

# Diagnostic Methods Commission

## Members

### Chair

Sarah Wilson (Australia)



Sarah Wilson

### Core Members

Sallie Baxendale (UK)

Sándor Beniczky (Denmark)

Ingmar Blümcke (Germany)

Jeff Britton (USA)

Paolo Federico (Canada)

Imad Najm (USA)

Sanjay Sisodiya (UK)

Jerzy Szaflarski (USA)

K. P. Vinayan (India)

### Management Committee Liaison

Samuel Wiebe (Canada), MC Liaison

The Commission on Diagnostic Methods provides a significant opportunity for the International League Against Epilepsy (ILAE) to consolidate and focus standardized protocols and guidelines for diagnosis of the epilepsies and their co-morbidities that is evidence-based and informed by the ILAE classification system of seizure types and their etiologies. Additionally, the Commission aims to promote the optimal use of technology and the identification of new diagnostic methods that will improve the care of patients with epilepsy worldwide.

In broad terms, the Commission seeks to identify key diagnostic methods for epilepsy, whilst ensuring there is a strong evidence-base for these diagnostic methods, and translating these identified methods into clinical practice. Working towards realising these broad objectives, there are six Task Forces, each focused on a different domain, including: Neuropsychology, Neuroimaging, EEG, Clinical Genetics Testing, Autoimmunity/ Inflammation, and FCD Classification (Neuropathology).

In 2020, the Commission has continued to work towards achieving these broad objectives through a range of activities led by the six Task Forces, as outlined below.

## Neuropsychology Task Force

### Members

Sallie Baxendale (UK)	Carrie McDonald (USA)
Gus Baker (UK)	Gitta Reuner (Germany)
William Barr (USA)	Patricia Rzezak (Brazil)
Christop Helmstaedter (Germany)	Severine Samson (France)
Bruce Hermann (USA)	Mary Lou Smity (Canada)
John Langfitt (USA)	Sarah Wilson (Australia)

- Signed a Memorandum of Understanding with the International Neuropsychological Society in February 2020 to promote public awareness of, and training pathways in, the neuropsychology of epilepsy.
- Organised the 3<sup>rd</sup> ILAE Advanced Neuropsychology in Epilepsy Course. The course was due to commence in Bordeaux, France in March 2020 but has been postponed to the Autumn of 2021 due to the COVID-19 pandemic.
- Initiated the International Classification of Cognitive Disorders in Epilepsy (IC CODE) Project in the Autumn of 2020. A manuscript describing this initiative has been published in *Epilepsia Open*:
  - Norman M, Wilson SJ, Baxendale S, Barr W, Block C, Busch RM, Fernandez A, Hessen E, Loring DW, McDonald CR, Hermann BP. **Addressing neuropsychological diagnostics in adults with epilepsy: Introducing the International Classification of Cognitive Disorders in Epilepsy: The IC CODE Initiative.** I. 2021. <https://doi.org/10.1002/epi4.12478>
- Published an article in the *European Journal of Neurology* on the core features of neuropsychological assessment that contribute to diagnostic methods in epilepsy:
  - Baxendale SA, Wilson SJ, Baker GA, Barr W, Helmstaedter C, Hermann BP, Langfitt J, Reuner G, Rzezak P, Samson S, Smith ML. **Ten things every neurologist needs to know about neuropsychological assessments and interventions in people with epilepsy.** *Eur J Neurol.* 2020 Feb;27(2):215-220. doi: 10.1111/ene.14104. Epub 2019 Nov 11. PMID: 31610070.

## Neuroimaging Task Force

### Members

Paolo Federico (Canada), <b>chair</b>	Luis Concha (Mexico)
Andrea Bernasconi (Canada)	Graeme Jackson (Australia)
Boris Bernhardt	Vicky Morgan (USA)
Hal Blumenfeld (USA)	Stefan Rampp (Germany)
Lorenzo Caciagli (USA)	Anna Elisabetta Vaudano (Italy)
Fernando Cendes (Brazil)	Irene Wang (USA)
Yotin Chinvarun (Thailand)	Shuang Wang (China)

- Organised a full-day neuroimaging course for the 2020 European Epilepsy Congress in Geneva and the International Training Course on Neuroimaging of Epilepsy planned at the Montreal Neurological Institute. Both courses were cancelled due to the COVID-19 pandemic.
- Successfully developed a web-based interactive neuroimaging tool which will feature examples of all common epileptogenic lesions organised according to the new ILAE classification system. Development of this tool was central to organising the ILAE Tutorless neuroimaging course (established in 2020).
- Commenced the development of a Virtual Epilepsy Academy (VIREPA) Neuroimaging Course. This will be a 12-week course with tutors, modelled after other VIREPA courses. The first course will be offered in 2021.
- Continued to work towards producing scientific publications, which include a review on MRI essentials in epileptology and a neuroimaging case report series, with the first case already published in a quarterly series.

## EEG Task Force

### Members:

Sándor Beniczky (Denmark), <b>chair</b>	Jayanthi Mani (India)
Firas Fahoum (Israel)	Luis Carlos Mayor (Colombia)
Sue Hermann (USA)	Stefan Rampp (Germany)
Katsuhiko Kobayashi (Japan)	Margitta Seeck (Switzerland)
Michalis Koutroumanidis (UK)	William (Bill) Tatum (USA)
Louis Maillard (France)	Vinayan K.P. (India)

- In collaboration with the International Federation of Clinical Neurophysiology (ICFN), the joint ICFN-ILAE Task Force on EEG is working to develop six essential guidelines to address clinical issues concerning neurophysiology in patients with epilepsy. The first guideline (on automated seizure detection using wearables) has been accepted for dual publication in *Epilepsia* and *Clinical Neurophysiology*. The second guideline (on video-EEG monitoring) has just been submitted for publication. The remaining guidelines are close to being completed.
- Completed strategic planning and elaborated a detailed proposal for development of the international EEG database for education and research, which in collaboration with the ICFN will be a web-based, interactive digital EEG atlas.
- Completed numerous, successful educational initiatives, including the VIREPA courses (i.e., basic, advanced and pediatric EEG), the fourth edition of the Dianalund Summer School on EEG and Epilepsy, and the international ILAE course on neonatal EEG. In addition, we contributed to educational material on the ILAE Academy site and *Epileptic Disorders*, the educational journal of the ILAE.

## Clinical Genetics Testing Task Force

### Members

Sanjay Sisodiya (UK)	Annapurna Poduri (USA)
Hande Caglayan (Turkey)	Lynette Sadleir (New Zealand)
Katie Helbig (USA)	Gagandeep Singh (India)
Michael Hildebrand (Australia)	Yvonne Weber (Germany)
Johannes Lemke (Germany)	Sarah Weckhuysen (Belgium)
Piero Perucca (Australia)	

- Continued to work towards producing scientific publications, including a manuscript on adults with developmental and epileptic encephalopathies (DEE). A manuscript on guidance for genetic testing in the epilepsies is in the advanced stage of completion.
- Developed a study on the availability of clinical genetic testing in the epilepsies across the world, which commenced with the distribution of a global survey.

## Autoimmunity/ Inflammation Task Force

### Members

Jeff Britton (USA), <b>chair</b>	Andrew McKeon (USA)
Christian Bien (Germany)	Russell Dale (Australia)
Josep Dalmau (Spain)	Xiao-Qiu Shao (China)
Avi Gadoth (Israel)	Claude Steriade (Canada)
Sarosh Irani (UK)	Viviana Venegas (Chile)
Jenny (“Yenny”) Linnoila (USA)	

- Publication of review on definitions of seizures and epilepsy resulting from autoimmune etiology, with input from all task force members and co-authorship by nearly all: <https://doi.org/10.1111/epi.16571>
- Agreement to produce educational piece on autoimmune-associated seizure disorders for the ILAE journal, Epileptic Disorders
- Working on textbook which will involve contributions from all task force members plus several other international experts on the topic; to be co-edited by Britton and Irni.

## FCD Classification (Neuropathology) Task Force

### Members

Imad Najm (USA), **Chair**  
Eleonora Aronica (Netherlands)  
Ingmar Blümcke (Germany)  
Fernando Cendes (Brazil)  
Helen Cross (UK)  
Bertrand Devaux (France)  
Rita Garbelli (Italy)

J Jeong Ho Lee (South Korea)  
Hajime Miyata (Japan)  
Andre Palmmini (Brazil)  
Harvey Sarnat (Canada)  
Maria Thom (UK)  
Christopher Walsh (USA)

- A manuscript on the neuropathology classification agreement, the clinical-imaging-genetic-pathological correlations was submitted in October 2020 to *Epilepsia* (reviews not back in).
- A virtual meeting of the Task Force was held in November 2020 to discuss the final outline of the FCD Classification update. Members of the Task Force in attendance agreed on the details. A draft proposal is being written and will be submitted for publication in the Spring of 2021.
- A session will be held at the upcoming IEC in August 2021 to discuss the FCD update.

Submitted by Sarah Wilson