

Report 4th meeting of ILAE NeuroBiology Commission

September 10th, 2016 - Time: 8³⁰am-4⁰⁰pm

Prague Congress Center – Level 2, room 221

The NBC meeting started at 8:30. Attended by A. Galanopoulou, K. Kobow, T. O'Brien, A. Nehlig, V. Whittemore, J. French, W-P Liao, M. Kokaia, R. Sankar, M. Simonato, M. de Curtis

Budget issues

An update on 2016 budget was presented by MdC. It has been reminded that the additional revenues obtained in 2015 for both WONOE and the Young Neuroscientist Award (\$ 33,565) are available for similar NBC activities for 2017.

The following requests discussed and approved during the meeting will be included in the 2017 NBC budget that will be sent to ILEA EC in November 2016:

- Translational TF activities	15,000 \$
- Harinarayan Young Neuroscientist Award	4,000 \$
- Support for the 2017 San Servolo "bridging" Course	35,000 \$
- Organization of 2017 XIV WONOE	35,000 \$
- NBC Commission business meetings	10,000 \$
- Conference calls	1,000 \$
Total	100,000 \$

Additional motivated request can be submitted for approval by NBC members before the end of October 2016.

NBC web site

All members were invited to send KK material related to the NBC and TF activities to be posted in the website. It was discussed and approved the request to highlight new posted material on the NBC page with a FLASHING HIGHLIGHT ADVERT.

The WONOE 2015 appraisal will be uploaded on the NBC web page, as well as the manuscript of the Translational TF when they will be published (see below). It was also discussed the possibility to post on the website the Common Data Element forms developed by the Translational TF Task 2. The forms can be shared initially for internal NBC and TF use and will be available as open downloads when approved and released by the TF. Finally, open working positions can be advertised on the website, following approval of the NBC.

Translational TF

AG, JF, MS and TOB updated on the Task1-4 activities (detailed in the specific Translational TF report).

Task 1 – WG1, WG3, WG4 and WG5 manuscripts are in a final form and WG2 paper is fast developing. Future steps of Task 1 are: the development of additional WG1 and WG2 papers specifically on EEG patterns in epilepsy animal models and animal models of neurological disorders; develop a table on the use of CDEs for in vitro slice experiments (TASK1 WG4 and WG5), review the CDEs for feedback that TASK3 is developing, and a new manuscript on in vitro seizure models; develop the background work for an EEG atlas of rodent physiological patterns.

Task 2 - A manuscript providing an overview of the usefulness of systematic reviews and meta-analysis for preclinical research is ready for submission. A systematic review of the outcome measures employed in epilepsy model literature is planned with the help the CAMARADES group. The protocol of this review has been already posted in the Syrcle website and a detailed description of it has been made in a manuscript that is ready for submission. Future steps of Task 2 are: run a preliminary search of the literature; prepare a teaching platform to instruct the volunteers that will extract the data. The aim is announce the start of the data extraction phase at the AES meeting in Houston.

Task 3 - Common data elements and CDE forms were developed, in particular for: Behavior; Physiology (general animal parameters); pharmacological studies; EEG; Core data (strain, sex, age etc.). Final version of these forms will be soon circulated among NBC members and could be posted on the NBC website for evaluation/testing. An open forum presentation of the preclinical epilepsy CDEs will be presented at the AES meeting in Houston (December 6th, 2016 at 11am – 5pm to obtain the wider community feedback prior to finalizing. This effort has been supported by ILAE, AES and NINDS and the plan is to make them available to the epilepsy research community through the ILAE / AES / NINDS websites.

Task 4 - Multicenter Pre-Clinical Trials; in line with the work of MULTIPART et al in Stroke (illustrated by Emily Sena who was invited to present at the TASK Force meeting on the 9th September). Grant funding is being sought to run a "proof-of-concept" study to test the methodology.

It has been proposed to disseminate TF activities at neuroscience and epilepsy meetings and at ILAE-sponsored Courses and meetings. The original papers generated by the TF will be published as regular review manuscripts, marked by a special TRANSLATIONAL TF-NBC tag (to be defined). AG proposed to write periodic reports of NBC and TF activities on open-access *Epilepsia Open* journal.

WONOEP TF

Four review reports of the **2015 WONOEP** have been finalized and submitted to *Epilepsia* for publication as WONOEP APPRAISALS. One (Walker et al DOI: 10.1111/epi.13460) is published, 2 are under revision and 1 has been recently submitted.

2017 WONOEP was discussed. Main theme: EPILEPSY AS A NETWORK DISEASE: FROM CONCEPT TO STRATEGY, as proposed by Rod Scott. The session theme proposed by RS were further defined and the following people were proposed as KEYNOTE SPEAKERS or DISCUSSANTS:

S1 – System biology KS: M. Johnson; D: J Noebels, W-P Liao, D Lowenstein

S2 - Local Neural Networks (in-vitro) KS: I Mody or L. De La Prida; D: M Kokaia, S Petrou

S3 - Local Neural Networks (in-vivo) KS: R Scott; D: S Cash, H Scharfman, R Sankar

S4 - Regional Networks (electrophysiology) KS: I Soltesz or B Litt; D: F Bartolomei, N Garcia Cairasco

S5 - Regional networks (imaging) KS: G Jackson, S Dedeurwaerdere; D: Jack Lin, L Lemieux, S Vulliemoz

Keynote speakers will be instructed to give a general introductory talk that reviews the current knowledge on the specific topic. **Discussants** will be instructed to coordinate a focused discussion that will be preliminary to the development of a WONOEP APPRAISAL on the specific topic.

The first announcement of the 2017 XIV WONOEP was published and disseminated through the NBC mailing list on September 20th 2016. Future XIV WONOEP organization steps:

- **finalize KS and Discussant list and send out the invitations in NOVEMBRE 2016**
- deadline for abstract submission January 1st, 2017
- abstract selection by January 31st 2017 (by WONOEP TF and LOC)
- final program by April 1st, 2017

Dissemination TF

2017 ILAE Congress in Barcelona (Spain): The Neurobiology Symposium organized for 2017 ILAE meeting is focused on **Understanding the Complexity and Networks of Epilepsies and their Associated Comorbidities**. The program includes the following lectures:

- The Human Brain and the Search for Networks and Connectivity Maps Associated to the Epilepsies and their Comorbidities: Maxime Guye
- Neurogenesis and Gene Cascades: Linking Epilepsy to Depression and Autism: Steve Danzer
- Neurobiological and Computational Rules of Epileptogenic Networks and Subnetworks: Impact for Epilepsy and Comorbidities: Liset Menéndez de la Prida
- Complexity and Emergence in Epileptogenic Networks: Clinical, Experimental and Computational Challenges and Perspectives: Norberto Garcia-Cairasco

Other session with neurobiology content at 2017 ILAE Congress include the following themes: Novel Technologies for epilepsy; Precision medicine in epilepsy; Understanding the nature of seizures; Network Imaging in Epilepsy - post main session; MicroRNA in Epilepsy; Autoimmunity and inflammation in epilepsy.

The HARINARAYAN YOUNG NEUROSCIENTIST AWARD has been presented to 2017 ILAE Congress SAC and has been approved. Details on how to organize the candidate submissions and selection of the awardees will be analyzed before March 2017. The following text was developed with the Commission members:

The *Harinarayan Young Neuroscientist Award of the Neurobiology Commission* is designed to encourage and reward young basic science investigators (within 10 years of completing PhD or MD training) committed to epilepsy research. The Award is generously supported by a donation of the Harinarayan Family Foundation.

Candidates should submit an abstract to the 2017 ILAE meeting, together with a paper on epilepsy research published within the last 2 years. Two candidates selected by the members of ILAE Neurobiology Commission will

be awarded (2,000 \$ each) during the Neurobiology Symposium at the 2017 ILAE Congress in Barcelona (Spain). The awardees will be invited to participate to the ILAE Satellite workshop XIV WONOE.

The two meetings sponsored by 2015 NBC funds (2016 Gordon Conference and Latin America Neurobiology Workshop) were briefly presented. Funding request for the 2017 San Servolo Course on Bridging Clinical and Basic Epileptology was presented.

Two slides to advertise 2017 WONOE and the HARINARAYAN YOUNG NEUROSCIENTIST AWARD are sent as attachment.