THE UNIVERSITY OF TENNESSEE MASTER RESEARCH SERVICE CONTRACT

This Research Service Contract (hereafter "Agreement"), made and entered into as of the date of last signature hereto ("Effective Date") agreement between ____(company/institute name)_, having an address at ___(address)__ (hereinafter "Company") and The University of Tennessee, an institution of higher learning and instrumentality of the State of Tennessee, on behalf of its Health Science Center, located at 62 S. Dunlap Street, Suite 300, Memphis, TN 38163 USA (hereinafter "UTHSC"). The Period of Performance under this Agreement is one year from the Effective Date. Company and UTHSC are sometimes hereafter referred to individually as a "Party" and collectively as "Parties."

WHEREAS, Company is involved in the development and/or marketing of [pharmaceutical, medical device, chemical, agricultural, other] products and from time to time may require certain pre-clinical research, basic exploratory or discovery research, engineering prototyping, chemical analysis, bioanalytical, statistical, pharmacokinetics, animal research and other related and agreed upon services, including, if specified, preclinical studies associated with its development processes (the "Research Services");

WHEREAS, UTHSC, under the direction of Dr. Colleen Jonsson, offers pre-clinical Research Services and performs the Services and maintains a laboratory in Memphis, Tennessee;

WHEREAS, the Parties wish to enter into this Agreement to present agreed upon terms and conditions under which Company may hire UTHSC from time to time to provide Research Services involving animal pharmaceuticals designed to prevent the transmission of zoonotic and other infectious diseases (heareafter the "Materials") by executing individual agreements specifying the details of the Research Services to be provided and the specifics of the Materials (each a "Scope of Work" or "SOW");

By mutual agreement, the Company and UTHSC agree to the following:

- 1. The terms and conditions of this Agreement shall govern the provision of Research Services by UTHSC to Company under individual SOWs. This Agreement is a general form of contract for Research Services to be provided by UTHSC for Company, and allows the Parties to contract multiple Studies through the execution of individual SOWs without the need to renegotiate the basic terms and conditions contained in this Agreement.
- 2. The Period of Performance under this Research Service Agreement is from _(start date)_ through __(closing date)__. This Agreement may be extended by the mutual written agreement of the Parties signed by both Parties' authorized officials.
- 3. If Company wishes to engage UTHSC to provide Research Services, Company shall provide UTHSC with a proposal for a Study or invite UTHSC to produce a proposal for a Study. Once the Parties have agreed on a proposal, the Parties will execute a SOW in accordance with Section 4. No Research Services shall be provided unless and until a proper SOW is first executed.
- 4. The details of each SOW shall be separately negotiated and specified in writing in a form acceptable to the Parties. Each SOW shall reference this Agreement and be an integral part of this Agreement. Each SOW shall include, as appropriate, the names of the Parties, description and scope of Research, Services, the Protocol, the Test Compound, materials to be provided or transferred and all obligations with respect to the materials, including without limitation, storage, retention, destruction, and use of the materials, time line, budget,

Research Services start date, payment schedules, deliverables and any other terms that are appropriate under the circumstances.

The Research Services start date shall depend on obtaining all necessary information and materials and obtaining applicable approvals, if any. A SOW shall become effective only upon execution by an authorized representative of each Party. All timelines, time of completion and budgets for the Research Services that are provided by UTHSC are good faith estimates. Actual timing and costs may vary significantly from these estimates. Company agrees that it shall be responsible for all reasonable overages.

Any UTHSC deliverables, including reports, shall be set forth in each SOW, which will specify the format and any related information that is to be delivered. If a SOW provides that UTHSC first produce a draft report, such draft shall constitute a final report if, after thirty (30) days following its release by UTHSC to Company, no comments are received from Company and any amounts due for producing a report shall be invoiceable by UTHSC and due for payment by Company. The Parties agree that UTHSC may invoice Company for redrafting and reformatting of reports requested by Company at rates set forth in the accompanying SOW. The applicable SOW shall set forth the rate to be paid by Company for any consulting or other work requested by Company on such reports performed by UTHSC.

A SOW can be changed after execution only by agreement of the Parties and by the execution of a written Change Order. Each Change Order shall provide details of the changes to the original SOW and will become effective only upon execution by an authorized representative of each Party. The Parties acknowledge that a Change Order may require that the Research Services be postponed or delayed. Each Party agrees to consider all changes requested by the other Party in good faith.

5. Under this Agreement, UTHSC agrees to complete the research as designated by the individual SOW worth up to \$50,000 USD (the "Ceiling Amount"). Once the Ceiling Amount is reached, then Company can request an Amendment to extend the Ceiling Amount to cover further Study Contracts.

Company shall pay UTHSC the fees, expenses, and costs set forth in the Budget, attached to the SOW. Company acknowledges that any Budget contains estimated costs based upon information provided by the Company. Actual costs may vary significantly from these estimates. Company is responsible for all overages. Even if not indicated in the Budget, Company shall pay all reasonable out-of-pocket expenses incurred by UTHSC in connection with performing the Study, including necessary travel-related expenses, which shall be approved in advance by the Company.

6. Company will compensate UTHSC for the amount as stipulated in the relevant individual SOW upon execution of the SOW and recipet of an invoice. Unless otherwise agreed in writing, all payment is due within thirty (30) days of the date of invoice.

When making payment to UTHSC, the payment must reference the following: Jonsson [insert cayuse#] SOW#.

All payment should be sent to:

UTHSC will submit an invoice upon execution of this Agreement to:

ATTN:	 	 	
Address:	 		_
Phone:			

E-mail:	

Payment should be sent to:

Attn: Brenda Murrell, MBA, CICA
Director, Proposal and Award Management
The University of Tennessee
Office of Sponsored Programs
910 Madison Ste. 823 Rm 826
Memphis, TN 38163
901-448-4889
901-448-7775 (fax)
bmurrell@uthsc.edu

UTHSC DUNS # 941884009 EINS 1626001626

- 7. **Subject Materials**: As applicable, Company will ensure that UTHSC receives, at no cost and on a timely basis, any of the required quantities of properly-labeled Materials to complete each SOW. Company is responsible for the cost to ship or otherwise transport the Materials to UTHSC, as well as for ensuring the proper shipping of Materials, and any issues related to improper labeling or shipment. Unless stated otherwise in writing by Company, Materials are and will remain the sole property of Company. Company is responsible for providing detailed information concerning the storage and handling of Materials and training all UTHSC staff and employees on the use of the Materials. Company will provide the expertise, inventory, device- or drug-related equipment necessary to complete the SOWs and related Research Services. UTHSC's receipt, storage, and handling of Materials will be in compliance with all applicable laws and regulations and any written Company instructions provided to UTHSC.
- 8. **Compliance:** UTHSC shall comply with and conduct all aspects of the SOW in compliance with all applicable federal, state, and local laws and regulations, including generally-accepted standards of good clinical practice as adopted by current FDA regulations and statutes and regulations of the U.S. Government relating to exportation of technical data, computer software, laboratory prototypes, and other commodities as applicable to those conducting research. UTHSC will only allow individuals who are appropriately trained and qualified to assist in the conduct of the SOW. The Parties recognize that the results of any particular SOW cannot be guaranteed even through UTHSC's adherence to the above-described practices. Therefore, it is specifically agreed that the failure of UTHSC to achieve specific research results shall not constitute a default or breach of this Agreement.
- 9. **Data**: "Data" shall mean all data and information generated by UTHSC as a result of conducting the SOW. Data does not include research notebooks, source documents, or other routine internal documents kept in UTHSC's ordinary course of business operations, which shall remain the sole and exclusive property of UTHSC. Company has the right to use the Data in accordance with applicable laws, and the terms of this Agreement. UTHSC shall retain the right to use Company's Materials and results for UTHSC's publication, regulatory, legal, clinical, educational, and internal research purposes. UTHSC does not own Company's Materials.

- 10. **Use of Animals**: In undertaking the SOW, UTHSC certifies that it is compliant with the Animal Welfare Act and any other applicable Laws relating to the care and use of laboratory animals, and ensures that the highest standards for the humane handling, care, and treatment of such research animals will be followed. Prior to conducting any animal research in connection with the SOW, UTHSC shall first ensure that IACUC approval has been obtained.
- 11. **Relationship of the Parties**: The Parties are independent contractors. Neither Company nor UTHSC may use the name, trademark, logo, symbol, or other image or trade name of the other Party or its employees and agents in any advertisement, promotion, or other form of publicity or news release or that in any way implies endorsement without the prior written consent of an authorized representative of the Party whose name is being used. Such approval will not be unreasonably withheld.
- 12. **Acknowledgement**: UTHSC may acknowledge Company's support, including but not limited to financial support, as may be required by academic journals, professional societies, funding agencies, and applicable regulations.
- 13. **Publication**: While no publications are currently contemplated, in the event UTHSC determines that it wishes to do so, UTHSC shall be free to publish, present, or use any Data and results arising out of its performance of the SOW (individually, a "Publication"), provided, however, that at least thirty (30) days prior to submission for Publication, UTHSC shall submit to Company for review and comment any proposed oral or written Publication ("Review Period"). UTHSC will consider any such comments in good faith but is under no obligation to incorporate Company's suggestions. The Review Period for abstracts or poster presentations shall be thirty (30) days. If during the Review Period, Company notifies UTHSCin writing that: (i) it desires patent applications to be filed on any inventions disclosed or contained in the disclosures, UTHSC will defer Publication for a period not to exceed sixty (60) days.
- 14. **Intellectual Property:** It is recognized and understood that certain existing inventions and technologies, and those arising outside of the research conducted under this Agreement, are the separate property of Company or UTHSC and are not affected by this Agreement, and neither Party shall have any claims to or rights in such separate inventions and technologies.

Any new patentable inventions, developments, or discoveries made during and in the performance of the Study ("Inventions") shall be promptly disclosed to Company. Title to Inventions that necessarily use or necessarily incorporate Company's Materials shall reside with Company ("Company Inventions"). UTHSC, or through the University Research Foundation (UTRF), shall assign all such Company Inventions to Company in writing. New intellectual property which results from work done under this Agreement shall be handled in accordance with UTHSC and Company policy. Company shall retain ownership of such Inventions developed by Company employees; UTHSC shall retain ownership of such Inventions developed by UTHSC employees, and both UTHSC and Company shall both retain joint ownership of such inventions developed by both UTHSC and Company employees.

To the extent that UTHSC, or through UTRF, owns sole or joint title in any such Other Inventions, Company is hereby granted, without option fee other than consideration of the payment for the SOW herein and the reimbursement to UTHSC for patent expenses incurred prior to or during the option period, an option to acquire an exclusive, worldwide, royalty-bearing license to UTHSC or UTRF, rights to any Other Invention, which option shall extend for no more than ninety (90) days after Company's receipt of an Invention disclosure from UTHSC or through UTRF, ("Option Period"). The Parties shall use reasonable efforts to negotiate, for a period not to exceed ninety (90) days after Company's exercise of such option, a license agreement satisfactory to both Parties ("Negotiation Period"). In the event Company fails to exercise its

option within the Option Period, or the Parties fail to reach agreement on the terms of such license within the Negotiation Period, UTHSC shall have no further obligation to Company under this Agreement with regard to the specific Other Invention.

UTHSC shall retain a royalty-free, irrevocable license to use for its own internal non-commercial research, educational and patient care purposes, all Company Inventions or Other Inventions licensed or assigned to Company hereunder.

Nothing contained in this Agreement shall be deemed to grant, either directly by implication, estoppel, or otherwise, any license under any patents, patent applications, or other proprietary interest to any other inventions, discovery or improvement of either Party.

The Parties agree that the provisions of this Agreement are intended to be interpreted and implemented so as to comply with all applicable federal laws, rules, and regulations, including without limitation the requirements of Rev. Proc. 2007-47; provided, however, if it is determined by the Internal Revenue Service or any other federal agency or instrumentality (the "Government") that the provisions of this Agreement are not in such compliance, then the Parties agree to modify the provisions and the implementation of this Agreement so as to be in compliance with all applicable federal laws, rules, and regulations as determined by the Government.

- 15. **Termination**: Either Party may terminate this Agreement by giving the other Party at least thirty (30) calendar days advance written notice before the effective termination date. UTHSC shall be entitled to receive compensation for work completed as of the termination date, including any non-cancelable obligations incurred in support of this Agreement.
- 16. **Nondiscrimination**: No person on the grounds of disability, age, race, color, religion, sex, national origin, veteran status or any other classification protected by Federal and/or Tennessee State constitutional and/or statutory law shall be excluded from participation in, or be denied benefits of, or be otherwise subjected to discrimination in the performance of this Contract. The UTHSC shall, upon request, show proof of such non-discrimination, and shall post in conspicuous places, available to all employees and applicants, notice of nondiscrimination.
- 17. **Insurance:** UTHSC is self-insured under the Tennessee Claims Commission Act, Tenn. Code Ann. §§ 9-8-301 et seq., which covers certain tort liability for actual damages of up to \$300,000 per claimant and \$1,000,000 per occurrence. UTHSC shall maintain insurance for the duration of this Agreement. Upon Company's request, UTHSC will provide a valid certificate of insurance evidencing the foregoing coverage.
- 18. **Representations and Warranties**: Notwithstanding anything in this Agreement to the contrary, UTHSC makes no representations or warranties of any kind, express or implied, concerning the results of the Research Project or any related Intellectual Property, including, but not limited to, representations and warranties as to non-infringement, merchantability and fitness for any particular purpose.
- 19. **Liability**: This Agreement shall be governed by the laws of the State of Tennessee, which provide that the UTHSC has liability coverage soley under the terms and limits of the Tennessee Claims Commission Act (Tenn. Code Ann. § 9-8-301 et seq.) (the "Act"). Any liability of UTHSC to Company or any third parties for any claims, damages, losses, or costs arising out of or related to acts or omissions of UTHSC or its employees under this Agreement will be governed by the provisions of said Act.

- 20. **Export Control**: Notwithstanding any other provision of this Agreement, the Parties understand and agree that they are subject to, and agree to abide by, applicable United States laws and regulations controlling the export of technical data, computer software, laboratory prototypes and other commodities. The Parties' obligations hereunder are contingent on their ability to comply with applicable United States export and embargo laws and regulations. It is the expectation of the Parties that the work done pursuant to this Agreement will constitute fundamental research and be exempt from export control licensing requirements under the applicable export control laws and regulations. The Parties do not wish to take receipt of export controlled information except as may be knowingly and expressly agreed to in writing signed by an authorized representative of the Parties and for which the Parties have made specific arrangements. The Parties agree to work together to ensure that, with regard to this Agreement, both are in compliance with applicable U.S. export control laws and regulations, as well embargoes and/or other restrictions imposed by the Treasury Department's Office of Foreign Asset Controls. Company agrees that it is responsible for any fees or expenses associated with obtaining any required export control license, and UTHSC neither represents that a license shall not be required nor that, if required, it shall be issued.
- 21. **Illegal Immigrants**. Company hereby attests that it shall not knowingly use the services of an illegal immigrant in the United States in the performance of this Agreement and shall not knowingly use the services of any entity who will use the services of an illegal immigrant in the United States in the performance of the Agreement.
- 22. **Default**. In the event that either Party defaults in the performance of its obligations under this Agreement, or any representation by either Party proves to be false, the non-defaulting Party shall promptly provide written notice of such default to the defaulting Party, who shall cure the default within thirty (30) calendar days after such Party's receipt of written notice of the default. If the defaulting Party fails to cure the default, then the Party giving such written notice may elect to terminate this Agreement by final written notice to the defaulting Party.
- 23. **Survival of Obligations**. Notwithstanding anything in this Agreement to the contrary, the provisions of Section 11. shall survive any expiration or termination of this Agreement, and each Party shall remain obligated under any other provisions that expressly or by their nature survive any expiration or termination of this Agreement.
- 24. The Parties to this Agreement are not bound by this Agreement until it is signed by the appropriate authorized official(s) indicated on the signature page of this Agreement.
- 25. **Notices**. Communications, reports, and notices required or permitted hereunder shall be deemed given upon documented delivery if in writing and personally delivered or sent by registered mail, postage prepaid, return receipt requested, or via nationally-recognized courier addressed to the parties as follows:

For Contractual Matters:

	UTHSC
Name:	Name: Sarah J. White
Title:	Title: Associate Vice Chancellor for Research
Address:	Address: Office of Sponsored Programs
	912 Madison Avenue, Suite 823
	Memphis, Tennessee 38163
Phone:	Phone: 901-448-2359
Email:	Email: swhite82@uthsc.edu
For Academic Matters:	
Name:	Name: Colleen Jonsson
Title:	Title: Professor
Address:	Address: 801B Molecular Sciences Building
	858 Madison Avenue
	Memphis, TN 38163
Phone:	Phone: 901-448-1870
Phone: Email:	Phone: 901-448-1870 Email: cjonsson@uthsc.edu
26. Entire Agreement : This Agreement consthe Parties. This Agreement may be modified	
Email: 26. Entire Agreement: This Agreement consthe Parties. This Agreement may be modified been executed and approved by the Parties Agreement.	Email: cjonsson@uthsc.edu stitutes the sole, full, and complete agreement by and between id, amended, or changed only by a written amendment, which has
Email: 26. Entire Agreement: This Agreement consthe Parties. This Agreement may be modified been executed and approved by the Parties Agreement.	Email: cjonsson@uthsc.edu stitutes the sole, full, and complete agreement by and between ed, amended, or changed only by a written amendment, which has authorized officials as indicated on the signature page of this
Email: 26. Entire Agreement: This Agreement consthe Parties. This Agreement may be modified been executed and approved by the Parties Agreement. Signature of the Parties of the	Email: cjonsson@uthsc.edu ctitutes the sole, full, and complete agreement by and between and, amended, or changed only by a written amendment, which has authorized officials as indicated on the signature page of this agrature Page to Follow THE UNIVERSITY OF TENNESSEE ON BEHALF
Email: 26. Entire Agreement: This Agreement consthe Parties. This Agreement may be modified been executed and approved by the Parties Agreement. Signature)	Email: cjonsson@uthsc.edu cititutes the sole, full, and complete agreement by and between ed, amended, or changed only by a written amendment, which has authorized officials as indicated on the signature page of this gnature Page to Follow THE UNIVERSITY OF TENNESSEE ON BEHALF OF ITS HEALTH SCIENCE CENTER (Signature)
Email: 26. Entire Agreement: This Agreement consthe Parties. This Agreement may be modified been executed and approved by the Parties Agreement. Sin(COMPANY NAME)	Email: cjonsson@uthsc.edu ctitutes the sole, full, and complete agreement by and between ad, amended, or changed only by a written amendment, which has authorized officials as indicated on the signature page of this ignature Page to Follow THE UNIVERSITY OF TENNESSEE ON BEHALF OF ITS HEALTH SCIENCE CENTER