

## Research Collaboration Agreement

THIS AGREEMENT is made on the Signature Date

BETWEEN:

- (1) **EMBL Enterprise Management Technology Transfer GmbH** whose registered office is at Boxberggring 107, 69126, Heidelberg, Germany ("**EMBLEM**"), being the technology transfer unit of the EUROPEAN MOLECULAR BIOLOGY LABORATORY ("**EMBL**") located at 1 Meyerhofstrasse, 69117, Heidelberg, Germany and having the right to perform its obligations under this Agreement through EMBL and all its sites and in particular EMBL's UK site, the European Bioinformatics Institute located on the Wellcome Genome Campus, Hinxton, Cambridge CB10 1SD, UK ("**EMBL-EBI**"); and
- (2) **University of West Attica** Egaleo Park Campus, Agiou Spyridonos 17, Egaleo, Post code 12243, Athens (the '**Collaborator**').

### RECITALS

- (1) The Parties have complementary expertise and resources and wish to collaborate to undertake the Project in accordance with the provisions of this Agreement.
- (2) The Parties to this Agreement acknowledge that the main objective of the Project is to make available to the public the results of the research and development projects conducted pursuant to this Agreement through publication.
- (3) The Project:
  - (a) is part of broader research and development activities of the Open Targets Consortium (the "Consortium") currently consisting of (i) EMBL Enterprise Management Technology Transfer GmbH ("**EMBLEM**"), (ii) the Wellcome Sanger Institute, ("**Sanger**") (iii) GlaxoSmithKline Research & Development Limited ("**GSK**"), (iv) Celgene Corporation ("**Celgene**") and (v) Sanofi US Services, Inc, a Delaware Corporation, ("**Sanofi**"), (vi) Pfizer Inc ("**Pfizer**"), (vii) Genentech Inc. ("**Genentech**");
  - (b) is of mutual interest and benefit to the Parties;
  - (c) will further the instructional and research objectives of EMBL and Collaborator in a manner consistent with their status as research Collaborators; and
  - (d) may result in benefits for all the Parties through evidence-based research, inventions, improvements and/or discoveries.

IT IS AGREED as follows:

OTAR2051\_2067\_2070\_COL-EBI-UWA

## 1 Definitions

In this Agreement, the following terms shall have the following meanings:

'Affiliate'	in relation to a Party, any entity or person which controls, is controlled by or is under common control with that Party. For the purposes of this definition, 'control' shall mean direct or indirect beneficial ownership of 50% or more of the share capital, stock or other participating interest carrying the right to vote or to distribution of profits of that entity or person, as the case may be
'Background Information'	<p>(a) as at the Commencement Date, all Know-how and Confidential Information and other Intellectual Property rights owned or controlled by a Party and made available to the other Parties for use in the Project; and</p> <p>(b) following the Commencement Date, all Know-how and Confidential Information and other Intellectual Property rights owned or controlled by a Party and made available to the other Parties for use in the Project which is not Foreground Information</p>
'Claims'	all demands, claims and liability (whether criminal or civil, in contract, tort or otherwise) for losses, damages, legal costs and other expenses of any nature whatsoever and all costs and expenses (including without limitation legal costs) incurred in connection therewith
'Collaborator's Principal Investigator'	Emmanouil Athanasiadis or any replacement appointed by written agreement of the Parties
'Collaborator Materials'	are described in Schedule 1
'Commencement Date'	the date of this agreement
'Confidential Information'	as defined in Clause 9.1.
'Consortium Connected Parties'	in relation to a member of the Consortium, such member's Affiliates, any third parties acting for or on behalf of such member or any of its Affiliates (including their subcontractors) and any third party collaborators approved by the Consortium Governance Board

'Data Sharing Policy'	<p>Sanger's policy for the release of genetic data and associated guidelines on interpretation as updated from time to time and available at:</p> <p><a href="http://www.sanger.ac.uk/datasharing/assets/wtsi_datasharing_policy.pdf">www.sanger.ac.uk/datasharing/assets/wtsi_datasharing_policy.pdf</a></p> <p>and</p> <p><a href="http://www.sanger.ac.uk/datasharing/assets/wtsi_datasharing_guidelines.pdf">www.sanger.ac.uk/datasharing/assets/wtsi_datasharing_guidelines.pdf</a></p>
'EMBL's Principal Investigator'	Ian Dunham (OTAR2051), Irene Papatheodorou (OTAR2067), Moritz Gerstung (OTAR2070) or any replacement appointed by written agreement of the Parties
'EMBL Materials'	are described in Schedule 1
'Foreground Information'	All data, information, Know-how, results, designs, inventions and other matter capable of being the subject of Intellectual Property rights, which is conceived, first reduced to practice or writing or developed in whole or in substantial part in the course of the Project
'Intellectual Property'	shall mean Patents, trademarks, service marks, registered designs, copyrights, database rights, design rights, Know-How, confidential information, and any similar right recognised from time-to-time in any jurisdiction, together with all rights of action in relation to the infringement of any of the above.
'Know-how'	unpatented technical information, including, without limitation, information relating to inventions, discoveries, concepts, methodologies, models, research, development and testing procedures, the results of experiments, tests and trials, manufacturing processes, techniques and specifications, quality control data, analyses, reports and submissions, that is not in the public domain.
'Major Public Repositories'	stable, archival databases of biological information which provide accession numbers for submissions, are considered public resources, and which accept and provide data freely to all users. These are often run by (for example) the European Bioinformatics Institute or the National Center for Biotechnology Information
'Patents'	shall mean:

	<p>1) issued and unexpired letters patent, including extensions, registrations, confirmations, validations, re-validations, reissues, supplementary protection certificates, paediatric extensions, re-examinations and renewals thereof;</p> <p>2) patent applications pending approval, including all provisional applications, substitutions, continuations, continuations-in-part, divisionals and renewals thereof; and</p> <p>3) foreign counterparts of any of the foregoing</p>
'Parties'	EMBL and the Collaborator, and 'Party' shall mean any of them
'Project'	the programme of research as described in further detail in Schedule 1
'Staff'	all scientific and technical staff who are employees, students, officers, contractors, visiting researchers, independent consultants or otherwise of a Party and who participate in the Project including the Principal Investigator of that Party and those under his or her supervision
'Term'	the period from the Commencement Date to the fourth anniversary thereafter, or any earlier date on which this Agreement is terminated under Clause 2.2 or Clause 10.

## 2 Research work

- 2.1 The Parties shall commence the performance of the Project after the start date of the Term and shall use reasonable endeavours to perform the Project in accordance with Schedule 1 and the provisions of this Agreement. The Parties may, however, amend the Project at any time by mutual written agreement of their authorised signatories.
- 2.2 The Project will be under the supervision of EMBL's Principal Investigators and the Collaborator's Principal Investigator. If any Principal Investigator becomes unable or unwilling to continue the Project and the Parties, acting reasonably, cannot agree on a substitute within thirty (30) days after receiving notice that the applicable Principal Investigator is unable or unwilling to continue the Project, each Party shall be entitled to terminate its participation to the Project and to this Agreement by giving ninety (90) days' notice in writing to the other.
- 2.3 The Parties to this Agreement acknowledge that, at the Signature Date, each Party's normal access to its premises and systems is prevented or restricted because of the COVID-19 pandemic. Therefore, notwithstanding anything else in this Agreement -

- 2.3.1 a Party undertaking to provide materials to another shall only send materials once (i) the provider Party has the necessary access to its relevant premises to do so lawfully and safely and (ii) the receiving Party has the necessary access to its relevant premises to receive the materials lawfully and safely and has confirmed to the provider Party in writing (including by email) that it is ready to receive the materials; and
- 2.3.2 any Party's obligations to perform any other activities that require access to its premises and systems are suspended until such Party has the necessary access to its relevant premises and systems to perform those activities lawfully and safely. Once such access has been restored for all Parties, they shall discuss in good faith and seek to agree revised timescales for the performance and completion of such activities (and if required they may seek extensions of time and/or funding from any relevant funding provider). Such agreed revised timescales shall be recorded by way of a written amendment to this Agreement, to be signed by all Parties.

### **3 Materials Transfer**

NOT IN USE

### **4 Reporting**

- 4.1 During the Term, representatives of each of the Parties shall meet at times and places mutually agreed upon (or by telephone- or video-conference) to discuss the progress and results, as well as ongoing plans, or changes therein, of the Project. The Parties agree that these meetings may be attended by representatives of other members of the Consortium (as constituted from time to time).
- 4.2 Without prejudice to the generality of Clause 4.1, each of Collaborator and EMBL shall prepare a detailed report of the progress they have made on the Project as may be required by the Consortium.

### **5 Financial and other support**

NOT IN USE

### **6 Publicity**

- 6.1 Subject to the provisions of Clause 7 (Publications) no Party will use the name of any of the other Parties in any publicity, advertising or news release without the prior written approval of such other Parties, which will not be unreasonably withheld.

## **7 Publications**

- 7.1 The Parties acknowledge that by charity law and under EMBL's policies, the results of the Project (including Foreground Information) should be publishable and that a principal aim of the activities of the Project (in line with the aims of the Consortium) is to publish and/or publicly disseminate those results, subject to the remaining provisions of this Section 7.
- 7.2 Subject to Clause 7.6, the Parties agree that Staff engaged in the Project shall be permitted to present at symposia, national, or regional professional meetings, and to publish in journals, theses or dissertations, or otherwise of their own choosing, methods and results of the Project provided that the other Parties ("Other Parties") shall have been furnished copies of any proposed publication or presentation at least sixty (60) days in advance of the submission of such proposed publication or presentation to a journal, editor, or other third party.
- 7.3 The Other Parties shall have forty-five (45) days, after receipt of said copies, to object to such proposed presentation or proposed publication on the grounds that there is patentable, copyright related or commercially sensitive subject matter, that they own, which needs protection or removal. Collaborator acknowledge that, in the case of any proposed publication or presentation by their Staff, EMBL will need to refer the matter to the Consortium's Joint Patent Committee (JPC).
- 7.4 If the Parties makes such objection, said Staff shall refrain from making such publication or presentation for a maximum of one hundred and eighty (180) days from the date of planned publication in order for the objecting Party or the Consortium member to assess the potential for and/or to file for Patent application(s) or for commercially or copyright related sensitive subject matter to be removed.
- 7.5 In any publication, the Parties shall each record the active role of the other Parties in the Project (and of any relevant members of the Consortium) with an acknowledgement or joint authorship, as appropriate and in accordance with academic custom and the contribution of the relevant researchers. In any publication reporting on their use, unless otherwise requested by the relevant Party, the Parties shall acknowledge (i) EMBL as the source of the EMBL Materials and related raw data (ii) Collaborator as the source of the Collaborator Materials. The Consortium (and other sources where applicable) will be cited as a source of funds supporting the Project.
- 7.6 Where a Project involves generating genetic data (including but not limited to sequencing, genotyping and microarray) the following provisions shall apply in addition to Clauses 7.1 – 7.6 (inclusive):



- 7.7 The Consortium embraces the principles of data sharing, open collaboration and transparency. Subject to internal review it makes data available in accordance with the Data Sharing Policy, following quality control genetic data shall be submitted to Major Public Repositories, if appropriate under managed access and under the respective Major Public Repository's terms of use. EMBL and the Collaborator shall provide sufficient metadata to meet the requirements for data submission set out by the applicable Major Public Repository. If required by the applicable terms of funding, the results of preliminary analyses of use to the research community will be submitted to suitable databases by EMBL in collaboration with the Collaborator.

## **8 Intellectual Property**

- 8.1 To avoid doubt, all Background Information used in connection with the Project shall remain the property of the Party introducing the same. No licence to use any Background Information is granted or implied by this Agreement except the rights expressly granted in this Agreement.
- 8.2 EMBL grants to Collaborator a worldwide, royalty-free, fully-paid up, non-exclusive, non-transferable licence to use its Background Information for the purpose of carrying out the Project but for no other purpose. Collaborator grants to EMBL and to the other members of the Consortium a worldwide, royalty-free, fully-paid up, non-exclusive, non-transferable licence (with the right to grant sub-licences to Consortium Connected Parties) to use their Background Information for the purpose of carrying out the Project but for no other purpose.
- 8.3 Each of the Parties will use reasonable efforts to notify the other promptly after identifying any Foreground Information that it believes is patentable, and will supply the other with copies of that Foreground Information.
- 8.4 Ownership of Foreground Information shall follow inventorship under the law relating to Patents in the jurisdiction in which the Foreground Information is. Notwithstanding that Patent protection may be obtained in respect of Foreground Information in accordance with this Clause 8 –
- 8.4.1 EMBL hereby grants to Collaborator a worldwide, royalty-free, fully paid-up, non-exclusive, non-transferable licence under EMBL's Foreground Information (including its share of any jointly-owned Foreground Information) (i) for the purpose of carrying out the Project and (ii) for Collaborator's research and development purposes and academic teaching purposes, and (iii) for the purpose of manufacturing, selling or otherwise

commercially supplying a product covered by Intellectual Property owned by the relevant Collaborator, but for no other purpose; and

8.4.2 Collaborator hereby grants to EMBL and to the other members of the Consortium a worldwide, royalty-free, fully-paid up, non-exclusive, non-transferable licence (with the right to grant sub-licences to Consortium Connected Parties) under their Foreground Information (including their share of any jointly-owned Foreground Information) (i) for the purpose of carrying out the Project and (ii) for EMBL's and the other Consortium members' research and development purposes and academic teaching purposes, and (iii) for the purpose of manufacturing, selling or otherwise commercially supplying a product covered by Intellectual Property owned by EMBL or such other member of the Consortium, but for no other purpose.

8.5 Each Party shall ensure that any of its Staff involved in the creation of the Foreground Information are engaged on the Project under terms ensuring that Foreground Information shall be owned in accordance with this Clause 8. Each Party shall ensure that such Staff will provide such assistance as either Party may reasonably request in connection with the registration and protection of Foreground Information, including filing and prosecuting patent applications derived from the Project.

8.6 Where Foreground Information is created or generated jointly by EMBL and Collaborator, the Foreground Information will be jointly owned by these Parties. The relevant owning Parties may take such steps as they may decide from time to time, to register and maintain any protection for that Foreground Information, including filing and prosecuting patent applications for any Foreground Information, and taking any action in respect of any alleged or actual infringement of that Foreground Information. If one or more of the relevant owning Parties does not wish to take any such step or action, the other relevant owning Parties may do so at their expense, and the relevant owning Party not wishing to take such steps or action will provide, at the expense of the relevant owning Parties making the request, any assistance that is reasonably requested of it.

8.7 Notwithstanding the applicable Patent or other Intellectual Property laws in any jurisdiction, except as expressly set out in Clause 8.4, none of the Parties may commercially exploit any jointly-owned Foreground Information without the agreement of the other Parties. In such circumstances, the Party which desires to commercially exploit the jointly-owned Foreground Information will negotiate with the other Parties in good faith the specific fair and reasonable terms and conditions on which it can exploit the jointly-owned Foreground Information, taking into consideration the respective financial and technical contributions of the other Parties to the development of the Foreground Information, the expenses



incurred in securing Intellectual Property protection thereof and the costs of the commercial exploitation and the proportionate value of the Foreground Information in any such product or process.

- 8.8 If a Party (the "Exercising Party") requires the use of Background Information of another Party in order to exercise its rights in Foreground Information (whether solely or jointly owned) then, provided the other Party is free to license the Background Information in question, the other Party will not unreasonably refuse to grant or delay granting a licence to the Exercising Party on reasonable commercial terms so that the Exercising Party may use such Background Information for the purpose of exercising its rights in Foreground Information.

## **9 Confidentiality**

- 9.1 For the purposes of Clause 9, 'Confidential Information' shall mean all information that is marked as 'confidential' or is clearly recognizable as such to a reasonable person with no special knowledge of Disclosing Party's (as hereafter defined) activities concerning a Party ('Disclosing Party') or its Affiliates or their respective business, research activities or Intellectual Property, and which the Disclosing Party provides, directly or indirectly to the other Party ('Receiving Party') including Background Information; but shall not include information which:

- 9.1.1 is presently public knowledge or becomes generally available to the public other than as a result of a disclosure by the Receiving Party or its directors, officers, employees, students, representatives or advisors; or
- 9.1.2 becomes available to the Receiving Party on a non-confidential basis from a source other than the Disclosing Party or its representatives or advisors, provided that such source is not known by the Receiving Party to be bound by a confidentiality agreement with or other obligation of secrecy to the Disclosing Party or another party; or
- 9.1.3 the Receiving Party can establish was in its possession before receipt from the Disclosing Party or is developed independently or acquired directly or indirectly from a source independent of the Disclosing Party, its employees, students or agents; or
- 9.1.4 has been approved for release in writing by an authorised signatory of the Disclosing Party or has been published in accordance with Section 7; or
- 9.1.5 the Receiving Party is required to disclose to the courts of any competent jurisdiction, or to any government regulatory or financial authority, provided that the Receiving Party shall: i) inform the Disclosing Party as soon as is reasonably practicable; and ii) at the Disclosing Party's request seek to persuade the court, agency or authority to have the information treated in a

confidential manner, where this is possible under the court, agency's or authority's procedures.

- 9.2 The Receiving Party undertakes that Confidential Information disclosed to it by the Disclosing Party will be used solely for the purpose of undertaking the Project including for publication purposes as set out at Clause 7, and that such information will be kept confidential by the Receiving Party and its representatives and advisors for the duration of the Project and for three (3) years after the Term. In addition, the Parties acknowledge and agree that EMBL may provide Confidential Information and the Foreground Information to other members of the Consortium (as constituted from time to time) provided that those other Members are bound by provisions of confidentiality and non-use no less restrictive than those in this Agreement.
- 9.3 At the end of the Term (including early termination under clause 2.2, 10 or 16.1):
- 9.3.1 upon request the Receiving Party shall promptly return to the other Party all documents and any other physical material containing or reflecting any information included in the Confidential Information (whether provided by the Disclosing Party, its representatives or advisors or otherwise) and will not retain any copies, extracts or other reproductions in whole or in part of such documents or physical material other than one copy in its legal files; and
  - 9.3.2 upon request the Receiving Party shall destroy all documents, memoranda, notes and other writings whatsoever prepared by the Receiving Party or its representatives or advisors incorporating the Confidential Information;
  - 9.3.3 the Receiving Party shall not make, and shall procure that its representatives or advisors do not make any more use of the Confidential Information unless permitted under an operative licence to Background Information or Foreground Information granted under Clause 8.

## **10 Commencement and Termination**

- 10.1 This Agreement shall commence on the Commencement Date and shall terminate at the end of the Term. Any Party may terminate this Agreement upon one (1) months' prior written notice to the other where it considers termination justified on the grounds that no further purpose would be served by continuing with the Project. Such notice of termination will only be given by any Party after full discussion with the any Party of the reasons for the proposal to give such notice, and in any event may not be given until three (3) months after the Commencement Date.
- 10.2 Any Party may terminate this Agreement with immediate effect by giving notice to the other Parties if:

- 10.2.1 another Party is in breach of any provision of this Agreement and (if it is capable of remedy) the breach has not been remedied within forty-five (45) days after receipt of a written notice specifying the breach and requiring its remedy; or
- 10.2.2 another Party becomes insolvent, or if an order is made or a resolution is passed for its winding up (except voluntarily for the purpose of solvent amalgamation or reconstruction), or if an administrator, administrative receiver or receiver is appointed over the whole or any part of the other Party's assets, or if such other Party makes any arrangements with its creditors.
- 10.3 At the termination of this Agreement EMBL shall pay costs incurred and falling due for payment up to the date of termination, except if terminated due to a breach by Collaborator, in which case EMBL shall not be obliged to pay the costs of the Party in breach. In the event of early termination of this Agreement by Collaborator, Collaborator shall repay to EMBL any sums paid to them in respect of work that has not been performed and which are cancellable.
- 10.4 Termination of this Agreement shall not affect the rights and obligations of the Parties accrued prior to the effective date of termination of this Agreement. No termination of the Agreement, however effected, shall release the Parties from their rights and obligations under Clauses 3, 5, 6, 7, 8, 9, 10.3, 10.4 11, 12, 13 and from 16.4 to 16.12 and any other provision of this Agreement that expressly or by implication is intended to continue in force on or after termination.

## **11 Warranties**

### **11.1 Experimental research**

It is acknowledged and agreed that this Agreement provides for the carrying out of experimental research and the use of experimental materials whose properties and safety may not have been established. Accordingly, specific results cannot be guaranteed and any results, materials, information or intellectual property (together 'Delivered Items') provided under this Agreement are provided 'as is' and without any express or implied warranties, representations or undertakings save for any confirmations set out at Section 3. As examples, but without limiting the foregoing, no Party gives any warranty that Delivered Items do not infringe third party rights, are of merchantable or satisfactory quality, are fit for any particular purpose, comply with any sample or description, or are viable, uncontaminated, safe or non-toxic, nor that any patent applications made or licensed pursuant to this Agreement will result in valid, granted patents. Whilst the Parties will use reasonable endeavours to ensure the accuracy of any work performed and information given under this Agreement, no Party gives any warranty, express or implied,

as to accuracy, and will not be held responsible for any consequences arising out of any inaccuracies or omissions unless they are the result of wilful default on the part of that Party.

#### **11.2 No other warranties**

Each of the Parties acknowledges that, in entering into this Agreement, it does not do so in reliance on any representation, warranty or other provision except as expressly provided in this Agreement, and any conditions, warranties or other terms implied by statute or common law are excluded from this Agreement to the fullest extent permitted by law.

### **12 Liability**

- 12.1 Subject to Clause 12.4 the Parties agree that no liability whatsoever, either direct or indirect, shall rest upon either of them for the effects of any products or process that may be produced or adopted by either of them as a result of the Project, notwithstanding that the formulation of such product or process may be based upon the findings of the Project.
- 12.2 Subject to Clause 12.4, the maximum limit of each Party's liability, whether in contract, tort, negligence, breach of statutory duty or otherwise shall not exceed in aggregate £30,000.
- 12.3 Subject to Clause 12.4, no Party shall be liable to the other Party in contract, tort, negligence, breach of statutory duty or otherwise for any loss, damage, costs or expenses of any nature whatsoever incurred or suffered by that other Party or its Affiliates of an indirect or consequential nature or for any economic loss or other loss of turnover, profits, business or goodwill, even if the Party bringing the Claim has advised the other of the possibility of those losses, or if they were within the other Party's contemplation.
- 12.4 Nothing in this Agreement limits or excludes a Party's liability for:
  - 12.4.1 death or personal injury caused by negligence of that Party;
  - 12.4.2 any fraud or for any sort of liability that, by law, cannot be limited or excluded;  
or
  - 12.4.3 any loss or damage caused by a deliberate breach of this Agreement or a breach of Clause 9.
- 12.5 The Parties acknowledge and agree that the obligations and liabilities of the Parties under this Agreement are several only, and will not be, nor construed to be, either joint or joint and several.

### **13 Ethical Standards**

- 13.1 Unless otherwise required or prohibited by law, EMBL and Collaborator represent that they will perform their work in the Project in accordance with high ethical standards and will comply with all requirements of applicable legislation relating to bribery and slavery.

### **14 Termination relating to Corruption.**

- 14.1 Any Party shall be entitled to terminate this Agreement immediately on written notice to the other Parties, if a Party fails to comply with Clause 13. No Party shall have a claim against another Party for compensation for any loss of whatever nature by virtue of the termination of this Agreement in accordance with Clause 13. To the extent (and only to the extent) that the laws of a territory provide for any such compensation to be paid to the terminating Party upon the termination of this Agreement, each Party hereby expressly agrees (to the extent possible under the laws of the territory) to waive or to repay any such compensation or indemnity.

### **15 Data Integrity.**

- 15.1 The Parties agree that they shall conduct the Project and collect and record any data generated therefrom in a manner consistent with the specific requirements set in respect of the Project, and in accordance with the following good data management practices:
- 15.1.1 data are being generated using good scientific techniques and processes;
  - 15.1.2 data are being accurately recorded in accordance with good scientific practices by persons conducting the Project;
  - 15.1.3 data are being analyzed appropriately in accordance with good scientific practices;
  - 15.1.4 data and results are being stored securely and can be easily retrieved; and
  - 15.1.5 data trails exist to demonstrate and/or reconstruct key decisions made during the conduct of the Project, presentations made about the Project and conclusions reached with respect to the Project.

### **16 General**

#### **16.1 Force majeure**

Neither Party shall have any liability or be deemed to be in breach of this Agreement for any delays or failures in performance of this Agreement which result from circumstances



beyond the reasonable control of that Party, including without limitation labour disputes involving that Party. The Party affected by such circumstances shall promptly notify the other Party in writing when such circumstances cause a delay or failure in performance and when they cease to do so. However, if the delay in performance is more than six (6) months, the other Party may terminate this Agreement with immediate effect by giving written notice.

#### **16.2 Amendment**

This Agreement may only be amended in writing signed by duly authorised representatives of the Parties.

#### **16.3 Assignment**

Neither Party shall assign, mortgage, charge or otherwise transfer or sub-contract any rights or obligations under this Agreement without the prior written consent of the other Party, such consent not to be unreasonably withheld or delayed.

#### **16.4 Waiver**

No failure or delay on the part of either Party to exercise any right or remedy under this Agreement shall be construed or operate as a waiver thereof, nor shall any single or partial exercise of any right or remedy preclude the further exercise of such right or remedy.

#### **16.5 Invalid clauses**

If any provision or part of this Agreement is held to be invalid, amendments to this Agreement may be made by the addition or deletion of wording as appropriate to remove the invalid part or provision but otherwise retain the provision and the other provisions of this Agreement to the maximum extent permissible under applicable law.

#### **16.6 No agency**

Neither Party shall act or describe itself as the agent of the other, nor shall it make or represent that it has authority to make any commitments on the other's behalf.

#### **16.7 Interpretation**

In this Agreement:

- 16.7.1 The headings are used for convenience only and shall not affect its interpretation.
- 16.7.2 References to persons shall include incorporated and unincorporated persons; references to the singular include the plural and vice versa; and references to the masculine include the feminine.
- 16.7.3 References to Clauses and Schedules shall mean clauses of, and schedules to, this Agreement respectively.

## **16.8 Notices**

16.8.1 Any notice to be given under this Agreement shall be in writing and shall be sent by first class mail or air mail to the address of the relevant Party set out at the head of this Agreement or such other address as that Party may from time to time notify to the other Party in accordance with this clause.

Notices to EMBLEM shall be marked for the attention of the Managing Director.

Notices to the Collaborator shall be marked for the attention of Collaborator's Principal Investigator'.

16.8.2 All payments, reports and notices or other communications required or desired to be given or delivered under this Agreement will be given in writing and delivered by person, by registered mail, or by email, addressed to the Party at its address first set out above or such other address as the Party otherwise advises in writing. Any notice personally delivered will be deemed to have been given or received at the time of delivery or transmission. Any notice delivered by email will be deemed to have been given or received upon the actual acknowledgment of receipt (not via an automated response such as an 'out of office' message). Any notice mailed will be deemed to have been received on the expiration of 5 business days after it is posted, provided that if, at the time of mailing or between the time of mailing and actual receipt, there is a postal strike, slow down, labour dispute or other circumstance which might affect the delivery of the notice, then the notice will only be effective if actually delivered.

## **16.9 Law and jurisdiction**

The validity, construction and performance of this Agreement shall be governed by English law and shall be subject to the exclusive jurisdiction of the English courts to which the Parties hereby submit, except that a Party may seek an interim injunction in any court of competent jurisdiction.

## **16.10 Further action**

Each Party agrees to execute, acknowledge and deliver such further instruments, and do all further similar acts, as may be necessary or appropriate to carry out the purposes and intent of this Agreement.

## **16.11 Entire agreement**

This Agreement, including its Schedules, sets out the entire agreement between the Parties relating to its subject matter and supersedes all prior oral or written agreements, arrangements or understandings between them relating to such subject matter. The Parties acknowledge that they are not relying on any representation, agreement, term or condition which is not set out in this Agreement.

#### 16.12 Third parties

The members of the Consortium may rely on and enforce the terms of the licences and other rights granted to them in Clause 8 but subject thereto, this agreement does not create any right enforceable by any person not a party to it. The Parties may vary or rescind the terms of this Agreement without the consent of the members of the Consortium.

This Agreement may be executed in counterpart by the Parties, either through original copies or by facsimile or electronically, each of which will be deemed an original and all of which will constitute the same instrument.

AGREED by the Parties through their authorised signatories:

For and on behalf of  
EMBL Enterprise Management  
Technology Transfer GmbH

For and on behalf of  
University of West Attica

signed

signed

print name  
Dr. Gábor M. Lamm  
Geschäftsführer / Managing Director  
EMBLEM Technology Transfer GmbH  
Boxberggring 107  
69126 Heidelberg, Germany

print name

phone +49-6221-363-2211, fax +49-6221-363-2229

title

5-DEC-2022

DEC. 02, 2022

date

date





## SCHEDULE ONE

### General project description:

OTAR2051 – NASH: Non-alcoholic steatohepatitis liver disease is an important area of unmet clinical need. This project will use single-cell genomics analysis from patient samples to identify transcriptional signatures of disease. These will be correlated with clinical disease progression to identify potential targets. These targets will be validated using CRISPR and small molecule perturbations with a variety of in vitro liver function read-outs.

OTAR2067 - Cell type deconvolution of gene expression in disease data sets: This proposal aims to develop processes that will reveal the cell type composition in healthy and diseased expression data sets used across the Open Targets resources. We will leverage the availability of a large collection of disease transcriptomics datasets in Expression Atlas, the rapidly increasing availability of single cell transcriptomics datasets in Single Cell Expression Atlas to identify disease-specific cell types. In addition, we will build on and diversify existing work on diffusion-based networks to assign pathogenic, cell type specific pathways that will prioritise possible targets for therapeutic intervention. Finally, we plan to apply the cell type deconvolution methodology to identify cell type specific eQTLs within the datasets of the newly released eQTL Catalogue.

OTAR2070 - Immuno-Oncology Target Identification using Spatial Transcriptomics: This proposal aims to develop methods integrating computer vision/AI and molecular analysis to identify targets for immuno-oncology and other diseases using a combination of single cell RNA-seq (scRNA-seq) and spatial transcriptomics data. We will apply these methods to study the myeloid derived suppressor cell (MDSC)-associated immuno-oncology of non-small cell lung cancer (NSCLC). A particular application in this proposal will be the immuno-oncology (10) of NSCLC, as this is a very important area of current translational research.

### Collaborator's activities under the project:

OTAR2051: Emmanouil I. Athanasiadis will contribute to the development of novel transcriptomics methods to identify targets in NASH. Emmanouil will be able to perform advanced computational analysis workflows to identify cell populations in scRNAseq datasets and then use that knowledge to identify disease relevant cell populations and potential drug targets.

OTAR2067: Given the previous experience in processing and analysing bulk and single cell datasets, Emmanouil I. Athanasiadis will contribute to the development of the standardised bulk and scRNAseq workflows that will be used to quantify the cell type composition of bulk transcriptomics data. In more detail, Emmanouil will assist the team in developing novel computational downstream analysis tools to enrich the current cell type specific gene expression panels that will be used for the deconvolution of the bulk data. Emmanouil will also help to identify disease-relevant processes and cell types from bulk disease RNAseq and healthy scRNAseq datasets by means of novel network based strategies.

OTAR2070: Emmanouil I. Athanasiadis will contribute to the development of novel integrating imaging and transcriptomics methods to identify targets in non-small cell lung cancer (NSCLC) patients. The previous experience in AI/ML applied to medical imaging, as well as the latest deep knowledge in analysing in house 10X Visium spatial transcriptomics data from scratch, will be valuable for the study. Emmanouil will be able to perform advanced computational analysis workflows to identify myeloid derived suppressor cell (MDSC) populations at scRNAseq datasets and then use that knowledge to identify how MDSCs spatially localised. Emmanouil will also help to the implementation of novel AI/ML strategies (like Convolutional Neural Networks) applied to the spatial transcriptomics data to further characterise spatially the different cell populations and then novel immuno-oncology targets using the corresponding scRNAseq data information.