# MATERIAL TRANSFER AGREEMENT

The **PARTIES** to this agreement are:

a) **Hellenic Centre for Marine Research (HCMR), Institute of Marine Biology, Biotechnology and Aquaculture (IMBBC)** (hereinafter referred to as **PROVIDER**) and

b) **University of Maryland** (hereinafter referred to as **RECIPIENT**)

and the **RECIPIENT's PRINCIPAL INVESTIGATOR Ms Lynn Schriml,** (hereinafter referred to as **PRINCIPAL INVESTIGATOR)**

Whereas the PROVIDER holds the MATERIAL as described in ANNEX 1, PROVIDER is willing to supply the RECIPIENT with the MATERIAL under the terms and conditions as set forth hereinafter and RECIPIENT agrees to the following before RECIPIENT receives the MATERIAL:

1.The MATERIAL is property of PROVIDER. RECIPIENT shall utilise the MATERIAL solely for the performance of the RESEARCH purposes, as indicated in ANNEX 2 (hereinafter RESEARCH).

2.In order to accomplish the RESEARCH, the RECIPIENT may distribute the MATERIAL to co-workers, who work under the RECIPIENT's and the PRINCIPAL INVESTIGATOR's direct supervision.

3. PROVIDER has notfiled patent applications claiming the MATERIAL or uses thereof.

4.The RECIPIENT and the PRINCIPAL INVESTIGATOR 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 PRINICIPAL INVESTIGATOR's working premises, under the direction of the PRINCIPAL INVESTIGATOR or others working under his/her direct supervision.

5. Nothing in this Material Transfer Agreement shall be deemed to grant RECIPIENT any rights under any patent or patent application, nor any rights to use the MATERIAL or any parts thereof for commercial purposes, such as sale of the MATERIAL, use in manufacturing products for sale, provision of a service to a third party in exchange for consideration, without first negotiating, or use in research or consulting for a for-profit entity under which that entity obtains rights to research results, and executing a license agreement with PROVIDER. RECIPIENT recognizes that PROVIDER is under no obligation to grant such a license.

6. RECIPIENT shall not make the MATERIAL available to any third party without written permission from the PROVIDER. Upon written permission thereof, RECIPIENT shall pass on the same obligations under this Agreement to the third party recipient(s).

7. PROVIDER does not warrant that the use of the MATERIAL does not or will not infringe any patent. PROVIDER is under no obligation to obtain or provide licenses that may be required for the use of the MATERIAL by the RECIPIENT.

8. The provision of the MATERIAL in no way prevents or restricts PROVIDER's right to publish any document relating to this MATERIAL. RECIPIENT agrees to provide appropriate acknowledgement of the source of the MATERIAL in all publications and presentations, reporting on RECIPIENT's use of the MATERIAL. All publications resulting from the RESEARCH shall be co-authored by scientists from both the PROVIDER and the RECIPIENT.

9. RECIPIENT will use the MATERIAL in compliance with all laws and regulations both nationally and internationally, including but not limited to, the use of human and animal subjects.

10. The delivered MATERIAL is experimental in nature and may have hazardous properties, and is provided by PROVIDER with no warranties, express or implied, including any warranty of merchantability, title, or fitness for a particular use. Except to the extent prohibited by law, RECIPIENT agrees to assume all liability for damages that arise from RECIPIENT's use, storage or disposal of the MATERIAL. PROVIDER is not liable for any losses, damages, claims or liabilities, which are caused by the transfer to and/or the use, storage and disposal of the MATERIAL by RECIPIENT, except to the extent such loss, claim, damage or liability is the direct result of PROVIDER's gross negligence or willful misconduct.

11. This Agreement will terminate on the earliest of the following dates: (1) on completion of the RESEARCH, or (2) on the thirty (30) days prior written notice by either party to the other. The PROVIDER reserves the right to terminate this agreement where the RECIPIENT fails to perform its obligations under this Agreement.

12. Paragraphs 5, 6, 7, 8 and 10 shall survive termination.

13. Upon termination of this Agreement, RECIPIENT will discontinue its use of the MATERIAL and will, upon direction of the PROVIDER, return any remaining MATERIAL.

14.The MATERIAL is provided at no cost.

*To confirm agreement with the above terms, please have an authorized representative sign and date the agreement below in two originals. Please return this document in two originals to PROVIDER.PROVIDER will return one fully executed agreement to RECIPIENT and forward the MATERIAL.*

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| **ANNEX 1 DEFINITION OF MATERIAL:** | **MATERIAL** means the ORIGINAL MATERIAL, PROGENY and UNMODIFIED DERIVATIVES.<br><br>**ORIGINAL MATERIAL**: Approx. 200 samples of plant external surfaces smears (i.e. dust, soil from leavesetc.), or soil and gravel from the plant-of-interest nearby environment, or surface smear from the top-surface of rocks.<br><br>**PROGENY**: Unmodified descendant from the MATERIAL, such as virus from virus, cell from cell, or organism from organism.<br><br>**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. |

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| **ANNEX 2 DEFINITION OF RESEARCH:** | **1. At preselected collection sites of the island of Crete:**<br>**a. Samples will be collected from the top five centimeters of soil. Soil will be collected with small shovels and sterilized spoons/scoops.**<br><br>**From each collection site three soil sample replicates will collected and placed in dry ice in aSarsted 50ml Falcon tube each. (one replicate will be used for sequencing analysis see next paragraph (ie. No 2), one replicate for soil chemical properties determination (e.g. total organic carbon concentration), and the last one for permanent storage at HCMR). All samples will be gathered at the HCMR IMBBC premises.**<br><br>**The soil chemical property determination might be conducted in HCMR IMBBC or outsourced in a third party laboratory given the Agreement of the PROVIDER.**<br><br>**b. From the HCMR IMBBC premises samples will be shipped from Crete to the University of Maryland, School of Medicine – Institute for Genome sciences (IGS).**<br><br>**2.** Institute for Genome sciences - IGS (recipient lab) and/or in collaborating specialized US sequencing centers (given the Agreement of the PROVIDER, see section 6 in the main document) processing:<br><br>**a.** DNA extraction and purification<br>**b.** Purified DNA of will be used for:<br>**i.**Bacterial community profiling by PCR amplification of the V3-V4 16S regions and sequencing using the Illumina MiSeq paired 300-bp reads platform.<br>**ii.** Fungal microbiota analysis, using barcoded PCR primers targeting the ITS region followed by sequencing of the ITS amplicons on Illumina MiSeq<br>**iii.**Bioinformatic and biostatistic pipelines* to process and analyze the 16S and ITS sequences. This includes sequence quality controls, sequence assembly, consensus sequences will be de-multiplexed (i.e. assigned to their original sample), trimmed of barcodes and primers, and assessed for chimeras using UCHIME in de novo mode implemented in Qiime. Sequences will then be clustered into operational taxonomic units (OTUs ; similarity threshold: 97%), and taxonomic assignments performed using the RDP Naive Bayesian Classifier. Within (alpha-diversity) and between (beta-diversity) sample comparisons will be performed using standard analysis tools in Qiime, as well as with Phyloseq, an R package dedicated to the analysis of microbiota data.<br><br>**3.** Publication: Authoring a joint publication (PROVIDER, RECIPIENT, third party partners) presenting the results along with making of the sequences publicly available |

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| | ** Note: these are in silico pipelines and should be conducted both by the RECIPIENT and by the PROVIDER (via remote computer access)* |

**AUTHORIZED SIGNATURES**

| **FOR PROVIDER** | **FOR RECIPIENT** | |
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| **SIGNATURE** | **AUTHORIZED SIGNATURE** | **PRINCIPAL INVESTIGATOR** |
| **NAME: Antonios Magoulas** | **NAME: Michael Rollor** | **NAME: Lynn Schriml** |
| **EMAIL:**<br>**magoulas@hcmr.gr** | **EMAIL:**<br>**mrollor@umaryland.edu** | **EMAIL:**<br>**lschriml@som.umaryland.edu** |
| **ADDRESS:**<br>**Hellenic Centre for Marine Research (HCMR), Institute of Marine Biology, Biotechnology and Aquaculture (IMBBC),**<br>**P.O.Box.: 2214,**<br>**710 03 Heraklion, Crete, Greece** | **ADDRESS:**<br>**620 W. Lexington Street,**<br>**4th Floor, Baltimore,**<br>**MD 21201** | **ADDRESS:**<br>**801 W. Baltimore Street,**<br>**6th Floor, Baltimore, MD 21201** |