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This Standard Material Transfer Agreement (the "SMTA") is concluded by and between:

- The EMMA Partner that is identified at the end of this agreement and
- (2) Recipient identified at the end of this agreement and further described in the Annex ("Recipient") acting also on behalf of its principal scientist/s identified in the Annex ("Researcher/s").

1. Definitions

- 1.1 "Material" means all material(s) supplied to Recipient, as described in **Annex 1** of this SMTA, as amended from time to time by written agreement between the parties together with, any progeny or descendants of the foregoing or any sperm or embryos recovered from the Materials. Mice created from supplied embryos and gametes shall be considered Material.
- 1.2 "Modifications" means substances created by the Recipient which contain or incorporate any form of the Material or parts of the Material. Mice created by the Recipient from allele conversion shall be considered Modifications together with any portion of such mice including embryos and gametes.
- 1.3 "Mouse Producer" means Genome Research Limited (operating as Wellcome Sanger Institute) of Wellcome Genome Campus, Hinxton, Cambridge, CB10 1SA.
- 1.4 "Staff" means the Researcher/s and those individuals under the direct supervision of the Researcher/s.
- 1.5 "EMMA Partner" means any of the participating organisations listed on the European Mutant Mouse Archive (EMMA) website (https://www.infrafrontier.eu/) under the section entitled INFRAFRONTIER partners.

2. Use of the Material and Modifications

- 2.1 Upon acceptance of this SMTA, EMMA Partner shall release to the Recipient the Material identified in the Annex (and in such amounts identified therein). Recipient agrees to comply with the terms herein and shall procure that the Staff are made aware of and also comply with the terms.
- 2.2 Recipient on behalf of itself, and its Staff, hereby agrees to comply with all laws, regulations, protocols and codes of practice applicable to the Material including its use, storage and disposal as they exist in the Recipient's place and country, including, where applicable, all guidelines for research on biological materials and animals. The Material shall not be used in humans or for diagnostic testing of human tissue or samples.
- 2.3 The Material shall only be used for non-commercial research purposes and only by the Recipient and Staff. Except as provided in Section 3 the Material must not be released to any other person or entity, or used for any other

purpose without the prior written consent of the EMMA Partner.

- 2.4 All Material supplied pursuant to Section 2.1 is supplied Ex Works (EXW Incoterms 2020) from EMMA Partner. Subject to the terms of this SMTA, risk and title in the physical Material shall pass to Recipient upon its or its agent's collection of the Material from EMMA Partner. Recipient is responsible for obtaining all import and export clearances, ethical and regulatory consents and licences and arranging itself for the import of the Material to its local jurisdiction and facility. Recipient is permitted to use a Third Party Agent as defined in Section 3 for the import of the Material subject to the provisions of Section 3.
- 2.5 Recipient shall pay a handling fee and shipping costs as agreed between EMMA Partner and Recipient.
- 2.6 Recipient shall, subject to Section 2.8 and Section 4.1, own title in any physical Modifications that its Staff create(s) or that are created for them by a Third Party Agent. Where a Modification results in a mouse (or embryo or sperm) being generated, Recipient is requested to register the information relating to the alleles carried by the mouse in a public database resource such as Mouse Genome Informatics (MGI) or the International Mouse Strain Resource (IMSR) and submit breeding pairs to a public repository such as the EMMA Repository or a similar repository of the Recipient's choice for cryopreservation and distribution to third parties for non-commercial purposes, using a material transfer agreement which is at least as protective as this SMTA, including restrictions on use and redistribution.
- 2.7 Modifications shall only be used for non-commercial purposes and only by the Recipient and Staff. Notwithstanding the foregoing, Recipient may release Modifications to non-profit organizations for non-commercial use provided such non-profit organization is subject to a material transfer agreement which is at least as protective as this SMTA, including restrictions on use and redistribution.
- 2.8 The Recipient shall not distribute Modifications for commercial purposes. If Recipient desires to use or license Modifications for commercial purposes, Recipient agrees, in advance of such use, to approach the Mouse Producer (via email using mousemta@sanger.ac.uk) to discuss this and seek the Mouse Producer's prior written consent. If such consent is granted the Recipient will, in advance of such use, negotiate in good faith with the Mouse Producer to establish the terms of a commercial license. It is understood by the Recipient that the Mouse Producer shall have no obligation to grant such a license to the Recipient.

3. Use of Third Party Agents

- 3.1 The Recipient may:
- (i) send the Materials to a third party where that third party is required for the rederivation and/or breeding of live mice from the Materials or to carry out contract research services using the Materials on the Recipient's behalf; and/or
- (ii) use a third party to import the Materials into the Recipient's country on the Recipient's behalf.

Such third parties shall be referred to as "Third Party Agents".

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3.2 Recipient shall ensure that the Third Party Agent is subject to legally enforceable provisions restricting them from retaining or using the Materials for any other purposes, or from providing the Materials to any other party.

4. Intellectual Property

- 4.1 All intellectual property rights (including without limitation rights in confidential information and know-how and the right to apply for patents) and all results, data and discoveries arising out of Recipient's use of the Material shall belong to the Recipient save that, the Mouse Producer retains sole ownership of any intellectual property rights contained or embodied in the Materials, including any Materials incorporated within any Modifications. Except as specifically provided in Section 4.3, neither the EMMA Partner nor the Mouse Producer shall have any right or license in respect of such intellectual property rights, results, data or discoveries created by Recipient including its Staff or Third Party Agents.
- 4.2 The Mouse Producer hereby grants to the Recipient a non-exclusive, worldwide, royalty-free research licence under its intellectual property rights to use, reproduce and modify the Materials for academic, non-commercial research. Except as expressly authorised herein, no rights are granted to the Recipient or any Third Party Agents with respect to the Materials or to any intellectual property of the Mouse Producer.
- 4.3 The Mouse Producer wishes to promote academic, noncommercial research through the use of its Materials. In support of this, if the Recipient, or the Recipient's Staff, creates, owns, benefits from or acquires any intellectual property rights in respect of (i) any Modifications, or (ii) any inventions which directly relate to the use of the Material and which are conceived of or first actually reduced to practice in the performance of the research under this SMTA (together, "IPR") the Recipient shall, to the extent it is legally able to do so (and except where the Recipient is a U.S. Public Health Service agency), make such IPR available to other academic, not-for-profit institutions on a non-exclusive, worldwide, royalty-free, sub-licensable, fully paid-up licence to use such IPR for such institutions own internal, non-profit making research and teaching purposes. Where the Recipient is an agency of the U.S. Public Health Service ("PHS", which includes NIH, FDA and CDC), Recipient acknowledges it is PHS policy to permit and encourage use of the IPR and accordingly hereby consents to the use by other academic, not-for-profit institutions of its IPR for their own internal, nonprofit making research and teaching purposes.
- 4.4 In any publication of the results of the research under this SMTA, the Recipient shall include the acknowledgement as set out in Annex 2 regarding the source of the Material.

5. Warranty and Liability

Recipient accepts that the Materials are supplied on an "as is" basis, are experimental in nature, may have hazardous properties and are supplied without representation or warranty of any kind, express or implied, for example (but without limitation) as to fitness for purpose or non-

infringement of third party rights. Recipient agrees that any and all liability of Mouse Producer, the EMMA Partner and any members of consortiums to which the Mouse Producer is a party and which are associated with the transfer and/or import of the Material or use of Modifications, is excluded to the maximum extent permitted by law. Recipient assumes all and any liability resulting from its use of the Materials and shall be liable for the acts of any Third Party Agents that it contracts under the provisions of Section 3.

6. Termination

- 6.1 This SMTA shall come into force on the date of the last signature of this SMTA and remain in force until:
- (i) the conclusion of the academic non-commercial research; or
- (ii) for as long as the Recipient and/or Staff have possession of any of the Materials or Modifications;
- (iii) until it is terminated in accordance with Section 6.2 whichever is the earlier.
- 6.2 The EMMA Partner may terminate this SMTA if:
- (i) the Recipient Institution is in breach of any of the terms, which in the case of a breach which is capable of remedy, has not been remedied within 60 days of receipt of notice from the EMMA Partner of such breach:
- (ii) there are significant welfare concerns where the Materials or Modifications are live mice; or
- (iii) the Recipient takes any action, or fails to take any actions, which in the EMMA Partner's reasonable opinion, brings or is likely to bring, the EMMA Partner's or the Mouse Producers' name or reputation into disrepute.
- 6.3 Upon termination of this SMTA the Recipient shall:
- (i) immediately discontinue use of the Materials or Modifications;
- (ii) dispose of any frozen Materials and Modifications in an appropriate manner; and
- (iii) cull any live Materials and Modifications in a humane manner.
- 6.4 Where the Recipient has culled any live Materials or Modifications under this Section 6, the Recipient acknowledges that such culling of live Materials or Modifications is solely due to its actions or inactions.
- 6.5 Sections $2.6,\,2.8,\,4,\,5,\,6$ and 7 shall survive the expiration or termination of this SMTA for any reason.

7. Miscellaneous

7.1 Subject to Section 7.2 this SMTA shall be construed according to the laws of the place of incorporation or seat of the EMMA Partner that has signed below, under exclusion of any of its choice of law and venue principles. Any dispute arising from the interpretation and/or implementation of this SMTA, which cannot be settled amicably, shall be brought before a competent court of first instance in the city of the country of incorporation of the defendant.

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7.2 Section 7.1 shall not be applicable for:

- (i) state related educational institutions in the United States of America (e.g. universities) and United States of America Federal Government funded research institutes if such institutions/institutes cannot enter into agreements governed by foreign laws and/or jurisdiction in which case this SMTA shall be construed with the laws and/or jurisdiction of the place of incorporation or seat of such United States of America institution/institute.
- 7.3 This SMTA is personal and non-assignable by the Recipient and it, together with its Annex, constitutes the entire agreement and understanding between the parties relating to its subject matter.
- 7.4 The EMMA Partner is not acting as an agent for the Mouse Producer.
- 7.5 Mouse Producer shall be a third party beneficiary to this SMTA with the right to enforce its terms.

Signatures

FMMA Partner

LIMINA I AITHE
Name of EMMA Partner: Helmholtz Zentrum München (GmbH)
Signature:
Name:
Title:
Date:
Signed on behalf of the Recipient by an authorised official
Signature:
Name:
Title:

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ANNEX 1

EMMA Partner's legal name and place of business ("EMMA Partner"):
Helmholtz Zentrum München Deutsches Forschungszentrum für Gesundheit und Umwelt (GmbH) Ingolstädter Landstraße 1 85764 Neuherberg Germany
Recipient's Institution legal name and place of business ("Recipient"):
Recipient principal scientist's name, full address, telephone number and e-mail ("Researcher/s"):
Recipient authorized official's name, full address, telephone number and e-mail:
Description of Material:

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ANNEX 2

Any publication of the results of the research shall acknowledge the source of the Materials:

"We thank the Wellcome Sanger Institute and its funders for providing the mutant mouse line (Allele:[state allele]), and INFRAFRONTIER/EMMA (www.infrafrontier.eu) partner [insert EMMA partner] from which the mouse was received. Funding information may be found at www.mousephenotype.org."

Details of the alleles have been published, please include the following references in publications:

White, J. K., Gerdin, A.-K., Karp, N. A., Ryder, E., Buljan, M., Bussell, J. N., Salisbury, J., et al. (2013). Genome-wide Generation and Systematic Phenotyping of Knockout Mice Reveals New Roles for Many Genes. Cell, **154**(2), 452–464.

Skarnes, W.C., Rosen, B., West, A.P., Koutsourakis, M., Bushell, W., Iyer, V., Mujica, A.O., Thomas, M., Harrow, J., Cox, T. et al. (2011) A conditional knockout resource for the genome-wide study of mouse gene function. Nature, **474**, 337-342.

Bradley A, Anastassiadis K, Ayadi A, Battey JF, Bell C, Birling M-C, Bottomley J, Brown SD, Bürger A, Bult CJ, Bushell W, Collins FS, Desaintes C, Doe B, Economides A, Eppig JT, Finnell RH, Fletcher C, Fray M, Frendewey D, et al. (2012) The mammalian gene function resource: the international knockout mouse consortium. Mamm. Genome, **23(9-10)**, 580-586.

Pettitt SJ, Liang Q, Rairdan XY, Moran JL, Prosser HM, Beier DR, Lloyd KC, Bradley A & Skarnes WC (2009) Agouti C57BL/6N embryonic stem cells for mouse genetic resources. Nature methods, **6(7)**, 493-495.

M. C. Birling, A. Yoshiki, D. Adams, S. Ayabe, A. L. Beaudet et al (2021) A resource of targeted mutant mouse lines for 5,061 genes Nature genetics 53 416–425 (PMID: 33833456)