

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT6197335

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
Name		Execution Date
TOCAGEN INC.		06/15/2020
RECEIVING PARTY DATA		
Name:	DENOVO BIOPHARMA LLC	
Street Address:	10240 SCIENCE CENTER DRIVE	
Internal Address:	SUITE 120	
City:	SAN DIEGO	
State/Country:	CALIFORNIA	
Postal Code:	92121	
PROPERTY NUMBERS Total: 18		
Property Type	Number	
Patent Number:	9320738	
Patent Number:	9889133	
Patent Number:	10449194	
Patent Number:	8722867	
Patent Number:	10035983	
Patent Number:	9732326	
Patent Number:	10407666	
Application Number:	16044472	
Application Number:	16560525	
Patent Number:	10316333	
Application Number:	16431626	
Patent Number:	9669049	
Application Number:	15611722	
Application Number:	14438564	
Patent Number:	9642921	
Application Number:	15127388	
Application Number:	15757292	
PCT Number:	US1961297	

CORRESPONDENCE DATA**Fax Number:**

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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ATTORNEY DOCKET NUMBER:	4594-2800100
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NAME OF SUBMITTER:	PENG CHEN
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SIGNATURE:	/Peng Chen/
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DATE SIGNED:	07/13/2020
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Total Attachments: 19

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PATENT ASSIGNMENT

THIS PATENT ASSIGNMENT (this “**Assignment**”) is made, entered into and effective as of June 15, 2020 (“the “**Effective Date**”), by Denovo Biopharma LLC, a Delaware limited liability company (“**Assignee**”), and Tocagen Inc., a Delaware corporation (“**Assignor**”). All capitalized terms used herein and not otherwise defined shall have the meaning ascribed to such terms in that certain Asset Purchase Agreement, dated April 17, 2020 (as amended, the “**Purchase Agreement**”), by and among the Assignor, the Assignee and the other parties signatory thereto.

RECITALS:

WHEREAS, pursuant to the Purchase Agreement, the Assignor has agreed to assign to the Assignee all of Assignor’s right, title and interest in the patents and patent applications set forth in Schedule 1 attached hereto, which includes letters patent and patent applications and all reissues thereof and reexamination certificates therefore, and the inventions disclosed therein (the “**Assigned Assets**”);

WHEREAS, the Assignor has agreed to execute this Assignment to enable the Assignee to record the assignment of, all of the Assignor’s right, title and interest in and to the Assigned Assets, the associated registration and renewals, all goodwill associated therewith, and all other rights, including the right to sue and recover (for the sole use and benefit of the Assignee and its successors, assigns or other legal representatives) damages for past, present and future infringement, misappropriation, dilution or other violation or damage, if any, in each case free and clear of all mortgages, pledges, ownership interests, security interests, liens, reservations and contract rights of third parties, if any, in the Assigned Assets throughout the world (the “**Related Rights**”).

NOW, THEREFORE, in consideration of the foregoing and the respective representations, warranties, covenants, agreements and conditions set forth herein, and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, and intending to be legally bound, each party agrees as follows:

1. Assignment. Assignor has agreed to and does hereby sell, assign and transfer unto Assignee, its successors and assigns, all of Assignor’s right, title and interest in and throughout the world, in and to the Assigned Assets and Related Rights; and Assignor has further agreed to and does hereby sell, assign and transfer unto Assignee, its successors and assigns, all of Assignor’s right, title and interest in and throughout the world in and to said inventions, any other patent applications (including provisional, non-provisional, divisional, continuing, or reissue applications) based in whole or in part on the Assigned Assets in any country which have been or may be granted. The Assignee will hold all right, title and interest in and to the Assigned Assets and Related Rights as fully and exclusively as they would have been held and enjoyed by the Assignor had the assignment in this Section 1 not been made.

2. Authorization. The Assignor authorizes and requests the Assignee to request the U.S. Patent and Trademark Office and any other registering body throughout the world (each, a “**Registrar**”) to record the Assignee as the assignee of the Assigned Assets. The Assignor shall, promptly upon presentation by the Assignee, execute, or procure the execution of, such transfer documents and provide such information as required by such Registrar. The Assignor covenants that the Assignor has full right to convey all interest in and to the Assigned Assets, and that the Assignor has not executed, and will not execute, any agreements in conflict with this covenant.

3. Power of Attorney. Assignor irrevocably designates and appoints Assignee and its duly authorized officers and agents as Assignor’s agent and attorney in fact. The appointment is coupled with an interest, to act for and on his behalf to execute, verify and file any such documents and to do all other

lawfully permitted acts to further the purposes of this Agreement with the same legal force and effect as if executed by Assignor. Such rights and authority may be exercised by Assignee if Assignee is unable for any reason, after reasonable effort, to secure Assignor's signature on any document needed in connection with these actions specified.

4. Waiver of Rights. Assignor will not assert any rights to any Assigned Assets or Related Rights after the Effective Date of this Agreement.

5. Further Assurances. Each party shall, upon the request of the other party, do, execute, acknowledge and deliver or cause to be done, executed, acknowledged and delivered all such further acts, deeds, assignments, transfers, conveyances, powers of attorney and assurances as may be required to carry out the intent of this Assignment.

6. Entire Agreement. This Assignment and the Purchase Agreement (including the other schedules and exhibits to the Purchase Agreement) contain the entire agreement of the parties with regard to the subject matter; provided, however, that this provision is not intended to abrogate any other written agreement between the parties executed with or after this Assignment.

7. Successors and Assigns. This Assignment shall be binding upon each party and its respective successors and assigns.

8. Governing Law. The parties specifically agree that this Assignment shall in all respects be interpreted, read construed and governed by the internal Laws of the State of Delaware, exclusive of its conflicts of law rules.

9. Counterparts. This Agreement may be executed in counterparts, each of which will be deemed an original, and all of which together will constitute one and the same instrument. This Agreement, and any amendments, to the extent signed and delivered by means of facsimile transmission or as an attachment to an electronic mail message in "PDF" or similar format, shall be treated in all manner and respects as an original agreement or instrument and shall have the same binding legal effect as if it were the original signed version delivered in person.

Signatures on following page.

IN WITNESS WHEREOF, the parties hereto have caused this Patent Assignment to be duly executed effective as of the date first above written.

ASSIGNOR:

TOCAGEN INC.

By: 

Name: Marty J. Duval

Title: Chief Executive Officer

ASSIGNEE:

DENOVO BIOPHARMA LLC

By: _____

Name: Wen Luo

Title: Chief Executive Officer

[Signature Page to Patent Assignment]

IN WITNESS WHEREOF, the parties hereto have caused this Patent Assignment to be duly executed effective as of the date first above written.

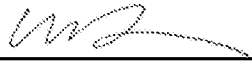
ASSIGNOR:

TOCAGEN INC.

By: _____
Name: Marty J. Duvall
Title: Chief Executive Officer

ASSIGNEE:

DENOVO BIOPHARMA LLC

By:  _____
Name: Wen Luo
Title: Chief Executive Officer

SCHEDULE 1

Tocagen Ref.	Priority Date	Assignee	Title	Country	Application/ Patent No.	Filing, Issue or Grant Date	Status	Expiration Date
00014-006AU1	6/30/2008	Tocagen	Fluorocytosine and uses thereof	AU	2009267052 2009267052	6/30/2009 10/24/2013	Granted	6/30/2029
00014-006AU2	6/30/2008	Tocagen	Fluorocytosine and uses thereof	AU	2013205004 2013205004	6/30/2009 12/10/2015	Granted	6/30/2029
00014-006BR1	6/30/2008	Tocagen	Fluorocytosine and uses thereof	BR	PI 0915284-9	6/30/2009	Pending	N/A
00014-006CA1	6/30/2008	Tocagen	Fluorocytosine and uses thereof	CA	2,724,740 2,724,740	6/30/2009 2/21/2017	Granted	6/30/2029
00014-006CN2	6/30/2008	Tocagen	Fluorocytosine and uses thereof	CN	201710036517. X	6/30/2009	Pending	
00014-006EP1	6/30/2008	Tocagen	Fluorocytosine and uses thereof	EP	09774387.6	6/30/2009	Pending	
00014-006HK2	6/30/2008	Tocagen	Fluorocytosine and uses thereof	HK	17113265.2	6/30/2009	Pending	
00014-006IL1	6/30/2008	Tocagen	Fluorocytosine and uses thereof	IL	209385 209385	6/30/2009 2/1/2017	Granted	6/30/2029
00014-006IL2	6/30/2008	Tocagen	Fluorocytosine and uses thereof	IL	246473 246473	6/30/2009 9/29/2018	Granted	6/30/2029
00014-006IL3	6/30/2008	Tocagen	Fluorocytosine and uses thereof	IL	255813	6/30/2009	Pending	
00014-006JP1	6/30/2008	Tocagen	Fluorocytosine and uses thereof	JP	2011-516833 6092514	6/30/2009 2/17/2017	Granted	6/30/2029
00014-006JP2	6/30/2008	Tocagen	Fluorocytosine and uses thereof	JP	2014-227208 6170896	6/30/2009 7/26/2017	Granted	6/30/2029
00014-006KR1	6/30/2008	Tocagen	Fluorocytosine and uses thereof	KR	10-2011- 7002457 10-1813721	6/30/2009 12/22/2017	Granted	6/30/2029

Tocagen Ref.	Priority Date	Assignee	Title	Country	Application/ Patent No.	Filing, Issue or Grant Date	Status	Expiration Date
00014-006KR2	6/30/2008	Tocagen	Fluorocytosine and uses thereof	KR	10-2017-7036825 10-1950635	6/30/2009 2/14/2019	Granted	6/30/2029
00014-006MX1	6/30/2008	Tocagen	Fluorocytosine and uses thereof	MX	MX/a/2010/014256 337213	6/30/2019 2/17/2016	Granted	6/30/2029
00014-006MX2	6/30/2008	Tocagen	Fluorocytosine and uses thereof	MX	MX/a/2016/002131 366570	6/30/2019 7/12/2019	Granted	6/30/2029
00014-006US1	6/30/2008	Tocagen	Fluorocytosine and uses thereof	US	13/001,516 9,320,738	3/11/2011 4/26/2016	Issued	11/25/2031
00014-006US2	6/30/2008	Tocagen	Fluorocytosine and uses thereof	US	15/136,056 9,889,133	4/22/2016 2/13/2018	Issued	11/25/2031
00014-006US3	6/30/2008	Tocagen	Fluorocytosine and uses thereof	US	15/891,243 10,449,194	2/7/2018	Issued	11/25/2031
00014-006US4	6/30/2008	Tocagen	Fluorocytosine and uses thereof	US	15/891,243	2/7/2018	Pending	
00014-007AU1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	AU	2009303690 2009303690	9/26/2009 10/2/2014	Granted	9/26/2029
00014-007AU2	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	AU	2013205006 2013205006	9/26/2009 6/2/2016	Granted	9/26/2029
00014-007BR1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	BR	PI 0919113-5	9/26/2009	Pending	
00014-007CA1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	CA	2,738,472	9/26/2009	Pending	

Tocagen Ref.	Priority Date	Assignee	Title	Country	Application/ Patent No.	Filing, Issue or Grant Date	Status	Expiration Date
00014-007CN1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	CN	200980147509.6 ZL 200980147509.6	9/26/2009 11/16/2016	Granted	9/26/2029
00014-007CN2	9/26/2008	Tocagen	Recombinant Vectors	CN	200980147515.1 ZL200980147515.1	9/26/2009 10/21/2015	Granted	9/26/2029
00014-007CN3	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	CN	201510505943.4	9/26/2009	Pending	
00014-007CN4	9/26/2008	Tocagen	Recombinant Vector	CN	201510624987.9	9/26/2009	Pending	
00014-007EA1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	EA	201170492027693	9/26/2009 8/31/2017	Granted	9/26/2029
00014-007EA2	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	EA	201790824	9/26/2009	Pending	
00014-007EP1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	EP (Validated in AT, BE, CH, DE, DK, ES, FI, FR, GB, IE, IT, LU, MC, NL, SE)	09820986.9 2346995	9/26/2009 11/7/2018	Granted	9/26/2029

Tocagen Ref.	Priority Date	Assignee	Title	Country	Application/ Patent No.	Filing, Issue or Grant Date	Status	Expiration Date
00014-007EP2	9/26/2008	Tocagen	Recombinant Vectors	EP (Validated in FR, DE, IT, ES, GB)	09816967.5 2344648	9/26/2009 11/14/2018	Granted	9/26/2029
00014-007EP3	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	EP	18188075.8	9/26/2009	Pending	
00014-007EP4	9/26/2008	Tocagen	Recombinant Vectors	EP	18198570.6	9/26/2009	Pending	
00014-007ID1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	ID	W/00 2011 01382	9/26/2009	Pending	
00014-007IL1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	IL	211847 211847	9/26/2009 3/1/2017	Granted	9/26/2029
00014-007IL2	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	IL	248833 248833	9/26/2009 5/1/2019	Granted	9/26/2029
00014-007IL3	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	IL	264214	9/26/2009	Pending	
00014-007IN1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	IN	2659/DELNP/2 011	9/26/2009	Pending	
00014-007JP1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	JP	2011-529291 5771147	9/26/2009 9/30/2016	Granted	9/26/2029
00014-007JP2	9/26/2008	Tocagen	Recombinant Vectors	JP	2011-529292 5684130	9/26/2009 1/23/2015	Granted	9/26/2029

Tocagen Ref.	Priority Date	Assignee	Title	Country	Application/ Patent No.	Filing, Issue or Grant Date	Status	Expiration Date
00014-007JP3	9/26/2008	Tocagen	Recombinant Vectors	JP	2015-004923 5992548	9/26/2009 8/26/2016	Granted	9/26/2029
00014-007JP4	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	JP	2015-097980 6062485	9/26/2009 12/22/2016	Granted	9/26/2029
00014-007JP5	9/26/2008	Tocagen	Recombinant Vectors	JP	2016-159893 6523224	9/26/2009 5/10/2019	Granted	9/26/2029
00014-007JP6	9/26/2008	Tocagen	Recombinant Vectors	JP	2019-086133	9/26/2009	Pending	
00014-007KR1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	KR	10-2011- 7008744 10-1724162	9/26/2009 3/31/2017	Granted	9/26/2029
00014-007KR2	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	KR	10-2016- 7016947 10-1870056	9/26/2009 6/15/2018	Granted	9/26/2029
00014-007KR3	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	KR	10-2018- 7016894 10-2025502	9/26/2009	Granted	9/26/2029
00014-007MX1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	MX	MX/a/2011/003 039 332230	9/26/2009 8/7/2015	Granted	9/26/2029
00014-007MX2	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	MX	MX/a/2015/010 159 357418	9/26/2009 7/9/2018	Granted	9/26/2029
00014-007MX3	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	MX	MX/a/2018/008 440	9/26/2009	Pending	
00014-007MY1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	MY	P1 2011001328 MY-156333-A	9/26/2009 2/15/2016	Granted	9/26/2029

Tocagen Ref.	Priority Date	Assignee	Title	Country	Application/ Patent No.	Filing, Issue or Grant Date	Status	Expiration Date
			Deaminases					
00014-007NZ1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	NZ	592070 592070	9/26/2009 11/5/2012	Granted	9/26/2029
00014-007PH1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	PH	1-2011-500630 1-2011-500630	9/26/2009 9/24/2015	Granted	9/26/2029
00014-007SG1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	SG	201102149-0 169834	9/26/2009 6/22/2015	Granted	9/26/2029
00014-007UA1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	UA	201105174 104298	9/26/2009 1/27/2014	Granted	9/26/2029
00014-007US1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	US	13/072,705 8,722,867	3/26/2011 5/13/2014	Issued	12/4/2031
00014-007US3	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	US	14/274,556 10,035,983	5/9/2014 7/31/2018	Issued	12/4/2031
00014-007US4	9/26/2008	Tocagen	Recombinant Vectors	US	14/477,741 9,732,326	9/4/2014 8/15/2017	Issued	12/4/2031
00014-007US5	9/26/2008	Tocagen	Recombinant Vectors	US	15/672,029 10,407,666	8/8/2017 9/10/2019	Issued	12/4/2031
00014-007US6	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine Deaminases	US	16/044,472	7/24/2018	Pending	
00014-007US7	9/26/2008	Tocagen	Recombinant Vectors	US	16/560,525	9/4/2019	Pending	
00014-007ZA1	9/26/2008	Tocagen	Gene Therapy Vectors and Cytosine	ZA	2011/02115 2011/02115	9/26/2009 7/25/2012	Granted	9/26/2029

Tocagen Ref.	Priority Date	Assignee	Title	Country	Application/ Patent No.	Filing, Issue or Grant Date	Status	Expiration Date
00014-008CA1	6/17/2009	Tocagen	Producer Cells For Replication Competent Retroviral Vectors	CA	2,764,107	6/17/2010	Pending	
00014-008CN2	6/17/2009	Tocagen	Producer Cells For Replication Competent Retroviral Vectors	CN	201710168480.6	6/17/2010	Pending	
00014-008EP1	6/17/2009	Tocagen	Producer Cells For Replication Competent Retroviral Vectors	EP (Validate d in AT, BE, DE, DK, FI, FR, NL, ES, GB, IE, IT, SE, CH)	10790193.6 2443242	6/17/2010 10/26/2016	Granted	6/17/2030
00014-008EP2	6/17/2009	Tocagen	Producer Cells For Replication Competent Retroviral Vectors	EP (Validate d in AT, BE, DK, FI, FR, DE, IE, IT, LU, MC, NL, ES, SE, CH, GB)	16191371.0 3159415	6/17/2010 3/13/2019	Granted	6/17/2030
00014-	6/17/2009	Tocagen	Producer Cells For	EP	19156480.6	6/17/2010	Pending	

Tocagen Ref.	Priority Date	Assignee	Title	Country	Application/ Patent No.	Filing, Issue or Grant Date	Status	Expiration Date
008EP3			Replication Competent Retroviral Vectors					
00014- 008HK2	6/17/2009	Tocagen	Producer Cells For Replication Competent Retroviral Vectors	HK	18100049.1	6/17/2010	Pending	
00014- 008IL1	6/17/2009	Tocagen	Producer Cells For Replication Competent Retroviral Vectors	IL	216799 216799	6/17/2010 12/29/2017	Granted	6/17/2030
00014- 008IL2	6/17/2009	Tocagen	Producer Cells For Replication Competent Retroviral Vectors	IL	254118 254118	6/17/2010 10/1/2019	Granted	6/17/2030
00014- 008IN1	6/17/2009	Tocagen	Producer Cells For Replication Competent Retroviral Vectors	IN	10014/DELNP/ 2011 325978	6/17/2010 11/27/2019	Granted	6/17/2030
00014- 008JP1	6/17/2009	Tocagen	Producer Cells For Replication Competent Retroviral Vectors	JP	2012-516300 5923037	6/17/2010 4/22/2016	Granted	6/17/2030
00014- 008JP2	6/17/2009	Tocagen	Producer Cells For Replication Competent Retroviral Vectors	JP	2015-251391 6335869	6/17/2010 5/11/2018	Granted	6/17/2030
00014- 008JP3	6/17/2009	Tocagen	Producer Cells For Replication Competent Retroviral Vectors	JP	2018-087936 6609663	6/17/2010 11/1/2019	Granted	6/17/2030

Tocagen Ref.	Priority Date	Assignee	Title	Country	Application/ Patent No.	Filing, Issue or Grant Date	Status	Expiration Date
			Vectors					
00014-008SG1	6/17/2009	Tocagen	Producer Cells For Replication Competent Retroviral Vectors	SG	201109341-6 176890	6/17/2010 4/26/2017	Granted	6/17/2030
00014-008SG2	6/17/2009	Tocagen	Producer Cells For Replication Competent Retroviral Vectors	SG	10201701942V	6/17/2010	Pending	
00014-008US1	6/17/2009	Tocagen	Producer Cells For Replication Competent Retroviral Vectors	US	13/376,827 10,316,333	12/7/2011 6/11/2019	Issued	6/12/2032
00014-008US3	6/17/2009	Tocagen	Producer Cells For Replication Competent Retroviral Vectors	US	16/431,626	6/4/2019	Pending	
00014-009EP1	3/29/2010	Tocagen	Recombinant Vectors with Multiplicity of Infection Cancer Treatment with Recombinant Vector	EP (Validate d in FR, DE, GB)	11766479.7 2547353	3/29/2011 3/6/2019	Granted	3/29/2031
00014-009JP1	3/29/2010	Tocagen	Recombinant Vectors with Multiplicity of Infection Cancer Treatment with Recombinant Vector	JP	2013-502771 6014020	3/29/2011 9/30/2016	Granted	3/29/2031

Tocagen Ref.	Priority Date	Assignee	Title	Country	Application/ Patent No.	Filing, Issue or Grant Date	Status	Expiration Date
00014-010CA1	7/26/2010	Tocagen	Retrovirus Detection	CA	2,803,011	7/16/2011	Granted	7/26/2030
00014-010EP2	7/26/2010	Tocagen	Retrovirus Detection	EP (validated in DE, FR, IT, ES, GB)	14191299,8 2913402	7/16/2011	Granted	7/26/2030
00014-010US1	7/26/2010	Tocagen	Retrovirus Detection	US	13/810,403 9,663,834	3/29/2013 5/30/2017	Issued	9/14/2033
00014-013EP1	10/31/2010	Tocagen	Antisera Assays for MLV Related Viruses in Humans and Other Mammals	EP (validated in FR, DE, IT, ES, GB)	11837226,7 2633321	10/28/2011 12/6/2017	Granted	10/28/2031
00014-015EP1	11/19/2010	Tocagen	Enhanced Cancer Treatment and Monitoring Using Recombinant Vectors	EP	11837255,6	10/31/2011	Pending	
00014-015US1	11/19/2010	Tocagen	Enhanced Cancer Treatment and Monitoring Using Recombinant Vectors	US	13/882,487 9,669,049	8/20/2013 6/6/2017	Issued	11/19/2034
00014-015US2	11/19/2010	Tocagen	Enhanced Cancer Treatment and Monitoring Using Recombinant Vectors	US	15/611,722	6/1/2017	Pending	

Tocagen Ref.	Priority Date	Assignee	Title	Country	Application/ Patent No.	Filing, Issue or Grant Date	Status	Expiration Date
00014-017CN1	10/25/2012	Tocagen	Retroviral Vector Comprising Mini-Promoter Cassette	CN	201380067486.4	10/24/2013	Pending	
00014-017EP1	10/25/2012	Tocagen	Retroviral Vector Comprising Mini-Promoter Cassette	EP (To Be Validated in AT, BE, CZ, DK, EE, FI, FR, DE, GB, GR, HU, IS, IE, IT, LI, LU, NL, NO, PL, PT, ES, SE, SI, SK, CH, TR)	13849839.9 2909324	10/24/2013	Pending	
00014-017EP2	10/25/2012	Tocagen	Retroviral Vector Comprising Mini-Promoter Cassette	EP	19190376.4	10/24/2013	Pending	
00014-017JP1	10/25/2012	Tocagen	Retroviral Vector Comprising Mini-Promoter Cassette	JP	2015-539817 6419706	10/24/2013 10/19/2018	Granted	10/24/2033
00014-017JP2	10/25/2012	Tocagen	Retroviral Vector Comprising Mini-Promoter Cassette	JP	2018-128726	10/24/2013	Pending	
00014-	10/25/2012	Tocagen	Retroviral Vector	US	14/438,564	4/24/2015	Pending	

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017US1			Comprising Mini-Promoter Cassette					
00014-018001	12/20/2012	Tocagen	Cancer Combination Therapy and Recombinant Vectors	US	14/137,803 9,642,921	12/20/2013 5/9/2017	Issued	11/12/2034
00014-020EP1	6/15/2013	Tocagen	Immunosuppressive Components Associated with Retroviral Replicating Vectors	EP (Validate d in GB, DE, IT, FR, ES)	14810447.4 3008175	6/15/2014 8/7/2019	Issued	6/15/2034
00014-020JP1	6/15/2013	Tocagen	Immunosuppressive Components Associated with Retroviral Replicating Vectors	JP	2016-519704	6/15/2014	Pending	
00014-021CA1	3/26/2014	Tocagen	A Retroviral Non-Replicating Vector Having Immune Stimulating Activity	CA	2,943,640	3/25/2015	Pending	
00014-021EP1	3/26/2014	Tocagen	A Retroviral Non-Replicating Vector Having Immune Stimulating Activity	EP (Validate d in DE, ES, FR, GB and IT)	15769100.7	3/25/2015	Pending	
00014-	3/26/2014	Tocagen	A Retroviral Non-	EP	19219628.5	3/25/2015	Pending	

Tocagen Ref.	Priority Date	Assignee	Title	Country	Application/ Patent No.	Filing, Issue or Grant Date	Status	Expiration Date
021EP2			Replicating Vector Having Immune Stimulating Activity					
00014-021JP1	3/26/2014	Tocagen	A Retroviral Non-Replicating Vector Having Immune Stimulating Activity	JP	2016-558674	3/25/2015	Pending	
00014-021US1	3/26/2014	Tocagen	A Retroviral Non-Replicating Vector Having Immune Stimulating Activity	US	15/127,388	9/19/2016	Pending	
00014-024AU1	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	AU	2016317936	9/1/2016	Pending	
00014-024BR1	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	BR	BR112018004283.8	9/1/2016	Pending	
00014-024CA1	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	CA	2,996,797	9/1/2016	Pending	
00014-024CN1	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	CN	201680050920.1	9/1/2016	Pending	
00014-024EA1	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	EA	201890640	9/1/2016	Pending	
00014-	9/4/2015	Tocagen	Recombinant Vectors	EP	16842998.3	9/1/2016	Pending	

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024EP1			Comprising 2A Peptide					
00014-024HK1	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	HK	18110849.2	9/1/2016	Pending	
00014-024ID1	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	ID	PID201801899	9/1/2016	Pending	
00014-024IL1	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	IL	257819	9/1/2016	Pending	
00014-024IN1	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	IN	201817009419	9/1/2016	Pending	
00014-024JP1	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	JP	2018-511704	9/1/2016	Pending	
00014-024KR1	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	KR	10-2018-7008093	9/1/2016	Pending	
00014-024MX1	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	MX	MX/a/2018/002744	9/1/2016	Pending	
00014-024MY1	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	MY	PI 2018000315	9/1/2016	Pending	
00014-024NZ1	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	NZ	739939	9/1/2016	Pending	
00014-	9/4/2015	Tocagen	Recombinant Vectors	PH	1-2018-500477	9/1/2016	Pending	

Tocagen Ref.	Priority Date	Assignee	Title	Country	Application/ Patent No.	Filing, Issue or Grant Date	Status	Expiration Date
024PH1			Comprising 2A Peptide					
00014-024SG1	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	SG	11201801731S	9/1/2016	Pending	
00014-024UA1	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	UA	2018 03568	9/1/2016	Pending	
00014-024US1	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	US	15/757,292	3/2/2018	Pending	
00014-024ZA1	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	ZA	2018/01140	9/1/2016	Pending	
00014-024ZA2	9/4/2015	Tocagen	Recombinant Vectors Comprising 2A Peptide	ZA	2019/00878	9/1/2016	Pending	
00014-034WO1	11/13/2018	Tocagen	Recombinant Vectors Comprising Secretary Signal Domain	WO	PCT/US19/612 97	11/13/2019	Pending	

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