

## Annual Report 2022

---

### Members

Anna Elisabetta Vaudano (Italy) Chair  
Paolo Federico (Canada), past Chair  
John Archer (Australia)  
Boris Bernhardt (Canada)  
Lorenzo Caciagli (USA)  
Fernando Cendes (Brazil)  
Yotin Chinvarun (Thailand)  
Luis Concha (Mexico)  
William Gaillard (USA)  
Eliane Kobayashi (Canada)  
Godwin Ogbole (Nigeria)  
Stefan Rampp (Germany)  
Irene Wang (USA)  
Shuang Wang (China)

### Educational Activities

- Organizing a full-day Neuroimaging Course “What the Clinician Should know” for 2022 European Epilepsy Congress in Geneva. The course took place on the 9<sup>th</sup> of July 2022. It was full booked, feedbacks were very good and encouraging.
- Developing and completion of the first Neuroimaging VIREPA course. The course started on the 12<sup>th</sup> of November 2021 and ended on the 7<sup>th</sup> of April 2022. At this first edition, the course was opened to a total number of 20 students. The course was full-booked mainly from young epileptologists/radiologists around the world, particularly from low-middle resource countries. The course was structured in 6 Units covering the basic and advanced aspects of Neuroimaging in Epilepsy.
- Developing and updating the second edition of the Neuroimaging VIREPA course. The course started on the 11<sup>th</sup> of November 2022 and will end on the 16<sup>th</sup> of April 2023. This year the course was extended to 30 participants. The course was perfected from the first edition with the (1) introduction of Video Tutorials for each Unit; (2) real-life clinical examples (one for each Unit, except the

### Neuroimaging Task Force

introductory one). The clinical cases were the same of the ILAE neuroimaging tutorless course (established on 2020). The course obtains 38 credits.

- Continued to work to produce scientific educational neuroimaging case report series. Specifically, the following works have been produced:
  - o Imaging characteristics of temporopolar blurring in the context of hippocampal sclerosis. Clavijo Prado CA, Federico P, Bernasconi A, Bernhardt B, Caciagli L, Concha L, Chinvarun Y, Jackson G, Morgan V, Rampp S, Vaudano AE, Wang I, Wang S, Zaidan BC, Rogerio F, Cendes F. *Epileptic Disord.* 2022 Feb 1;24(1):1-8. doi: 10.1684/epd.2021.1378.
  - o Unilateral perisylvian polymicrogyria and mesiotemporal seizures: Imaging and surgical workup in an enigmatic case. Lorenzo Caciagli, Adam Greenblatt, Anna Elisabetta Vaudano, John Archer, Boris C. Bernhardt, Fernando Cendes, Yotin Chinvarun, Luis Concha, Paolo Federico, William D. Gaillard, Eliane Kobayashi, Godwin Ogbale, Stefan Rampp, Zhong Irene Wang, Shuang Wang, Ashley Tranquille, Jacob G. Dubroff, Joel M. Stein, Kathryn A. Davis, Dani S. Bassett. *Submitted December 2022.*

### Research Activities

Two research projects have been started during the past year and are still ongoing.

- (1) *The when's and why's of functional MRI in focal epilepsy: A systematic review and meta-analysis.* A research project aiming to critically appraise the extant literature on functional MRI (fMRI) in focal epilepsy by addressing, the when's, what's, why's of an fMRI study throughout a systematic literature review and meta-analysis. Initial outline of the project has been discussed and approved within the NITF.
  - i. Leaders: Lorenzo Caciagli, Anna E Vaudano
  - ii. Timetable: after approval by the NITF, the first planned meeting was on September 2022. The outline of the project has been approved. Literature search is ongoing.
- (2) *MRI essentials in infants with epilepsy: Consensus Review and Recommendations.* A research project aiming to produce a consensus protocol for imaging in infants and to discuss its practical applications for the investigation of: 1. children presenting with a first seizure; and 2. with newly-diagnosed epilepsy. Initial outline of the project has been already discussed and approved by the taskforce.

#### Neuroimaging Task Force

- i. *Leaders:* Anna E Vaudano, William Gaillard.
- ii. *Time Table:* A working group of expert, composed by pediatric neurologists with expertise in epilepsy, pediatric neuroradiologists with expertise in infants, has been already formed under the auspices of the NITF. The first working group meeting took place the 27th of September 2022. Preliminary literature search has been started by AE Vaudano and the librarian services of UniMoRe (University of the NITF chair, AE Vaudano) but a methodological support is needed to achieve the goal of the project (specific budget has been asked)

#### Achievements

- 1) Successful completion of the VIREPA NeuroImaging course, first edition 2021-2022
- 2) Producing of two educational neuroimaging case report series
- 3) Successful completion full-day NeuroImaging Course at the EEC 2022 in Geneva