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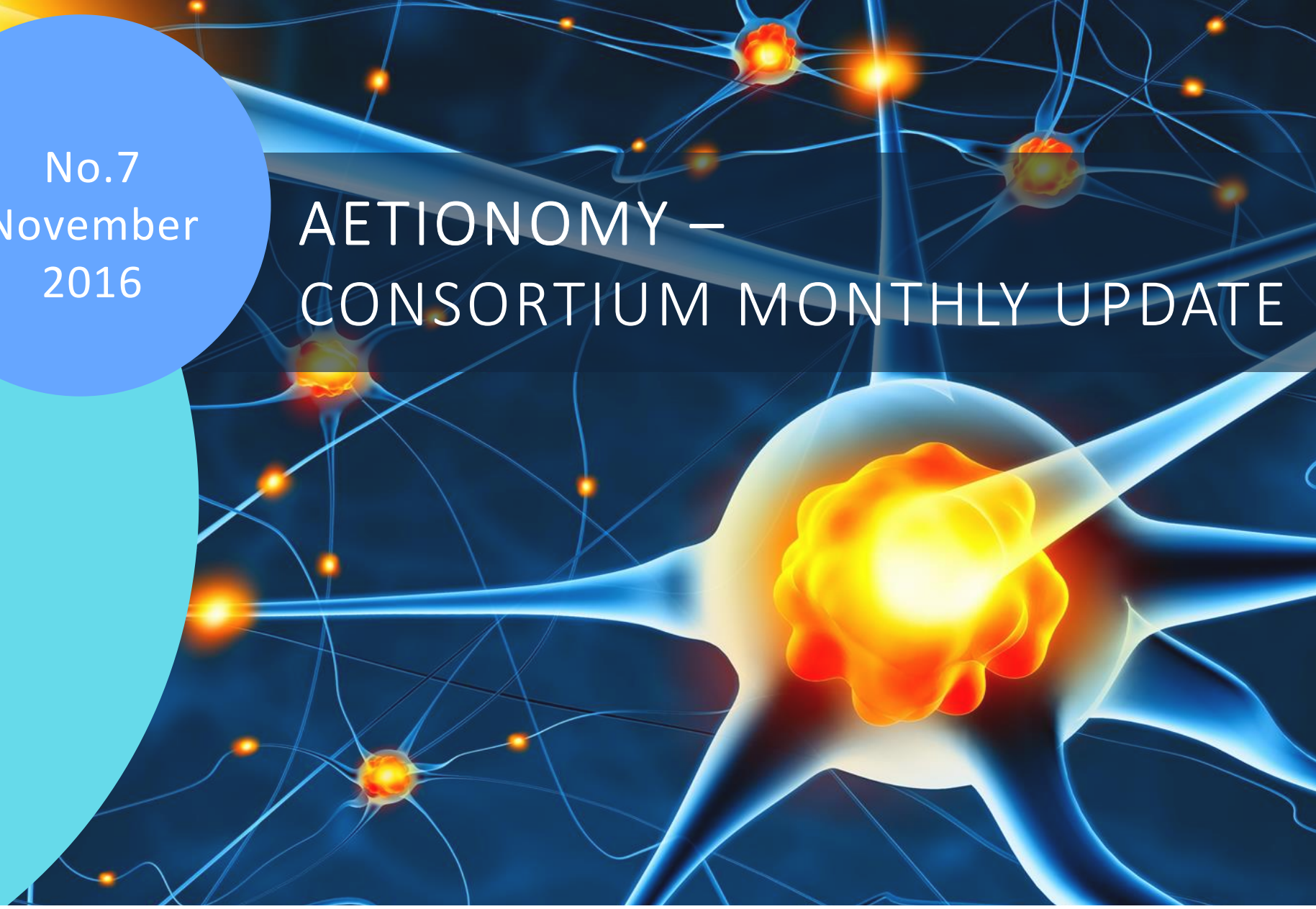
AETIONOMY – CONSORTIUM MONTHLY UPDATE



ucb Fraunhofer SCAI efpia imi innovative medicines initiative AETIONOMY

Message from the Coordinator

Building the New Taxonomy

The aim of AETIONOMY is to propose a new taxonomical classification for Alzheimer's and Parkinson's disease at the end of our 5 year project. This taxonomy will be based around the different molecular mechanisms causing the disease symptoms and not just on the symptoms. Different individuals will have different molecular mechanisms causing their symptoms and we can then cluster individuals with the same disease mechanisms together, to create the new taxonomy.

We have spent the first 3 years of the project identifying the potential disease mechanisms from literature mining, data analysis and model building. Not all of these potential disease mechanisms will be real, and some may be overlapping with each other. The focus for the project for the last 2 years of the project is therefore changing. We now need to take the potential mechanisms we have identified and cross validate them with each other as well as use available datasets from the literature and partners as well as samples. Who does this validation work will very much depend upon the mechanism and the partner skill sets and capabilities. This means that right now we have to take the time to review the mechanisms and come up with a scientific based validation plan. This will be a core piece of work being done over the next few months, leading up to the interim review. It also means that some of the budget may need to be reallocated to match up the validation work and the resources required to complete the science.

Once we have validated the mechanisms we can look at clustering them into discrete sub-groups and a new taxonomical structure. We hope everyone will get engaged in this new phase of the project and support the scientific strategy as it develops.

General Information

Recruitment Update				
Site	**PD**	**AD**	**Controls**	**Total**
ICM	49	0	18	67
KI	37	0	11	48
UKB	19	0	6	25
Total:	**105**	**0**	**35**	**140**
Neurorad	0	7	34	**53**
Oxford	0	0	0	Not started
EPAD	x	x	22	22

Reminder that all publications need to be submitted to the Project Office before submission. Same for Congress abstracts, etc. Please review the Project Agreement for more details.

Upcoming Meetings

- 3rd General Assembly – at Sanofi, Paris (F), 1 & 2 December 2016
- AD/PD Conference 2017 – Vienna (A), 29 March – 2 April 2017

Deliverables due to IMI in September 2016 (late)

- D3.3.2 Webinar and report to review the pathophysiology graphs and potential hypotheses to be tested (M30)
- D3.7.2 Report of the generation of specific pathophysiological mechanisms that induce class separation for NDD sub-groups (M32)
- D3.1.3.6 Report of the generation of specific pathophysiological mechanisms that induce class separation for NDD sub-groups (M32)
- D3.3.3. Webinar and report to review the pathophysiology graphs and potential hypotheses to be tested

WP1 – Governance & Coordination

- The MoU with Prof. Simon Lovestone's group in Oxford and the Consortium is still under review. Plans are to finance a post doc in Oxford to access EHR.
- The updated Description of Work, vs 4.0 of 25 October 2016 has been submitted to IMI for approval. This includes our 2 new partners: BBRC and AMU.
- The III General Assembly Meeting will take place on the 1st & 2nd of December in Paris at Sanofi. We have 4 Advisory Board members attending as well as IMI.
- The 2nd Interim Review is scheduled for end of February. At the SC meeting in Paris we will start to program rehearsals and preparation.
- The Project Agreement was recently circulated with updates to schedule 3 (background) for UCB and BBRC.

WP2 – Knowledge & Data Management

- WP2 continue working on enhanced analysis platform. Processing of Imaging Scans from PPMI, ADNI and ICM subjects is now completed at EMC. A ticket has been opened to track inclusion into the AKB.
- The PPMI data will be used by WP3 for further clustering activities, processed ADNI imaging data will be used by EMC and Fraunhofer with SNP and brain volume data to find associations between Imaging and genetics.
- Christian Ebeling and Adriano Barbosa are presenting at the annual tranSMART Foundation meeting at San Diego. Christian will present the pyBEL package and to access the BEL network in several formats. Adriano will talk about linking tranSMART to brain imaging, connectivity data and vis-tools through a dedicated API.
- Fraunhofer and BI have planned a F2F workshop on the 7th of November. Another technical F2F dedicated to upcoming deliverables, specifically to enhanced user interface, is to be planned, once more of the ongoing tasks are completed.

WP3 – Knowledge Integration & Mining

- Presented wide range of hypotheses generated for AD and PD at the WP3/WP5 meeting in Barcelona
- Participated at the combined AETIONOMY-PRECISESADS event to discuss approaches about disease mechanism taxonomy generation;
- EMC completed radiology image analysis for both ADNI and PPMI cohorts;
- SARD and UCB carried out testing and optimisation of analysis pipeline developed by KI.

WP4 – Ethical & Legal Governance

- WP4 participated in the joint taxonomy workshop of AETIONOMY and PRECISESADS on 11 October in Barcelona; as part of this LUH led a joint ethics session, including a Q & A element, for participants from both projects, in which it presented outcomes from the 2015 joint ethics meeting of the projects.
- Barcelona also saw the third annual meeting of AETIONOMY's Legal and Ethical Advisory Board (LEAB), composed of independent external experts. Discussion in both meetings focused inter alia on the importance of developing standard codes of conduct for researchers from different institutions who deal with clinical data and biosamples; this is encouraged by the upcoming General Data Protection Regulation, and it is planned to further pursue the existing IMI Draft Code initiative on data reuse at the follow-up AETIONOMY and PRECISESADS ethics workshop in spring 2017.

WP5 – Clinical Validation

- WP3/WP5 workshop in Barcelona on the 10th of October led to a short list of mechanistic hypotheses to be tested in the AETIONOMY clinical study. Minutes of the meeting will be shared shortly.
- Draft of data and samples sharing agreement between EPAD and AETIONOMY consortia is currently prepared.
- 1/3 of the subjects from the PD group of the AETIONOMY clinical study have been recruited!
- PharmacoIdea proceeded its studies on the proteoglycan-dependent internalization of misfolded protein aggregates (such as Abeta, tau and a-synuclein) that might contribute to spreading phenomena in neurodegeneration. The next steps will include the identification of antagonists and the investigation of their effects in phenotypic screens.

Clinical Study Recruitment