



SAPIENZA
UNIVERSITÀ DI ROMA

Consiglio di
Amministrazione

Seduta del

28 OTT. 2014

Nell'anno **duemilaquattordici**, addì **28 ottobre** alle ore **15.50**, presso il **Salone di rappresentanza**, si è riunito il Consiglio di Amministrazione, convocato con note rettorali prot. n. 0060826 del 23.10.2014 e prot. n. 0061695 del 28.10.2014, per l'esame e la discussione degli argomenti iscritti al seguente ordine del giorno:

..... **O M I S S I S**

Sono presenti: il **rettore**, prof. Luigi Frati; il **prorettore**, prof. Antonello Biagini; i consiglieri: prof.ssa Antonella Polimeni, prof. Maurizio Barbieri, prof. Bartolomeo Azzaro, dott.ssa Francesca Pasinelli, prof. Michel Gras, sig. Domenico Di Simone, dott.ssa Angelina Chiaranza, sig. Luca Lucchetti, sig.ra Federica Di Pietro; il **direttore generale**, Carlo Musto D'Amore, che assume le funzioni di segretario.

Assiste per il Collegio dei Revisori dei Conti: dott. Massimiliano Atelli.

Il **presidente**, constatata l'esistenza del numero legale, dichiara l'adunanza validamente costituita e apre la seduta.

..... **O M I S S I S**

D.241/14

BREVETTI

12.1



SAPIENZA
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SAPIENZA UNIVERSITÀ DI ROMA
ASUR - Ufficio Valorizzazione
e Trasferimento Tecnologico
Il Capo del Settore Trasf. Tecnologico
Sandro Zicari

SAPIENZA UNIVERSITÀ DI ROMA
Area Supporto alla Ricerca
Ufficio Valorizzazione
e Trasferimento Tecnologico
Il Capo dell'Ufficio
Dott. Daniela Riccioni

SAPIENZA UNIVERSITÀ DI ROMA
Area Supporto alla Ricerca
Il Direttore
Dott. S. Baccarini

DOMANDA DI BREVETTO N. USA 61/256846: CONTRATTO DI LICENZA CON LA SOCIETÀ VESTA THERAPEUTICS INC. - ADDENDUM

Il Presidente sottopone all'attenzione del Consiglio di Amministrazione la seguente relazione predisposta dal Settore Trasferimento Tecnologico dell'Ufficio Valorizzazione Trasferimento Tecnologico dell'Area Supporto alla Ricerca.

Sapienza è titolare, con l'Università del North Carolina, della domanda di brevetto n. USA 61/256846 del 30.10.09 dal titolo "Multipotent stem cells from the extrahepatic biliary tree and methods of isolating same", la cui tutela è stata estesa a livello internazionale con domanda PCT n. PCT/US2010/054450 del 28.10.10 – inventori Eugenio Gaudio, Domenico Alvaro, Vincenzo Cardinale (Sapienza), Guido Carpino (Univ. Foro Italico), Lola M. Reid (U.N.C.).

Si ricorda che in data del 04.12.12 codesto Consesso ha approvato, con delibera del C.d.A. n. 271 (Allegato in visione), il contratto di licenza, sottoscritto in data 28.12.12, con la succitata Società di cui si riportano schematicamente le principali condizioni:

- a) concessione in licenza esclusiva dei diritti di sfruttamento della domanda di brevetto per ciò che concerne l'uso clinico (terapeutico) per tutta la durata di vita del brevetto (pari a venti anni dal primo deposito USA);
- b) concessione non esclusiva dei diritti di sfruttamento del brevetto per uso non terapeutico;
- c) assunzione da parte di Vesta Therapeutics Inc dei seguenti obblighi:
 - c.1 accollo dei costi di mantenimento del brevetto;
 - c.2 pagamento a favore di Sapienza di una fee iniziale di € 40.000,00 prevista alla firma del contratto di licensing (detta somma è stata anticipata dalla Società e già introitata da Sapienza);
 - c.3 *annual license payments* di € 30.000,00 a partire dal II anno di vita del contratto, di € 35.000,00 per il III e IV anno, e di € 40.000,00 dal quinto anno fino alla scadenza del brevetto (30.10.2029);
 - c.4 *royalties* variabili pari al 2% del fatturato netto realizzato da Vesta, con un minimo garantito pari a € 50.000,00 per il I e il II anno e a € 100.000,00 dal III anno in poi fino alla scadenza del brevetto (30.10.2029);
 - c.5 tre milestones di € 40.000,00, € 60.000,00 e € 100.000,00 legate al conseguimento di individuati steps di sperimentazione;
 - c.6 compensi derivanti da eventuali sub-licenze pari al 20% di tutte le royalties incassate da Vesta, con un minimo garantito annuale di € 20.000,00, e pari al 10% di tutti i compensi diversi dalle royalties percepiti da Vesta con un minimo garantito annuale di € 10.000,00;
 - c.7 un finanziamento alla ricerca tramite la sottoscrizione (da parte del Dipartimento di afferenza degli Inventori) di uno *Sponsored Research Agreement* di durata di sei anni, per un importo annuo di € 250.000,00;
 - c.8 una *additional fee* minima garantita su eventuali risultati migliorativi del brevetto sviluppati in regime di co-titolarità, di importo pari a € 10.000,00;



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Area Supporto alla Ricerca
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e Trasferimento Tecnologico
Il Capo dell'Ufficio
Dott. Daniele Riccioni

SAPIENZA UNIVERSITÀ DI ROMA
Area Supporto alla Ricerca
Il Direttore
Dott. Sabina Quattrone

d) riconoscimento di un diritto di prelazione a favore di Vesta su eventuali nuovi risultati scaturenti dalla collaborazione.

Si fa presente che, in data 12.03.2014, è stata depositata la domanda di brevetto n. USA 14207,191 e la relativa estensione PCT n. PCT/US2014/25461 del 13.03.2014, dal titolo "Method of treating pancreatic and liver conditions by transplantation of stem cells into bile duct walls", di titolarità di Sapienza, dell'Università del North Carolina e del Diabetes Research Institute, derivante dai risultati migliorativi al precedente brevetto, scaturiti dalla ricerca degli stessi inventori.

Stante quanto previsto dalle succitate clausole c.8 e d), la titolarità, per la quota di competenza di Sapienza, è trasferita alla società Vesta Therapeutics Inc a fronte di un additional fee di importo pari a € 10.000,00, con l'Addendum che si sottopone all'approvazione di questo Consesso, che così diventa parte integrante del suddetto contratto di licenza.

Si precisa che sui brevetti in questione, Sapienza non ha sostenuto costi di deposito e mantenimento, poiché sin dal momento del deposito dei brevetti e nelle more della conclusione dell'operazione contrattuale, la società Vesta Therapeutics si è fatta carico di tutte le spese. Inoltre, come previsto dal suddetto contratto, ad oggi, Sapienza ha incassato, a titolo di royalty, un importo pari a € 80.000,00.

Su tale Addendum, la Commissione Tecnica Brevetti, nella seduta del 11.04.14, ha espresso il proprio parere favorevole in merito allo schema contrattuale proposto.

ALLEGATI PARTE INTEGRANTE:

- Contratto di Licenza tra Sapienza e Vesta Therapeutics Inc.;
- Addendum

ALLEGATI IN VISIONE:

- Estratto della delibera del C.d.A. n. 271 del 04.12.12;
- Estratto del Verbale della Commissione Tecnica Brevetti dell'11.04.14



..... O M I S S I S

Consiglio di
Amministrazione

DELIBERAZIONE N. 271/14

Seduta del

28 OTT. 2014

IL CONSIGLIO DI AMMINISTRAZIONE

- **Letta la relazione istruttoria;**
- **Visto lo Statuto dell'Università degli Studi di Roma "La Sapienza";**
- **Visto il D.lgs. n.30/2005 (Codice di Proprietà Industriale);**
- **Visto il Regolamento Brevetti di Sapienza emanato con D.R. nr. 490 del 16.10.2009;**
- **Vista la domanda di brevetto n. USA 61/256846 del 30.10.09 e relativa estensione PCT n. PCT/US2010/054450 del 28.10.10, dal titolo "Multipotent stem cells from the extrahepatic biliary tree and methods of isolating same", – inventori Alvaro Domenico, Gaudio Eugenio, Carpino Guido, Vincenzo Cardinale, Lola M. Reid, di titolarità in via derivativa (giusto contratto di cessione del 25.10.10) di Sapienza per il 50% e di UNC (Università del North Carolina) per il restante 50%;**
- **Vista la propria precedente delibera di approvazione (n. 271 del 4.12.12) del contratto di licenza per la concessione, relativamente alla quota di titolarità appartenente a Sapienza, con il quale la Società Vesta Therapeutics si assume i seguenti obblighi:**
 - i) **pagamento di una fee iniziale di € 40.000,00 prevista alla firma del contratto di licensing;**
 - ii) **pagamento di annual license payment di € 30.000,00 a partire dal II anno di vita del contratto, di € 35.000,00 per il III e IV anno, e di € 40.000,00 dal quinto anno fino alla scadenza del brevetto;**
 - iii) **pagamento di royalties variabili pari al 2% del fatturato netto realizzato da Vesta, con un minimo garantito pari a € 50.000,00 per il I e il II anno e a € 100.000,00 dal III anno in poi fino alla scadenza del brevetto;**
 - iv) **pagamento di tre milestones di € 40.000,00, € 60.000,00 e € 100.000,00 legate al conseguimento di individuati steps di sperimentazione;**
 - v) **pagamento di compensi derivanti da eventuali sub-licenze pari al 20% di tutte le royalties incassate da Vesta con un minimo garantito annuale di € 20.000,00, e pari al 10% di tutti i compensi diversi dalle royalties percepiti da Vesta con un minimo garantito annuale di € 10.000,00;**
 - vi) **l'accollo dei costi di mantenimento del brevetto da parte di Vesta Therapeutics Inc;**
 - vii) **una additional fee minima garantita su eventuali risultati migliorativi del brevetto sviluppati in regime di co-titolarità, di importo pari a € 10.000,00;**

18.1



viii) riconoscimento di un diritto di prelazione a favore di Vesta su eventuali nuovi risultati scaturenti dalla collaborazione.

- **Vista la domanda di brevetto n. USA 14207,191 del 12.03.2014 e relativa estensione PCT n. PCT/US2014/25461 del 13.03.2014, dal titolo "Method of treating pancreatic and liver conditions by transplantation of stem cells into bile duct walls" – inventori Alvaro Domenico, Gaudio Eugenio, Carpino Guido, Vincenzo Cardinale, Lola M. Reid, di titolarità di Sapienza, dell'Università del North Carolina e del Diabetes Research Institute, derivante dai risultati migliorativi al precedente brevetto, scaturiti dalla ricerca degli stessi inventori;**
- **Visto l'Addendum al contratto di licenza, previsto dal suddetto contratto di licenza in caso di risultati migliorativi al precedente brevetto che hanno portato al deposito della domanda di brevetto n. USA 14207,191 del 12.03.2014 e della relativa estensione PCT n. PCT/US2014/25461 del 13.03.2014, dal titolo "Method of treating pancreatic and liver conditions by transplantation of stem cells into bile duct walls" – inventori Alvaro Domenico, Gaudio Eugenio, Carpino Guido, Vincenzo Cardinale, Lola M. Reid, la cui titolarità, per la quota di competenza di Sapienza, è trasferita alla società Vesta Therapeutics Inc a fronte di un additional fee di importo pari a € 10.000,00;**
- **Visto il parere favorevole espresso al suddetto Addendum dalla Commissione Tecnica Brevetti nella seduta dell'11.04.14;**
- **Presenti n. 10, votanti n. 8: a maggioranza con i 7 voti favorevoli espressi nelle forme di legge dai consiglieri: Polimeni, Barbieri, Gras, Di Simone, Chiaranza, Lucchetti, Di Pietro e con la sola astensione del rettore**

DELIBERA

- **di approvare il testo e le condizioni economiche dell'Addendum al Contratto di Licenza, concordato con la Società Vesta Therapeutics Inc., che così ne diventa parte integrante, avente ad oggetto la domanda di brevetto n. USA 14207,191 del 12.03.2014 e relativa estensione PCT n. PCT/US2014/25461 del 13.03.2014, dal titolo "Method of treating pancreatic and liver conditions by transplantation of stem cells into bile duct walls" – inventori Alvaro Domenico, Gaudio Eugenio, Carpino Guido, Vincenzo Cardinale, Lola M. Reid, di titolarità di Sapienza, dell'Università del North Carolina e del Diabetes Research Institute;**
- **di autorizzare il Rettore alla sottoscrizione dell'Addendum al Contratto di Licenza di brevetto in premessa;**
- **di autorizzare la Ragioneria a introitare sul conto in entrata A.R.05.02.050.010 "Royalties Brevetti di Ateneo" l'importo di € 10.000,00 corrisposto dalla Società Vesta Therapeutics Inc. previsto dall'Addendum al Contratto di licenza, procedendo**



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**conseguentemente a ripartire il medesimo, in conformità a quanto
previsto dal Regolamento Brevetti di Ateneo.**

Letto, approvato seduta stante per la sola parte dispositiva.

IL SEGRETARIO
Carlo Musto D'Amore

IL PRESIDENTE
Luigi Frati

..... **OMISSIS**

**LICENSE AGREEMENT
BETWEEN
UNIVERSITA DI ROMA, SAPIENZA
AND
VESTA THERAPEUTICS, INC.**

THIS LICENSE AGREEMENT is made as of the date of signing (the "Effective Date") between UNIVERSITA DI ROMA, SAPIENZA, an educational and research organization, having an address at Viale Regina Elena, 336 - 00185 Roma (hereinafter the "University") and VESTA THERAPEUTICS, INC. organized and existing under the laws of Delaware and having an address at 4800 Montgomery Lane, Suite 801, Bethesda, MD 20814 (hereinafter the "Licensee").

WITNESSETH

WHEREAS, the University owns and controls inventions disclosed in "Multipotent Stem Cells from the Extrahepatic Biliary Tree and Methods of Isolating Same" (USSN 12/296,161, "Biliary Tree Inventions");

WHEREAS, the Inventions were jointly developed by Prof. Lola Reid and Profs. Vincenzo Cardinale, Guido Carpino, Eugenio Gaudio and Domenico Alvaro and their respective laboratories at the University of North Carolina Chapel Hill and Universita di Roma, Sapienza (hereinafter "Inventors");

WHEREAS, the Licensee has substantial expertise and intellectual property in the field of endodermal cells and tissues, cell products and derivatives, and related matters; and

WHEREAS, The University desires to facilitate a timely transfer of its information and technology concerning the Inventions for the ultimate benefit of the public and this transfer is best accomplished by the grant of this license;

NOW, THEREFORE, for and in consideration of the covenants, conditions, and undertakings hereinafter set forth, it is agreed by and between the parties as follows:

1. DEFINITIONS.

1.1 "Affiliate" means any person or entity which directly or indirectly owns or effectively controls the outstanding voting securities of the Licensee, or is owned or effectively controlled by the Licensee, or under common ownership or effective control with the Licensee.

1.2 "Clinical Applications" means the uses of cells and/or their progeny or derivatives or other materials that are the subject of the Inventions in or for a human patient, relating to potential diseases or medical conditions in that patient. For the avoidance of doubt, the scope of Clinical Applications is not intended to "reach through" to any drug compound which may be discovered through drug discovery and toxicity testing under Non-Clinical Applications.

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1.3 "Exclusive Field" means the practice of the Patent Rights and Inventions for all Clinical Applications.

1.4 "IDE" means an Investigational Device Exemption Application or its foreign equivalent thereto filed on a Licensed Product.

1.5 "Improvements" means any intellectual property which is wholly or partly dependent upon or dominated by any of the Patent Rights licensed hereunder, including intellectual property which, if practiced without a license to the Patent Rights covered in this License, would infringe in whole or in part this Agreement.

1.6 "IND" means an Investigational New Drug Application or its foreign equivalent thereto filed on a Licensed Product.

1.7 "Inventions" means the Biliary Tree Inventions and any Improvements.

1.8 "Licensed Products" means any method, procedure, product, service, or component part thereof whose manufacture or sale includes any use of Licensed Technology.

1.9 "Licensed Territory" means the entire world.

1.10 "Licenses" means the Exclusive License and Non-Exclusive License granted under Section 2 hereof.

1.11 "NDA" means a New Drug Application or its foreign equivalent thereto filed on a Licensed Product.

1.12 "Net Sales" means sales of Licensed Products, for the invoiced sales prices less the following sums paid or credited by Licensee (or a sub-licensee or partner): sales taxes, other taxes stated on the invoice, shipping and insurance charges, quantity, trade or cash discounts, and allowances for returned or defective goods. Licensed Products will be considered sold when billed or when paid prior to delivery, whichever first occurs.

1.13 "Net Sales Price" means the invoiced sales price of Licensed Products, less the following sums actually paid or credited by the Licensee as will be detailed in the Licensee's report made pursuant to this Agreement: (a) sales taxes or other taxes separately stated on the invoice, (b) shipping and insurance charges and (c) quantity, trade or cash discounts allowed in amounts customary in the trade.

1.14 "New IP" means intellectual property and/or information of any kind which is conceived or developed, in whole or in part, pursuant to or in connection with any sponsored research involving the University which is paid for by or on behalf of the Licensee.

1.15 "Non-Clinical Applications" means all uses other than Clinical Applications, including without limitation drug discovery and/or toxicity testing.

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1.16 "Non-Exclusive Field" means the practice of the Patent Rights and Inventions for Non-Clinical Applications.

1.17 "Non-Sponsored Improvements" means any Improvements developed without any sponsored research paid for by or on behalf of the Licensee.

1.18 "Patent Rights" means all U.S. and non-U.S. patents and patent applications owned or controlled by the University prior to or during the term of this Agreement, covering any Inventions (including Improvements), as well as any continuations, continuations in part, divisionals, provisionals, or reissues thereof, and the University Technology.

1.19 "PMA" means a Premarket Approval Application or its foreign equivalent thereto filed on a Licensed Product.

1.20 "PLA" means a Product License Application or its foreign equivalent thereto filed on a Licensed Product.

1.21 "Sales Year" will mean as to a specific Licensed Product, the period beginning on the date of first commercial sale of that Licensed Product and extending for twelve months thereafter, and each successive twelve-month period for the life of this Agreement.

1.22 "Sponsored Improvements" means any Improvements developed in whole or in part pursuant to or in connection with any sponsored research involving the University which is paid for by or on behalf of the Licensee.

1.23 "University Technology" means any unpublished research and development information, unpatented inventions, know-how, and technical data in the possession of the University involving, relating to or facilitating the Inventions and/or Improvements or the use thereof.

2. GRANT OF LICENSE.

2.1 Exclusive License. The University grants to the Licensee in the Licensed Territory an exclusive right and license (the "Exclusive License") to use and practice the Patent Rights and Inventions in the Exclusive Field, subject to the University's reservation of certain educational and non-commercial research rights under Section 2.4 hereof.

2.2 Non-Exclusive License. The University also grants to the Licensee in the Licensed Territory a non-exclusive right and license (the "Non-Exclusive License") to use and practice the Patent Rights and Inventions in the Non-Exclusive Field for all Non-Clinical Applications.

2.3 Sub-Licenses. The Licensee will use commercially reasonable efforts to pursue sub-licensing and partnering arrangements to help progress the clinical development of the technology. The Licensee will ensure that any sub-license or partnering agreement requires the sub-licensee or partner to comply with applicable regulations, and with the requirements of this

Agreement (including recordkeeping and consent requirements). The Licensee will notify the University in advance about such potential sub-license or partnering agreements, notify the University upon completion of such agreements, and provide a copy of such agreements to the University within thirty (30) days after execution thereof. The Licensee will pay to the University a portion of any royalties or other payments the Licensee receives in connection with sub-licensing and partnering arrangements, as provided in Section 3.5 hereof.

2.4 Non-Commercial University Rights. Notwithstanding the foregoing, the University retains a non-exclusive right to use and practice the Patent Rights solely for educational and non-commercial research use. Such rights include the ability to carry out non-sponsored clinical trials and experimental research, supported by institutional funds, involving biliary tree stem cells and their progeny and derivatives. The University may collaborate with other non-commercial entities in research involving biliary tree stem cells and their progeny and derivatives. The foregoing provisions of this paragraph are subject to the condition that such clinical trials and/or research will not lead to or result in any commercialization without the Licensee's participation that would otherwise be within the scope of this License.

2.5 Sponsored Improvements. Sponsored Improvements will be owned by the University and automatically included in the Patent Rights and Licenses hereunder, without necessity of any action on the part of the parties hereto, provided, however, that the parties will use commercially reasonable efforts to update and maintain a current list of Sponsored Improvements in Exhibit A. The University will notify the Licensee of any Sponsored Improvements within 30 days of receiving notice thereof. The University and the Licensee will jointly determine whether and in what manner to file new patent applications, and/or add claims to existing patent applications, relating to the Sponsored Improvements.

2.6 Non-Sponsored Improvements. Non-Sponsored Improvements will be owned by the University and will not be automatically included in the Licenses, but will be subject to a Right of First Refusal of the Licensee, as provided in Exhibit B hereof. The University will notify the Licensee of any Non-Sponsored Improvements within 30 days of receiving notice thereof. The University and the Licensee will jointly determine whether and in what manner to file new patent applications, and/or add claims to existing patent applications, relating to the Non-Sponsored Improvements.

2.7 Sponsored New IP. New IP will be owned by the University and will not be automatically included in the Licenses hereunder, but will be subject to a Right of First Refusal of the Licensee, as provided in Exhibit B hereof, and is anticipated to be the subject of a license determined in advance under the Sponsored Research Agreement. The University will notify the Licensee of any New IP within 30 days of receiving notice thereof. The University and the Licensee will jointly determine whether and in what manner to file new patent applications, and/or add claims to existing patent applications, relating to the New IP.

3. PAYMENTS.

3.1 Upfront Payments. The Licensee will make an initial payment to the University of fifty thousand euros (€50,000) for the License issuance and first year during the term of the

License (the "Upfront Payment"). Such Upfront Payment will be payable in two installments: ten thousand euros (€10,000) upon execution of the Term Sheet, and forty thousand euros (€40,000) upon execution of this Agreement. Following execution of this Agreement, the Licensee will also reimburse the University for reasonable legal fees for outside legal counsel for negotiation and completion of this Agreement.

3.2 Annual Payments. Commencing with the second year during the term of the License, the Licensee will make the following Annual License Payments to the University, within thirty (30) days of the beginning of the applicable year, until Minimum Royalty Payments begin to apply:

- (a) Year 2: €30,000
- (b) Years 3 and 4: €35,000
- (c) Years 5 and beyond: €40,000

In the event that the Licensee makes Net Sales during a year for which an Annual Payment has been made, the pro rata portion of that year's Annual Payment applicable to the period during which Net Sales are made shall be credited toward the Minimum Royalty (or Earned Royalties) applicable to that period of Net Sales pursuant to Section 3.5 hereof.

3.3 Milestone Payments. With respect to each Licensed Product developed, the Licensee will make milestone payments to the University within thirty (30) days after the first achievement of the following development milestones:

- (a) €40,000 for the initial IND approval or its equivalent (i.e., initiation of Phase I trial);
- (b) €60,000 at the initiation of the first Phase III clinical trial or its equivalent, with such trial initiation deemed to occur upon enrollment of the first patient; and
- (c) €100,000 for the initial product approval (BLA or equivalent) in the first country where such approval is received.

For the avoidance of doubt, each milestone shall be payable only one time for each Licensed Product, if that Licensed Product is applied to more than one use or indication and/or if the use or indication of that Licensed Product changes during the course of development.

3.4 Royalties.

3.4.1 Earned Royalties. The Licensee will pay earned royalties on all of its Net Sales, equal to two percent (2%) of such Net Sales, subject to modification pursuant to the royalty stacking provision set forth in Section 3.4.2.

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3.4.2 Royalty Stacking. Notwithstanding the provisions of Section 3.4.1, in the event that the Licensee must pay royalties to third parties in connection with a Licensed Product that is also covered by this Agreement, the royalties paid to such third parties will be credited against the royalties payable to the University hereunder with respect to such Licensed Product, provided that in no event will the royalties payable to the University be reduced by more than fifty percent (50%).

3.4.3 Pass-Through Royalties. The Licensee will pay to the University a pass-through percentage equal to twenty percent (20%) of any royalties it receives on Net Sales by sub-licensees and/or partners, within thirty (30) days after the Licensee's receipt of such royalties from a sub-licensee or partner. Upon the closing of a sub-license agreement involving pass-through royalties, the Licensee will pay to the University a minimum amount of such royalties equal to €20,000, which shall be credited towards the earned royalties.

3.4.4 Minimum Royalties. If, in any Sales Year for a Licensed Product during the term of this Agreement, total amounts otherwise payable under this Section 3.4 are less than the minimum amounts set forth below, the Licensee will pay the University, within thirty (30) days after the end of such Sales Year, the difference between the amounts payable for such Sales Year and said minimum amount:

- (a) Years 1 and 2: €50,000
- (b) Year 3 and beyond: €100,000

3.4.5 Coordination With Annual Payments. In the event that the Licensee makes Net Sales during a year for which an Annual Payment has been made as provided in Section 3.2 hereof, the pro rata portion of that year's Annual Payment applicable to the period during which Net Sales are made shall be credited toward the Minimum Royalty (or Earned Royalties) applicable to that period of Net Sales pursuant to this Section 3.4.

3.5 Sub-License Payments. The Licensee will share with the University any payments the Licensee receives from sub-licenses and/or partnering arrangements, as set forth in this Section 3.5.

3.5.1 Pass-Through Royalties. The Licensee will pay a pass-through percentage of any royalties it receives on Net Sales by sub-licensees and/or partners, as provided in Section 3.4.3 hereof.

3.5.2 Non-Royalty Payments. The Licensee will pay to the University ten percent (10%) of any payments other than royalties on Net Sales that it receives from sub-licensees and/or partners (including license issue fees; annual license maintenance fees; milestone payments; minimum royalty payments); provided however that purchases of equity in the Licensee, loans, research funding and payments for manufacturing costs shall be excluded. Upon the closing of a sub-license or partnering agreement not involving pass-through royalties or other payments, the Licensee will pay to the University a minimum payment equal to €10,000, which shall be credited towards the earned amounts of the other payments pursuant to this Section 3.

3.6 Patent and Legal Costs. The Licensee will be responsible for payment of all costs associated with the filing, prosecution and maintenance of the Licensed Patents pursuant to Section 6 hereof. The Licensee will also be responsible for payment of all other reasonable legal fees and expenses associated with this License, including with respect to regulatory compliance, contractual matters with third parties, and claims and proceedings covered by the Indemnification hereunder, provided that the Licensee has the authority to select the attorneys, decide any strategy matters and direct the execution of the legal work involved. The Licensee will keep the University informed in a timely manner and consult with the University about all legal matters, and any strategy and execution matters relating thereto.

3.7 Additional IP Payments. In the event that Improvements are developed through the Sponsored Research and are added to the scope of the License, as provided in Section 2.5 hereof, and separate patent applications are filed on such Sponsored Improvements, the Licensee shall thereupon pay an additional Upfront Fee of €10,000 for each such Sponsored Improvement.

4. DEVELOPMENT DILIGENCE.

4.1 Diligence Plan. The Licensee will use commercially reasonable best efforts to proceed diligently with the development, clinical testing, manufacture and sale of Licensed Products, under reasonable conditions, during the term of this Agreement.

4.1.1 Further Technology Development. During the first two (2) years of the term of this Agreement, the Licensee will undertake and/or arrange for other parties to undertake (through sponsored research, sub-licenses, partnering and/or other contractual arrangements) for further research work to further develop the Inventions. Such further development of the Inventions will focus on the biology and the technology, and will not necessarily involve development or application of any particular product.

4.1.2 Pre-clinical Development. During the third and fourth years of the term of this Agreement, the Licensee will identify initial product candidates, and will select and begin pre-development of at least one (1) product for liver applications and one (1) product for pancreatic applications. The Licensee will use commercially reasonable best efforts to file an IND or equivalent application to begin clinical trials of a Licensed Product by the end of the fourth year of the term of this Agreement (i.e., on or before the 4th year anniversary of the execution of this Agreement).

4.1.3 Clinical Development. During a period of five (5) to seven (7) years' duration, commencing in the fifth year of the term of this Agreement, the Licensee will conduct an initial Phase I clinical trial and initial Phase II clinical trial of a Licensed Product. The parties anticipate that such trials may take place in a location outside the U.S. or Europe, such as India or Asia. The Licensee will use commercially reasonable best efforts to complete a Phase II trial with this five to seven year period, or to execute a corporate partnering or acquisition agreement.

4.2 Diligence Default. In the event of a material failure of the Licensee to meet the diligence requirements set forth in Section 4.1 hereof, then following notice of default from the

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University, and subject to the exceptions in Section 4.2.3 below, the following default provisions shall apply.

4.2.1 Default Not Exceeding 12 Months. If the delay in meeting an applicable diligence requirement does not exceed twelve (12) months beyond the applicable milestone in the diligence schedule set forth in Section 4.1 hereof, the Licensee will pay to the University a Default Penalty of €10,000 for each month of delay after the first 3 months (i.e., €10,000 per month for months 4 through 12 of delay). The License will remain in force as is, with the diligence schedule deemed to be correspondingly amended.

4.2.2 Default Exceeding 12 Months. If the delay in meeting an applicable diligence requirement exceeds twelve (12) months beyond the applicable milestone, the Licensee will submit to the University a written description of the reasons for the delay and a plan for completion of the applicable milestone. The University will evaluate the description and plan, and reasonably determine, in good faith, whether the Licensee has demonstrated reasonable diligence. If the University reasonably determines, in good faith, that the Licensee has not demonstrated reasonable diligence, the University may amend the License to remove the exclusivity and make the License non-exclusive with respect to some or all applications, including clinical ones. If the University reasonably determines, in good faith, that the Licensee has demonstrated reasonable diligence, then the University and the Licensee will negotiate a mutually agreeable amendment of the diligence provisions.

4.2.3 Exceptions to Diligence Defaults. The Licensee will not be considered in default of the diligence requirements, and the diligence default provisions will not apply, if the Licensee's failure to meet the diligence requirements is materially attributable to a change in regulatory requirements, change in the biliary tree technology being developed pursuant to this License, or unforeseen difficulties with the biliary technology that have not been solved by the Sponsored Research work.

5. SPONSORED RESEARCH.

5.1 Sponsored Research With the University. The Licensee agrees to enter for the term of this Agreement into an annual Sponsored Research program, with the University investigators, if they are interested and willing to enter into such agreement, for the further technology development relating to the Inventions in order to help ensure rapid progress toward the beginning of clinical trials of a Licensed Product. The scope of work and budget for such Sponsored Research will be subject to mutual agreement, in each party's discretion. It is anticipated that the budget for an annual Sponsored Research program will be in the range of €200,000 to 250,000. It is anticipated that the further technology development under such Sponsored Research program may include such subjects as the following:

- (a) Further exploration of the biliary tree and duodenum tissues and stem cell niches;
- (b) Further characterization of the biliary tree-derived stem cells;

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- (c) Exploration of the differentiation of the biliary tree-derived cells into various endodermal tissues, starting with liver and pancreas;
- (d) Exploration of culture conditions and expansion potential;
- (e) Other subjects, as may be suggested by the University investigators, in their discretion, and may be agreed by the Licensee, in its discretion.

5.2 Sponsored Research Program With UNC. The Licensee plans to continue its annual Sponsored Research program with the University of North Carolina ("UNC"). Such Sponsored Research with UNC has been under way since 2002.

6. PATENTS; INFRINGEMENT.

6.1 Filing, Prosecution and Maintenance of Patents.

6.1.1 The Licensee will be responsible for filing, prosecuting and/or maintaining the patents and patent applications comprising the Patent Rights hereunder, and paying all costs involved in such actions, including those of Societa Italiana Brevetti ("SIB"). The Licensee will pursue such patent actions in the U.S. and the customary countries of Europe (U.K., France, Germany, Italy and Spain), and such other countries, if any, as the Licensee may determine in its discretion. In regard to all patent filings and prosecution, the Licensee will consult in advance with the University, and cooperate with any patent counsel designated by the University, including providing the University or its designated patent counsel with copies of all papers involved in filing, prosecuting and maintaining the Licensed Patents. Any material limitation or abandonment of patent rights in the U.S. or the customary countries of Europe will require an explicit approval of the University, which will not be unreasonably withheld or delayed, and which will be granted for a limitation or partial abandonment which is required in order to overcome office action rejections or to pursue an appeal.

6.1.2 The University and the University inventors will cooperate with, and actively assist and support, the Licensee and its counsel in the filing, prosecution and maintenance of the patent and patent applications comprising the Patent Rights. Such cooperation and assistance will include timely execution of all necessary documents, and active assistance in responding to office actions, pursuing appeals and other such actions.

6.1.3 The University and the University inventors will cooperate with, and actively assist and support, the Licensee and its counsel in applying for an extension of the term of any patent included within Patent Rights, if appropriate under the Drug Price Competition and Patent Term Restoration Act of 1984 in the U.S., and/or any similar law or regulation in Europe and any other countries where the Licensee is pursuing prosecution or maintenance of Patent Rights. Such cooperation and assistance will include timely execution of all necessary documents, and active assistance in responding to office actions, pursuing appeals and other such actions.

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6.2 Infringement.

6.2.1 The University and the Licensee will each inform the other of any suspected infringement by third parties and will cooperate in pursuing infringers and defending the Patent Rights. In the event that any Patent Rights licensed to the Licensee are infringed by a third party, the Licensee will have the primary right, but not the obligation, to institute, prosecute and control any action. Licensee shall have the option to commence action against infringers, seeking to cause the infringer to cease the infringement or bringing legal action, as applicable in the Licensee's discretion, within one hundred twenty (120) days after Licensee discovers such infringement, or after Licensee receives notice from the University of such infringement. If Licensee is unsuccessful in persuading the alleged infringer to desist and/or is not diligently prosecuting an infringement action, or if Licensee notifies Licensors that it does not intend to bring suit against the alleged infringer, Licensors may prosecute such matter at its own expense and retain the proceeds of any settlement. Neither Licensee nor Licensors may settle any infringement action without prior notice to and consultation with the other party about the proposed settlement.

6.2.2 If the Licensee is prosecuting or defending Patent Right by litigation(s) or settlement action(s), then, after the Licensee has incurred an aggregate of at least €35,000 of legal fees and expenses, the Licensee may start withholding up to fifty percent (50%) of the royalties otherwise thereafter due to the University under this Agreement, and may apply such withheld amounts toward reimbursement of the Licensee's litigation fees and expenses. Any recovery of damages by the Licensee will be applied to (a) satisfy unreimbursed litigation fees and expenses; (b) reimburse Licensors for royalties withheld; and (c) reimburse Licensee for lost sales and the University for lost royalties on account of lost sales. Amounts that exceed compensatory damages will be shared equally between the Licensee and the University.

6.3 Third Party Patents. The Licensee will use commercially reasonable efforts to identify protected intellectual property that is owned or controlled by third parties, and that is necessary for freedom to operate in the use of the Patent Rights licensed hereunder ("Third Party Patents"). The Licensee will undertake commercially reasonable efforts to license or acquire any such Third Party Patents, provided, however, that the Licensee cannot and does not provide any guarantee or warranty of any kind that it will be able to license or acquire any such Third Party Patents on commercially reasonable terms, and the Licensee will determine what are such commercially reasonable terms in its sole discretion.

7. REPRESENTATIONS AND WARRANTIES.

7.1 Power and Authority; Binding Obligation. The Licensee and the University each represent and warrant, respectively, that all necessary corporate or other proceedings, votes, resolutions and approvals relating to this Agreement and the License hereunder have been completed by such party. Such party has full power and authority to enter into this Agreement and the License hereunder. Upon execution, this Agreement and the License hereunder will constitute valid and legally binding obligations of such party, enforceable in accordance with their terms except (i) as limited by applicable bankruptcy, insolvency, reorganization, moratorium, and other laws of general application affecting enforcement of creditors' rights

generally, and (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies. This representation and warranty shall survive until the last claim of any of the Patent Rights has expired.

7.2 Inventions; Patent Rights. The University represents that it is the co-exclusive owner (together solely with UNC) of the Inventions and the Patent Rights, and, to the extent of the University's interest therein, the University has the full right, authority and power to enter into this Agreement, and grant and maintain the License hereunder. The University is not aware of any third party claiming any rights to the Inventions or the Patent Rights, arising through the University or otherwise (other than through UNC). The University inventors have assigned to the University all of their right, title and interest in and to the Inventions and the Patent Rights. The University makes no warranties that any patent will issue on the University Technology or Inventions. The University further makes no warranties, express or implied, with respect to the merchantability or fitness for particular purpose of the Inventions, or with respect to any Licensed Products that may developed based upon such Inventions.

8. TERM AND TERMINATION.

8.1 Term. The term of the License will be from the Effective Date until expiration of the last valid (issued) claim of the Licensed Patents.

8.2 Termination.

8.2.1 Material Breach and Cure. In the event of material breach of this Agreement by either party, the non-breaching party will deliver notice of such breach to the breaching party and provide an opportunity for the breaching party to cure such breach. In the event of breaches consisting of failure to make a payment, the cure period will be thirty (30) days after notice of such breach. In the event of non-monetary breaches, the cure period will be up to one hundred eighty (180) days, or such other period as is reasonably necessary, after notice of such breach. Delays, events or omissions relating to development diligence shall not be deemed to be a breach of this Agreement unless and until such delays, events or omissions exceed the provisions of Section 4.2.

8.2.2 Actions Upon Material Breach. In the event of a material breach that is not cured in accordance with Section 8.2.1 hereof, if the breaching party has made reasonable efforts, in good faith, to cure the breach but has not succeeded within the applicable cure period, the non-breaching party will endeavor, in good faith, to negotiate a settlement with the breaching party which preserves this Agreement to the extent reasonable under all the facts and circumstances. In the event the breaching party has not made reasonable efforts, in good faith, to cure the breach during the applicable cure period, the non-breaching party may modify this Agreement to render the License non-exclusive as to some or all applications, or the non-breaching party may proceed with termination of this Agreement.

8.3 Sub-Licenses. Any sub-licenses existing at the time of termination of this Agreement will survive the termination, and will be deemed to become license agreements

directly with the University, and the Licensee will have no further obligations to the University with respect to such sub-licenses.

8.4 Obligations Prior to Termination. Any outstanding payment obligations or other obligations existing at the time of termination of this Agreement will survive termination, and will remain obligations of the applicable party.

9. INDEMNIFICATION; INSURANCE.

9.1 Indemnification. The Licensee will indemnify the University for all claims, losses, damages, litigation, etc. arising from or relating to Licensed Products and the Licensee's activities with respect to Licensed Products or pursuant to this License Agreement, provided however, that in no event will the Licensee be liable for indirect or consequential damages, or for damages attributable to gross negligence or willful misconduct on the part of the University or its agents, employees, or representatives.

9.2 Insurance. The Licensee will maintain, at its sole cost and expense, customary insurance (including, as applicable, general liability and products liability) in amounts that are customary in the industry and commercially reasonable with respect to the stage of development of the Inventions and Licensed Products. The University will have the right to ascertain from time to time that such coverage exists, such right to be exercised in a reasonable manner.

10. RECORDKEEPING.

The Licensee will keep complete, true and accurate books of account and records which show the derivation of the amounts payable to the University under this Agreement. Such books and records will be kept at the Licensee's principal place of business for at least three (3) years following the end of the calendar quarter to which they pertain, and will be open at all reasonable times during business hours, upon reasonable advance notice, for inspection by a representative of the University, on up to two occasions per year, for the purpose of verifying Licensee's royalty reports and other financial reporting to the University. The scope of the representative's inspection shall be limited to financial information necessary to verify such royalty reports and other financial reporting pursuant to this Agreement. The representative and the University will be required to execute a Confidentiality Agreement ("CDA") with the Licensee, prior to obtaining any access to records or information of the Licensee hereunder, and shall be obliged to treat as confidential all proprietary records and information of the Licensee to which the University and/or its representative obtain access pursuant to the CDA.

Such inspections shall be at the expense of University, unless an underpayment, exceeding the greater of €20,000 or five percent (5%) of all payments due to the University is discovered in the course of any such inspection, and validated by an independent third party, in which event all costs relating to that inspection shall be paid by Licensee. The Licensee will promptly pay to the University the full amount of any underpayment, together with interest thereon at the rate of eight percent (8%) per annum.

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11. PUBLICATION.

11.1 The Licensee agrees that the University Investigators involved in each annual Sponsored Research Agreement will be permitted to publish in journals, theses, dissertations, or other formats of their own choosing, and to present at symposia and professional meetings, the methods and results of the Sponsored Research, *provided* that copies of any proposed full article publication are provided to the Licensee at least thirty (30) days in advance of the submission to a journal, editor, or other third party and ten (10) days in advance for abstracts or presentations.

11.2 Licensee Comments and Objections. The Licensee will have thirty (30) days for full article publications, and ten (10) days for theses, dissertations, abstracts and presentations after receipt of the copies to comment on and/or object to the proposed publication or presentation. In the event that the Licensee has comments about the content of the proposed publication or presentation, the University will give reasonable consideration to the Licensee's comments and make reasonable efforts to incorporate or otherwise respond to the comments. The Licensee may object to the proposed publication or presentation because it contains (a) patentable subject matter that needs protection, (b) trade secrets or know how that Licensee wishes to keep confidential and proprietary, or (c) trade secrets or know how that the Licensee disclosed to the University and that the Licensee wishes to keep confidential and proprietary. If Licensee objects based on patentable subject matter, the University and the University Investigators will refrain from making such publication or presentation until the appropriate patent applications have been filed at the Licensee's expense. If the Licensee objects based on trade secrets or know how, the University and the University Investigators will remove the same from such publication or presentation.

12. USE OF OTHER PARTY'S NAME.

Neither party will make any public use of the other party's name, in any form, without such other party's prior written approval, except if and to the extent required for compliance with applicable laws and regulations, and except that the Licensee may state that it holds a License from the University.

13. MISCELLANEOUS.

13.1 **Entire Agreement.** This Agreement (including the Exhibits hereto, which are an integral part of this Agreement), constitute the full and complete agreement between the parties with regard to the subjects hereof, and supersedes all prior agreements and understandings between the parties with respect thereto.

13.2 **Amendments.** This Agreement may not be amended, waived, discharged or terminated, except by a written instrument signed by both the University and the Licensee.

13.3 **Assignment.** Neither party to this Agreement may assign this Agreement to a third party other than an Affiliate without the prior written consent of the other party to this Agreement. In

the event of a permitted assignment of this Agreement, the provisions hereof will be binding upon, and inure to the benefit of, the successors, assigns, heirs, executors and administrators of the parties hereto.

13.4 Dispute Resolution. Any disputes between the parties hereto will be decided by binding arbitration, in accordance with the rules of the ICC International Court of Arbitration. Any such arbitration will take place in Paris, France and each party hereby consents to jurisdiction in Paris and waives any objection thereto. Each party agrees to accept service or process in the same manner as provided for notices hereunder. Official written transcripts will be made of all proceedings and sessions involved in any such arbitration, and will be available promptly to the parties.

13.5 Notices. Any notices, consents, waivers or other communications required or permitted to be given under the terms of this Agreement must be in writing and will be deemed to be effective upon delivery when delivered (a) personally; (b) by facsimile, with contemporaneous transmission confirmation, provided that a copy is mailed on the same day by overnight delivery with an internationally recognized overnight delivery service; (c) by overnight delivery with an internationally recognized overnight delivery service, in each case properly addressed to the party to receive the same. The addresses and facsimile numbers for such communications will be as set forth in the signature blocks of each party hereto, or at such other address or facsimile number as the receiving party will have furnished to the sending party in writing.

13.6 Severability. In the event that any provision of this Agreement, in whole or in part, is determined to be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions will not in any way be affected or impaired thereby, and the parties will cooperate, in good faith, to achieve as nearly as reasonably possible the original intent of the severed provisions.

13.7 No Waiver. No waiver by either party hereto of any breach or default hereunder will be deemed to be a waiver as to any other breach or default, or as to any subsequent breach or default.

13.8 Independent Contractor; No Partnership. The relationship of the parties hereunder is one of independent contractors. There is no partnership relationship between the parties hereunder, and neither party is an agent of the other party for any purpose.

13.9 Interpretations. All pronouns and any variations thereof shall be deemed to include to the masculine, feminine, neuter, singular or plural, as the identity of the person or persons or entity or entities may require. All references to "including" shall be deemed to mean "including, without limitation." All references to "€" or euros herein will be construed to refer to the currency unit of the European Union. The titles of the Sections and subsections of this Agreement are for convenience or reference only and are not to be considered in construing this Agreement.

13.10 Counterparts. This Agreement may be executed in counterparts, each of which when so executed and delivered will constitute a complete and original instrument but all of which

together will constitute one and the same agreement, and it will not be necessary when making proof of this Agreement or any counterpart thereof to account for any counterpart other than the counterpart of the party against whom enforcement is sought.

IN WITNESS WHEREOF, both the University and the Licensee have executed this Agreement, in duplicate originals by their duly authorized respective officers, the date written below.

UNIVERSITA DI ROMA, SAPIENZA

By: _____

Name: _____

Title: _____

Date: _____

Address: _____

Fax: _____

VESTA THERAPEUTICS, INC.

By: Linda F Powers

Name: Linda F Powers

Title: Chairman

Date: 11/19/12

Address: 4800 Montgomery Lane

Bethesda, MD 20814

USA

Fax: 240-497-4065

EXHIBIT A
IMPROVEMENTS

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EXHIBIT B
RIGHT OF FIRST REFUSAL

For purposes of Sections 2.6 and 2.7 of this Agreement, the Licensee will receive a Right of First Refusal ("ROFR") to license any Non-Sponsored Improvements and any New IP (the "Covered IP"), on terms no less favorable than the University would provide to any other party. The University will promptly notify the Licensee of any Covered IP which may arise from time to time during the term of this License Agreement. The University and the Licensee will negotiate in good faith to reach agreement on licenses to the Covered IP, which licenses may either be separate licenses or additions to the Licenses hereunder, as determined jointly by the parties. The negotiation period will be at least one hundred twenty (120) days, and may be extended for two further periods of thirty (30) days each, if the Licensee so requests and the Licensee is proceeding with the negotiations promptly and in good faith.

If the University receives or obtains an expression of interest or offer from a third party for a license of any kind (e. g. exclusive, semi-exclusive or non-exclusive) to any Covered IP, or other agreement, assignment or encumbrance of any kind with respect to any Covered IP, the University will promptly notify the Licensee such offer, the scope of the proposed transaction, the proposed payment and other terms, the timeframe and such other information as the Licensee may reasonably need or request in order to determine whether to exercise this ROFR (collectively, the "Notified Transaction").

Within forty-five (45) days after such notice from the University, the Licensee may decide whether to exercise this ROFR to enter into a license, or other agreement, assignment or encumbrance with respect to such Covered IP on terms and conditions that are the same as, or comparable and no less favorable to the Licensee than, the terms and conditions in the Notified Transaction, provided, however, that if the terms offered by a third party are not commercially reasonable or are materially above or in excess of the prevailing market terms for such a license, the Licensee shall be entitled to exercise this ROFR upon commercially reasonable terms and conditions consistent with prevailing market terms. The Licensee will notify the University of the Licensee's decision within such forty-five (45)-day period.

If the Licensee decides to proceed with the transaction, and the terms and conditions proposed by the Licensee differ in any material respect from the terms and conditions of the Notified Transaction, but the Licensee's proposed terms and conditions are at least as favorable to the University as the terms and conditions of the Notified Transaction, or are commercially reasonable and consistent with prevailing market terms, then the University will proceed with the transaction with the Licensee. If the Licensee decides not to proceed with the Notified Transaction, or the Licensee fails to notify the University of its decision within the forty-five (45)-day period, or the terms and conditions proposed by the Licensee are not either at least as favorable to the University as the terms and conditions of the Notified Transaction or commercially reasonable and consistent with prevailing market terms, then the University will be free to proceed with consummation of the Notified Transaction. The University shall remain obligated to comply with the ROFR with respect to any Covered IP which is not included in the Notified Transaction and/or which arises subsequent to such Notified Transaction.

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If a third party's offer or expression of interest does not result in a license to such third party as provided above, and such third party or any other third party makes another or subsequent offer or expression of interest, the ROFR provided above shall apply to each such offer or expression of interest.

If the University proceeds with a license of any kind (e. g. exclusive, semi-exclusive or non-exclusive), or other agreement, assignment or encumbrance of Covered IP during the term of this License Agreement without complying with the terms and conditions of this ROFR, such transaction will be void and unenforceable.

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**FIRST AMENDMENT TO LICENSE AGREEMENT
BETWEEN
UNIVERSITA' DEGLI STUDI DI ROMA
"LA SAPIENZA"
AND
VESTA THERAPEUTICS, INC.**

WHEREAS, UNIVERSITA' DEGLI STUDI DI ROMA "LA SAPIENZA" (fiscal code 80209930587, VAT No. 02133771002), an educational and research organization, having an address at Piazzale Aldo Moro 5, 00185 Roma (hereinafter the "University") and VESTA THERAPEUTICS, INC., a corporation organized and existing under the laws of Delaware, having an address at 4800 Montgomery Lane, Suite 801, Bethesda, Maryland 20814 (hereinafter the "Licensee") have entered into a license agreement with an effective date of 28 December 2012 (hereinafter the "Agreement");

WHEREAS, the University owns inventions described in patent applications entitled "Method of Treating Pancreatic and Liver Conditions by Endoscopic-Mediated (or Laparoscopic-Mediated) Transplantation of Stem Cells into/onto Bile Duct Walls of Particular Regions of the Biliary Tree" and its employees are inventors of those patent applications;

WHEREAS, the University and the Licensee agree the inventions described in those patent applications are a Sponsored Improvement as defined by Section 1.22 of the Agreement;

WHEREAS, the University and the Licensee agree to update and maintain Exhibit A as provided by Section 2.5 of the Agreement;

WHEREAS, the Licensee shall pay to the University an additional Upfront Payment of €10,000 in consideration of adding that Sponsored Improvement to the scope of the license as provided by Section 3.7 of the Agreement; and

WHEREAS, the University and the Licensee agree to amend Exhibit A as provided by Section 13.2 of the Agreement;

NOW, THEREFORE, Exhibit A is amended by listing the Sponsored Improvement as listed in the following:

EXHIBIT A
IMPROVEMENTS

First Family:

U.S. Provisional Application Number 61/780,644;

U.S. Patent Application Number 14/207,191;

Argentinean (AR) Patent Application Number 20140100961;

Gulf Cooperation Council (GCC) Patent Application Number 2014/26742;

Jamaican (JM) Patent Application Number 18/1/5527;

Taiwanese (TW) Patent Application Number 103109067;

International Patent Application Number PCT/US2014/026461;

and the national/regional stages, continuations, and divisions thereof.

IN WITNESS WHEREOF, both the University and the Licensee have executed this First Amendment, in duplicate originals by their duly authorized respective officers, on the date written below.

**UNIVERSITA' DEGLI STUDI DI ROMA
"LA SAPIENZA"**

VESTA THERAPEUTICS, INC.

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

Address: _____

Address: _____

Fax: _____

Fax: _____