Deliverable 5.2. – Press Releases

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1 Version History

Version	Summary of Change	Written by	Approver	Date
0.01		Derek McKenzie	Edik Rafailov	01.05.19
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2 Scope

This report documents the production and placement of Press Releases publicizing newsworthy material of the MESO-BRAIN project. The context of the report is with respect to the execution of the WP5 Dissemination and Exploitation Work Package. The Description of Action sets out the scope of activities to be implemented to achieve the Communication, Dissemination and Exploitation Planning objectives of the project. Deliverable D5.2 requires a report specifically on the use of Press Releases in support of the objectives.

3 Introduction

Press Releases are a conventional tool of the publicist and despite the enormous change brought in by digital communications, the formal Press Release retains its place within the toolbox of publicity strategies and methods.

The benefit of a Press Release is that they have a recognizable format and are widely understood to be a formal announcement. This lends the well-written Press Release the opportunity to be placed in multiple news outlets, journals and magazines. They can be carried as simple announcements without modification by the receiving news outlet or can be quoted from or edited to become part of a wider topical piece of journalism.

In Meso-Brain, Work Package 5 is dedicated to Dissemination and Exploitation. Task 5.1 – "Dissemination of the project" encompasses a broad range of Communication and Dissemination activities. The task is described generally as undertaking the consortium to promote the results Meso-Brain to wide range of targeted parties, leaving plenty of scope for the means of doing so to be determined as required. Press Releases are one of the options available to promote the results of the project to different stakeholders.

4 Main Body

4.1 Press Releases Issues

The following press release was issued at the outset of the project

MESO-BRAIN initiative receives €3.3million to replicate brain's neural networks through 3D nanoprinting

The MESO-BRAIN consortium has received a prestigious award of €3.3million in funding from the European Commission as part of its Future and Emerging Technology (FET) scheme. The project aims to develop three-dimensional (3D) human neural networks with specific biological architecture, and the inherent ability to interrogate the network's brain-like activity both electrophysiologically and optically. It is expected that the MESO-BRAIN will facilitate a better understanding of human disease progression, neuronal growth and enable the development of large-scale human cell-based assays to test the modulatory effects of pharmacological and toxicological compounds on neural network activity. The use of more physiologically relevant human models will increase drug screening efficiency and reduce the need for animal testing.

About the MESO-BRAIN project

The MESO-BRAIN project's cornerstone will use human induced pluripotent stem cells (iPSCs) that have been differentiated into neurons upon a defined and reproducible 3D scaffold to support the development of human neural networks that emulate brain activity. The structure will be based on a brain cortical module and will be unique in that it will be designed and produced using nanoscale 3D-laser-printed structures incorporating nano-electrodes to enable downstream electrophysiological analysis of neural network function. Optical analysis will be conducted using cutting-edge light sheet-based, fast volumetric imaging technology to enable cellular resolution throughout the 3D network. The MESO-BRAIN project will allow for a comprehensive and detailed investigation of neural network development in health and disease.

The MESO-BRAIN project will launch in September 2016 and research will be conducted over three years.

About the MESO-BRAIN consortium

The MESO-BRAIN initiative targets a transformative progress in photonics, neuroscience and medicine. The project aims to develop human induced pluripotent stem cell (iPSC)-derived neural networks upon a defined and reproducible 3D scaffold to emulate brain activity and improve our understanding and treatment of conditions such as Parkinson's disease, dementia and trauma. This research, led by Aston University, is a collaboration between Axol Bioscience Ltd. (UK), Laser Zentrum Hannover (Germany), University of Barcelona (Spain), Institute of Photonic Sciences (Spain) and KITE Innovation (UK). The project is funded by the European Commission through its Future and Emerging Technology (Open) programme.

This press release template was placed on the news sites of the following:

Aston University
https://www2.aston.ac.uk/eas/research/groups/photonics/news/meso-brain/index

ICFO
https://www.icfo.eu/newsroom/news/3142-meso-brain-and-light-sheet-imaging-techniques

Drug Target Review
https://www.drugtargetreview.com/news/12210/meso-brain-funding/

Genetic Engineering & Biotechnology News
https://www.genengnews.com/topics/translational-medicine/meso-brain-initiative-wins-3-7m-in-ec-funding/

Fanatical Futurist
https://www.fanaticalfuturist.com/tag/meso-brain-consortium/

ALL3DP
https://all3dp.com/meso-brain/

311institute
https://www.311institute.com/tag/meso-brain/

3DPrint.com
https://3dprint.com/137851/meso-brain-initiative/

Digital Trends
https://www.digitaltrends.com/cool-tech/meso-brain-project/

3ders.org
https://www.3ders.org/articles/20161212-meso-brain-initiative-receives-to-3d-nanoprint-brains-neural-networks.html

ARPROGEG (OKAN UNIVERSITY ISTANBUL)
https://arproged.okan.edu.tr/en/projes/meso-brain-consortium-acquires-eu33m

3DMedNet
https://www.3dmednet.com/users/1034-alexandra-thompson/posts/7076-3d-nanoprinting-the-neural-network-3-3-million-funding-for-meso-brain-initiative

3dprintingmedia.network
https://www.3dmednet.com/users/1034-alexandra-thompson/posts/7076-3d-nanoprinting-the-neural-network-3-3-million-funding-for-meso-brain-initiative

FrogHeart
http://www.frogheart.ca/?tag=meso-brain-project

A wide variety of news sites, vertical technology journals, blogs and discussion forums carried the Press Release (particularly in 3D printing). The geographic coverage extended from North America to Turkey.

Axol Bioscience

Major success for MESO-BRAIN partners will lead to breakthrough technology for developing new brain models

[Cambridge, UK / March 20th, 2019 / Axol Bioscience, a partner in EU-funded MESO-BRAIN project (GA # 713140) has had a new proposal selected for funding by the EU through the FET (Future Emerging Technologies) Launchpad scheme.

The FET Launchpad scheme is available only to existing or recently ended FET projects to encourage development of innovative ideas emerging from a project to be accelerated through separate and dedicated, Launchpad funding.

The COMMER-CELL Launchpad project provides a **unique opportunity for the creation of a marketable product stemming from work already programmed within** FETOPEN MESO-BRAIN. Co-cultured *in vitro* cell models have the capacity to retain neuronal maturity and functionality for long periods of time. Such co-cultures, featuring only two or three different cell types have already been demonstrated to be effective models for researching the mechanisms of diseases such as AD and monitoring inflammation response, indicating consistent and reproducible results. As such, complex and consistently reproducible ready-made co-cultures will be promoted to pharmaceutical and biotech companies seeking to use iPSC-derived cells as a basis for building cell-based assays and drug screening based on the validated cells.

As the FETOPEN MESO-BRAIN project already intends to grow the major neuronal cell types, **complex, physiologically relevant 2D and 3D co-cultures featuring cortical neurones, astrocytes, interneurons and microglia can be developed within COMMER-CELL** and made available for sale. The creation and mass-availability of a four-cell-type co-culture in an easy-to-use and pre-made form could not only allow for improved research into CNS-affecting conditions and drug testing, but also expedite such research by circumventing the need for research institutions and scientific industrial organisation (such as pharmaceutical and biotech companies) to create their own time-consuming cell models.

The proposed COMMER-CELL project harnesses results from MESO-BRAIN to deliver concrete added value by raising the technological maturity of the cells to demonstrator level. The fulfilment of the proposition, based upon anticipated positive feedback from the market, will lead to the commercialisation of an innovation derived from FETOPEN MESO-BRAIN.

MESO-BRAIN partners Aston University, working in conjunction with Laser nanoFAB GmbH, and Institute for Photonic Sciences, ICFO, Barcelona, were also successful in having their own FET Launchpad proposals selected for funding with SCAFFOLD-NEEDs and MAFIn respectively.

About Axol Bioscience

Axol produces high quality human cell products and critical reagents such as media and growth supplements. We have a passion for great science, delivering epic support and innovating future products to help our customers advance faster in their research.

Our expertise includes reprogramming cells to iPSCs and then differentiating to various cell types. We supply differentiated cells derived from healthy donors and patients of specific disease backgrounds. As a service, we also take cells provided by customers (primary or iPSC) and then do the reprogramming (when necessary) and differentiation. Clearly, by offloading the burden of generating cells, your time is freed up to focus on the research. Axol holds the necessary licenses that are required to do iPSC work.

The package wouldn't be complete without optimized media, coating solutions and other reagents. Our in-house R&D team works hard to improve on existing media and reagents as well as innovate new products for human cell culture. We also supply a growing range of human primary cells; making Axol your first port of call for your human cell culture needs.

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https://www.axolbio.com/news/major-success-for-meso-brain-partners-will-lead-to-breakthrough-technology-for-developing-new-brain-models

ICFO

MESO-BRAIN partners awarded FET funding to continue breakthrough technology for developing new brain models

[Castelldefels, SPAIN / May 2nd, 2019 / ICFO, a partner in EU-funded MESO-BRAIN project (GA # 713140) has had a new proposal selected for EU funding for the FET (Future Emerging Technologies) Launchpad scheme.

Available only to existing or recently ended FET projects, the FET Launchpad scheme aims to encourage the development of innovative ideas emerging from a project to be accelerated through separate and targeted Launchpad funding.

One of the aims of the MESO-BRAIN project is to develop a unique biocompatible 3D platform with integrated electrodes in which the neuronal cells can grow and carry out functional connections within the full volume of the produced network. These networks aim to be tested by fast 3D recordings of its electrical activity to see if the neural network is fully functional.

Conventional imaging systems are capable of observing an optical section of a sample with a relative high resolution (and even with super resolution) and with speeds that can vary from a few frames per second (fps) (confocal microscopy) to hundreds of fps (eg. confocal using resonant galvanometric mirrors or LSFM). However, any interesting or useful dynamic biological process occurs in three dimensions (3D), i.e. in volumes. The previously mentioned systems fail to record fast volumetric dynamics at speeds overpassing a few volumes per second (vps). Other competitive research techniques may reach fast volumetric imaging, but, at the cost of a reduced resolution in complex schemes.

The MAFIn prototype to be developed will be able to observe the fast cellular and intracellular dynamics that occur in biological samples in 3D with high resolutions and at speeds approaching 100vps. One example of a targeted application is fast functional imaging, such as the calcium dynamics in the brain, or those involved in observing spinal dendrites signalling across a volume.

The MAFIn module will be tested for measuring the fast electrical activity in connected functional 3D neural networks. This module intends to be developed for use by a wide range of potential biomedical researchers interested in studying other fast biological dynamics in 3D.

In addition, the module will be developed to be easily attached to any existing Light Sheet Fluorescence microscope (LSFM) and intrinsically be able to correct for aberrations, providing sharp information of the fast 3D process to be studied.

MESO-BRAIN partners Aston University (working in collaboration with Laser nanoFAB GmbH) and Axol Bioscience, also succeeded in having their own FET Launchpad proposals selected for funding with Scaffold-Needs and COMMER-CELL respectively.

About ICFO – The Institute for Photonic Sciences

ICFO - The Institute of Photonic Sciences (www.icfo.eu) was founded in 2002 by the Government of Catalonia and the Universitat Politècnica de Catalunya (UPC), both of which are members of its board of trustees along with the Cellex and Mir-Puig Foundations, philanthropic entities that have played a critical role in the advancement of the institute since 2007. Located in the Mediterranean Technology Park in the metropolitan area of Barcelona, the institute currently hosts 400 people, organized in 26 research groups in 60 state-of-the-art research laboratories. Research lines encompass diverse areas in which photonics plays a decisive role, with an emphasis on basic and applied themes relevant to medicine and biology, advanced imaging techniques, information technologies, a range of environmental sensors, tunable and ultra-fast lasers, quantum science, photovoltaics and the properties and applications of nano-materials such as graphene, among others. In addition to two nationally awarded Severo Ochoa accreditations of excellence, ICFOnians have been awarded 15 ICREA Professorships and 35 European Research Council grants. ICFO participates actively in the European Technological Platform Photonics21 and is also very proactive in **fostering entrepreneurial activities, spin-off creation, and** creating collaborations and links between industry and ICFO researchers. To date, ICFO has helped create 7 start-up companies.

The Super-resolution Light-microscopy and Nanoscopy lab (SLN) at ICFO is led by Pablo Loza Alvarez

For more information, contact
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http://www.icfo.es

5 Conclusion

5.1 Press Release Strategy

The optimum strategy for maximising Press Release coverage is to take advantage of the multiplier effect that key beneficairies can deliver. For example, the web-site of the coordinator, Aston University is followed routinely by a large number of journals, news-sites and bloggers who will carry news from the Aston site.

The beneficiary partners propose to continue this strategy of generating and placing newsworthy material via the multiplier sites within the consortium.

5.2 Next Steps

The consortium anticipates further press release opportunities as follows:

- Light Sheet Microscopy results
- Calcium Indicator results
- Final Meso-Brain

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