



MATERIAL TRANSFER AGREEMENT

In this Material Transfer Agreement ("Agreement"), effective as of the date of final signature below ("Effective Date"), the term "Provider" Georgios Loudianos with a place of business at Clinica Pediatrica e Malattie Rare, Ospedale Microcitemico, via Edward Jenner 18, 09121, Cagliari, Italy and the term "Recipient" refers to Seattle Children's Hospital d/b/a Seattle Children's Research Institute, a Washington nonprofit corporation with a place of business at 4800 Sand Point Way NE, Seattle, WA 98105.

BACKGROUND

- Provider wishes to encourage scientific collaboration and promote the advancement of science by providing certain materials and information to the scientific community.
- Recipient wishes to receive certain materials and information from Provider.

DEFINITIONS

1. PROVIDER SCIENTIST: **Georgios Loudianos**
2. RECIPIENT SCIENTIST: **Sihoun Hahn**
3. ORIGINAL MATERIAL: **Dried blood samples of confirmed Wilson's Disease patients**
4. MATERIAL: ORIGINAL MATERIAL, PROGENY, and UNMODIFIED DERIVATIVES. The MATERIAL shall not include: (a) MODIFICATIONS, or (b) other substances created by the RECIPIENT through the use of the MATERIAL which are not MODIFICATIONS, PROGENY, or UNMODIFIED DERIVATIVES.
5. PROGENY: Unmodified descendant from the MATERIAL, such as virus from virus, cell from cell, or organism from organism.
6. UNMODIFIED DERIVATIVES: Substances created by the RECIPIENT which constitute an unmodified functional subunit or product expressed by the ORIGINAL MATERIAL. Some examples include: subclones of unmodified cell lines, purified or fractionated subsets of the ORIGINAL MATERIAL, proteins expressed by DNA/RNA supplied by the PROVIDER, or monoclonal antibodies secreted by a hybridoma cell line.
7. MODIFICATIONS: Substances created by the RECIPIENT which contain/incorporate the MATERIAL.
8. COMMERCIAL PURPOSES: The sale, lease, license, or other transfer of the MATERIAL or MODIFICATIONS to a for-profit organization. COMMERCIAL PURPOSES shall also include uses of the MATERIAL or MODIFICATIONS by any organization, including RECIPIENT, to perform contract research, to screen compound libraries, to produce or manufacture products for general sale, or to conduct research activities that result in any sale, lease, license, or transfer of the MATERIAL or MODIFICATIONS to a for-profit organization. However, industrially sponsored academic research shall not be considered a use of the MATERIAL or MODIFICATIONS for COMMERCIAL PURPOSES per se, unless any of the above conditions of this definition are met.
9. NONPROFIT ORGANIZATION(S): A university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c)) and exempt from taxation under section 501(a) of the Internal Revenue Code (26 U.S.C. 501(a)) or any nonprofit scientific or educational

organization qualified under a state nonprofit organization statute. As used herein, the term also includes government agencies.

TERMS AND CONDITIONS

1. The PROVIDER retains ownership of the MATERIAL, including any MATERIAL contained or incorporated in MODIFICATIONS.

2. The RECIPIENT retains ownership of: (a) MODIFICATIONS (except that, the PROVIDER retains ownership rights to the MATERIAL included therein), and (b) those substances created through the use of the MATERIAL or MODIFICATIONS, but which are not PROGENY, UNMODIFIED DERIVATIVES or MODIFICATIONS (i.e., do not contain the ORIGINAL MATERIAL, PROGENY, UNMODIFIED DERIVATIVES). If either 2 (a) or 2 (b) results from the collaborative efforts of the PROVIDER and the RECIPIENT, joint ownership may be negotiated.

3. The RECIPIENT and the RECIPIENT SCIENTIST agree that the MATERIAL:

(a) is to be used solely for teaching and academic research purposes;

(b) will not be used in human subjects, in clinical trials, or for diagnostic purposes involving human subjects without the written consent of the PROVIDER;

(c) is to be used only at the RECIPIENT organization and only in the RECIPIENT SCIENTIST's laboratory under the direction of the RECIPIENT SCIENTIST or others working under his/her direct supervision; and

(d) will not be transferred to anyone else within the RECIPIENT organization without the prior written consent of the PROVIDER.

4. The RECIPIENT and the RECIPIENT SCIENTIST agree to refer to the PROVIDER any request for the MATERIAL from anyone other than those persons working under the RECIPIENT SCIENTIST's direct supervision.

5. Permitted uses of the MATERIAL by RECIPIENT:

(a) The RECIPIENT and/or the RECIPIENT SCIENTIST shall have the right, without restriction, to distribute substances created by the RECIPIENT through the use of the ORIGINAL MATERIAL only if those substances are not PROGENY, UNMODIFIED DERIVATIVES, or MODIFICATIONS.

(b) Under a separate agreement at least as protective of the PROVIDER's rights as this Agreement, the RECIPIENT may distribute MODIFICATIONS to NONPROFIT ORGANIZATION(S) for research and teaching purposes only.

(c) Without written consent from the PROVIDER, the RECIPIENT and/or the RECIPIENT SCIENTIST may NOT provide MODIFICATIONS for COMMERCIAL PURPOSES. It is recognized by the RECIPIENT that such COMMERCIAL PURPOSES may require a commercial license from the PROVIDER and the PROVIDER has no obligation to grant a commercial license to its ownership interest in the MATERIAL incorporated in the MODIFICATIONS. Nothing in this paragraph, however, shall prevent the RECIPIENT from granting commercial licenses under the RECIPIENT's intellectual property rights claiming such MODIFICATIONS, or methods of their manufacture or their use.

6. The RECIPIENT acknowledges that the MATERIAL is or may be the subject of a patent application. Except as provided in this Agreement, no express or implied licenses or other rights are provided to the RECIPIENT under any patents, patent applications, trade secrets or other proprietary rights of the PROVIDER, including any altered forms of the MATERIAL made by the PROVIDER. In particular, no express or implied licenses or other rights are provided to use the MATERIAL, MODIFICATIONS, or any related patents of the PROVIDER for COMMERCIAL PURPOSES.

7. If the RECIPIENT desires to use or license the MATERIAL or MODIFICATIONS for COMMERCIAL PURPOSES, the RECIPIENT agrees, in advance of such use, to negotiate in good faith with the PROVIDER to establish the terms of a commercial license. It is understood by the RECIPIENT that the PROVIDER shall have no obligation to

grant such a license to the RECIPIENT, and may grant exclusive or non-exclusive commercial licenses to others, or sell or assign all or part of the rights in the MATERIAL to any third party(ies), subject to any pre-existing rights held by others and obligations to the Federal Government.

8. The RECIPIENT is free to file patent application(s) claiming inventions made by the RECIPIENT through the use of the MATERIAL but agrees to notify the PROVIDER upon filing a patent application claiming MODIFICATIONS or method(s) of manufacture or use(s) of the MATERIAL.

9. Any MATERIAL delivered pursuant to this Agreement is understood to be experimental in nature and may have hazardous properties. The PROVIDER MAKES NO REPRESENTATIONS AND EXTENDS NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED. THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR THAT THE USE OF THE MATERIAL WILL NOT INFRINGE ANY PATENT, COPYRIGHT, TRADEMARK, OR OTHER PROPRIETARY RIGHTS.

10. Except to the extent prohibited by law, the RECIPIENT assumes all liability for damages which may arise from its use, storage or disposal of the MATERIAL. The PROVIDER will not be liable to the RECIPIENT for any loss, claim or demand made by the RECIPIENT, or made against the RECIPIENT by any other party, due to or arising from the use of the MATERIAL by the RECIPIENT, except to the extent permitted by law when caused by the gross negligence or willful misconduct of the PROVIDER. RECIPIENT hereby waives any claim against PROVIDER and further agrees to indemnify, defend and hold PROVIDER harmless from and against any and all claims, suits, losses, damages, liabilities, and expenses, including reasonable attorneys' fees, which may be alleged to arise out of or in connection with RECIPIENT's receipt, use, disposition, handling, or storage of the MATERIAL.

11. This Agreement shall not be interpreted to prevent or delay publication of research findings resulting from the use of the MATERIAL or the MODIFICATIONS. The RECIPIENT SCIENTIST agrees to provide appropriate acknowledgement of the source of the MATERIAL in all publications and to provide PROVIDER SCIENTIST with a copy of any such publication(s).

12. The RECIPIENT agrees to use the MATERIAL in compliance with all applicable statutes and regulations, including Public Health Service and National Institutes of Health regulations and guidelines such as, for example, those relating to research involving the use of animals or recombinant DNA. In the event the transfer contemplated under this Agreement requires regulatory approval(s), including, but not limited to, approval from an appropriately authorized Institutional Animal Care and Use Committee, PROVIDER shall not transfer the MATERIAL until receipt of documentation of approval from RECIPIENT. In the event RECIPIENT is unable to provide confirmation of approval within 180 days of execution of this Agreement, the Agreement will automatically terminate.

13. RECIPIENT agrees that it will not knowingly export or re-export any technical data or materials furnished or resulting from the provision of the MATERIAL, without first obtaining permission to do so from PROVIDER and from the U.S. Department of Commerce, the U.S. Food and Drug Administration, and/or other appropriate governmental agencies as may be required by law.

14. This Agreement will terminate on the earliest of the following dates: (i) when the MATERIAL becomes generally available from third parties, for example, through reagent catalogs or public depositories or (ii) on completion of the RECIPIENT's current research with the MATERIAL, or (iii) on thirty (30) days written notice by either party to the other, provided that:

(a) if termination should occur under 14(i), the RECIPIENT shall be bound to the PROVIDER by the least restrictive terms applicable to the MATERIAL obtained from the then-available resources; and

(b) if termination should occur under 14(ii) above, the RECIPIENT will discontinue its use of the MATERIAL and will, upon direction of the PROVIDER, return or destroy any remaining MATERIAL. The RECIPIENT, at its discretion, will also either destroy the MODIFICATIONS or remain bound by the terms of this agreement as they apply to MODIFICATIONS; and

(c) in the event the PROVIDER terminates this Agreement under 14(iii) other than for breach of this Agreement or for cause such as an imminent health risk or patent infringement, the PROVIDER will defer the effective date of termination for a period of up to one year, upon request from the RECIPIENT, to permit completion of research in progress. Upon the effective date of termination, or if requested, the deferred effective date of termination, RECIPIENT will discontinue its use of the MATERIAL and will, upon

direction of the PROVIDER, return or destroy any remaining MATERIAL. The RECIPIENT, at its discretion, will also either destroy the MODIFICATIONS or remain bound by the terms of this agreement as they apply to MODIFICATIONS.

15. Paragraphs 6, 9, and 10 shall survive termination.

16. The MATERIAL is provided at no cost, or with an optional transmittal fee solely to reimburse the PROVIDER for its preparation and distribution costs. If a fee is requested by the PROVIDER, the amount will be indicated here: Not applicable

The individuals whose signatures appear below represent that they have authority to enter into this Agreement on behalf of their respective organizations and hereby agree to the terms and conditions set forth in this Agreement.

Clinica Pediatrica e Malattie Rare, Ospedale
Microcitemico, Cagliari

Seattle Children's Research Institute

Azienda Socio Sanitaria Locale n. 8 di Cagliari Date
Il Direttore Generale
Dr. Marcello Tidore

Eric Tham, M.D., M.S. Date
Interim Senior Vice President
MTA00000135

Provider Scientist:

Read and understood:

Recipient Scientist:

Read and understood:

Georgios Loudianos, MD Date

Sihoun Hahn, MD Date