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Aims

The overall goals of the Neurobiology Commission are (1) to increase the visibility and impact of basic neuroscience research among the epilepsy community, (2) to set up new good laboratory practice for research at the translational level in order to identify new drugs that could reach the level of clinical trials, (3) to bring education to a broader community, (4) to develop specific Task Forces and (5) spread knowledge during diverse meetings.

Mission of the Commission

The mission is the sum of the aims, namely, to provide a forum for neuroscientists involved in epilepsy research to discuss new findings related to the understanding of the basic mechanisms of epilepsy and epileptogenesis in the context of translational research. The Commission will also promote the participation of ILAE Chapters and of young emerging scientists in the field of experimental epileptology. It is also to develop basic science and translational approaches to remaining problems such as establishing better guidelines for preclinical research and with the help of other Chapters and Commissions to develop a better interactive network partly related to specific problems linked to epileptic syndromes more common in less developed countries.

Commission Activities from July 2011 through July 2012

The Commission has been actively working on the preparation of the WONOEP 2013 workshop content and format which will concern "New Tools to Study Epilepsy." The Task Force on Translational Research helped co-author with the AES Task Force a first organizing framework for development of optimized preclinical research practices in response to need for higher quality of preclinical evidence. As a result, a multidisciplinary group of experts in epilepsy drug development, animal models, and human clinical AED trials has finalized a report entitled "Identification of new treatments for epilepsy: Issues in preclinical methodology" which has been published in *Epilepsia* (2012). A follow-on meeting and several publications are planned after the London, 2012 Task Force meeting which took place October 2012. The Commission had agreed to move forward on the

planning of a project entitled “From Professional Training in Neurobiology to Regional Research Funding,” proposed by the Educational Task Force of the Neurobiology Commission and that will be launched with the Educational Commission. The Neurobiology Commission had identified one junior investigator network after the San Servolo 2011 course. The designated leader is located in a less developed country (Ethiopia). This research project was proposed as a new project for the Neurobiology Commission but the project was not selected by the Bill Gates Foundation or any other grant agency and has not been followed up.

Accomplishments from July 2011 through July 2012

The WONOEP workshop generated four review papers that were published in 2012 in *Epilepsia*. The Task Force on Translational Research helped co-author with the AES Task Force a first organizing framework for development of optimized preclinical research practices in response to the need for higher quality of preclinical evidence. As a result, a multidisciplinary group of experts in epilepsy drug development, animal models, and human clinical AED trials is finalizing a report entitled “Identification of new treatments for epilepsy: Issues in preclinical methodology” which was published in *Epilepsia* in 2012. A follow-on meeting of the Task Force took place in London, 2012 and the follow up will take place at AES where the future manuscripts will be discussed.

Recommendations for Future Work

The Neurobiology Commission recommends that it focus on two main goals:

- (1) Promote further collaboration between the Translational Task Force and the AES Basic Science Committee to elaborate further appropriate guidelines for the design of appropriate and uniform preclinical models aimed at the development of new therapeutic strategies for some epilepsy syndromes.
- (2) Support the project “From Professional Training in Neurobiology to Regional Research Funding,” proposed by the Educational Task Force of the Neurobiology Commission that will be launched with the Educational Commission.

Astrid Nehlig and Jeff Noebels
Co-Chairs