2012 PAT 9,447,401
which claims benefit of 61/796,208 11/01/2012
and claims benefit of 61/631,313 12/30/2011
This application is a DIV of 16/912,590 06/25/2020 PAT 11,066,656
which is a CON of 15/226,489 08/02/2016 PAT 10,865,400
which is a DIV of 13/694,731 12/28/2012 PAT 9,447,401
and said 16/912,590 06/25/2020 is a DIV of 13/694,731 12/28/2012 PAT 9,447,401
which claims benefit of 61/796,208 11/01/2012
and claims benefit of 61/631,313 12/30/2011
This application is a DIV of 16/824,572 03/19/2020 PAT 11,041,149
which is a CON of 15/226,489 08/02/2016 PAT 10,865,400
which is a DIV of 13/694,731 12/28/2012 PAT 9,447,401
and said 16/824,572 03/19/2020 is a DIV of 13/694,731 12/28/2012 PAT 9,447,401
which claims benefit of 61/796,208 11/01/2012
and claims benefit of 61/631,313 12/30/2011
This application is a CON of 15/226,489 08/02/2016 PAT 10,865,400
which is a DIV of 13/694,731 12/28/2012 PAT 9,447,401
which claims benefit of 61/796,208 11/01/2012
and claims benefit of 61/631,313 12/30/2011
This application is a DIV of 13/694,731 12/28/2012 PAT 9,447,401
which claims benefit of 61/796,208 11/01/2012
and claims benefit of 61/631,313 12/30/2011

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 03/29/2023
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 18/068,418**
Projected Publication Date: 07/06/2023
Non-Publication Request: No
Early Publication Request: No
Title

PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

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this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s)	:	Ge WEI *et al.*	Art Unit	:	Not yet assigned
Serial No.	:	18/068,418	Examiner	:	Not yet assigned
Filed	:	December 19, 2022	Conf. No.	:	5769
			Cust. No.	:	13565
Title	:	**PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF**			

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR CORRECTED FILING RECEIPT

Dear Sir:

Transmitted herewith are this *Request for Corrected Filing Receipt*, a copy of the *Filing Receipt*, mailed March 30, 2023, with annotated corrections, and an updated *Application Data Sheet* (ADS), marked to show the changes.

Please update the second Inventor's City of Residence to read as follows:

H. Michael Shepard, Eugene, OR;

Applicant requests the inventor's city of residence be updated from "Springfield, OR" to "Eugene, OR". The marked-up ADS provides the Office with H. Michael Shepard's new residence and mailing address information. The marked-up ADS also provides the Office with applicant Halozyme, Inc.'s change of address.

Please correct the Power of Attorney section to read as follows:

STEPHANIE SEIDMAN – 33779
FRANK MISKIEL – 53332
~~**JOSHUA GALGANO–74802**~~

Applicant requests correction of the error introduced by the USPTO in the Power of Attorney section, which erroneously lists Joshua Galgano – 74802. The Power of Attorney filed on December 19, 2022, does not list Joshua Galgano. Please remove Joshua Galgano–74802.

Applicant respectfully requests provision of a corrected filing receipt to reflect the updated information and correction to the power of attorney section.

Respectfully submitted,
/Stephanie Seidman/
Stephanie Seidman
Reg. No. 33,779

Attorney Docket No.: 33320.03087.US2E/3087K
Address all correspondence to: 13565
Stephanie Seidman
Dentons US LLP
4655 Executive Dr., Suite 700
San Diego, CA 92121
Telephone: (619) 595-8010
Facsimile: (619) 595-8135
email: stephanie.seidman@dentons.com

CERTIFICATE OF TRANSMISSION VIA EFS-WEB
I hereby certify that this paper is being transmitted via the Electronic Filing System (EFS-WEB) to the United States Patent and Trademark Office on **April 05, 2023**.

/Javier Wong/
Javier Wong

ATTACHMENT 1

Copy of *Filing Receipt*, mailed March 30, 2023, with annotated corrections

COPY

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
18/068,418	12/19/2022		5000	33320.03087.US2E/3087K	35	1

CONFIRMATION NO. 5769

13565
Dentons US LLP
4655 Executive Drive
Suite 700
San Diego, CA 92121

FILING RECEIPT

OC000000055464206

Date Mailed: 03/30/2023

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Ge Wei, San Diego, CA;
H. Michael Shepard, ~~Springfield,~~ OR;
Qiping Zhao, San Diego, CA;
Robert James Connor, Oceanside, CA;

Eugene

Applicant(s)

Halozyme, Inc., San Diego, CA;

Power of Attorney:
STEPHANIE SEIDMAN -33779
FRANK MISKIEL -53332
~~JOSHUA GALGANO -74802~~

Domestic Priority data as claimed by applicant

This application is a DIV of 17/327,568 05/21/2021
which is a CON of 16/912,590 06/25/2020 PAT 11,066,656
which is a CON of 15/226,489 08/02/2016 PAT 10,865,400
which is a DIV of 13/694,731 12/28/2012 PAT 9,447,401
which claims benefit of 61/796,208 11/01/2012
and claims benefit of 61/631,313 12/30/2011
and said 17/327,568 05/21/2021 is a CON of 16/824,572 03/19/2020 PAT 11,041,149
which is a CON of 15/226,489 08/02/2016 PAT 10,865,400
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This application is a DIV of 17/327,586 05/21/2021
which is a CON of 16/912,590 06/25/2020 PAT 11,066,656
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and claims benefit of 61/631,313 12/30/2011
and said 17/327,586 05/21/2021 is a CON of 15/226,489 08/02/2016 PAT 10,865,400
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which claims benefit of 61/796,208 11/01/2012
and claims benefit of 61/631,313 12/30/2011

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 03/29/2023
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 18/068,418**
Projected Publication Date: 07/06/2023
Non-Publication Request: No
Early Publication Request: No
Title

PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

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NOT GRANTED

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technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	33320.03087.US2E/3087K
	Application Number	18/068,418
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.

Inventor Information:

Inventor 1				
Legal Name				
Prefix	**Given Name**	**Middle Name**	**Family Name**	**Suffix**
	Ge		Wei	

Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service

City	San Diego	**State/Province**	CA	**Country of Residence**	US

Mailing Address of Inventor:

Address 1	11530 Miro Circle		
Address 2			
City	San Diego	**State/Province**	CA
Postal Code	92131	**Country**	US

Inventor 2				
Legal Name				
Prefix	**Given Name**	**Middle Name**	**Family Name**	**Suffix**
	H.	Michael	Shepard	

Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service

City	~~Springfield~~ Eugene	**State/Province**	OR	**Country of Residence**	US

Mailing Address of Inventor:

Address 1	~~870 Mountaingate Drive~~ 4133 Sabrena Avenue		
Address 2			
City	~~Springfield~~ Eugene	**State/Province**	OR
Postal Code	~~97478~~ 97404	**Country**	US

Inventor 3				
Legal Name				
Prefix	**Given Name**	**Middle Name**	**Family Name**	**Suffix**
	Qiping		Zhao	

Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service

City	San Diego	**State/Province**	CA	**Country of Residence**	US

Mailing Address of Inventor:

Address 1	11240 Windbrook Way

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	33320.03087.US2E/3087K
	Application Number	18/068,418
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF	

Address 2			
City	San Diego	State/Province	CA
Postal Code	92131	Country	US

Inventor 4				
Legal Name				
Prefix	Given Name	Middle Name	Family Name	Suffix
	Robert	James	Connor	

Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service

City	Oceanside	State/Province	CA	Country of Residence	US

Mailing Address of Inventor:			
Address 1	451 Lexington Circle		
Address 2			
City	San Diego	State/Province	CA
Postal Code	92057	Country	US

All Inventors Must Be Listed – Add Additional Inventor Information blocks for each inventor.

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).	
Customer Number	**13565**
Email Address	stephanie.seidman@dentons.com
Email Address	mlaipsd@dentons.com

Application Information:

Title of the Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF		
Attorney Docket Number	33320.03087.US2E/3087K	Small Entity Status Claimed	☐
Application Type	☒ Nonprovisional ☐ Provisional		
Subject Matter	☒ Utility ☐ Plant ☐ Design		
Total Number of Drawing Sheets (if any)	13	Suggested Figure for Publication (if any)	

Representative Information:

Please Select One:	☐ Customer Number	☒ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)

Prefix	Given Name	Middle Name	Family Name	Suffix
	Stephanie		Seidman	
Registration Number:	33,779			
Prefix	Given Name	Middle Name	Family Name	Suffix
	Frank	J.	Miskiel	
Registration Number:	53,332			

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	33320.03087.US2E/3087K
	Application Number	18/068,418
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF	

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

Present Application No.	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
This application	is a Divisional of	**17/327,568**	2021-05-21
Prior Application No. 17/327,568 - Status:		☐ Patented ☒ Pending ☐ Abandoned ☐ Expired	

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/327,568	is a Continuation of	**16/912,590**	2020-06-25	11,066,656	2021-07-20
Prior Application No. 16/912,590 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			
16/912,590	is a Continuation of	**15/226,489**	2016-08-02	10,865,400	2020-12-15
Prior Application No. 15/226,489 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			
Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
15/226,489	is a Divisional of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			

Application Number	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	**61/796,208**	2012-11-01
Prior Application No. 61/796,208- Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	
Application Number	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**
13/694,731	claims priority to	**61/631,313**	2011-12-30
Prior Application No. 61/631,313 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/327,568	also is a Continuation of	**16/824,572**	2020-03-19	11,041,149	2021-06-22
Prior Application No. 16/824,572 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			
Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
16/824,572	is a Continuation of	**15/226,489**	2016-08-02	10,865,400	2020-12-15
Prior Application No. 15/226,489 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			
Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
15/226,489	is a Divisional of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
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Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	**61/796,208**	2012-11-01
Prior Application No. 61/796,208 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	
Application Number	**Continuity Type**	**Prior Application Number**	**Filing Date (YYYY-MM-DD)**

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Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF		

13/694,731	claims priority to	61/631,313	2011-12-30
Prior Application No. 61/631,313 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
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Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	61/796,208	2012-11-01
Prior Application No. 61/796,208 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	61/631,313	2011-12-30
Prior Application No. 61/631,313 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/327,568	also is a Continuation of	13/694,731	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	61/796,208	2012-11-01
Prior Application No. 61/796,208 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	61/631,313	2011-12-30
Prior Application No. 61/631,313 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	33320.03087.US2E/3087K
	Application Number	18/068,418
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF	

Present Application No.	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
This application	also is a Divisional of	**17/327,586**	2021-05-21
Prior Application No. 17/327,586 - Status:	☐ Patented ☒ Pending ☐ Abandoned ☐ Expired		

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/327,586	is a Continuation of	**16/912,590**	2020-06-25	11,066,656	2021-07-20
Prior Application No. 16/912,590 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
16/912,590	is a Continuation of	**15/226,489**	2016-08-02	10,865,400	2020-12-15
Prior Application No. 15/226,489 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
15/226,489	is a Divisional of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				

Application Number	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	**61/796,208**	2012-11-01
Prior Application No. 61/796,208- Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired		
Application Number	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**
13/694,731	claims priority to	**61/631,313**	2011-12-30
Prior Application No. 61/631,313 - Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired		

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/327,586	also is a Continuation of	**16/824,572**	2020-03-19	11,041,149	2021-06-22
Prior Application No. 16/824,572 status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
16/824,572	is a Continuation of	**15/226,489**	2016-08-02	10,865,400	2020-12-15
Prior Application No. 15/226,489 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
15/226,489	is a Divisional of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				

Application Number	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	**61/796,208**	2012-11-01
Prior Application No. 61/796,208- Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired		
Application Number	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**
13/694,731	claims priority to	**61/631,313**	2011-12-30
Prior Application No. 61/631,313 - Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired		

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	33320.03087.US2E/3087K
	Application Number	18/068,418
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF	

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/327,586	is a Continuation of	15/226,489	2016-08-02	10,865,400	2020-12-15
Prior Application No. 15/226,489 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15/226,489	is a Divisional of	13/694,731	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application Number	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)		
13/694,731	claims priority to	61/796,208	2012-11-01		
Prior Application No. 61/796,208- Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired				
Application Number	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)		
13/694,731	claims priority to	61/631,313	2011-12-30		
Prior Application No. 61/631,313 - Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired				

Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/327,586	also is a continuation of	13/694,731	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
13/694,731	claims priority to	61/796,208	2012-11-01		
Prior Application No. 61/796,208 - Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired				
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
13/694,731	claims priority to	61/631,313	2011-12-30		
Prior Application No. 61/631,313 - Status:	☐ Patented ☐ Pending ☐ Abandoned ☒ Expired				

Present Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
This application	is a Divisional of	16/912,590	2020-06-25	11,066,656	2021-07-20
Prior Application No. 16/912,590 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16/912,590	is a Continuation of	15/226,489	2016-08-02	10,865,400	2020-12-15
Prior Application No. 15/226,489 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15/226,489	is a Divisional of	13/694,731	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:	☒ Patented ☐ Pending ☐ Abandoned ☐ Expired				
Application No.	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	33320.03087.US2E/3087K
	Application Number	18/068,418
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF	

16/912,590	also is a Divisional of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			

Application Number	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**
13/694,731	claims priority to	**61/796,208**	2012-11-01
Prior Application No. 61/796,208- Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	

Application Number	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**
13/694,731	claims priority to	**61/631,313**	2011-12-30
Prior Application No. 61/631,313 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	

Present Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
This application	is a Divisional of	**16/824,572**	2020-03-19	11,041,149	2021-06-22
Prior Application No. 16/824,572 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			

Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
16/824,572	is a Continuation of	**15/226,489**	2016-08-02	10,865,400	2020-12-15
Prior Application No. 15/226,489 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			

Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
15/226,489	is a Divisional of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			

Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
16/824,572	also is a Divisional of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			

Application Number	**Continuity Type**	**Prior Application Number**	**Filing Date (YYYY-MM-DD)**
13/694,731	claims priority to	**61/796,208**	2012-11-01
Prior Application No. 61/796,208 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	

Application Number	**Continuity Type**	**Prior Application Number**	**Filing Date (YYYY-MM-DD)**
13/694,731	claims priority to	**61/631,313**	2011-12-30
Prior Application No. 61/631,313 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired	

Present Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
This application	is a Continuation of	**15/226,489**	2016-08-02	10,865,400	2020-12-15
Prior Application No. 15/226,489 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			

Application No.	**Continuity Type**	**Prior Application No.**	**Filing Date (YYYY-MM-DD)**	**Patent Number**	**Issue Date (YYYY-MM-DD)**
15/226,489	is a Divisional of	**13/694,731**	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	33320.03087.US2E/3087K
	Application Number	18/068,418
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF	

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	61/796,208	2012-11-01
Prior Application No. 61/796,208 - Status:		☐ Patented ☐ Pending	☐ Abandoned ☒ Expired
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/694,731	claims priority to	61/631,313	2011-12-30
Prior Application No. 61/631,313 - Status:		☐ Patented ☐ Pending	☐ Abandoned ☒ Expired

Present Application No.	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
This application	also is a Divisional of	13/694,731	2012-12-28	9,447,401	2016-09-20
Prior Application No. 13/694,731 - Status:		☒ Patented ☐ Pending ☐ Abandoned ☐ Expired			
Application Number	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)		
13/694,731	claims priority to	61/796,208	2012-11-01		
Prior Application No. 61/796,208- Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired			
Application Number	Continuity Type	Prior Application No.	Filing Date (YYYY-MM-DD)		
13/694,731	claims priority to	61/631,313	2011-12-30		
Prior Application No. 61/631,313 - Status:		☐ Patented ☐ Pending ☐ Abandoned ☒ Expired			

Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55.

Application Number	Country	Filing Date (YYYY-MM-DD)	Priority Claimed		Access Code (if applicable)
			☐ Yes	☐ No	

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications:

☐ If checked, this application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant must opt-out of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	33320.03087.US2E/3087K
	Application Number	18/068,418
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF	

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h) (1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby grants the USPTO authority to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ **A.** Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ **B.** Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

☒ Assignee	☐ Legal Representative under 35 U.S.C. 117	☐ Joint Inventor
☐ Person to whom the inventor is obligated to assign	☐ Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:		
☐ Deceased	☐ Legally incapacitated	
Name of the Deceased or Legally Incapacitated Inventor:		
If the Applicant is an Organization check here.	☒	

Organization Name:	**HALOZYME, INC.**		
Mailing Address Information For Applicant:			
Address 1	~~11388 Sorrento Valley Road~~ 12390 El Camino Real		
Address 2			
City	San Diego	**State/Province**	CA
Country	US	**Postal Code**	~~92121~~ 92130
Phone Number		**Fax Number**	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	33320.03087.US2E/3087K
		Application Number	18/068,418
Title of Invention	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF		

Email Address	
If needed, Additional Applicant Data may be added within this form.	

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications					
Signature	/Stephanie Seidman/			Date (YYYY-MM-DD)	2023-04-05
First Name	Stephanie	Last Name	Seidman	Registration Number	33,779
Additional Signatures may be added within this form.					

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Electronic Acknowledgement Receipt

EFS ID:	47795530
Application Number:	18068418
International Application Number:	
Confirmation Number:	5769
Title of Invention:	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF
First Named Inventor/Applicant Name:	Ge Wei
Customer Number:	13565
Filer:	Stephanie L. Seidman/Javier Wong
Filer Authorized By:	Stephanie L. Seidman
Attorney Docket Number:	33320.03087.US2E/3087K
Receipt Date:	05-APR-2023
Filing Date:	19-DEC-2022
Time Stamp:	15:46:02
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	3087Ktra04-05-23.pdf	143701 7ad9468bdcc75a257a3c96dc2f4e5ad12f6ca5c4	no	1

Warnings:

Information:					
2	Request for Corrected Filing Receipt	3087Kcfr04-05-23.pdf	453075 b5baa7415147f84bfd4fdc09151e70fe0438d519	no	7
Warnings:					
Information:					
3	Application Data Sheet	3087Kads04-05-23.pdf	277586 fe8756feca0bcd17e681a8e869a0855c58787d03	no	10
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
		Total Files Size (in bytes):	874362		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s)	:	Wei *et al.*	Art Unit	:	To be assigned
Serial No.	:	18/068,418	Examiner	:	To be assigned
Filed	:	December 19, 2022	Conf. No.	:	5769
			Cust. No.	:	13565
Title	:	**PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF**			

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL LETTER

Dear Sir:

Transmitted herewith are a *Request for Corrected Filing Receipt* (1 page); a copy of the *Filing Receipt*, mailed March 30, 2023, with annotated corrections (5 pages), and an updated *Application Data Sheet* (10 pages) for filing in connection with the above-captioned application.

A fee for filing this request should not be due. However, should it be determined that a fee for filing these papers is required, the Commissioner is authorized to charge Deposit Account No. 50-0911, as stated below.

☒ The Commissioner is hereby authorized to charge any fees that may be due in connection with this paper or with this application during its entire pendency to Deposit Account No. 50-0911.

Respectfully submitted,

/Stephanie Seidman/
Stephanie Seidman
Reg. No. 33,779

Attorney Docket No.: 33320.03087.US2E/3087K
Address all correspondence to: 13565
Stephanie Seidman
Dentons US LLP
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CERTIFICATE OF TRANSMISSION VIA EFS-WEB
I hereby certify that this paper is being transmitted via the Electronic Filing System (EFS-WEB) to the United States Patent and Trademark Office on **April 05, 2023**.

/Javier Wong/
Javier Wong

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
18/068,418	12/19/2022	OPAP	5000	33320.03087.US2E/3087K	35	1

CONFIRMATION NO. 5769

REPLACEMENT FILING RECEIPT

13565
Dentons US LLP
4655 Executive Drive
Suite 700
San Diego, CA 92121

OC000000056443883

Date Mailed: 04/28/2023

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

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Inventor(s)

Ge Wei, San Diego, CA;
H. Michael Shepard, Eugene, OR;
Qiping Zhao, San Diego, CA;
Robert James Connor, Oceanside, CA;

Applicant(s)

Halozyme, Inc., San Diego, CA;

Power of Attorney:

STEPHANIE SEIDMAN -33779
FRANK MISKIEL -53332
JOSHUA GALGANO -74802

Domestic Priority data as claimed by applicant

This application is a DIV of 17/327,568 05/21/2021
which is a CON of 16/912,590 06/25/2020 PAT 11,066,656
which is a CON of 15/226,489 08/02/2016 PAT 10,865,400
which is a DIV of 13/694,731 12/28/2012 PAT 9,447,401
which claims benefit of 61/796,208 11/01/2012
and claims benefit of 61/631,313 12/30/2011
and said 17/327,568 05/21/2021 is a CON of 16/824,572 03/19/2020 PAT 11,041,149
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Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 03/29/2023

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Projected Publication Date: 07/06/2023

Non-Publication Request: No

Early Publication Request: No

Title

PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF

Preliminary Class

424

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor

community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
18/068,418	12/19/2022	Ge Wei	33320.03087.US2E/3087K

CONFIRMATION NO. 5769

IMPROPER CPOA LETTER

13565
Dentons US LLP
4655 Executive Drive
Suite 700
San Diego, CA 92121

OC000000056443935

Date Mailed: 04/28/2023

NOTICE REGARDING POWER OF ATTORNEY

This is in response to the power of attorney filed 04/05/2023. The power of attorney in this application is not accepted for the reason(s) listed below:

- The power of attorney you provided did not comply with the power of attorney rules that became effective on June 25, 2004. See 37 CFR 1.32 and 69 Fed. Reg. 29865.

/byemane/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

13565
Dentons US LLP
4655 Executive Drive
Suite 700
San Diego, CA 92121
UNITED STATES

Electronic Acknowledgement Receipt

EFS ID:	48025241
Application Number:	18068418
International Application Number:	
Confirmation Number:	5769
Title of Invention:	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF
First Named Inventor/Applicant Name:	Ge Wei
Customer Number:	13565
Filer:	Stephanie L. Seidman/Jimmy Schaub
Filer Authorized By:	Stephanie L. Seidman
Attorney Docket Number:	33320.03087.US2E/3087K
Receipt Date:	18-MAY-2023
Filing Date:	19-DEC-2022
Time Stamp:	16:55:58
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	3087Ktra_000.pdf	142455 e8a350bb206f06ffa8228af72d7bae4c5b946f52	no	1

Warnings:

Information:					
2	Request for Corrected Filing Receipt	3087Kcfr_000.pdf	178758 d9038febf72df52694208574377174 7d404ae871	no	2
Warnings:					
Information:					
3	Miscellaneous Incoming Letter	3087K-04-28-2023-Annotated_Filing_Receipt-18068418.pdf	273182 dca28eaf5741130e9f5927daa6aaec5de62a9202	no	5
Warnings:					
Information:					
		Total Files Size (in bytes):	594395		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
<u>National Stage of an International Application under 35 U.S.C. 371</u>
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s)	:	Wei *et al.*	Art Unit	:	To be assigned
Serial No.	:	18/068,418	Examiner	:	To be assigned
Filed	:	December 19, 2022	Conf. No.	:	5769
			Cust. No.	:	13565
Title	:	**PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF**			

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL LETTER

Dear Sir:

Transmitted herewith are a *Request for Corrected Filing Receipt* (1 page); a copy of the *Replacement Filing Receipt*, mailed April 28, 2023, with annotated corrections (5 pages), for filing in connection with the above-captioned application.

A fee for filing this request should not be due. However, should it be determined that a fee for filing these papers is required, the Commissioner is authorized to charge Deposit Account No. 50-0911, as stated below.

☒ The Commissioner is hereby authorized to charge any fees that may be due in connection with this paper or with this application during its entire pendency to Deposit Account No. 50-0911.

Respectfully submitted,

/Stephanie Seidman/
Stephanie Seidman
Reg. No. 33,779

Attorney Docket No.: 33320.03087.US2E/3087K
Address all correspondence to: 13565
Stephanie Seidman
Dentons US LLP
4655 Executive Drive, Ste. 700
San Diego, California 92121
Telephone: (619) 595-8010
Facsimile: (619) 595-8135
email: stephanie.seidman@dentons.com

CERTIFICATE OF TRANSMISSION VIA EFS-WEB
I hereby certify that this paper is being transmitted via the Electronic Filing System (EFS-WEB) to the United States Patent and Trademark Office on **May 18, 2023**.

/Jimmy Schaub/
Jimmy Schaub

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s)	:	Ge WEI *et al.*	Art Unit	:	Not yet assigned
Serial No.	:	18/068,418	Examiner	:	Not yet assigned
Filed	:	December 19, 2022	Conf. No.	:	5769
			Cust. No.	:	13565
Title	:	**PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF**			

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR CORRECTED FILING RECEIPT

Dear Sir:

Transmitted herewith are this *Request for Corrected Filing Receipt*, a copy of the *Replacement Filing Receipt*, mailed April 28, 2023, marked to show the correction.

Please correct the Power of Attorney section to read as follows:

STEPHANIE SEIDMAN – 33779
FRANK MISKIEL – 53332
~~**JOSHUA GALGANO 74802**~~ **JAMES M. TURNER – 74,602**

Applicant requests correction of the error introduced by the USPTO in the Power of Attorney section, which erroneously lists Joshua Galgano – 74802. The Power of Attorney filed on December 19, 2022, does not list Joshua Galgano and does not list attorney registration number 74802. There is a one digit difference between the attorney registration numbers (74802 vs. 74602). Due to a USPTO clerical error in transcribing the attorney registration number, an incorrect attorney has been listed in the Power of Attorney section. Please remove Joshua Galgano–74802 and replace with the correct attorney supplied above.

Applicant respectfully requests provision of a corrected filing receipt to reflect the updated information and correction to the power of attorney section.

Respectfully submitted,

/Stephanie Seidman/
Stephanie Seidman
Reg. No. 33,779

Attorney Docket No.: 33320.03087.US2E/3087K
Address all correspondence to: 13565
Stephanie Seidman
Dentons US LLP
4655 Executive Drive, Suite 700
San Diego, CA 92121
Telephone: (619) 595-8010
Facsimile: (619) 595-8135
email: stephanie.seidman@dentons.com

CERTIFICATE OF TRANSMISSION VIA EFS-WEB
I hereby certify that this paper is being transmitted via the Electronic Filing System (EFS-WEB) to the United States Patent and Trademark Office on **May 18, 2023**.

/Jimmy Schaub/
Jimmy Schaub

ATTACHMENT 1

Copy of *Filing Receipt*, mailed April 28, 2023, with annotated correction

COPY

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
18/068,418	12/19/2022	OPAP	5000	33320.03087.US2E/3087K	35	1

CONFIRMATION NO. 5769

REPLACEMENT FILING RECEIPT

13565
Dentons US LLP
4655 Executive Drive
Suite 700
San Diego, CA 92121

OC000000056443883

Date Mailed: 04/28/2023

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Projected Publication Date: 07/06/2023

Non-Publication Request: No

Early Publication Request: No

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COPY

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor

community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
18/068,418	12/19/2022	OPAP	5000	33320.03087.US2E/3087K	35	1

CONFIRMATION NO. 5769

REPLACEMENT FILING RECEIPT

13565
Dentons US LLP
4655 Executive Drive
Suite 700
San Diego, CA 92121

OC00000057394524

Date Mailed: 05/23/2023

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Ge Wei, San Diego, CA;
H. Michael Shepard, Eugene, OR;
Qiping Zhao, San Diego, CA;
Robert James Connor, Oceanside, CA;

Applicant(s)

Halozyme, Inc., San Diego, CA;

Power of Attorney:

STEPHANIE SEIDMAN -33779
FRANK MISKIEL -53332
JAMES TURNER -74602

Domestic Priority data as claimed by applicant

This application is a DIV of 17/327,568 05/21/2021
which is a CON of 16/912,590 06/25/2020 PAT 11,066,656
which is a CON of 15/226,489 08/02/2016 PAT 10,865,400
which is a DIV of 13/694,731 12/28/2012 PAT 9,447,401
which claims benefit of 61/796,208 11/01/2012
and claims benefit of 61/631,313 12/30/2011
and said 17/327,568 05/21/2021 is a CON of 16/824,572 03/19/2020 PAT 11,041,149
which is a CON of 15/226,489 08/02/2016 PAT 10,865,400
which is a DIV of 13/694,731 12/28/2012 PAT 9,447,401
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This application is a DIV of 17/327,586 05/21/2021
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which is a DIV of 13/694,731 12/28/2012 PAT 9,447,401
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which claims benefit of 61/796,208 11/01/2012
and claims benefit of 61/631,313 12/30/2011

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 03/29/2023

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 18/068,418**

Projected Publication Date: 07/06/2023

Non-Publication Request: No

Early Publication Request: No

Title

PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF

Preliminary Class

424

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

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Title 37, Code of Federal Regulations, 5.11 & 5.15

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This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

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community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
18/068,418	12/19/2022	Ge Wei	33320.03087.US2E/3087K

CONFIRMATION NO. 5769

13565
Dentons US LLP
4655 Executive Drive
Suite 700
San Diego, CA 92121

PUBLICATION NOTICE

OC000000060428970

Date Mailed: 08/11/2023

Title:PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF

Publication No.US-2023-0250409-A1
Publication Date:08/10/2023

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently https://portal.uspto.gov/pair/PublicPair. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

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Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

Doc Code: PA..
Document Description: Power of Attorney

PTO/AIA/82A (07-13)
Approved for use through 03/31/2021. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	18/068,418
Filing Date	12/19/2022
First Named Inventor	Ge Wei
Title	PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF
Art Unit	NYA
Examiner Name	NYA
Attorney Docket Number	063995-01-5105-US10

SIGNATURE of Applicant or Patent Practitioner

Signature	/Robert Smyth/	Date (Optional)	
Name	Robert Smyth	Registration Number	50,801
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☑ *Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Document Description: Power of Attorney

PTO/AIA/82B (07-13)
Approved for use through 03/31/2021. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☑ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 28977

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☑ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

☐ Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

HALOZYME, INC.

☐ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature	/ Mark Snyder / DocuSigned by: Signature: C768494...	Date (Optional)	05-Jan-2023
Name	Mark Snyder		
Title	Senior Vice President, General Counsel, CCO & Secretary		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☑ Total of 1 forms are submitted.

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/068,418	**10/27/2023 02:34:53 PM ET**	**33320.03087.US2E/3087K**

Title of Invention

PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	5769	FILED BY	Collins Mba-Jonas
PATENT CENTER #	63084735	FILING DATE	12/19/2022
CUSTOMER #	13565	FIRST NAMED INVENTOR	Ge Wei
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Robert Smyth

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
20231026_POA.pdf	2	Power of Attorney	463 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
20231026_POA.pdf	D538DEADBBD8B182E6139F05C8F2F0F103E098AA861196C4F7B185BB550CEAF59BF50C24C34D5722ED9B446B65A6853CB90415EBAA89E69E0942BEA5B55B9EC1

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as

described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
18/068,418	12/19/2022	Ge Wei	063995-01-5105-US10

CONFIRMATION NO. 5769

28977
MORGAN, LEWIS & BOCKIUS LLP (PH)
1701 MARKET STREET
PHILADELPHIA, PA 19103-2921

POA ACCEPTANCE LETTER

OC000000063959464

Date Mailed: 11/01/2023

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/27/2023.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/dtdinh/

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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
18/068,418	12/19/2022	Ge Wei	33320.03087.US2E/3087K

CONFIRMATION NO. 5769

13565
Womble Bond Dickinson/Seidman Group
Attn: IP Docketing
PO. Box 570489
Atlanta, GA 30357-0037

POWER OF ATTORNEY NOTICE

OC000000063959214

Date Mailed: 11/01/2023

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/27/2023.

- The Power of Attorney to you in this application has been revoked by the applicant. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/068,418	12/19/2022	Ge Wei	063995-01-5105-US10	5769

28977 7590 02/20/2024
Morgan, Lewis & Bockius LLP (PH)
2222 Market Street
Philadelphia, PA 19103

EXAMINER	
MCKNIGHT, CIARA A	

ART UNIT	PAPER NUMBER
1656	

NOTIFICATION DATE	DELIVERY MODE
02/20/2024	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

judith.troilo@morganlewis.com
phpatentcorrespondence@morganlewis.com

Office Action Summary	**Application No.** 18/068,418	**Applicant(s)** Wei et al.	
	Examiner CIARA A MCKNIGHT	**Art Unit** 1656	**AIA (FITF) Status** No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 12/19/2022.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-35 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☐ Claim(s) _____ is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☑ Claim(s) 1-35 are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-30 and 34-35, drawn to a modified PH20 polypeptide comprising one or more amino acid substitutions or modifications and pharmaceutical composition comprising said polypeptide, classified in CPC C12N 9/2474.

II. Claims 31-33, drawn to a method of treating hyaluronan-associated conditions or diseases, including inflammatory disease, tumor, or cancer, with a PH20 polypeptide and therapeutic agent, classified G01N 2333/914.

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case the polypeptide of invention I can be used in a material different process apart from invention II, such as raising polyclonal antibodies in mice for diagnostic or laboratory use.

Restriction for examination purposes as indicated is proper because all the inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and/or examination burden if restriction were not required because one or more of the following reasons apply:

a. the inventions have acquired a separate status in the art in view of their different classification;

b. the inventions have acquired a separate status in the art due to their recognized divergent subject matter;

c. the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);

d. another invention;

e. the prior art applicable to one invention would not likely be applicable to the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Each group is under a unique CPC class and will require a separate and distinct keyword search, where group I is classified under CPC C12N 9/2474 and group II is classified under G01N 2333/914.

Applicant is advised that the reply to this requirement to be complete must include (i) an **election of an invention to be examined** even though the requirement may be traversed (37 CFR 1.143) and (ii) **identification of the claims encompassing the elected invention.**

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103 or pre-AIA 35 U.S.C. 103(a) of the other invention.

The examiner has required restriction between product or apparatus claims and process claims. Where applicant elects claims directed to the product/apparatus, and all product/apparatus claims are subsequently found allowable, withdrawn process claims that include all the limitations of the allowable product/apparatus claims should be considered for rejoinder. All claims directed to a nonelected process invention must include all the limitations of an allowable product/apparatus claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product/apparatus claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112.

Until all claims to the elected product/apparatus are found allowable, an otherwise proper restriction requirement between product/apparatus claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product/apparatus claim will not be rejoined. See MPEP § 821.04. Additionally, in order for rejoinder to occur,

applicant is advised that the process claims should be amended during prosecution to require the limitations of the product/apparatus claims. **Failure to do so may result in no rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CIARA A MCKNIGHT whose telephone number is (703)756-4791. The examiner can normally be reached M-F 8:00am-4:30pm. Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Manjunath Rao can be reached on (571)272-0939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit:

https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CIARA A MCKNIGHT/
Examiner, Art Unit 1656

/SUZANNE M NOAKES/
Primary Examiner, Art Unit 1656

PTO/SB/06 (09-11)
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 18/068,418	Filing Date 12/19/2022	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $100 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $480 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	03/05/2024	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 35	Minus	** 35	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 1	Minus	*** 3	= 0		x $480 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/LISA THOMAS/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/068,418	**03/05/2024 12:28:29 PM Z ET**	**063995-01-5105-US10**

Title of Invention

PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	5769	FILED BY	Kimberly Pollard
PATENT CENTER #	64552261	FILING DATE	12/19/2022
CUSTOMER #	28977	FIRST NAMED INVENTOR	Ge Wei
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Kalpesh Upadhye

Documents

TOTAL DOCUMENTS: 3

DOCUMENT		PAGES	DESCRIPTION	SIZE (KB)
063995-01-5105-US10_RESTRICTIONRESPONSE.pdf		5	-	133 KB
063995-01-5105-US10_RESTRICTIONRESPONSE-ELC..pdf	(1-1)	1	Response to Election / Restriction Filed	95 KB
063995-01-5105-US10_RESTRICTIONRESPONSE-CLM.pdf	(2-4)	3	Claims	107 KB
063995-01-5105-US10_RESTRICTIONRESPONSE-REM.pdf	(5-5)	1	Applicant Arguments/Remarks Made in an Amendment	116 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
063995-01-5105-US10_RESTRICTIONRESPONSE.pdf	86DB0D0368CCC9C2F74D7AD3B973BA11A03893C900EBA8D3666E59782A0867F5E089539F211123BCEABAD2FB798052AE6162D62C8CA46433A8AAA3B7844B9681
063995-01-5105-US10_RESTRICTIONRESPONSE-ELC..pdf	D823D08CE743ED58C454E6E4A25DA7DB4BF70D0F6FCC014E1108B3E645C1CE7CEF73AA5E0CE01222412B73036380DE0B056637B9C0760E054ECB76277357649F
063995-01-5105-US10_RESTRICTIONRESPONSE-CLM.pdf	BC36FCB2E8DAC97DBD93118A31547DD908CE3E4A19692F5835BCADF96A5CCBDC233C046782DCEA7A6B3CE8999C626164F20CDEECE52F93959D7A7C49156C3660
063995-01-5105-US10_RESTRICTIONRESPONSE-REM.pdf	AF34FB3B116CD3EE67BD7A9344CACAD682055857EFD18508263D5D2475D17B9BD76E984E5FD8C3E4489F55A7F227448A0E50606BFA11966CB8D3CAACFA95E494

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PATENT
Attorney Docket **063995-01-5105-US10**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of **Ge Wei et al.**	)	
	)	Confirmation No. **5769**
U.S. Application No. **18/068,418**	)	
	)	Group Art Unit: **1656**
Filing Date: **12/19/2022**	)	
	)	Examiner: **Ciara A. McKnight**
For: **PH20 Polypeptide Variants, Formulations and Uses Thereof**	)	

RESPONSE TO RESTRICTION REQUIREMENT

In response to the Restriction Requirement dated 2/20/2024, please enter the following provisional election for examination on the merits. This response is considered timely filed. To the extent any additional fee is due, the Director is hereby authorized to charge additional fees which may be required, or credit any overpayment, to Deposit Account No. 50-0310.

Listing of the Claims begins on page 2 of this paper.

Remarks begin on page 5 of this paper.

LISTING OF THE CLAIMS

This version of the claims will replace all previous versions.

1. (Original) A modified PH20 polypeptide, comprising one or more amino acid modifications in an unmodified PH20 polypeptide, wherein:

the unmodified PH20 polypeptide consists of the amino acid sequence selected from among SEQ ID NOs: 3, 7 and 32-66;

amino acid modifications are selected from among amino acid replacements(s), deletion(s), and/or insertion(s);

the modified PH20 polypeptide comprises an amino acid replacement at a position corresponding to residue 324, with reference to amino acid positions set forth in SEQ ID NO:3;

the replacement at the position corresponding to residue 324 is selected from among A, D, H, M, N, R and S;

corresponding amino acid positions are identified by alignment of the PH20 polypeptide with the polypeptide having the amino acid sequence of SEQ ID NO:3; and

the modified PH20 polypeptide has at least 91 % sequence identity to a polypeptide having the amino acid sequence selected from among SEQ ID NOs: 3, 7 and 32-66.

2. (Original) The modified PH20 polypeptide of claim 1, wherein the modified PH20 polypeptide has at least 95% sequence identity to the amino acid sequence selected from among SEQ ID NOs: 3, 7, and 32-66.

3. (Original) The modified PH20 polypeptide of claim 1 that has increased resistance to or stability in denaturing conditions compared to an unmodified PH20 polypeptide that does not contain the amino acid modification(s).

4. (Original) The modified PH20 polypeptide of claim 1 that exhibits increased hyaluronidase activity compared to the unmodified PH20 polypeptide not containing the amino acid replacement at position 324.

5. (Original) The modified PH20 polypeptide of claim 1 that is a soluble PH20 polypeptide.

6. (Original) The modified PH20 polypeptide of claim 1, wherein the replacement at the position corresponding to residue 324 is D.

7. (Original) The modified PH20 polypeptide of claim 1, wherein the replacement at the position corresponding to residue 324 is Nor R.

8. (Original) The modified PH20 polypeptide of claim 1, wherein the unmodified PH20 polypeptide comprises the amino acid sequence selected from among SEQ ID NOs: 3 and 32-66.

9. (Original) The modified PH20 polypeptide of claim 1, wherein the unmodified PH20 polypeptide consists of the amino acid sequence selected from among SEQ ID NOs: 3 and 32-66.

10. (Original) The modified PH20 polypeptide of claim 6, wherein the unmodified PH20 polypeptide consists of the amino acid sequence selected from among SEQ ID NOs: 3 and 32-66.

11. (Original) The modified PH20 polypeptide of claim 1, wherein the unmodified PH20 polypeptide consists of the amino acid sequence of SEQ ID NO:35.

12. (Original) The modified PH20 polypeptide of claim 1, wherein the unmodified PH20 polypeptide consists of the amino acid sequence of SEQ ID NO:32.

13. (Original) The modified PH20 polypeptide of claim 6, wherein the unmodified PH20 polypeptide consists of the amino acid sequence of SEQ ID NO:35.

14. (Original) The modified PH20 polypeptide of claim 6, wherein the unmodified PH20 polypeptide consists of the amino acid sequence of SEQ ID NO:32.

15. (Original) The modified PH20 polypeptide of claim 1, comprising a sequence of amino acids that exhibits at least 91 % sequence identity to the sequence of amino acids set forth in any of SEQ ID NOs: 3, 32-66, 623, and 624 and that contains an amino acid replacement D at the residue corresponding to residue 324 with reference to SEQ ID NO:3.

16. (Original) The modified PH20 polypeptide of claim 1 that is C-terminally truncated, whereby the polypeptide is soluble.

17. (Original) The modified PH20 polypeptide of claim 1 that comprises one or more modifications of the polypeptide selected from among glycosylation, sialylation, albumination, famesylation, carboxylation, hydroxylation, and phosphorylation.

18. (Original) The modified PH20 polypeptide of claim 1 that is glycosylated.

19. (Original) The modified PH20 polypeptide of claim 18, wherein the polypeptide is a glycoprotein that comprises an N-acetylglucosamine moiety linked to each of at least three asparagine (N) residues.

20. (Original) The modified PH20 polypeptide of claim 1 that is conjugated to a polymer.

21. (Original) The modified PH20 polypeptide of claim 20, wherein the polymer is dextran or polyethylene glycol (PEG).

22. (Original) The modified PH20 polypeptide of claim 1, further comprising a heterologous signal sequence, wherein the unmodified PH20 polypeptide consists of the amino acid sequence selected from among SEQ ID NOs: 3 and 32-66.

23. (Original) A chimeric polypeptide, comprising the modified PH20 polypeptide of claim 1.

24. (Original) A pharmaceutical composition, comprising the modified PH20 polypeptide of claim 1.

25. (Original) The modified PH20 polypeptide of claim 6, wherein:

the unmodified PH20 polypeptide consists of the amino acid sequence of SEQ ID NO:32; and

the amino acid sequence of the modified PH20 polypeptide has at least 95% sequence identity to the amino acid sequence of SEQ ID NO:32.

26. (Original) The modified PH20 polypeptide of claim 6, wherein:

the unmodified PH20 polypeptide consists of the amino acid sequence of SEQ ID NO:35; and

the amino acid sequence of the modified PH20 polypeptide has at least 95% sequence identity to the amino acid sequence of SEQ ID NO:35.

27. (Original) The pharmaceutical composition of claim 24, further comprising a therapeutically active agent formulated in the same composition or in a separate composition.

28. (Original) The pharmaceutical composition of claim 27, wherein the therapeutically active agent is a polypeptide, a protein, a nucleic acid, a drug, a small molecule, or an organic molecule.

29. (Original) The pharmaceutical composition of claim 27, wherein the therapeutically active agent is selected from among a chemotherapeutic agent, an analgesic agent, an anti-inflammatory agent, an antimicrobial agent, an amoebicidal agent, a trichomonacidal agent, an anti-Parkinson agent, an anti-malarial agent, an anticonvulsant agent, an anti-depressant agent, an antiarthritics agent, an anti-fungal agent, an antihypertensive agent, an antipyretic agent, an anti-parasite agent, an antihistamine agent, an alpha-adrenergic agonist agent, an alpha blocker agent, an anesthetic agent, a bronchial dilator agent, a biocide agent, a bactericide agent, a bacteriostat agent, a beta adrenergic blocker agent, a calcium channel blocker agent, a cardiovascular drug agent, a contraceptive agent, a decongestant agent, a diuretic agent, a depressant agent, a diagnostic agent, an electrolyte agent, a hypnotic agent, a hormone agent, a hyperglycemic agent, a muscle relaxant agent, a muscle contractant agent, an ophthalmic agent, a parasympathomimetic agent, a psychic energizer agent, a sedative agent, a sympathomimetic agent, a tranquilizer agent, a urinary agent, a vaginal agent, a viricide agent, a vitamin agent, a non-steroidal anti-inflammatory agent, an angiotensin converting enzyme inhibitor agent, and a sleep inducer.

30. (Original) The pharmaceutical composition of claim 27, wherein the therapeutically active agent is an antibody.

31. (Withdrawn) A method for treating a hyaluronan-associated disease or condition, comprising administering to a subject a modified PH20 polypeptide of claim 1.

32. (Withdrawn) The method of claim 31, wherein the hyaluronan-associated disease or condition is an inflammatory disease or a tumor or cancer.

33. (Withdrawn) The method of claim 32, wherein the hyaluronan-associated disease or condition is a solid tumor.

34. (Withdrawn) The modified PH20 polypeptide of claim 1 that is modified by conjugation to a moiety selected from among a multimerization domain, a toxin, a detectable label, and a drug.

35. (Original) The modified PH20 polypeptide of claim 34, wherein the modified PH20 polypeptide is conjugated to a multimerization domain that is an Fe domain.

REMARKS

In response to the Restriction Requirement, Applicant elects with traverse, Group I (claims 1-30 and 34-35) drawn to a modified PH20 polypeptide.

With regard to the traversal, the Examiner has required restriction between claims drawn to a product and claims drawn to a process of making and/or using the product. Where Applicant elects claims directed to the product, and all the product claims are subsequently found allowable, withdrawn process claims that include all the limitations of the allowable product claims should be considered for rejoinder. *See* MPEP § 821.04(b). Here, the features of the modified PH20 polypeptide as set forth in claim 1 are all included in the method for treating a hyaluronan-associated disease or condition as set forth in claims 31-33. For this reason alone, rejoinder of claims 31-33 is proper and requested by Applicant in view of the above remarks.

Applicant is thus entitled to a rejoinder of the non-elected claims should the elected claims be deemed allowable.

Conclusion

In view of the foregoing, Applicant awaits a favorable action on the merits. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the undersigned representative to expedite prosecution.

Respectfully submitted,

Date: March 5, 2024

By: /Kalpesh V. Upadhye/
Kalpesh V. Upadhye, Ph.D.
Registration No. 70,236

Robert Smyth, Ph.D.
Registration No. 50,801

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robert.smyth@morganlewis.com

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/068,418	12/19/2022	Ge Wei	063995-01-5105-US10	5769

28977 7590 05/01/2024
Morgan, Lewis & Bockius LLP (PH)
2222 Market Street
Philadelphia, PA 19103

EXAMINER	
MCKNIGHT, CIARA A	

ART UNIT	PAPER NUMBER
1656	

NOTIFICATION DATE	DELIVERY MODE
05/01/2024	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

judith.troilo@morganlewis.com
phpatentcorrespondence@morganlewis.com

Office Action Summary	**Application No.** 18/068,418	**Applicant(s)** Wei et al.	
	Examiner CIARA A MCKNIGHT	**Art Unit** 1656	**AIA (FITF) Status** No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 03/05/2024.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-35 is/are pending in the application.

5a) Of the above claim(s) 31-33 is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1-30 and 34-35 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 12/19/2022 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

Status of the Application

1. Claims 1-35 are pending and subject to examination on the merits. Claims 31-33 are withdrawn from consideration as being drawn to non-elected subject matter.

Election/Restrictions

2. Applicant's election with traverse of Group I, claims 1-30 and 34-35, in the reply filed on 05 March 2024 is acknowledged. There seems to be an inadvertent mistake with the withdrawal of 34, where elected Group I includes claim 34 in the previous office action. The examiner will treat said claim as being under examination despite the status identifier indicating otherwise. Please update the status identifier in the next response.

The traversal is on the ground(s) that a rejoinder would be required if the product claims were found allowable, since the withdrawn claims are drawn to a process of using said product. Should the product claims become allowable, a rejoinder of the process claims will be considered. The requirement is still deemed proper and is therefore made FINAL.

Priority

3. This application ultimately derives benefit to US Provisional 61/631,313 filed 12/30/2011.

Information Disclosure Statement

4. The information disclosure statements (IDS) submitted on 16 March 2023 have been considered by the examiner. See initialed and signed PTO/SB/08's.

Objections

5. Claims 1 (lines 3, 5, 9, and 14), 2, 8, 9, 10, 17, 22, and 29 are objected to because of the following informalities: "selected from among" should be changed to a proper Markush term, "selected from the group consisting of," to maintain consistency with the previously allowed parent patents. Appropriate correction is required.

6. Claims 7 is objected to because of the following informalities: in claim 7, "Nor" should be changed to "N or." Appropriate correction is required.

7. Claim 15 is objected to because of the following informalities: "set forth in any of" should be changed to a proper Markush term, "selected from the group consisting of," to maintain consistency with the previously allowed parent patents. Appropriate correction is required.

Claim Rejections - 35 USC § 112(b)

8. The following is a quotation of 35 U.S.C. 112(b):
(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 17 and 34-35 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor (or for applications subject to pre-AIA 35 U.S.C. 112, the applicant), regards as the invention.

10. The term "modifications" in claim 17 is a relative term which renders the claim indefinite. It is unclear if "modifications" here holds the same definition as "modification"

in claim 1, where "modification" refers to "a modification at a position ... " Here in claim 17, however, it appears to be defined as any of the posttranslational modifications listed afterwards. For examining purposes, the term "modification" is interpreted as referring to the possible posttranslational modifications of the modified PH20 of claim 1. It is recommended to change "modifications" to "posttranslational modifications" for increased clarity.

11. The term “is modified” in claim 34 renders the claim indefinite. Claim 1 already recites a “modified PH20;” therefore, “is modified” should be changed to “is further modified” to increase clarity to mitigate any confusion between the usage of the similar terms.

12. The term “Fe domain” in claim 35 renders the claim indefinite. It is unclear what a “Fe domain” is, as it is not well-known in the art or defined in the specification. If “Fe” is a typographical error for “Fc domain”, then it should be changed to “Fc domain,” which is well-known in the art and cited in the specification as a multimerization domain on p. 37 at line 7.

Claim Rejections - 35 USC § 112(d)

13. The following is a quotation of 35 U.S.C. 112(d):

> (d) REFERENCE IN DEPENDENT FORMS.—Subject to subsection (e), a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

The following is a quotation of pre-AIA 35 U.S.C. 112, fourth paragraph:

> Subject to the following paragraph [i.e., the fifth paragraph of pre-AIA 35 U.S.C. 112], a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

14. Claims 8 and 15 rejected under 35 U.S.C. 112(d) or pre-AIA 35 U.S.C. 112, 4th paragraph, as being of improper dependent form for failing to further limit the subject matter of the claim upon which it depends, or for failing to include all the limitations of the claim upon which it depends. Claim 1 recites that the unmodified PH20 polypeptide **consists of** the amino acid sequence of SEQ ID NOs: 3, 7, and 32-66, whereas claim 8 recites that the unmodified polypeptide **comprises** SEQ ID NOs: 3 and 32-66. Since "comprises" is broader than "consisting of," claim 8 does not further limit claim 1. Regarding claim 15, the recitation of comprises SEQ ID NOs: 3, 32-66, 623, and 624 makes these claims broader than claim 1, and therefore, not further limiting. Applicant may cancel the claim(s), amend the claim(s) to place the claim(s) in proper dependent form, rewrite the claim(s) in independent form, or present a sufficient showing that the dependent claim(s) complies with the statutory requirements.

Double Patenting

15. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP § 2146 *et seq.* for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The filing of a terminal disclaimer by itself is not a complete reply to a nonstatutory double patenting (NSDP) rejection. A complete reply requires that the terminal disclaimer be accompanied by a reply requesting reconsideration of the prior Office action. Even where the NSDP rejection is provisional the reply must be complete. See MPEP § 804, subsection I.B.1. For a reply to a non-final Office action, see 37 CFR 1.111(a). For a reply to final Office action, see 37 CFR 1.113(c). A request for reconsideration while not provided for in 37 CFR 1.113(c) may be filed after final for consideration. See MPEP §§ 706.07(e) and 714.13.

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The actual filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/apply/applying-online/eterminal-disclaimer.

16. Claims 1-30 and 34-35 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1, 2, 4, 6-8, 10, 12-13, 19, 23, and 27 of U.S. Patent No.

10865400. Although the claims at issue are not identical, they are not patentably distinct from each other because the claims in '400 would anticipate the instant claims.

The instant claims in their broadest are drawn to a modified PH20 polypeptide with one or more amino acid modifications at **position 324** (claim 1) with some sequence identity to the PH20 polypeptide encoded in SEQ ID NOs: 3, 7, and 32-66 (claim 2). Additionally, dependent claims 3 and 5 recite increased resistance or stability and solubility. Claim 4 recites increased hyaluronidase activity. Dependent claims 6-16, 22-23, and 25-26 recite variation modifications to amino acid 324 in reference to SEQ ID NOs: 3 and 32-66. Dependent claims 17-19 recite an additional modification of PH20, where the modification can be N-linked glycosylation. Dependent claims 20-21 recite conjugation to a polymer. Dependent claims 24 and 27-30 recite the modified PH20 polypeptide comprising a pharmaceutical composition.

The claims in the '400 patent in their broadest are drawn to a modified PH20 polypeptide with an amino acid replacement at a number of positions, including 324, resulting in an increase in hyaluronidase activity compared to an unmodified PH20 polypeptide, where the reference PH20 is selected from SEQ ID NOs: 3, 7, 32-66 (claims 1, 2, 4, 6 and 13).

Dependent claims 7-8 recite additional modifications, such as N-linked glycosylation. Dependent claim 10 and 12 recite polymer conjugation. Dependent claims 19 and 23 recite a pharmaceutical composition comprising the modified PH20 polypeptide. Dependent claim 27 recites that the modified PH20 is soluble.

It is noted that the reference sequences, SEQ ID NOs: 3, 7, and 32-66 are identical between the two claim sets. Thus, the difference between the claims in the '400 claim set specifies a modified PH20 at a variety of different amino acids. This, however, will still anticipate the instant claims because position 324 can be selected from the amino acids to be modified.

17. Claims 1-30 and 34-35 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-3, 5-10, and 14-18 of copending Application No. 18/340,786.

Although the claims at issue are not identical, they are not patentably distinct from each other because the claims in '786 would anticipate the instant claims.

The instant claims in their broadest are drawn to a modified PH20 polypeptide with one or more amino acid modifications at position 324 with some sequence identity to the PH20 polypeptide encoded in SEQ ID NOs: 3, 7, and 32-66 (claims 1, 2, 7-15, 22-23, and 25-26). Additionally, dependent claim 4 recite increased hyaluronidase activity. Dependent claims 5 and 16 recite that the modified PH20 is soluble. Claim 6 recites that the amino acid replacement at 324 of PH20 is specifically D. Dependent claims 17-19 recite an additional modification of PH20, where the modification can be N-linked glycosylation. Dependent claims 24 and 27-30 recite the modified PH20 polypeptide comprising a pharmaceutical composition.

The claims in the '786 application in their broadest are drawn to a modified PH20 polypeptide with an amino acid replacement of N, R, or D at position 324 in SEQ ID NO: 3, and the mutant PH20 has some sequence identity to SEQ ID NO: 35 (claims 1-4), and the PH20 polypeptide is soluble (claim 7). Dependent claims 5-6 recite increased hyaluronidase activity. Dependent claims 8-10 recite additional modifications, such as N-linked glycosylation. Dependent claims 14-18 recite a pharmaceutical composition comprising the modified PH20 polypeptide.

It is noted that the reference sequences, SEQ ID NOs: 3 and 35 are identical between the two claim sets. Thus, the difference between the claims in the '786 claim set specifies a modified PH20 with reference polypeptide SEQ ID NO: 35, specifically. However, since the instant claim set recites the reference sequences, SEQ ID NOs: 3, 7, and 32-66, SEQ ID NO: 35 is included in the reference sequence choices.

Conclusion

All claims are rejected. Additionally, claims 1, 7, and 15 are objected to.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CIARA A MCKNIGHT whose telephone number is (703)756-4791. The examiner can normally be reached M-F 8:00am-4:30pm.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Manjunath Rao can be reached on (571) 272-0939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CIARA A MCKNIGHT/
Examiner, Art Unit 1656

/SUZANNE M NOAKES/
Primary Examiner, Art Unit 1656

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/068,418	Wei et al.
	Examiner	Art Unit
	CIARA A MCKNIGHT	1656

CPC - Searched*		
Symbol	Date	Examiner
C12N9/2474, A61P35/00, A61K9/0019, A61K38/28, A61K38/47, A61K4506, A61K47/10, C07K14/47, C12Q1/34, C12Y302/01035, Y02A50/30, A61K38/00, C07K2319/30, G01N2333/926, G01N2333/928		

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
PALM inventor name search, all inventors searched	04/18/2024	/CAM/
SEARCH inventor name and assignee search, all inventors searched	04/18/2024	/CAM/
SEARCH keyword search, see attached printouts for search strategy and databases searched	04/18/2024	/CAM/
PUBMED keyword search, see attached printout for strategy	04/18/2024	/CAM/
STIC sequence search	04/18/2024	/CAM/

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/068,418	Wei et al.
	Examiner	Art Unit
	CIARA A MCKNIGHT	1656

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

Attorney Docket No.: 33320.03087.US2E/3087K

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s)	:	Wei *et al.*	Art Unit	:	Not yet assigned
Serial No.	:	18/068,418	Examiner	:	Not yet assigned
Filed	:	December 19, 2022	Conf. No.	:	5769
			Cust. No.	:	13565
Title	:	**PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF**			

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT IN ACCORDANCE WITH 37 C.F.R. §§ 1.97-1.98

Dear Sir:

Because this Information Disclosure Statement is filed before the receipt of a First Office Action on the Merits for the above-captioned application, a fee is not required. If a fee for filing these papers is required, the Commissioner is authorized to charge the fee to Deposit Account No. 50-0911.

In accordance with the duty of disclosure imposed by 37 C.F.R. § 1.56 to inform the Patent Office of all information known by Applicant or Applicant's representative that may be material to the examination of the subject application, Applicant's representative hereby provides this Information Disclosure Statement that is prepared in accordance with 37 C.F.R. §§ 1.97-1.98. Forms PTO-1449 (25 pages) and copies of the cited non-U.S. patent documents listed thereon are provided herewith in connection with the above-captioned application. The documents cited comprise the references cited in the application and incorporated by reference, and any additional information of which those associated with the prosecution are aware.

In accordance with 37 C.F.R. § 1.98(d), copies of the references listed on the Forms PTO-1449 that are marked with a double asterisk (**) are not provided herewith as they have been previously provided in connection with U.S. Patent Application Serial No. 13/694,731, 15/226,489, 16/824,572, 17/327,568 and/or 17/327,586, which is relied upon for an earlier filing date in accordance with 35 U.S.C. § 120.

The documents cited on the Forms PTO-1449 are in the English Language with the exception of the items noted below. Item GB (CN 102065886A) is in the Chinese Language and an English Language equivalent is listed (Item GR). Item GI (JP 2007-153797) is in the Japanese Language and an English Language Abstract is listed (Item IM). Item GJ (KR 10-2020-0017538) is in the Korean Language and an English Language equivalent is listed (Item GG). Hence, in

CERTIFICATE OF TRANSMISSION VIA EFS-WEB
I hereby certify that this paper is being transmitted via the Electronic Filing System (EFS-WEB) to the United States Patent and Trademark Office on **March 16, 2023.**

/Anh Nguyen/
Anh Nguyen

accordance with the requirements of 37 C.F.R. § 1.98, no further explanation of the listed items is necessary.

Applicant also makes known to the Examiner the following pending U.S. Applications that have one or more common inventors and/or an owner in common.

Examiner's Initials	U.S.S.N.	Filing Date	Publ. No.	Publ. Date	Docket No.
	16/930,766	07/16/2020	2020/0368330	11/26/2020	3066D
	17/062,425	10/02/2020	2021/0023184	01/28/2021	3051M
	17/327,568	05/21/2021	2021/0284985	09/16/2021	3087E
	17/327,586	05/21/2021	2021/0277376	09/09/2021	3087F
	17/850,903	06/27/2022	2022/0372151	11/24/2022	3122B
	18/064,886	12/12/2022	n.a.	n.a.	3087G
	18/066,960	12/15/2022	n.a.	n.a.	3087H
	18/068,218	12/19/2022	n.a.	n.a.	3087I
	18/068,327	12/19/2022	n.a.	n.a.	3087J
	18/068,443	12/19/2022	n.a.	n.a.	3087L
	18/069,651	12/21/2022	n.a.	n.a.	3087M

Although these documents and applications are made known to the Patent and Trademark Office in compliance with Applicant's duty of disclosure, such disclosure is not to be construed as an admission by Applicant or Applicant's representative that any of the documents, singly or in any combination thereof, is effective as prior art against the subject application. In accordance with 37 C.F.R. §§ 1.97(g) and (h), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 C.F.R. § 1.56(b) exists.

Applicant respectfully requests that the Examiner review the foregoing documents and they be made of record in the file history of the above-captioned application.

Respectfully submitted,

/Stephanie Seidman/
Stephanie Seidman
Reg. No. 33,779

Attorney Docket No.: 33320.03087.US2E/3087K
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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /C.A.M./

/CIARA A MCKNIGHT/
04/19/2024

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	1484	((("WEI") near3 ("Ge")) OR (("SHEPARD") near3 ("H")) OR (("ZHAO") near3 ("Qiping")) OR (("CONNOR") near3 ("Robert"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/02 02:56 PM
L2	66	((("WEI") near3 ("Ge")) OR (("SHEPARD") near3 ("H")) OR (("ZHAO") near3 ("Qiping")) OR (("CONNOR") near3 ("Robert"))).INV. AND PH20	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/02 02:57 PM
L3	53	((("WEI") near3 ("Ge")) OR (("SHEPARD") near3 ("H")) OR (("ZHAO") near3 ("Qiping")) OR (("CONNOR") near3 ("Robert"))).INV. AND PH20	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/02/02 02:57 PM
L4	55	((("HALOZYME") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2024/02/02 02:59 PM

PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

Bibliographic Data

Application No: 18/068,418

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☐ No ☐ Met After Allowance

Verified and Acknowledged: /CIARA A MCKNIGHT/ Examiner's Signature | Initials

Title: PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
12/19/2022	424	1656	
RULE			

APPLICANTS

Halozyme, Inc., San Diego, CA, UNITED STATES

INVENTORS

Ge Wei, San Diego, CA, UNITED STATES

H. Michael Shepard,

Qiping Zhao,

Robert James Connor,

CONTINUING DATA

This application is a DIV of 17327568 05/21/2021

This application is a DIV of 17327586 05/21/2021

17327568 is a CON of 16912590 06/25/2020 PAT 11066656

17327586 is a CON of 16912590 06/25/2020 PAT 11066656

This application is a DIV of 16912590 06/25/2020 PAT 11066656

17327568 is a CON of 16824572 03/19/2020 PAT 11041149

17327586 is a CON of 16824572 03/19/2020 PAT 11041149

This application is a DIV of 16824572 03/19/2020 PAT 11041149

17327568 is a CON of 15226489 08/02/2016 PAT 10865400

16824572 is a CON of 15226489 08/02/2016 PAT 10865400

17327586 is a CON of 15226489 08/02/2016 PAT 10865400

16912590 is a CON of 15226489 08/02/2016 PAT 10865400

This application is a CON of 15226489 08/02/2016 PAT 10865400

This application is a DIV of 13694731 12/28/2012 PAT 9447401

15226489 is a DIV of 13694731 12/28/2012 PAT 9447401

16824572 is a DIV of 13694731 12/28/2012 PAT 9447401

16912590 is a DIV of 13694731 12/28/2012 PAT 9447401

17327586 is a CON of 13694731 12/28/2012 PAT 9447401

13694731 has PRO of 61796208 11/01/2012

13694731 has PRO of 61631313 12/30/2011

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

03/29/2023

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Search	Actions	Details	Query	Results	Time
#19	•••		Search: **hyaluronidase PH20 human modified**	9	09:31:51
#18	•••		Search: **hyaluronidase PH20 human**	121	09:29:04
#17	•••		Search: **hyaluronidase PH20 324**	0	09:28:53
#16	•••		Search: **hyaluronidase PH20 324 - Schema: all**	0	09:28:53
#15	•••		Search: **hyaluronidase PH20 treatment**	81	09:28:29
#14	•••		Search: **hyaluronidase PH20 C-terminal**	5	09:27:36
#13	•••		Search: **hyaluronidase PH20 protein**	150	09:27:25
#12	•••		Search: **hyaluronidase PH20 mutant therapy**	0	09:26:25
#11	•••		Search: **hyaluronidase PH20 mutant therapy - Schema: all**	0	09:26:25
#9	•••		Search: **hyaluronidase PH20 recombinant**	79	09:20:48
#10	•••		Search: **hyaluronidase PH20 reombinant - Spellcheck off**	0	09:20:44
#8	•••		Search: **hyaluronidase PH20 soluble**	15	09:20:14
#7	•••		Search: **hyaluronidase PH20 amino acid**	32	09:19:51
#2	•••		Search: **hyaluronidase PH20 mutant**	7	09:18:26
#6	•••		Search: **hyaluronidase PH20 antibody**	58	09:18:13

Search	Actions	Details	Query	Results	Time
#5	•••		Search: **hyaluronidase PH20 phamaceutical - Spellcheck off**	0	09:17:19
#4	•••		Search: **hyaluronidase PH20 pharmaceutical**	11	09:17:19
#3	•••		Search: **hyaluronidase PH20 therapy**	63	09:17:10
#1	•••		Search: **hyaluronidase PH20**	175	09:16:28

Showing 1 to 19 of 19 entries

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Search	Actions	Details	Query	Results	Time
#6	•••		Search: **Ge Wei PH20**	3	09:00:57
#5	•••		Search: **Robert Connor PH20**	5	09:00:18
#4	•••		Search: **Qiping Zhao**	56	08:59:59
#3	•••		Search: **Qiping Zhao PH20**	0	08:59:53
#2	•••		Search: **Qiping Zhao PH20 - Schema: all**	0	08:59:53
#1	•••		Search: **Michael Shepard PH20**	8	08:58:14

Showing 1 to 6 of 6 entries

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Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No. 33320.03087.US2E/3087K	Application No. 18/068,418
List of Patents and Publications for Applicant's Information Disclosure Statement		Inventor(s) Wei *et al.*	
(37 CFR §1.98(b))		Filing Date December 19, 2022	Group Art Unit Not yet assigned

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	AA	3,536,809	10/27/1970	Applezweig	424	28	02/17/1969
	AB	3,598,123	08/10/1971	Zaffaroni	128	268	04/01/1969
	AC	3,630,200	12/28/1971	Higuchi	128	260	06/09/1969
	AD	3,710,795	01/16/1973	Higuchi et al.	128	260	09/29/1970
	AE	3,845,770	11/05/1974	Theeuwes et al.	128	260	06/05/1972
	AF	3,916,899	11/04/1975	Theeuwes et al.	128	260	02/07/1974
	AG	4,002,531	01/11/1977	Royer	195	68	01/22/1976
	AH	4,008,719	02/22/1977	Theeuwes et al.	128	260	02/02/1976
	AI	4,044,126	08/23/1977	Cook et al.	514	180	07/09/1976
	AJ	4,179,337	12/18/1979	Davis et al.	435	181	07/28/1977
	AK	4,364,923	12/21/1982	Cook et al.	424	46	04/30/1981
	AL	4,414,209	11/08/1983	Cook et al.	514	180	06/13/1977
	AM	4,769,027	09/06/1988	Baker et al.	424	493	02/24/1987
	AN	4,952,496	08/28/1990	Studier et al.	435	91	12/29/1986
	AO	4,980,286	12/25/1990	Morgan et al.	435	371	01/03/1989
	AP	5,033,252	07/23/1991	Carter	53	425	07/30/1990
	AQ	5,052,558	10/01/1991	Carter	206	439	07/27/1990
	AR	5,059,595	10/22/1991	Le Grazie	424	468	03/20/1990
	AS	5,073,543	12/17/1991	Marshall et al.	514	21	07/21/1988
	AT	5,120,548	06/09/1992	McClelland et al.	424	473	11/07/1989
	AU	5,122,614	06/16/1992	Zalipsky	548	520	04/19/1990
	AV	5,323,907	06/28/1994	Kalvelage	206	531	03/15/1993
	AW	5,324,844	06/28/1994	Zalipsky	548	520	01/08/1992
	AX	5,446,090	08/29/1995	Harris	525	54.1	11/12/1993
	AY	5,591,767	01/07/1997	Mohr et al.	514	413	06/06/1995
	AZ	5,612,460	03/18/1997	Zalipsky	530	391.9	02/17/1994
	BA	5,639,476	06/17/1997	Oshlack et al.	424	468	06/02/1995
	BB	5,643,575	07/01/1997	Martinez et al.	424	194.1	10/27/1993
	BC	5,672,662	09/30/1997	Harris et al.	525	408	10/02/1995
	BD	5,674,533	10/07/1997	Santus et al.	424	493	05/26/1995
	BE	5,721,348	02/24/1998	Primakoff et al.	536	22.1	10/21/1991
	BF	5,733,566	03/31/1998	Lewis	424	426	10/30/1995
	BG	5,766,581	06/16/1998	Bartley et al.	424	85.1	03/30/1995
	BH	5,795,569	08/18/1998	Bartley et al.	424	85.1	10/12/1994
	BI	5,808,096	09/15/1998	Zalipsky	548	520	01/21/1997
	BJ	5,854,046	12/29/1998	Au-Young et al.	435	201	01/20/1998
	BK	5,900,461	05/04/1999	Harris	525	54.11	02/23/1998

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		Filing Date December 19, 2022	Group Art Unit Not yet assigned

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	BM	5,932,462	08/03/1999	Harris et al.	435	188	05/17/1995
	BN	5,958,750	09/28/1999	Au-Young et al.	435	201	07/03/1996
	BO	5,985,263	11/16/1999	Lee et al.	424	85.2	12/19/1997
	BP	5,990,237	11/23/1999	Bentley et al.	525	54.2	05/20/1998
	BQ	6,057,110	05/02/2000	Au-Young et al.	435	6	12/17/1998
	BR	6,113,906	09/05/2000	Greenwald et al.	424	194.1	12/29/1998
	BS	6,193,963	02/27/2001	Stern et al.	424	94.6	08/21/1997
	BT	6,214,966	04/10/2001	Harris	528	322	09/25/1997
	BU	6,258,351	07/10/2001	Harris	424	78.3	11/05/1997
	BV	6,340,742	01/22/2002	Burg et al.	530	351	06/28/2000
	BW	6,413,507	07/02/2002	Bentley et al.	424	78.02	12/23/1999
	BX	6,420,339	07/16/2002	Gegg et al.	514	12	10/14/1998
	BY	6,437,025	08/20/2002	Harris et al.	523	406	11/05/2001
	BZ	6,448,369	09/10/2002	Bentley et al.	528	425	11/05/1998
	CA	6,461,802	10/08/2002	Van Thillo et al.	430	336	07/31/2000
	CB	6,461,863	10/08/2002	Jarvis	435	320.1	11/29/1999
	CC	6,495,659	12/17/2002	Bentley et al.	528	425	12/20/2000
	CD	6,615,063	09/02/2003	Ntziachristos et al.	600	312	11/27/2000
	CE	6,737,505	05/18/2004	Bentley et al.	528	425	10/30/2002
	CF	6,828,401	12/07/2004	Nho et al.	526	333	10/29/2003
	CG	6,858,736	02/22/2005	Nho et al.	546	290	12/23/2002
	CH	7,105,330	09/12/2006	Stern et al.	435	200	07/18/2003
	CI	7,279,457	10/09/2007	Pohl et al.	514	3	03/11/2005
	CJ	7,585,940	09/08/2009	Skerra et al.	530	350	05/11/2006
	CK	7,767,429	08/03/2010	Bookbinder et al.	435	201	03/05/2004
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	CM	7,829,081	11/09/2010	Bookbinder et al.	424	94.62	03/04/2010
	CN	7,846,431	12/07/2010	Bookbinder et al.	424	94.62	03/04/2010
	CO	7,871,607	01/18/2011	Bookbinder et al.	424	094.620	02/23/2005
	CP	8,105,586	01/31/2012	Bookbinder et al.	424	94.3	06/15/2010
	CQ	8,187,855	05/29/2012	Baker et al.	435	201	11/09/2010
	CR	8,202,517	06/19/2012	Bookbinder et al.	424	094.620	02/20/2009
	CS	8,257,699	09/04/2012	Bookbinder et al.	424	094.620	12/15/2011
	CT	8,318,154	11/27/2012	Frost et al.	424	094.500	04/28/2009
	CU	8,343,487	01/01/2013	Baker et al.	424	094.620	03/13/2012
	CV	8,431,124	04/30/2013	Bookbinder et al.	424	94.62	04/16/2009

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	CW	8,431,380	04/30/2013	Bookbinder et al.	435	201	02/20/2009
	CX	8,450,470	05/28/2013	Bookbinder et al.	536	023.200	06/03/2009
	CY	8,568,713	10/29/2013	Frost et al.	424	094.500	05/18/2012
	CZ	8,580,252	11/12/2013	Bookbinder et al.	424	85.2	07/06/2012
	DA	8,765,685	07/01/2014	Bookbinder et al.	514	020.900	05/16/2012
	DB	8,772,246	07/08/2014	Bookbinder et al.	435	200	10/18/2012
	DC	9,284,543	03/15/2016	Wei et al.	435	201	02/21/2012
	DD	9,447,401	09/20/2016	Wei et al.	424	094.62	12/28/2012
	DE	9,913,822	03/13/2018	Maneval et al.	435	195	03/15/2013
	DF	10,016,491	07/10/2018	Bookbinder et al.	424	94.62	11/09/2015
	DG	10,328,130	06/25/2019	Frost et al.	424	094.620	02/22/2012
	DH	10,588,983	03/17/2020	Bookbinder et al.	435	069.100	02/23/2018
	DI	11,041,149	06/22/2021	Wei et al.	435	069.100	03/19/2020
	DJ	11,066,656	07/20/2021	Wei et al.	435	069.100	06/25/2020
	DK	2001/0021763	09/13/2001	Harris	528	75	04/02/2001
	DL	2001/0044526	11/22/2001	Shen	530	409	02/21/2001
	DM	2001/0046481	11/29/2001	Bentley et al.	424	78.18	04/21/2001
	DN	2002/0052430	05/02/2002	Harris et al.	523	406	11/05/2001
	DO	2002/0072573	06/13/2002	Bentley et al.	525	409	02/08/2002
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	DQ	2003/0017108	01/23/2003	Zamora et al.	424	001.490	04/30/2002
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	DU	2003/0220447	11/27/2003	Harris	528	322	12/12/2002
	DV	2004/0013637	01/22/2004	Bentley et al.	424	78.17	02/10/2003
	DW	2004/0235734	11/25/2004	Bossard et al.	514	12	02/26/2004
	DX	2004/0268425	12/30/2004	Bookbinder et al.	800	18	03/05/2004
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	DZ	2005/0114037	05/26/2005	Desjarlais et al.	702	19	09/30/2004
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	EI	2009/0123367	05/14/2009	Bookbinder et al.	424	001.490	10/09/2008
	EJ	2009/0181032	07/16/2009	Bookbinder at al.	424	141.1	02/20/2009
	EK	2009/0214505	08/27/2009	Bookbinder at al.	424	94.1	04/16/2009
	EL	2009/0253175	10/08/2009	Bookbinder at al.	435	69.1	06/03/2009
	EM	2009/0304665	12/10/2009	Frost et al.	424	94.5	04/28/2009
	EN	2009/0305982	12/10/2009	Jensen et al.	435	069.100	06/11/2009
	EO	2009/0311237	12/17/2009	Frost	424	094.620	04/14/2009
	EP	2010/0003238	01/07/2010	Frost et al.	424	94.62	04/14/2009
	EQ	2010/0074885	03/25/2010	Schiff et al.	424	130.100	03/16/2009
	ER	2010/0143457	06/10/2010	Wei et al.	424	450	12/09/2009
	ES	2010/0172892	07/08/2010	Uvarkina et al.	424	94.62	12/15/2009
	ET	2011/0053247	03/03/2011	Baker et al.	435	201	11/09/2010
	EU	2011/0066111	03/17/2011	Teschner et al.	514	183	09/16/2010
	EV	2011/0152359	06/23/2011	Bookbinder et al.	435	200	12/21/2010
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	EX	2012/0093770	04/19/2012	Bookbinder et al.	424	094.620	12/15/2011
	EY	2012/0148555	06/14/2012	Bookbinder et al.	435	200	12/28/2011
	EZ	2012/0171153	07/05/2012	Frost et al.	424	94.62	02/22/2012
	FA	2012/0213767	08/23/2012	Wei et al.	424	450	02/21/2012
	FB	2012/0251517	10/04/2012	Frost et al.	424	094.500	05/18/2012
	FC	2012/0251620	10/04/2012	Bookbinder et al.	424	450	05/16/2012
	FD	2012/0294830	11/22/2012	Bookbinder et al.	424	85.2	07/06/2012
	FE	2013/0011378	01/10/2013	Yang et al.	424	094.300	06/15/2012
	FF	2013/0022588	01/24/2013	Yang et al.	424	094.300	06/15/2012
	FG	2013/0022592	01/24/2013	Vaughn et al.	424	094.620	06/15/2012
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	FI	2013/0071394	03/21/2013	Troyer et al.	435	071.100	09/14/2012
	FJ	2013/0101577	04/25/2013	Wei et al.	424	450	02/21/2012
	FK	2013/0202583	08/08/2013	Jiang et al.	424	094.620	10/24/2012
	FL	2013/0251786	09/26/2013	Li et al.	424	094.620	02/19/2013
	FM	2013/0302275	11/14/2013	Wei et al.	424	094.620	12/28/2012
	FN	2013/0302400	11/14/2013	Maneval et al.	435	195	03/15/2013
	FO	2014/0037613	02/06/2014	Bookbinder et al.	424	094.620	09/25/2013
	FP	2014/0105824	04/17/2014	Shepard et al.	424	009.200	10/16/2013
	FQ	2014/0135682	05/15/2014	Frost et al.	424	094.500	09/24/2013
	FR	2014/0199282	07/17/2014	Bookbinder et al.	435	200	02/26/2014

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	FT	2016/0362670	12/15/2016	Wei et al.	424	094.620	08/02/2016
	FU	2017/0290796	10/12/2017	Maneval et al.	435	195	06/16/2017
	FV	2019/0336587	11/07/2019	Frost et al.	424	78.17	05/21/2019
	FW	2020/0255814	08/13/2020	Wei et al.	435	069.100	03/19/2020
	FX	2020/0318091	10/08/2020	Wei et al.	424	094.620	06/25/2020
	FY	2020/0368330	11/26/2020	Frost et al.	424	078.170	07/16/2020
	FZ	2021/0277376	09/09/2021	Wei et al.	424	094.620	05/21/2021
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	GC**	EP 0400472	12/05/90	EP		
	GD**	EP 0822199	09/22/04	EP		
	GE**	EP 1064951	08/22/07	EP		
	GF**	EP 3130347	09/18/19	EP		
	GG**	EP 3636752	04/15/20	EP		
	GH**	EP 3785701	03/03/21	EP		
	GI**	JP 2007-153797	06/21/07	JP		X** (Item IM)
	GJ**	KR 10-2020-0017538	02/18/20	KR		X (Item GG)
	GK**	WO 1992/16640	10/01/92	WIPO		
	GL**	WO 1994/028024	12/08/94	WIPO		
	GM**	WO 2000/002017	01/13/00	WIPO		
	GN**	WO 2001/087925	11/22/01	WIPO		
	GO**	WO 2002/049673	06/27/02	WIPO		
	GP**	WO 2004/056312	07/08/04	WIPO		
	GQ**	WO 2005/000360	01/06/05	WIPO		
	GR**	WO 2009/128917	10/22/09	WIPO		
	GS**	WO 2009/134380	11/05/09	WIPO		
	GT**	WO 2010/077297	07/08/10	WIPO		

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	GV**	WO 2012/136768	10/11/12	WIPO		
	GW**	WO 2012/174478	12/20/12	WIPO		
	GX**	WO 2013/102144	07/04/13	WIPO		
	GY**	WO 2015/003167	01/08/15	WIPO		

** = Copies not provided herewith as they have been previously provided in connection with U.S. Patent Application Serial No. 13/694,731, 15/226,489, 16/824,572, 17/327,568 and/or 17/327,586, which are relied upon for an earlier filing date in accordance with 35 U.S.C. §120.
X* = An English language equivalent has been previously provided in connection with U.S. Serial No. 13/694,731.
X** = An English Abstract (Item IM) for Japanese Publication No. JP 2007-153797 has been previously provided in connection with with U.S. Serial No. 13/694,731.
X = An English language equivalent has been previously provided in connection with U.S. Serial No. 15/226,489.

Other Documents (include Author, Title, Date, and Place of Publication)

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	GZ	Letter/Written Disclosure of the Information Disclosure Statement for the above-referenced application, filed herewith on March 16, 2023, 2 pages.
	HA**	Adams, G.E. and I.J. Stratford, "Bioreductive drugs for cancer therapy: the search for tumor specificity," Int. J. Radiat. Oncol. Biol. Phys., 29(2): 231-238 (1994).
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	ID**	Conserved domain search from US Application No. 10/795,095 of SEQ ID NO:6, Primakoff et al. US 5,721,348, performed on the NCBI website on August 5, 2008.
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	IJ**	De Salegui et al., "A Comparison of Serum and Testicular Hyaluronidase," Arch. Biochem. Biophys. 121:548-554 (1967).
	IK**	De Boer et al., "The *tac* promoter: a functional hybrid derived from the *trp* and *lac* promoters," Proc. Natl. Acad. Sci. USA 80:21-25 (1983).
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	IR**	Ernst et al., "Enzymatic degradation of glycosaminoglycans," Crit. Rev. Biochem. Mol. Biol. 30(5):387-444 (1995).
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	JU**	Herrera-Estrella et al., "Expression of chimaeric genes transferred into plant cells using a Ti-plasmid-derived vector," Nature 303:209-213 (1983).
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	JW**	Hibi et al., "Chondroitinase C activity of *Streptococcus intermedius*," FEMS Microbiol. Lett. 57(2):121-124 (1989).
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	JZ**	Hooper, N. M., "Determination of glycosyl-phosphatidylinositol membrane protein anchorage" Proteomics 1:748-755 (2001)
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	KR**	Krupers et al., "Complexation of poly(ethylene oxide) with poly(acrylic acid-co-hydroxyethyl methacrylate)s," Eur. Polym J. 32(6):785-790 (1996).
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	LN**	Maa and Hsu, "Aggregation of recombinant human growth hormone induced by phenolic compounds," Int. J. Pharm. 140(2):155-168 (1996).
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	LU**	Mehvar, R., "Modulation of the pharmacokinetics and pharmacodynamics of proteins by polyethylene glycol conjugation," J. Pharm. Pharmaceut. Sci. 3(1):125-136 (2000).
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	MD**	Monfardini et al., "A branched monomethoxypoly(ethylene glycol) for protein modification," Bioconjugate Chem. 6:62-69 (1995).
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	MF**	Nakayama et al., "CD15 expression in mature granulocytes is determined by α1,3-fucosyltransferase IX, but in promyelocytes and monocytes by α1,3-fucosyltransferase IV," J. Biol. Chem. 276(19):16100-16106 (2001).
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	MI**	Nekoroski et al., "A recombinant human hyaluronidase sustained release gel for the treatment of post-surgical edema," Int. J. Dermatol. 53(6):777-785 (2014).
	MJ**	Omaetxebarria et al., "Computational approach for identification and characterization of GPI-anchored peptides in proteomics experiments," Proteomics 7(12):1951-1960 (2007).

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	MK**	Ornitz et al., "Elastase I promoter directs expression of human growth hormone and SV40 T antigen genes to pancreatic acinar cells in transgenic mice," Cold Spring Harbor Symp. Quant. Biol. 50:399-409 (1985).
	ML**	Ostresh et al., "Peptide libraries: determination of relative reaction rates of protected amino acids in competitive couplings," Biopolymers 34:1681-1689 (1994).
	MM**	Padavattan, S., "Crystal structure determination of hyaluronidase : a major bee venom allergen, in complex with an IgG Fab fragment and purification and biophysical characterization of bovine testes hyaluronidase," 2006, PhD Thesis, University of Basel, Faculty of Science. DOI: 10.5451/unibas-004349798, 101 pages.
	MN**	Paul, A. and D. Sochart, "Improving the results of ganglion aspiration by the use of hyaluronidase," J. Hand Surg. 22B(2):219-221 (1997).
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	MP**	Pawlowski et al., "The effects of hyalurodinase upon tumor formation in BALB/c mice painted with 7,12-dimethylbenz-(α)anthracene," Int. J. Cancer 23:105-109 (1979).
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	MU**	Pinkert et al., "An albumin enhancer located 10 kb upstream functions along with its promoter to direct efficient, liver-specific expression in transgenic mice," Genes and Devel. 1:268-276 (1987).
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	NA**	Remmele et al., "Interleukin-1 receptor (IL-1R) liquid formulation development using differential scanning calorimetry," Pharm. Res. 15(2):200-208 (1998).
	NB**	Rhodes et al., "Transformation of maize by electroporation of embryos," Methods Mol Biol 55:121-131 (1995).
	NC**	Richmond, T., "Precompiled codon-usage tables," Genome Biology 1:reports 241(2000).
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	NF**	Ropponen et al., "Tumor Cell-associated Hyaluronan as an Unfavorable Prognostic Factor in Colorectal Cancer," Cancer Research 58:342-347 (1998).
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	NJ**	Sawhney et al., "Bioerodible hydrogels based on photopolymerized poly(ethylene glycol)-co-poly(α-hydroxy acid) Diacrylate Macromers," Macromolecules 26:581-587 (1993).
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	NV**	Shimizu, Y. and H. Yoshikura, "Multicycle infection of hepatitis C virus in cell culture and inhibition by alpha and beta interferons," J. Virol. 68:8406-8408 (1994).
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	ON**	Tung et al., "Mechanism of infertility in male guinea pigs immunized with sperm PH-20," Biol. Reprod. 56(5):1133-1141 (1997).
	OO**	Udenfriend, S. and Kodukula, K., "Prediction of ω site in nascent precursor of glycosylphosphatidylinositol protein," Methods Enzymol. 250:571-582 (1995).
	OP**	UniProt Murine PH20 sequence Retrieved from: <uniprot.org/uniprot/P48794, [retrieved on August 02, 2010], 5 pages.
	OQ**	United States Pharmacopeia. USP <51>. Antimicrobial effectiveness testing. United States Pharmacopeia Convention, Inc, Rockville, MD.Retreived from: <http://www.pharmacopeia.cn/v2920/usp29nf24s0_c51.html, [retreived on Apr. 02, 2013], 5 pages.
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	OX**	Watson et al., Molecular Biology of the Gene, 4th Edition, The Benjamin/Cummings Pub. Co., Menlo Park, CA, p. 224 (1987).
	OY**	Weiss et al., "Activities of monomeric insulin analogs at position A8 are uncorrelated with their thermodynamic stabilities," J. Biol. Chem. 276(43):40018-40024 (2001).
	OZ**	Wells, J.A., "Additivity of Mutational Effects in Proteins," Biochem. 29(37):8509-8517 (1990).
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	PC**	Wigler et al., "Transformation of mammalian cells with an amplifiable dominant-acting gene," Proc. Natl. Acad. Sci. USA 77:3567-3570 (1980).
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	PE**	Yamane-Ohnuki et al., "Establishment of FUT8 knockout Chinese hamster ovary cells: an ideal host cell line for producing completely defucosylated antibodies with enhanced antibody-dependent cellular cytotoxicity," Biotech. Bioeng. 87:614-622 (2004).
	PF**	Yang, X. and X. Yu, "An introduction to epitope prediction methods and software," Rev. Med. Virol. 19(2):77-96 (2009).
	PG**	Yocum et al., "Assessment and Implication of the Allergic Sensitivity to a Single Dose of Recombinant Human Hyaluronidase Injection: A Double-Blind, Placebo-Controlled Clinical Trial," J. Infus. Nursing. 30:293-299 (2007).
	PH**	Yudin et al., "Characterization of the active site of monkey sperm hyaluronidase," Reproduction 121(5):735-743 (2001).
	PI**	Zalipsky, S., "Chemistry of polyethylene glycol conjugates with biologically active molecules," Adv. Drug Del. Rev. 16:157-182 (1995).
	PJ**	Zanker et al., "Induction of response in previous chemotherapy resistant patients by hyaluronidase," Proc. Amer. Assoc. Cancer Res. 27:390 Abstract 1550 (1986).
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	PL**	Zhao, X. and J. Harris, "Novel degradable poly(ethylene glycol) esters for drug delivery," in Chapter 28: Poly(ethylene glycol), ACS Symposium Series , Vol. 680, Harris, J. and Zalipsky, S., (eds), 458-472 (1997).
	PM**	Bee et al., "Recombinant human PH20 is well tolerated at higher intravenous and subcutaneous doses in cynomolgus monkeys," EUFEPS 2008, Munich, Germany. Abstract, 2 pages.

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	PO**	Bookbinder et al., "Biochemical characterization of recombinant human PH20 (SPAM1) hyaluronidase," Hyaluronan (ISHAS) 2007, Charleston, SC. Abstract, 1 page.
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	PX**	Haller et al., "Enhanze Technology – A Revolution in Drug Dispersion," Biotechnology Industry Organization (BIO) Annual Meeting, June 19-22, 2005, Philadelphia, PA. Abstract, 3 pages.
	PY**	Haller et al., "Recombinant Human Hyaluronidase for the Interstitial Transport of Therapeutics," American Association of Pharmaceutical Scientists Conference, June 2006, San Antonio, TX. Abstract, 2 pages.
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	QB**	Haller et al., "The Effects of Recombinant Human Hyaluronidase on Drug Dispersion," American Association of Pharmaceutical Scientists Annual Meeting, Nashville, TN, Abstract in AAPS Journal 7(S2) May 5, 2005; 3 pages.
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	QD**	Haller, "Focus on Enhanced and Innovative Recombinant Human Enzymes," Japanese Export Trade Organization, September 2004, Chicago, IL. PRESENTATION, 16 pages.
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	QF**	Haller, M., "Enzyme-facilitated Parenteral Drug Transport." Strategic Research Institute's 10th Anniversary Drug Delivery Technology and Deal-making Summit, 2005 New Brunswick, NJ. Presentation, 24 pages.

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	QG**	Hofer et al., "Human recombinant hyaluronidase increases the convection of molecules up 0.2 μm in athymic nude mice," J. Am. Assoc. Lab. Animal Sci., 45(4):120, abstract P97 (2006).
	QH**	Hofer et al., "Human Recombinant Hyaluronidase (rHuPh20) Increases the Convection of Molecules up to 0.2 μm in Athymic Nude Mice," American Association for Laboratory Animal Science, 2006, Salt Lake City, UT. Poster P97, 1 page.
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	QL**	Kodandapani et al., "Diverse Structural and Functional Roles of N-glycosylations on rHuPH20," Glycan Abstract, 1 page (2009).
	QM**	Morrow et al., "Human Hyaluronidase Coinjection Accelerates Insulin Pharmacokinetics and Glucodynamics of 3 Rapid Insulin Analogs," American Diabetes Association Scientific Sessions, held on June 28, 2010 in Orlando, FL., Abstract # 353-OR, 2 pages.
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	QO**	Nagy et al., "Prospective, randomized study on bovine and recombinant human (Cumulase®) Hyaluronidases," American Society of Reproductive Medicine, 2006, New Orleans, LA, 06-A-886-ASRM, Abstract O-213.
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	QQ**	Halozyme Therapeutics, Inc., "PEGPH20: The Science & The Strategy," presented at J. P. Morgan Healthcare Conference on Jan. 7, 2015. Presentation. 81 pages.
	QR**	Pinkstaff et al., "Recombinant Human Hyaluronidase for Drug and Fluid Dispersion," American Association of Pharmaceutical Scientists Annual Meeting, November 2006, Boston, MA, Abstract, 2 pages.
	QS**	Pinkstaff et al., "Recombinant Human Hyaluronidase for Drug and Fluid Dispersion," American Association of Pharmaceutical Scientists Annual Meeting, November 2006, Boston, MA, Poster and individual panels, 8 pages.
	QT**	Stelzer, L., "Platforms for Growth: Building a Premier Oncology Biotech," Presented at the Canaccord Genuity 38th Annual Growth Conference on Aug. 09, 2018, 24 pages.
	QU**	Torley, H., "Halozyme Therapeutics, Inc. The next chapter begins: creating value through growth," Presented at the 32nd Annual J.P. Morgan Healthcare Conference January 2014, 26 pages.
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	QW**	Wei et al., "Structure function analysis of the human hyaluronidase enzymes," Matrix Biology 27 (Supplement 1):S41, December 2008, American Society for Matrix Biology (ASMB) Biennial Meeting, San Diego, CA, (available on-line November 17, 2008), ABSTRACT 132 (corresponding to poster B4), 2 pages.
	QX**	Wei et al., "Structure function analysis of the human hyaluronidase enzymes," Presented at American Society for Matrix Biology (ASMB) Biennial Meeting, San Diego, CA, December 9, 2008. Poster B4 and individual panels, 5 pages.
	QY**	Wilson, M.S., "Enhanze Technology – An Enzymatic Drug Delivery System (DDS)," Japanese Export Trade Organization, November 2005, Santa Clara, CA. Oral presentation, 22 pages.
	QZ**	News Release, "Halozyme Announces Presentation Of Clinical Data At The American Diabetes Association 74th Scientific Sessions," Published on 06-15-2014 [online][retrieved on 08-18-2014] Retrieved from the internet: <URL: halozyme.com/Investors/News-Releases/News-Release-Details/2014/Halozyme-Announces-Presentation-Of-Clinical-Data-At-The-American-Diabetes-Association-74th-Scientific-Sessions/default.aspx [3 pages].
	RA**	News Release, Halozyme Therapeutics, Inc "Halozyme Licenses New Enhanze Target For $30 Million Upfront Payment, Future Milestones And Royalties," Published Sept. 14, 2017 [online] Retrieved from:<URL: halozyme.com/investors/news-releases/news-release-details/2017/Halozyme-Licenses-New-Enhanze-Target-For-30-Million-Upfront-Payment-Future-Milestones-And-Royalties/default.aspx [retrieved on 09-14-17], 3 pages.
	RB**	News Release, Halozyme Therapeutics, Inc., "Bristol-Myers Squibb and Halozyme Enter Global Collaboration and License Agreement for ENHANZE Technology," Published Sept. 14, 2017 [online] Retrieved from:<URL: halozyme.com/investors/news-releases/news-release-details/2017/Bristol-Myers-Squibb-and-Halozyme-Enter-Global-Collaboration-and-License-Agreement-for-ENHANZE-Technology/default.aspx [Retrieved on Sept. 14, 2017], 7 pages.
	RC**	News Release, "Bristol, Roche tap Halozyme for tech platform," Published September 14, 2017 [online] Retrieved from:<URL: biopharmadive.com/news/bristol-roche-tap-halozyme-for-tech-platform/504958/ [retrieved on 09-18-17], 3 pages.
	RD**	News Article, "Alteogen Inc. to Develop Herceptin Biosimilar for Subcutaneous Injection," Published on Aug. 23, 2018 [online] Retrieved from: <URL:thebell.co.kr/free/Content/ArticleView.asp?key=201808220100037100002360 [Original documents retrieved from the internet and English translation], 4 pages.
	RE**	News Article, "[Promising biocompany] Alteogen Inc. tries to differentiate itself with specialized bio technology and strategy," Published on Sept. 17, 2018 [online] Retrieved from: <URL:edaily.co.kr/news/read?newsId=01105366619341104&mediaCodeNo=257&OutLnkChk=Y [Original documents retrieved from the internet and English translation], 4 pages.
	RF**	News Release, Halozyme Therapeutics, Inc., "Halozyme Publication In The Journal Clinical Cancer Research Highlights New Nonclinical Data Supporting Multiple Effects Of PEGPH20 On The Tumor Microenvironment," Published Oct. 04, 2018 [online] Retrieved from:<URL: halozyme.com/investors/news-releases/news-release-details/2018/Halozyme-Publication-In-The-Journal-Clinical-Cancer-Research-Highlights-New-Nonclinical-Data-Supporting-Multiple-Effects-Of-PEGPH20-On-The-Tumor-Microenvironment/default.aspx [retrieved on Oct. 05, 2018], 4 pages.
	RG**	News Article, "Alteogen, Inc. challenges to the ethical drug market by utilizing 'Human Hyaluronidase'," Published on Oct. 29, 2018 [online] Retrieved from: <URL:fnnews.com/news/201810290941498520 [Original documents retrieved from the internet and English translation], 6 pages.

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Substitute Form PTO-1449 (Modified) U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No. 33320.03087.US2E/3087K	Application No. 18/068,418
List of Patents and Publications for Applicant's Information Disclosure Statement (37 CFR §1.98(b))	Inventor(s) Wei *et al.*	
	Filing Date December 19, 2022	Group Art Unit Not yet assigned

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	RH**	News Article, "Alteogen names bio drug business development expert Arun Swaminathan as new CBO," Published on Dec. 19, 2018 [online] Retrieved from: <URL:biospectator.com/view/news_view.php?varAtcId=6825 [Original documents retrieved from the internet and English translation], 7 pages.
	RI**	News Article, "Maximizing patient convenience by changing intravenous injection to subcutaneous injection … Alteogen expects increased exports of the technology this year," Published on Jan. 20, 2019 [online] Retrieved from: <URL:http://news.hankyung.com/article/2019012023181 [Original documents retrieved from the internet and English translation], 5 pages.
	RJ**	News Release, Halozyme Therapeutics, Inc., "Halozyme Announces Actions To Focus Strategy On ENHANZE® Drug Delivery Technology," Published Nov. 04, 2019 [online], Retrieved from: <URL: halozyme.com/investors/news-releases/news-release-details/2019/Halozyme-Announces-Actions-To-Focus-Strategy-On-ENHANZE-Drug-Delivery-Technology/default.aspx [retrieved on Nov. 11, 2019], 4 pages.
	RK**	News Release, Halozyme Therapeutics, Inc., "Halozyme Announces HALO-301 Phase 3 Study Fails To Meet Primary Endpoint," Published Nov. 04, 2019 [online], Retrieved from: <URL: halozyme.com/investors/news-releases/news-release-details/2019/Halozyme-Announces-HALO-301-Phase-3-Study-Fails-To-Meet-Primary-Endpoint/default.aspx [retrieved on Nov. 11, 2019], 3 pages.
	RL**	News Article, "Alteogen files a PCT application for subcutaneous pharmaceutical composition," Published on Mar. 24, 2020 [online], retrieved from <URL: medipana.com/news/news_viewer.asp?NewsNum=254556&MainKind=A&NewsKind=5&vCount=12&vKind [retrieved on Mar. 26, 2020] [Original documents retrieved from the internet and English translation], 2 pages.
	RM**	News Article, "MK biotech publishes an article demonstrating the safety of Alteogen's human hyaluronidase (ALT-B4) in germ cells," Published on Apr. 29, 2021 [online], retrieved on Aprl. 29, 2021 from <URL:news.heraldcorp.com/view.php?ud=20210429000267 [Original article in Korean and English translation], 3 pages.
	RN**	Invitation to Pay Additional Fees, sent by facsimile Sept. 9, 2013, in connection with International Patent Application No. PCT/US2012/072182, 6 pages.
	RO**	International Search Report and Written Opinion, mailed Dec. 17, 2013, in connection with International Patent Application No. PCT/US2012/072182, 18 pages.
	RP**	Response, dated March 17, 2014, to Written Opinion, mailed Dec. 17, 2013, in connection with International Patent Application No. PCT/US2012/072182, 94 pages.
	RQ**	Second Written Opinion, mailed May 21, 2014, in connection with International Patent Application No. PCT/US2012/072182, 8 pages.
	RR**	Response, dated July 21, 2014, to second Written Opinion, mailed May 21, 2014, in connection with International Patent Application No. PCT/US2012/072182, 72 pages.
	RS**	Second Written Opinion, mailed July 30, 2014, in connection with International Patent Application No. PCT/US2012/072182, 9 pages.
	RT**	Response, dated Sept. 1, 2014, to second Written Opinion, mailed July 30, 2014, in connection with International Patent Application No. PCT/US2012/072182, 73 pages
	RU**	International Preliminary Report on Patentability, mailed Sept. 12, 2014, in connection with International Patent Application No. PCT/US2012/072182, 11 pages.
	RV**	Office Action, mailed November 2, 2015, in connection with U.S. Patent Application Serial No. 13/694,731, 14 pages.
	RW**	Response, filed April 20, 2016, to Office Action, mailed November 2, 2015, in connection with U.S. Patent Application Serial No. 13/694,731, 43 pages.

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		Filing Date December 19, 2022	Group Art Unit Not yet assigned

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	RX**	Notice of Allowance, mailed May 20, 2016, in connection with U.S. Patent Application Serial No. 13/694,731, 16 pages.
	RY**	Office Action, issued May 15, 2019, in connection with U.S. Patent Application No. 15/226,489, 16 pages.
	RZ**	Response, filed Oct. 15, 2019, to Office Action, issued May 15, 2019, in connection with U.S. Patent Application No. 15/226,489, 30 pages.
	SA**	Office Action, issued Jan. 23, 2020, in connection with U.S. Patent Application No. 15/226,489, 19 pages.
	SB**	Response, filed Apr. 24, 2020, to Office Action, issued Jan. 23, 2020, in connection with U.S. Patent Application No. 15/226,489, 25 pages.
	SC**	Notice of Allowance, issued Jul. 16, 2020, in connection with U.S. Patent Application No. 15/226,489, 13 pages.
	SD**	Office Action, issued Oct. 27, 2020, in connection with U.S. Patent Application No. 16/824,572, 9 pages.
	SE**	Response, filed Jan. 27, 2021, to Office Action, issued Oct. 27, 2020, in connection with U.S. Patent Application Serial No. 16/824,572, 23 pages.
	SF**	Notice of Allowance, mailed Feb. 18, 2021, and Examiner-Initiated Interview Summary, summarizing the interview held on Feb. 10, 2021, issued in connection with U.S. Patent Application Serial No. 16/824,572, 10 pages.
	SG**	Non-final Office Action, issued Dec. 09, 2020, in connection with U.S. Patent Application No. 16/912,590, 12 pages.
	SH**	Response, filed Mar. 17, 2021, to Non-final Office Action, issued Dec. 09, 2020 in connection with U.S. Patent Application No. 16/912,590, 24 pages.
	SI**	Notice of Allowance, issued Apr. 14, 2021, and Examiner-Initiated Interview Summary, of interview conducted Apr. 08, 2021, in connection with U.S. Patent Application No. 16/912,590, 10 pages.
	SJ**	Examination Report, issued Jan. 13, 2017, in connection with Australian Patent Application No. 2012362141, 3 pages.
	SK**	Response, filed Aug. 14, 2017, to Examination Report, issued Jan. 13, 2017, in connection with Australian Patent Application No. 2012362141, 43 pages.
	SL**	Notice of Acceptance, dated Sept. 11, 2017, issued in connection with Australian Patent Application No. 2012362141, 3 pages.
	SM**	Office Action (claims deemed allowable), dated Oct. 19, 2018, issued in connection with Australian Patent Application No. 2017245352, 7 pages.
	SN**	Notice of Acceptance, issued Jul. 17, 2019, in connection with Australian Patent Application No. 2017245352, 3 pages.
	SO**	Preliminary Office Action, issued April 14, 2021, in connection with Brazilian Patent Application No. BR112014016195-0 [Machine generated English translation and Office Action as issued in Portuguese], 11 pages.
	SP**	Response, filed Jul. 26, 2021, to Preliminary Office Action, published April 27, 2021, in connection with Brazilian Patent Application No. BR112014016195-0 [English instructions for Response and Response as filed in Portuguese], 111 pages.
	SQ**	Office Action, dated June 09, 2022 and published on July 26, 2022, in connection with Brazilian Patent Application No. BR 112014016195-0 [Machine generated English translation and Office Action as issued in Portuguese], 10 pages.

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List of Patents and Publications for Applicant's Information Disclosure Statement (37 CFR §1.98(b))		Inventor(s) Wei *et al.*	
		Filing Date December 19, 2022	Group Art Unit Not yet assigned

Other Documents (include Author, Title, Date, and Place of Publication)		
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	SR**	Response, filed October 24, 2022, to Official Action, dated June 09, 2022 and published on July 26, 2022, in connection with Brazilian Patent Application No. BR 112014016195-0 [English instructions for Response and Response as filed in Portuguese], 57 pages.
	SS	Office Action, dated November 10, 2022 and published on Dec. 06, 2022, in connection with Brazilian Patent Application No. BR 112014016195-0 [Machine generated English translation and Office Action as issued in Portuguese], 6 pages.
	ST	Response, filed February 06, 2023, to Office Action, dated November 10, 2022 and published on Dec. 06, 2022, in connection with Brazilian Patent Application No. BR 112014016195-0 [English instructions for Response and Response as-filed in Portuguese], 33 pages.
	SU**	Office Action, dated June 09, 2022 and published on July 26, 2022, in connection with Brazilian Patent Application No. BR 122021016549-1 [Machine generated English translation and Office Action as issued in Portuguese], 8 pages.
	SV**	Response, filed October 24, 2022, to Official Action, dated June 09, 2022 and published on July 26, 2022, in connection with Brazilian Patent Application No. BR 122021016549-1 [English instructions for Response and Response as filed in Portuguese], 101 pages.
	SW	Office Action, dated Nov. 11, 2022 and published on Dec. 06, 2022, in connection with Brazilian Patent Application No. BR 122021016549-1 [Machine generated English translation and Office Action as issued in Portuguese], 8 pages.
	SX	Response, filed March 06, 2023, to Office Action, dated Nov. 11, 2022 and published on Dec. 06, 2022, in connection with Brazilian Patent Application No. BR 122021016549-1 [English instructions for Response and Response as filed in Portuguese], 170 pages.
	SY**	Examiner's Report, issued March 1, 2016, in connection with Canadian Patent Application No. 2861919, 7 pages.
	SZ**	Response, filed July 14, 2016, to Examiner's Report, issued March 1, 2016, in connection with Canadian Patent Application No. 2861919, 37 pages.
	TA**	Examiner's Report, issued Jan. 24, 2017, in connection with Canadian Patent Application No. 2861919, 4 pages.
	TB**	Response, filed July 24, 2017, to Examiner's Report, issued Jan. 24, 2017, in connection with Canadian Patent Application No. 2861919, 26 pages.
	TC**	Examiner's Report, issued Jan. 23, 2018, in connection with Canadian Patent Application No. 2861919, 4 pages.
	TD**	Response, filed Jun. 21, 2018, to Examiner's Report, dated Jan. 23, 2018, issued in connection with Canadian Patent Application No. 2861919, 39 pages.
	TE**	Notice of Allowance, dated Dec. 12, 2018, issued in connection with Canadian Patent Application No. 2861919, 1 page.
	TF**	Office Action, issued May 25, 2015, in connection with Chinese Patent Application No. 201280070954.9 [English language translation and original document in Chinese], 7 pages.
	TG**	Response, filed Oct. 9, 2015, to Office Action, issued May 25, 2015, in connection with Chinese Patent Application No. 201280070954.9 [English instructions and document as filed in Chinese], 37 pages.
	TH**	Office Action, issued Feb. 3, 2016, in connection with Chinese Patent Application No. 201280070954.9 [English language translation and original document in Chinese], 6 pages.
	TI**	Response, filed June 20, 2016, to Office Action, issued Feb. 3, 2016, in connection with Chinese Patent Application No. 201280070954.9 [English language instructions, document as filed in Chinese and claims, as filed, in English], 58 pages.

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	Filing Date December 19, 2022	Group Art Unit Not yet assigned

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	TJ**	Office Action, issued Oct. 17, 2016, in connection with Chinese Patent Application No. 201280070954.9 [English language translation and original document in Chinese], 4 pages.
	TK**	Response, filed Dec. 27, 2016, to Office Action, issued Oct. 17, 2016, in connection with Chinese Patent Application No. 201280070954.9 [English language instructions and document as-filed in Chinese], 18 pages.
	TL**	Letter, dated March 15, 2017, reporting Telephonic Interview with Examiner in connection with Chinese Patent Application No. 201280070954.9, 1 page.
	TM**	Response, filed Mar. 23, 2017 to Telephonic Interview with Examiner in connection with Chinese Patent Application No. 201280070954.9 [English translation of pending claims and original document as filed in Chinese], 10 pages.
	TN**	Notice of Granting Patent Right for Invention, issued April 28, 2017, in connection with Chinese Patent Application No. 201280070954.9 [English translation and original document in Chinese], 4 pages.
	TO**	Notice of Allowance, dated Dec. 7, 2017, issued in connection with Eurasian Patent Application No. 201400772 [English letter and original document in Russian], 2 pages.
	TP**	Communication Pursuant to Rule 71(3) (Intention to Grant), issued April 22, 2016, in connection with European Patent Application No. 12816624.6, 5 pages.
	TQ**	Extended European Search Report, dated Jan. 12, 2017, issued in connection with European Patent Application No. 16189970.3, 11 pages.
	TR**	Response, filed Aug. 15, 2017, to Extended European Search Report, dated Jan. 12, 2017, issued in connection with European Patent Application No. 16189970.3, 55 pages.
	TS**	Examination Report, dated Sept. 14, 2017, issued in connection with European Patent Application No. 16189970.3, 3 pages.
	TT**	Response, dated Oct. 13, 2017, to Examination Report, dated Sept. 14, 2017, issued in connection with European Patent Application No. 16189970.3, 19 pages.
	TU**	Communication Pursuant to Article 94(3) EPC (claims deemed allowable), dated Feb. 26, 2018, issued in connection with European Patent Application No. 16189970.3, 3 pages.
	TV**	Response, filed Sept. 10, 2018, to Communication Pursuant to Article 94(3) EPC (claims deemed allowable), issued Feb. 26, 2018, issued in connection with European Patent Application No. 16189970.3, 821 pages.
	TW**	Communication Pursuant to Article 71(3) EPC (Intention to Grant), dated Apr. 08, 2019, issued in connection with European Patent Application No. 16189970.3, 7 pages.
	TX**	Decision to Grant, issued Aug. 22, 2019, in connection with European Patent Application No. 16189970.3, 2 pages.
	TY**	Examination Report, issued Dec. 4, 2018, in connection with Indian Patent Application No. 6272/DELNP/2014, 6 pages.
	TZ**	Response, filed Sept. 04, 2019, to Examination Report, issued Dec. 4, 2018, in connection with Indian Patent Application No. 6272/DELNP/2014, 79 pages.
	UA**	Hearing Notice, issued Jun. 17, 2020, in connection with Indian Patent Application No. 6272/DELNP/2014, 2 pages.
	UB**	Written Submissions, filed Oct. 09, 2020, responsive to Hearing Notice, issued Aug. 10, 2020, in connection with Indian Patent Application No. 6272/DELNP/2014, 27 pages.
	UC**	Amended claims and abstract, filed Nov. 19, 2020, responsive to Examiner request, in connection with Indian Patent Application No. 6272/DELNP/2014, 22 pages.
	UD**	Certificate of Grant, issued Dec. 28, 2020, in connection with Indian Patent Application No. 6272/DELNP/2014, 1 page.

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List of Patents and Publications for Applicant's Information Disclosure Statement		Inventor(s) Wei *et al.*	
(37 CFR §1.98(b))		Filing Date December 19, 2022	Group Art Unit Not yet assigned

Other Documents (include Author, Title, Date, and Place of Publication)		
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	UE**	Examination Report, issued Aug. 29, 2022, in connection with Indian Patent Application No. 201918041329, 7 pages.
	UF**	Office Action, dated August 3, 2016, in connection with Israeli Patent Application No. 233192 [English language translation], 3 pages.
	UG**	Response, filed Jan. 3, 2017, to Office Action, dated August 3, 2016, in connection with Israeli Patent Application No. 233192 [English language translation], 32 pages.
	UH**	Office Action, dated Nov. 20, 2017, issued in connection with Israeli Patent Application No. 233192 [English language translation], 2 pages.
	UI**	Response, filed May 21, 2018, to Office Action, dated Nov. 20, 2017, issued in connection with Israeli Patent Application No. 233192 [English language translation], 22 pages.
	UJ**	Office Action (claims deemed allowable), dated Feb. 20, 2019, issued in connection with Israeli Patent Application No. 233192 [English letter reporting Office Action and original document in Hebrew], 5 pages.
	UK**	Certificate of Grant, issued Oct. 01, 2020, in connection with Israeli Patent Application No. 233192, 3 pages.
	UL**	Notification Prior to Acceptance, dated Dec. 14, 2020, issued in connection with Israeli Patent Application No. 274798 [English reporting letter; original document as issued in Hebrew; and English translation of allowed claims], 10 pages.
	UM**	Official Action, issued on Aug. 11, 2021, in connection with Israeli Patent Application No. 280949 [English translation and original document as issued in Hebrew], 6 pages.
	UN**	Response, filed Dec. 05, 2021, to Official Action, issued on Aug. 11, 2021, in connection with Israeli Patent Application No. 280949, 11 pages.
	UO**	Notification Prior to Acceptance, issued Aug. 22, 2022, in connection with Israeli Patent Application No. 280949 [Reporting letter in English and Notification as issued in Hebrew], 6 pages.
	UP**	Official Action, issued Jan. 19, 2016, in connection with Japanese Patent Application No. 2014-550526 [English translation and original document in Japanese], 8 pages.
	UQ**	Response, filed July 15, 2016, to Official Action, issued January 19, 2016, in connection with Japanese Patent Application No. 2014-550526 [English instructions and document as filed in Japanese], 138 pages.
	UR**	Decision to Grant, issued November 22, 2016, in connection with Japanese Patent Application No. 2014-550526 [Letter reporting decision to grant and original document in Japanese], 5 pages.
	US**	Office Action, issued Dec 12, 2017, in connection with Japanese Patent Application No. 2016-247708 [English translation and original document in Japanese], 6 pages.
	UT**	Response, filed May 22, 2018, to Office Action, issued Dec. 12, 2017, in connection with Japanese Patent Application No. 2016-247708 [English instructions with amended claims, documents as filed in Japanese and English translation of claims as-filed], 90 pages.(3087BJP)
	UU**	Decision to Grant, issued Sept. 18, 2018, in connection with Japanese Patent Application No. 2016-247708 [English reporting letter and original document in Japanese], 4 pages.
	UV**	Office Action, dated May 25, 2018, in connection with Mexican Patent Application No. MX/a/2014/007966 [English translation and original document in Spanish], 6 pages.
	UW**	Response, filed Oct. 10, 2018, to Office Action, dated May 25, 2018, in connection with Mexican Patent Application No. MX/a/2014/007966 [English instructions and document as-filed in Spanish], 13 pages.
	UX**	Notice of Allowance, issued Oct. 18, 2018, in connection with Mexican Patent Application No. MX/a/2014/007966 [English reporting letter and original document in Spanish], 4 pages.

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	UY**	Office Action, dated Nov. 15, 2022, in connection with Mexican Patent Application No. MX/a/2018/012394 [English translation and original document in Spanish], 14 pages.
	UZ**	Examination Report, dated March 26, 2015, in connection with New Zealand Patent Application No. 626126, 32 pages.
	VA**	Response, dated May 16, 2016, to Examination Report, dated March 26, 2015, in connection with New Zealand Patent Application No. 626126, 70 pages.
	VB**	Notice of Acceptance, dated June 8, 2016, in connection with New Zealand Patent Application No. 626126, 1 page.
	VC**	Letters Patent, issued Sept. 27, 2016, in connection with New Zealand Patent No. 626126, 1 page.
	VD**	Examination Report, dated July 27, 2017, issued in connection with New Zealand Patent Application No. 720075, 4 pages.
	VE**	Response, filed Feb. 26, 2018, to Examination Report, dated July 27, 2017, issued in connection with New Zealand Patent Application No. 720075, 88 pages.
	VF**	Notice of Acceptance, dated Mar. 10, 2020, issued in connection with New Zealand Patent Application No. 720075, 1 page.
	VG**	Search Report and Written Opinion, dated Dec. 4, 2015, in connection with Singaporean Patent Application No. 11201403714T, 7 pages.
	VH**	Response, filed May 23, 2016, to Search Report and Written Opinion, dated Dec. 4, 2015, in connection with Singaporean Patent Application No. 11201403714T, 21 pages.
	VI**	Written Opinion, dated Sept. 18, 2017, in connection with Singapore Patent Application No. 11201403714T, 9 pages.
	VJ**	Response, filed Oct. 27, 2017, to Written Opinion, dated Sept. 18, 2017, in connection with Singapore Patent Application No. 11201403714T, 6 pages.
	VK**	Notice of Eligibility for Grant and Examination Report, dated Jul. 02, 2018, in connection with Singapore Patent Application No. 11201403714T, 8 pages.
	VL**	Certificate of Grant, dated Oct. 3, 2018, in connection with Singapore Patent Application No. 11201403714T [Grant Certificate and Granted Claims], 6 pages.
	VM**	Search Report and Written Opinion, issued Oct. 20, 2017, in connection with Singapore Patent Application No. 10201604470T, 14 pages.
	VN**	Response, filed Mar. 20, 2018, to Search Report and Written Opinion, issued Oct. 20, 2017, in connection with Singapore Patent Application No. 10201604470T [Response, replacement specification pages, amended claims and cited document], 105 pages.
	VO**	Examination Report, dated Aug. 06, 2018, and Notice of Eligibility for Grant, dated Aug. 07, 2018, issued in connection with Singapore Patent Application No. 10201604470T, 6 pages.
	VP**	English translation of Official Action, issued Mar. 20, 2020, in connection with Korean Application No. 10-2020-7002955, 6 pages.
	VQ**	English Translation of International Search Report and Written Opinion, issued Oct. 29, 2019, in connection with International application No. PCT/KR2019/009215, 10 pages.
** = Copies not provided herewith as they have been previously provided in connection with U.S. Patent Application Serial No. 13/694,731, 15/226,489, 16/824,572, 17/327,568 and/or 17/327,586, which are relied upon for an earlier filing date in accordance with 35 U.S.C. §120.		

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L1	177	C12N9/2474.CPC.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/02 02:41 PM
L2	201200	A61P35/00.CPC.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/02 02:42 PM
L3	37518	A61K9/0019.CPC.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/02 02:42 PM
L4	5108	A61K38/28.CPC.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/02 02:42 PM
L5	3445	A61K38/47.CPC.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/02 02:42 PM
L6	104356	A61K45/06.CPC.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/02 02:43 PM
L7	20876	A61K47/10.CPC.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/02 02:43 PM
L8	19375	C07K14/47.CPC.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/02 02:43 PM
L9	2749	C12Q1/34.CPC.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/02 02:44 PM
L10	395	C12Y302/01035.CPC.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/02 02:44 PM
L11	51269	Y02A50/30.CPC.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/02 02:44 PM
L12	81483	A61K38/00.CPC.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/02 02:45 PM
L13	14088	C07K2319/30.CPC.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/02 02:45 PM
L14	65	G01N2333/926.CPC.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/02 02:45 PM
L15	78	G01N2333/928.CPC.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/02 02:45 PM
L16	1594	L1	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/02 02:49 PM
L17	1768127	L2	(US-PGPUB; USPAT;	OR	ON	ON	2024/02/02

			USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				02:49 PM
L18	280370	L3	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/02 02:49 PM
L19	36146	L4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/02 02:49 PM
L20	24207	L5	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO,	OR	ON	ON	2024/02/02 02:49 PM

			NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L21	722177	L6	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/02 02:49 PM
L22	169938	L7	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/02 02:49 PM
L23	126070	L8	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/02 02:49 PM
L24	20002	L9	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2024/02/02 02:49 PM

			AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L25	2691	L10	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/02 02:50 PM
L26	508581	L11	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/02 02:50 PM
L27	634584	L12	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO,	OR	ON	ON	2024/02/02 02:50 PM

			RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L28	87091	L13	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/02 02:50 PM
L29	356	L14	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/02 02:50 PM
L30	424	L15	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/02 02:50 PM
L31	906	L1 AND L2	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2024/02/02 02:50 PM

			CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L32	336	L1 AND L3	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/02 02:50 PM

PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	3740	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR "sperm adhesion molecule 1")	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/03 03:41 PM
L2	14861	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR "sperm adhesion molecule 1")	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/03 03:41 PM
L3	18888646	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR (sperm adhesion molecule 1))	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/03 03:41 PM
L4	14691	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR (sperm ADJ adhesion ADJ molecule ADJ 1))	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK,	OR	ON	ON	2024/02/03 03:42 PM

			TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L5	9369	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR (sperm ADJ adhesion ADJ molecule ADJ 1)) AND hyaluronidase	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/03 03:42 PM
L6	2585	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR (sperm ADJ adhesion ADJ molecule ADJ 1)) AND hyaluronidase AND "309"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/03 03:46 PM
L7	91	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR (sperm ADJ adhesion ADJ molecule ADJ 1)) AND hyaluronidase AND "position 309"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/03 03:46 PM
L8	7278	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2024/02/03 03:50 PM

		OR SPAG15 OR (sperm ADJ adhesion ADJ molecule ADJ 1)) AND hyaluronidase AND insertion	CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L9	8855	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR (sperm ADJ adhesion ADJ molecule ADJ 1)) AND hyaluronidase AND (insertion OR deletion OR modification OR replacement)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/03 03:51 PM
L10	7638	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR (sperm ADJ adhesion ADJ molecule ADJ 1)) AND hyaluronidase AND (insertion OR deletion OR modification OR replacement) AND (stability OR ressitance AND denaturing)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/03 03:55 PM
L11	7638	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR (sperm ADJ adhesion ADJ molecule ADJ 1)) AND hyaluronidase AND (insertion OR deletion OR modification OR replacement) AND (stability OR ressitance	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA,	OR	ON	ON	2024/02/03 03:57 PM

		AND denaturing) AND (arginine OR N)	VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L12	1	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR (sperm ADJ adhesion ADJ molecule ADJ 1)) AND hyaluronidase AND (insertion OR deletion OR modification OR replacement) AND (stability OR ressitance AND denaturing) AND (arginine OR N) AND "increased hyaluronidase acitivity"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/03 03:58 PM
L13	0	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR (sperm ADJ adhesion ADJ molecule ADJ 1)) AND hyaluronidase AND (insertion OR deletion OR modification OR replacement) AND (stability OR ressitance AND denaturing) AND (arginine OR N) AND increaesd	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/03 03:58 PM
L14	7424	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR (sperm ADJ adhesion ADJ molecule ADJ 1)) AND hyaluronidase AND (insertion OR deletion OR modification OR replacement) AND (stability OR ressitance AND denaturing) AND (arginine OR N) AND increased	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/03 03:58 PM
L15	6739	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2024/02/03 04:00 PM

		OR SPAG15 OR (sperm ADJ adhesion ADJ molecule ADJ 1)) AND hyaluronidase AND (insertion OR deletion OR modification OR replacement) AND (stability OR ressitance AND denaturing) AND (arginine OR N) AND increased AND glycoprotein	CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L16	5960	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR (sperm ADJ adhesion ADJ molecule ADJ 1)) AND hyaluronidase AND (insertion OR deletion OR modification OR replacement) AND (stability OR ressitance AND denaturing) AND (arginine OR N) AND increased AND glycoprotein AND glycosylation	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/03 04:00 PM
L17	4146	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR (sperm ADJ adhesion ADJ molecule ADJ 1)) AND hyaluronidase AND (insertion OR deletion OR modification OR replacement) AND (stability OR ressitance AND denaturing) AND (arginine OR N) AND increased AND glycoprotein AND glycosylation AND "pharmaceutical composition"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/03 04:01 PM
L18	585	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR (sperm ADJ adhesion	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2024/02/03 04:01 PM

		ADJ molecule ADJ 1)) AND hyaluronidase AND (insertion OR deletion OR modification OR replacement) AND (stability OR ressitance AND denaturing) AND (arginine OR N) AND increased AND glycoprotein AND glycosylation AND "pharmaceutical composition" AND "heterologous signal sequence"	HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L19	41	(Artificial Intelligence) Similar to: 17/327,586 with 0 CPC Selections and 0 Text Selections Text: (US-9447401-B2 OR AU-2012362141-A1 OR AU-2012362141-B2 OR MX-2014007966-A OR NZ-626126-A OR EP-2797622-B1 OR CA-2861919-C OR US-20130302275-A1 OR US-20140178330-A9 OR EP-2797622-A2 OR DK-2797622-T3 OR NZ-626126-B2 OR ES-2609582-T3 OR JP-2017112999-A OR WO-2013102144-A2 OR EP-3130347-B1 OR US-20160362670-A1 OR EP-3130347-A1 OR AU-2017245352-A1 OR US-10865400-B2 OR IL-298330-A OR CA-2861919-A1 OR ES-2749620-T3 OR JP-2015504666-A OR IL-280949-B2 OR JP-6067746-B2 OR NZ-720075-A OR NZ-720075-B2 OR US-11041149-B2 OR AU-2017245352-B2 OR US-11066656-B2 OR CN-104244968-B OR JP-6422933-B2 OR US-20200255814-A1 OR US-20210284985-A1	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))	OR	ON	ON	2024/02/03 04:09 PM

		OR US-20200318091-A1 OR US-20210277376-A1 OR BR-112014016195-A2 OR CN-104244968-A OR EA-030252-B1 OR US-20230295593-A1 OR US-20230357739-A1 OR US-20230250409-A1 OR US-20230295592-A1 OR US-20230151346-A1 OR US-20230287381-A1 OR US-20230212547-A1 OR HR-P20192249-T1 OR WO-2015003167-A1 OR US-20150010529-A1).did.					
L20	578	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR (sperm ADJ adhesion ADJ molecule ADJ 1)) AND hyaluronidase AND (insertion OR deletion OR modification OR replacement) AND (stability OR ressitance AND denaturing) AND (arginine OR N) AND increased AND glycoprotein AND glycosylation AND "pharmaceutical composition" AND "heterologous signal sequence" AND antibody	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/03 04:24 PM
L21	138	L18 AND proline	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/08 04:06 PM
L22	41	(Artificial Intelligence) Similar to: 18/068,418 with 0 CPC Selections and 0 Text Selections Text: (DK-2797622-T3 OR EP-2797622-B1 OR AU-2012362141-A1 OR EP-2797622-A2 OR AU-2012362141-B2 OR US-9447401-B2 OR MX-2014007966-A OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA,	OR	ON	ON	2024/04/18 04:39 PM

		NZ-626126-A OR WO-2013102144-A2 OR IL-298330-A OR CA-2861919-C OR JP-2017112999-A OR IL-280949-B2 OR NZ-626126-B2 OR CA-2861919-A1 OR US-20140178330-A9 OR US-20130302275-A1 OR ES-2609582-T3 OR EP-3130347-B1 OR EP-3130347-A1 OR US-20160362670-A1 OR AU-2017245352-A1 OR US-10865400-B2 OR ES-2749620-T3 OR US-11041149-B2 OR US-20240002825-A1 OR US-20240026327-A1 OR JP-2015504666-A OR NZ-720075-A OR US-11066656-B2 OR NZ-720075-B2 OR JP-6422933-B2 OR US-20200255814-A1 OR AU-2017245352-B2 OR US-20210284985-A1 OR US-20210277376-A1 OR US-20200318091-A1 OR JP-6067746-B2 OR CN-104244968-B OR BR-112014016195-A2 OR US-20240002826-A1 OR US-20240026328-A1 OR US-20240011008-A1 OR CN-104244968-A OR US-20230295593-A1 OR US-20230357739-A1 OR US-20230250409-A1 OR US-20230287381-A1 OR US-20230295592-A1 OR US-20230151346-A1).did.	VN))				
L23	230	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR (sperm ADJ adhesion ADJ molecule ADJ 1)) AND hyaluronidase AND (insertion OR	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL,	OR	ON	ON	2024/04/19 09:03 AM

		deletion OR modification OR replacement) AND (stability OR ressitance AND denaturing) AND (arginine OR N) AND increased AND glycoprotein AND glycosylation AND "pharmaceutical composition" AND "heterologous signal sequence" AND antibody AND "324"	NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L24	230	(SPAM1 OR HEL-S-96n OR HYA1 OR HYAL1 OR HYAL3 OR HYAL5 OR PH-20 OR PH20 OR SPAG15 OR (sperm ADJ adhesion ADJ molecule ADJ 1)) AND hyaluronidase AND (insertion OR deletion OR modification OR replacement) AND (stability OR ressitance AND denaturing) AND (arginine OR N) AND increased AND glycoprotein AND glycosylation AND "pharmaceutical composition" AND "heterologous signal sequence" AND antibody AND "324"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/04/19 09:05 AM

PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

United States Patent and Trademark Office

Office of the Commissioner for Patents

Dear Applicant,

You recently received an Office action from your examiner. Review of your patent application is under way! You can continue to advertise or mark any products covered by your application for your invention as "Patent Pending" for as long as this application is pending. This letter provides information about how to continue through the patent application process and the help available to you on your journey.

Where are you in the patent application process? Your patent application is now in step 3, Application Prosecution (www.uspto.gov/UtilityPatentGuide.) Though the Office action includes a "rejection," that does not mean that you don't have a good idea you can patent. It means your examiner believes your application is not yet ready for allowance.

Ready to respond? Responding to the Office action is your opportunity to address the issues raised by your examiner. Responses must be timely, complete, and in writing. In your response, you may want to consider amending your application (www.uspto.gov/patents/maintain/responding-office-actions).

We provide Pro Se Assistance, support specifically geared for independent inventors without an agent or attorney. Visit www.uspto.gov/ProSePatents for a consolidated list of resources, including a sample amendment format. Full description of amendment formatting can be found at www.uspto.gov/web/offices/pac/mpep/s714.html. Call us at 866-767-3848, or email proseassistancecenter@uspto.gov.

Have questions about the Office action? Contact your examiner! A conversation with your examiner (called an "interview") may help clarify and resolve any issues and possibly identify what you can patent. While an interview does not stop the clock for your official response or substitute for a response, there is no fee for an interview. To schedule a call or video, you can:

1. use the USPTO's Automated Interview Request (AIR) form (www.uspto.gov/patents/uspto-automated-interview-request-air-form);
2. file the Applicant Initiated Interview Request form (PTOL-413A) (www.uspto.gov/sites/default/files/documents/PTOL413A.pdf); or
3. contact your examiner directly via telephone (contact information is provided at the end of your Office action).

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Best,

Vaishali Udupa
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United States Patent and Trademark Office

PTO/SB/06 (09-11)
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 18/068,418	Filing Date 12/19/2022	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $100 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $480 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	05/21/2024	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 35	Minus	** 35	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 1	Minus	*** 3	= 0		x $480 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/CAROLYN E THOMAS/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

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Alexandria, VA 22313 - 1450
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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/068,418	05/21/2024 04:51:30 PM Z ET	063995-01-5105-US10

Title of Invention

PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	5769	FILED BY	Collins Mba-Jonas
PATENT CENTER #	65615907	AUTHORIZED BY	Kalpesh Upadhye
CUSTOMER #	28977	FILING DATE	12/19/2022
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Ge Wei

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 5344	E20245KG51498405	Kalpesh Upadhye

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
1814	STATUTORY DISCLAIMER, INCLUDING TERMINAL DISCLAIMER	170.00	1	170.00
			TOTAL AMOUNT:	$170.00

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A PRIOR PATENT

APPLICATION #	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET #
18068418	12/19/2022	Ge Wei	063995-01-5105-US10

Title of Invention

PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF

☑ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

☑ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent Interest
HALOZYME, INC.	100%
Total	100%

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending reference Application Number(s)

Application #	Filing Date
18340786	06/23/2023

as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent

granted on the reference application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.
In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term of any patent granted on said reference application, "as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application," in the event that any such patent granted on the pending reference application: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

Patent #
10865400

as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.
In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:
- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Terminal disclaimer fee under 37 CFR 1.20(d) included with Electronic Terminal Disclaimer request.

Applicant claims the following entity status:
Regular Undiscounted

I hereby declare that all statements made herein of my own knowledge are true and that all statemnts made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I certify, in accordance with 37 CFR 1.4(d)(4) that I am: An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application

Signature	Name	Registration #
/Kalpesh V. Upadhye/	Kalpesh Upadhye	70236

* Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner). Form PTO/SB/96 may be used for making this certification. See MPEP 324.

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/068,418	**05/21/2024 04:51:30 PM Z ET**	**063995-01-5105-US10**

Title of Invention

PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF

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APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
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PATENT CENTER #	65615907	FILING DATE	12/19/2022
CUSTOMER #	28977	FIRST NAMED INVENTOR	Ge Wei
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Kalpesh Upadhye

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
petition-request.pdf	3	Terminal Disclaimer-Filed (Electronic)	48 KB
grantLetter.pdf	1	Terminal Disclaimer-Electronic-Approved	19 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
petition-request.pdf	C4D412E79F47C26C42E58C26F22382A280F781DA4E29A9F5091CA7E7885D1FCA6621BDB0DBD152C41A295A33341F316A970

	BC6031CACF7AE5BFA2E3C8219ACFB
grantLetter.pdf	F236555CD8516AD3A9CB1446022F7B0241B7BDAA6E4FD63B2D9957F67A3DA1A10F3D78D6F8015E93F5AC4ADC5FF3E26E5CBD6B0E924449E4BD29E7989E61F08D

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc code : DISQ.EFILE
Description : Electronic Terminal Disclaimer - Approved

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APPROVAL LETTER

APPLICATION #	FILING DATE	APPLICANT/PATENT UNDER REEXAMINATION
18/068,418	12/19/2022	Ge Wei

Title of Invention

PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF

Electronic terminal disclaimer filed on 05/21/2024

☑ Approved

This patent is subject to a Terminal Disclaimer

Approved / Disapproved by: Electronic Terminal Disclaimer automatically approved

PATENT
Attorney Docket **063995-5105-US10**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of **Ge Wei et al.**	)	
	)	Confirmation No. **5769**
U.S. Application No. **18/068,418**	)	
	)	Group Art Unit: **1656**
Filing Date: **12/19/2022**	)	
	)	Examiner: **Ciara McKnight**
For: **PH20 Polypeptide Variants, Formulations and Uses Thereof**	)	

AMENDMENT UNDER 37 C.F.R. § 1.111

In response to the Non-Final Office Action dated 05/01/2024, having a three-month shortened statutory period for response set to expire 08/01/2024, Applicant requests entry of the following amendments and remarks in the above patent application. To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-0310 and please credit any excess fees to such deposit account.

LISTING OF THE CLAIMS

This version of the claims will replace all previous versions.

1. (Currently amended) A modified PH20 polypeptide, comprising one or more amino acid modifications in an unmodified PH20 polypeptide, wherein:

the unmodified PH20 polypeptide consists of the amino acid sequence selected from ~~among~~ the group consisting of SEQ ID NO: 3, 7 and 32-66;

amino acid modifications are selected from ~~among~~ the group consisting of amino acid replacements(s), deletion(s), and/or insertion(s);

the modified PH20 polypeptide comprises an amino acid replacement at a position corresponding to residue 324, with reference to amino acid positions set forth in SEQ ID NO: 3;

the replacement at the position corresponding to residue 324 is selected from ~~among~~ the group consisting of A, D, H, M, N, R and S;

corresponding amino acid positions are identified by alignment of the PH20 polypeptide with the polypeptide having the amino acid sequence of SEQ ID NO: 3; and

the modified PH20 polypeptide has at least 91 % sequence identity to a polypeptide having the amino acid sequence selected from ~~among~~ the group consisting of SEQ ID NO: 3, 7 and 32-66.

2. (Currently amended) The modified PH20 polypeptide of claim 1, wherein the modified PH20 polypeptide has at least 95% sequence identity to the amino acid sequence selected from ~~among~~ the group consisting of SEQ ID NO: 3, 7, and 32-66.

3. (Original) The modified PH20 polypeptide of claim 1 that has increased resistance to or stability in denaturing conditions compared to an unmodified PH20 polypeptide that does not contain the amino acid modification(s).

4. (Original) The modified PH20 polypeptide of claim 1 that exhibits increased hyaluronidase activity compared to the unmodified PH20 polypeptide not containing the amino acid replacement at position 324.

5. (Original) The modified PH20 polypeptide of claim 1 that is a soluble PH20 polypeptide.

6. (Original) The modified PH20 polypeptide of claim 1, wherein the replacement at the position corresponding to residue 324 is D.

7. (Currently amended) The modified PH20 polypeptide of claim 1, wherein the replacement at the position corresponding to residue 324 is [[Nor]] N or R.

8. (Currently amended) The modified PH20 polypeptide of claim 1, wherein the unmodified PH20 polypeptide ~~comprises~~ consists of the amino acid sequence selected from ~~among~~ the group consisting of SEQ ID NO: 3 and 32-66.

9. (Currently amended) The modified PH20 polypeptide of claim [[1]] 7, wherein the unmodified PH20 polypeptide consists of the amino acid sequence selected from ~~among~~ the group consisting of SEQ ID NO: 3 and 32-66.

10. (Currently amended) The modified PH20 polypeptide of claim 6, wherein the unmodified PH20 polypeptide consists of the amino acid sequence selected from ~~among~~ the group consisting of SEQ ID NO: 3 and 32-66.

11. (Original) The modified PH20 polypeptide of claim 1, wherein the unmodified PH20 polypeptide consists of the amino acid sequence of SEQ ID NO:35.

12. (Original) The modified PH20 polypeptide of claim 1, wherein the unmodified PH20 polypeptide consists of the amino acid sequence of SEQ ID NO:32.

13. (Original) The modified PH20 polypeptide of claim 6, wherein the unmodified PH20 polypeptide consists of the amino acid sequence of SEQ ID NO:35.

14. (Original) The modified PH20 polypeptide of claim 6, wherein the unmodified PH20 polypeptide consists of the amino acid sequence of SEQ ID NO:32.

15. (Currently amended) The modified PH20 polypeptide of claim 1, comprising a sequence of amino acids that exhibits at least 91 % sequence identity to the sequence of amino acids ~~set forth in any~~ selected from the group consisting of SEQ ID NO: 3, and 32-66[[, 623, and 624]] and that contains an amino acid replacement D at the residue corresponding to residue 324 with reference to SEQ ID NO: 3.

16. (Original) The modified PH20 polypeptide of claim 1 that is C-terminally truncated, whereby the polypeptide is soluble.

17. (Currently amended) The modified PH20 polypeptide of claim 1 that comprises one or more post-translational modifications of the polypeptide selected from ~~among~~ the group consisting of glycosylation, sialylation, albumination, ~~famesylation~~ farnesylation, carboxylation, hydroxylation, and phosphorylation.

18. (Currently amended) The modified PH20 polypeptide of claim ~~1 that is glycosylated~~ 17, wherein the post-translational modification is glycosylation.

19. (Original) The modified PH20 polypeptide of claim 18, wherein the polypeptide is a glycoprotein that comprises an N-acetylglucosamine moiety linked to each of at least three asparagine (N) residues.

20. (Original) The modified PH20 polypeptide of claim 1 that is conjugated to a polymer.

21. (Original) The modified PH20 polypeptide of claim 20, wherein the polymer is dextran or polyethylene glycol (PEG).

22. (Currently amended) The modified PH20 polypeptide of claim 1, further comprising a heterologous signal sequence, wherein the unmodified PH20 polypeptide consists of the amino acid sequence selected from ~~among~~ the group consisting of SEQ ID NO: 3 and 32-66.

23. (Original) A chimeric polypeptide, comprising the modified PH20 polypeptide of claim 1.

24. (Original) A pharmaceutical composition, comprising the modified PH20 polypeptide of claim 1.

25. (Original) The modified PH20 polypeptide of claim 6, wherein:

the unmodified PH20 polypeptide consists of the amino acid sequence of SEQ ID NO:32; and

the amino acid sequence of the modified PH20 polypeptide has at least 95% sequence identity to the amino acid sequence of SEQ ID NO:32.

26. (Original) The modified PH20 polypeptide of claim 6, wherein:

the unmodified PH20 polypeptide consists of the amino acid sequence of SEQ ID NO:35; and

the amino acid sequence of the modified PH20 polypeptide has at least 95% sequence identity to the amino acid sequence of SEQ ID NO:35.

27. (Original) The pharmaceutical composition of claim 24, further comprising a therapeutically active agent formulated in the same composition or in a separate composition.

28. (Original) The pharmaceutical composition of claim 27, wherein the therapeutically active agent is a polypeptide, a protein, a nucleic acid, a drug, a small molecule, or an organic molecule.

29. (Currently amended) The pharmaceutical composition of claim 27, wherein the therapeutically active agent is selected from ~~among~~ the group consisting of a chemotherapeutic agent, an analgesic agent, an anti-inflammatory agent, an antimicrobial agent, an amoebicidal agent, a trichomonacidal agent, an anti-Parkinson agent, an anti-malarial agent, an anticonvulsant agent, an anti-depressant agent, an antiarthritics agent, an anti-fungal agent, an antihypertensive agent, an antipyretic agent, an anti-parasite agent, an antihistamine agent, an alpha-adrenergic agonist agent, an alpha blocker agent, an anesthetic agent, a bronchial dilator agent, a biocide agent, a bactericide agent, a bacteriostat agent, a beta adrenergic blocker agent, a calcium channel blocker agent, a cardiovascular drug agent, a contraceptive agent, a decongestant agent, a diuretic agent, a depressant agent, a diagnostic agent, an electrolyte agent, a hypnotic agent, a hormone agent, a hyperglycemic agent, a muscle relaxant agent, a muscle contractant agent, an ophthalmic agent, a parasympathomimetic agent, a psychic energizer agent, a sedative agent, a sympathomimetic agent, a tranquilizer agent, a urinary agent, a vaginal agent, a viricide agent, a vitamin agent, a non-steroidal anti-inflammatory agent, an angiotensin converting enzyme inhibitor agent, and a sleep inducer.

30. (Original) The pharmaceutical composition of claim 27, wherein the therapeutically active agent is an antibody.

31. (Withdrawn) A method for treating a hyaluronan-associated disease or condition, comprising administering to a subject a modified PH20 polypeptide of claim 1.

32. (Withdrawn) The method of claim 31, wherein the hyaluronan-associated disease or condition is an inflammatory disease or a tumor or cancer.

33. (Withdrawn) The method of claim 32, wherein the hyaluronan-associated disease or condition is a solid tumor.

34. (Currently amended) The modified PH20 polypeptide of claim 1 that is further modified by conjugation to a moiety selected from ~~among~~ the group consisting of a multimerization domain, a toxin, a detectable label, and a drug.

35. (Currently amended) The modified PH20 polypeptide of claim 34, wherein the modified PH20 polypeptide is conjugated to a multimerization domain that is an [[Fe]] Fc domain.

REMARKS

Claims 1-30, 34 and 35 are examination in this application. Claims 1, 2, 7-10, 15, 17, 18, 22, 29, 34 and 35 are amended herein to correct informalities. Claims 31-33 are withdrawn as being drawn to non-elected subject matter. Written support for the claim amendments is found throughout the specification and original claims. No prohibited new matter is added herein. Entry of the amendments and reconsideration of the application are requested.

The arguments and contentions presented in the Office Action should not be construed as any acquiescence or agreement by Applicant with the stated reasoning therein regardless of whether or not the following remarks specifically address any particular argument or contention from the Office Action. Furthermore, although certain distinctions between the claims of the present application and the cited references are addressed below, these distinctions are not necessarily exhaustive.

Claim Objections

Claims 1, 2, 7-10, 15, 17, 22 and 29 are objected to because of informalities. *See* Office Action at Section No. 5-7. These claims have been amended in accordance with the Examiner's suggestions. Withdrawal of the objections is requested in view of the amendments.

Rejections Under 35 U.S.C. § 112

Claims 17, 34 and 35 stand rejected under 35 U.S.C. § 112 (second paragraph) as being indefinite. *See* Office Action at Section No. 8-12. Claims 17, 34 and 35 have been amended in accordance with the Examiner's suggestions. Claim 18 is amended for consistency with claim 17. Withdrawal of the rejection is requested in view of the amendments.

Claims 8 and 15 stand rejected under 35 U.S.C. § 112 (fourth paragraph) as being indefinite. *See* Office Action at Section No. 13-14. Claim 8 has been amended in accordance with the Examiner's suggestion and Claim 9 has been amended to depend on claim 7. Withdrawal of the rejection is requested in view of the amendment.

Claim 15 stands rejected because "the recitation of comprises SEQ ID NO: 3, 32-66, 623 and 624 makes this claim broader than claim 1, and therefore, not further limiting" (*see* Office Action at Section No. 14). Without acquiescing to the propriety of the rejection and solely in an effort to expedite prosecution, Applicant has amended claim 15 to remove the recitation of SEQ ID NO: 623 and 624. Withdrawal of the rejection is requested in view of the amendment.

Double Patenting Rejections

Claims 1-30 and 34-35 are rejected on the ground of non-statutory double patenting as being unpatentable over claims 1, 2, 4, 6-8, 10, 12, 13, 19, 23 and 27 of U.S. Patent No. 10,865,400. *See* Office Action at Section No. 16.

Claims 1-30 and 34-35 are provisionally rejected on the ground of non-statutory double patenting as being unpatentable over claims 1-3, 5-10 and 14-18 of co-pending Application No. 18/340,786. *See* Office Action at Section No. 17.

Applicant concurrently files terminal disclaimers obviating the rejections in view of the cited patent and patent application. Withdrawal of the double patenting rejections is requested in view of the terminal disclaimers.

Conclusion

In view of the foregoing, Applicant awaits a favorable action on the merits. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the undersigned representative to expedite prosecution.

Respectfully submitted,

Date: May 21, 2024

By: /Kalpesh V. Upadhye/
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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/068,418	**05/21/2024 04:53:21 PM Z ET**	**063995-01-5105-US10**

Title of Invention

PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	5769	FILED BY	Collins Mba-Jonas
PATENT CENTER #	65616083	FILING DATE	12/19/2022
CUSTOMER #	28977	FIRST NAMED INVENTOR	Ge Wei
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Kalpesh Upadhye

Documents

TOTAL DOCUMENTS: 3

DOCUMENT		PAGES	DESCRIPTION	SIZE (KB)
20240521_RespNFOA.pdf		7	-	141 KB
20240521_RespNFOA-A...pdf	(1-1)	1	Amendment/Request for Reconsideration-After Non-Final Rejection	93 KB
20240521_RespNFOA-CLM.pdf	(2-5)	4	Claims	109 KB
20240521_RespNFOA-REM.pdf	(6-7)	2	Applicant Arguments/Remarks Made in an Amendment	118 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
20240521_RespNFOA.pdf	7EEEE533DC5357AA54AE6465CB64C9996D59AA3B87C281377634E7874CF02F3CC91956A57D69BF3C255504CB64202777FEA08B6BFCE79CAA598FAFA920BBB8F1
20240521_RespNFOA-A....pdf	B18CBD6AF32371F0607C290FF355FC8334C29A91A005FB9EA7745C642B0CB6CA40B1ED7A9B4D0E2E4DB9DF00B4B360E85E15991473E6CAF28FAC1605B9CB095C
20240521_RespNFOA-CLM.pdf	6F8AB396C63D25C31DFD7BF47B46F987C474ECD9607DAD33F9CD5D11278468C7FE3C940E3286DC8DD14E3A6082557320D940729F96AEB58EEAD2269DD513D409
20240521_RespNFOA-REM.pdf	C68E41B56FFDBF12116E7912342505AFD52117B4395199B062764F09ED8A1E26F43688A5AF0BF5F89C1BF8304A80A8D9A3C27660B627733F5675E9C0760309AB

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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NOTICE OF ALLOWANCE AND FEE(S) DUE

28977 7590 07/01/2024
Morgan, Lewis & Bockius LLP (PH)
2222 Market Street
Philadelphia, PA 19103

EXAMINER	
MCKNIGHT, CIARA A	
ART UNIT	PAPER NUMBER
1656	

DATE MAILED: 07/01/2024

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/068,418	12/19/2022	Ge Wei	063995-01-5105-US10	5769

TITLE OF INVENTION: PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	10/01/2024

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

By mail, send to: Mail Stop ISSUE FEE
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P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

28977 7590 07/01/2024
Morgan, Lewis & Bockius LLP (PH)
2222 Market Street
Philadelphia, PA 19103

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/068,418	12/19/2022	Ge Wei	063995-01-5105-US10	5769

TITLE OF INVENTION: PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	10/01/2024

EXAMINER	ART UNIT	CLASS-SUBCLASS
MCKNIGHT, CIARA A	1656	424-094620

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑ Issue Fee ❑ Publication Fee (if required)

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via the USPTO patent electronic filing system ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

❑ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

❑ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/068,418	12/19/2022	Ge Wei	063995-01-5105-US10	5769

28977 7590 07/01/2024

Morgan, Lewis & Bockius LLP (PH)
2222 Market Street
Philadelphia, PA 19103

EXAMINER	
MCKNIGHT, CIARA A	
ART UNIT	**PAPER NUMBER**
1656	

DATE MAILED: 07/01/2024

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013).
https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf

Routine uses of the information in this record may include disclosure to:

1) law enforcement, in the event that the system of records indicates a violation or potential violation of law;
2) a federal, state, local, or international agency, in response to its request;
3) a contractor of the USPTO having need for the information in order to perform a contract;
4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record;
5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record;
6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations;
7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals;
8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c));
9) the Office of Personnel Management (OPM) for personnel research purposes; and
10) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

Notice of Allowability	Application No. 18/068,418	Applicant(s) Wei et al.	
	Examiner CIARA A MCKNIGHT	Art Unit 1656	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to claim amendments 05/21/2024.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 1-35 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☑ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/CIARA A MCKNIGHT/ Examiner, Art Unit 1656	/SUZANNE M NOAKES/ Primary Examiner, Art Unit 1656

Notice of Allowance

1. The amendments to the claims filed 21 May 2024 are acknowledged and have been considered in their entireties. Claims 1-35 are under examination after rejoinder (See below).

Terminal Disclaimer

2. The terminal disclaimer filed on 21 May 2024 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of **U.S. Patent 10865400** has been reviewed and is accepted. The terminal disclaimer has been recorded.

3. The terminal disclaimer filed on 21 May 2024 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of **U.S. Application No. 18/340,786** has been reviewed and is accepted. The terminal disclaimer has been recorded.

Withdrawal of Previous Objections/Rejections

4. The objections to claims 1, 2, 8-10, 17, 22, and 29 for informalities are withdrawn, since the amended claims included the suggested change from the previous office action.

5. The objection to claim 7 for informalities is withdrawn, since the amended claim included the suggested change from the previous office action.

6. The objection to claim 15 for informalities are withdrawn, since the amended claims included the suggested change from the previous office action.

7. The 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, rejection of claim 17 as being indefinite for the utilization of the term “modifications” is withdrawn, since the

amended claim 17 recites "post-translational modifications" as suggested in the previous office action.

8. The 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, rejection of claim 34 as being indefinite for the utilization of the term "is modified" is withdrawn, since the amended claim 34 recites "is further modified" as suggested in the previous office action.

9. The 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, rejection of claim 35 for indefiniteness for the term "Fe domain" is withdrawn, since the amended claim 35 recites "Fc domain" as suggested in the previous office action.

10. The 35 U.S.C. 112(d) or 35 U.S.C. 112 (pre-AIA0, fourth paragraph, rejection of claim 8 for failing to further limit the subject matter for the recitation of "comprises" is withdrawn, since the amended claims now recite "consists of."

11. The 35 U.S.C. 112(d) or 35 U.S.C. 112 (pre-AIA0, fourth paragraph, rejection of claim 15 for failing to further limit the subject matter for the recitation of "SEQ ID NO: 623 and 624" is withdrawn, since the amended claims have deleted these SEQ ID NOs.

12. The double patenting rejection over **U.S. Patent 10865400** is withdrawn, since the terminal disclaimer has been filed.

13. The double patenting rejection over **U.S. Application No. 18/338189** is withdrawn, since the terminal disclaimer has been filed.

Election/Restrictions

14. Claims 1-30 and 34-35 are directed to an allowable product. Pursuant to the procedures set forth in MPEP § 821.04(b), claims 31-33, directed to the process of using the allowable product, previously withdrawn from consideration as a result of a restriction requirement, are hereby rejoined and fully examined for patentability under 37 CFR 1.104.

Because all claims previously withdrawn from consideration under 37 CFR 1.142 has been rejoined, **the restriction requirement as set forth in the Office action mailed on 20 February 2024 is hereby withdrawn**. In view of the withdrawal of the restriction requirement as to the rejoined inventions, applicant(s) are advised that if any claim presented in a divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once the restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Reasons for Allowance

15. The following is an examiner's statement of reasons for allowance: the claims are drawn to a modified PH20 polypeptide with a mutation corresponding to position 324 in SEQ ID NO: 3 with at least 91% identity to a sequence selected from the group consisting of SEQ ID NOs: 3, 7, and 32-66. Prior to the priority date of 30 December 2011, the closest known art was Lin et al. (Lin et al., 1993, *PNAS*—cited on the Information Disclosure Statement dated 07 June 2021), which discloses a PH20 variant that is 99.7% identical to SEQ ID NO: 3 in the instant application (See Supplemental File, 20240201_135928_us-17-327-586-3.minpct90.rpr). Lin et al. does not suggest mutating site 324 or functionally study the PH20 variant in any manner to determine increased stability, solubility, or hyaluronidase activity. As such, the instant claims are deemed novel and non-obvious and **claims 1-35 are allowed**.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CIARA A MCKNIGHT whose telephone number is (703)756-4791. The examiner can normally be reached M-F 9:00am-5:30pm.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Manjunath Rao can be reached on (571) 272-0939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CIARA A MCKNIGHT/
Examiner, Art Unit 1656

/SUZANNE M NOAKES/
Primary Examiner, Art Unit 1656

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/068,418	Wei et al.
	Examiner	**Art Unit**
	CIARA A MCKNIGHT	1656

CPC						
Symbol					**Type**	**Version**
C12N	/	9	/	2474	F	2013-01-01
A61K	/	38	/	47	I	2013-01-01
A61K	/	38	/	28	I	2013-01-01
A61K	/	45	/	06	I	2013-01-01
C12Y	/	302	/	01035	I	2013-01-01
A61K	/	9	/	0019	I	2013-01-01
A61K	/	47	/	10	I	2013-01-01
C12Q	/	1	/	34	I	2013-01-01
A61P	/	35	/	00	I	2018-01-01
C07K	/	14	/	47	I	2013-01-01
G01N	/	2333	/	926	A	2013-01-01
G01N	/	2333	/	928	A	2013-01-01
Y02A	/	50	/	30	A	2018-01-01
C07K	/	2319	/	30	A	2013-01-01
A61K	/	38	/	00	A	2013-01-01

CPC Combination Sets								
Symbol					**Type**	**Set**	**Ranking**	**Version**
A61K	/	38	/	28	I	1	1	2013-01-01
A61K	/	2300	/	00	I	1	2	2013-01-01
A61K	/	38	/	47	I	2	1	2013-01-01
A61K	/	2300	/	00	I	2	2	2013-01-01

/CIARA A MCKNIGHT/ Examiner, Art Unit 1656 (Assistant Examiner)	25 June 2024 (Date)	**Total Claims Allowed:** 35	
/SUZANNE M NOAKES/ Primary Examiner, Art Unit 1656 (Primary Examiner)	26 June 2024 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure none

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/068,418	Wei et al.
	Examiner	**Art Unit**
	CIARA A MCKNIGHT	1656

INTERNATIONAL CLASSIFICATION				
CLAIMED				
C12N	/	9	/	26
A61K	/	9	/	00
A61K	/	38	/	28
A61K	/	38	/	47
A61K	/	45	/	06
A61K	/	47	/	10
A61P	/	35	/	00
C07K	/	14	/	47
C12Q	/	1	/	34
A61K	/	38	/	00

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					

/CIARA A MCKNIGHT/ Examiner, Art Unit 1656	25 June 2024	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	35	
/SUZANNE M NOAKES/ Primary Examiner, Art Unit 1656	26 June 2024	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	none

U.S. Patent and Trademark Office — Part of Paper No.: 20240625

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/068,418	Wei et al.
	Examiner	**Art Unit**
	CIARA A MCKNIGHT	1656

☑ Claims renumbered in the same order as presented by applicant ☐ CPA ☑ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original

/CIARA A MCKNIGHT/ Examiner, Art Unit 1656	25 June 2024	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	35	
/SUZANNE M NOAKES/ Primary Examiner, Art Unit 1656	26 June 2024	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	none

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/068,418	Wei et al.
	Examiner	Art Unit
	CIARA A MCKNIGHT	1656

CPC - Searched*		
Symbol	Date	Examiner
C12N9/2474, A61P35/00, A61K9/0019, A61K38/28, A61K38/47, A61K4506, A61K47/10, C07K14/47, C12Q1/34, C12Y302/01035, Y02A50/30, A61K38/00, C07K2319/30, G01N2333/926, G01N2333/928		

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
PALM inventor name search, all inventors searched	04/18/2024	/CAM/
SEARCH inventor name and assignee search, all inventors searched	04/18/2024	/CAM/
SEARCH keyword search, see attached printouts for search strategy and databases searched	04/18/2024	/CAM/
PUBMED keyword search, see attached printout for strategy	04/18/2024	/CAM/
STIC sequence search	04/18/2024	/CAM/
SEARCH inventor name and assignee, updated	06/25/2024	/CAM/
PUBMED keyword search, updated	06/25/2024	/CAM/

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/068,418	Wei et al.
	Examiner	Art Unit
	CIARA A MCKNIGHT	1656

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
	inventors names and assignee in SEARCH	06/25/2024	/CAM/

PubMed Advanced Search Builder

Add terms to the query box

All Fields

Enter a search term

ADD

Show Index

Query box

Enter / edit your search query here

Search

History and Search Details

Search	Actions	Details	Query	Results	Time
#16	•••		Search: **PH20 hyaluronidase disease**	22	15:38:00
#15	•••		Search: **PH20 hyaluronidase composition**	3	15:37:44
#14	•••		Search: **PH20 hyaluronidase soluble**	15	15:37:37
#13	•••		Search: **PH20 hyaluronidase 324**	0	15:37:12
#12	•••		Search: **PH20 hyaluronidase 324 - Schema: all**	0	15:37:12
#11	•••		Search: **PH20 hyaluronidase cancer**	46	15:37:04
#10	•••		Search: **PH20 hyaluronidase stability**	4	15:36:58
#9	•••		Search: **PH20 hyaluronidase solubility**	15	15:36:54
#8	•••		Search: **PH20 hyaluronidase treatment**	83	15:36:45
#7	•••		Search: **PH20 hyaluronidase glycosylation mutant**	0	15:36:36
#6	•••		Search: **PH20 hyaluronidase glycosylation mutant - Schema: all**	0	15:36:36
#5	•••		Search: **PH20 hyaluronidase glycosylation**	20	15:36:30
#4	•••		Search: **PH20 hyaluronidase pharmaceutical**	12	15:36:23
#3	•••		Search: **PH20 hyaluronidase mutant**	7	15:36:16
#2	•••		Search: **PH20 hyaluronidase**	178	15:36:12

Search	Actions	Details	Query	Results	Time
#1	***		Search: **PH20**	238	15:36:03

Showing 1 to 16 of 16 entries

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	1484	((("WEI") near3 ("Ge")) OR (("SHEPARD") near3 ("H")) OR (("ZHAO") near3 ("Qiping")) OR (("CONNOR") near3 ("Robert")))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/02 02:56 PM
L2	66	((("WEI") near3 ("Ge")) OR (("SHEPARD") near3 ("H")) OR (("ZHAO") near3 ("Qiping")) OR (("CONNOR") near3 ("Robert")))).INV. AND PH20	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/02 02:57 PM
L3	53	((("WEI") near3 ("Ge")) OR (("SHEPARD") near3 ("H")) OR (("ZHAO") near3 ("Qiping")) OR (("CONNOR") near3 ("Robert")))).INV. AND PH20	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/02/02 02:57 PM
L4	55	((("HALOZYME") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2024/02/02 02:59 PM
L5	1505	((("WEI") near3 ("Ge")) OR (("SHEPARD") near3 ("H")) OR (("ZHAO") near3 ("Qiping")) OR (("CONNOR") near3 ("Robert")))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/06/25 03:35 PM
L6	68	((("WEI") near3 ("Ge")) OR (("SHEPARD") near3 ("H")) OR (("ZHAO") near3 ("Qiping")) OR (("CONNOR") near3 ("Robert")))).INV. AND PH20	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/06/25 03:35 PM
L7	55	((("WEI") near3 ("Ge")) OR (("SHEPARD") near3 ("H")) OR (("ZHAO") near3 ("Qiping")) OR (("CONNOR") near3 ("Robert")))).INV. AND PH20	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/06/25 03:35 PM
L8	57	((("HALOZYME") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2024/06/25 03:35 PM

PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/068,418	**08/16/2024 09:12:20 PM Z ET**	**063995-01-5105-US10**

Title of Invention

PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	5769	FILED BY	Collins Mba-Jonas
PATENT CENTER #	66821508	FILING DATE	12/19/2022
CUSTOMER #	28977	FIRST NAMED INVENTOR	Ge Wei
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Kalpesh Upadhye

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
20240816_Issuefeepayment.pdf	1	Issue Fee Payment (PTO-85B)	125 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
20240816_Issuefeepayment.pdf	32A63ADA65DAF744B1138014DE977FE94B9DF7E1ADD5649BF7C6C44576FA816AB1C63956673F2A347A3A00BC156862E9CA4428C39315C950F767454D4CE56220

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/068,418	**08/16/2024 09:12:20 PM Z ET**	**063995-01-5105-US10**

Title of Invention

PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	5769	FILED BY	Collins Mba-Jonas
PATENT CENTER #	66821508	AUTHORIZED BY	Kalpesh Upadhye
CUSTOMER #	28977	FILING DATE	12/19/2022
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Ge Wei

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 5344	**E20248FL12528229**	**Kalpesh Upadhye**

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
1501	UTILITY ISSUE FEE	1200.00	1	1200.00
			TOTAL AMOUNT:	**$1,200.00**

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

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PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

28977 7590 07/01/2024
Morgan, Lewis & Bockius LLP (PH)
2222 Market Street
Philadelphia, PA 19103

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/068,418	12/19/2022	Ge Wei	063995-01-5105-US10	5769

TITLE OF INVENTION: PH20 POLYPEPTIDE VARIANTS, FORMULATIONS AND USES THEREOF

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	10/01/2024

EXAMINER	ART UNIT	CLASS-SUBCLASS
MCKNIGHT, CIARA A	1656	424-094620

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Morgan, Lewis & Bockius LLP
2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Halozyme, Inc.

(B) RESIDENCE: (CITY and STATE OR COUNTRY): San Diego, CA

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required)

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

☒ Electronic Payment via the USPTO patent electronic filing system ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 50-0310

5. **Change in Entity Status** (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

☐ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

☐ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Kalpesh V. Upadhye/ Date August 16, 2024

Typed or printed name Kalpesh V. Upadhye Ph.D. Registration No. 70,236

PTOL-85 Part B (11/23) Approved for use through 03/31/2026 OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

UNITED STATES PATENT AND TRADEMARK OFFICE

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Alexandria, Virginia 22313-1450
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/068,418	10/08/2024	12110520	063995-01-5105-US10	5769

28977 7590 09/18/2024

Morgan, Lewis & Bockius LLP (PH)
2222 Market Street
Philadelphia, PA 19103

ISSUE NOTIFICATION

The projected patent number and issue date are specified above. The patent will issue electronically. The electronically issued patent is the official patent grant pursuant to 35 U.S.C. § 153. The patent may be accessed on or after the issue date through Patent Center at https://patentcenter.uspto.gov/. The patent will be available in both the public and the private sides of Patent Center. Further assistance in electronically accessing the patent, or about Patent Center, is available by calling the Patent Electronic Business Center at 1-888-217-9197.

The USPTO is implementing electronic patent issuance with a transition period, during which period the USPTO will mail a ceremonial paper copy of the electronic patent grant to the correspondence address of record. Additional copies of the patent (i.e., certified and presentation copies) may be ordered for a fee from the USPTO's Certified Copy Center at https://certifiedcopycenter.uspto.gov/index.html. The Certified Copy Center may be reached at (800)972-6382.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 1 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Center (https://patentcenter.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PATENT CENTER site https://patentcenter.uspto.gov for additional inventors):

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APPLICANT(s) (Please see PATENT CENTER site https://patentcenter.uspto.gov for additional applicants):

Halozyme, Inc., San Diego, CA;

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EXAMINER	
MCKNIGHT, CIARA A	

ART UNIT	PAPER NUMBER
1656	

NOTIFICATION DATE	DELIVERY MODE
10/08/2024	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

judith.troilo@morganlewis.com
phpatentcorrespondence@morganlewis.com

APPLICATION NO.	ISSUE DATE	PATENT NO.
18/068,418	08-Oct-2024	12110520

Morgan, Lewis & Bockius LLP (PH)
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EGRANT NOTIFICATION

Your electronic patent grant (eGrant) is now available, which can be accessed via Patent Center at https://patentcenter.uspto.gov

The electronic patent grant is the official patent grant under 35 U.S.C. 153. For more information, please visit https://www.uspto.gov/electronicgrants