# **Complex Epilepsy 2018**

#### Group Leader

Morten I. Lossius, Consultant Neurologist, National Centre for Epilepsy, OUH (mortenl@ous-hf.no) and Professor II, UiO (morten.lossius@medisin.uio.no)

**Group Members**

* Marit Bjørnvold, MD/PhD, SSE
* Cecilie Johannessen Landmark, MSc/PhD, SSE and OsloMET
* Kristin Alfstad, MD/PhD, SSE
* Karl Otto Nakken, MD/PhD, SSE
* Magnhild Kverneland, MSc, SSE and UiO
* Kari Modalsli Aaberg, MD/PhD, SSE and UiO
* Hilde Karterud, Cand.san/PhD, SSE and UiO
* Antonia Villagran, MD, SSE and UiO
* Torleiv Svendsen, MD, SSE and UiO
* Oliver Henning, MD, SSE
* Sigrid Pedersen, MSc, SSE
* Erik sætre, MD, PhD, SSE
* Annette Holth Skogan Clin.Neuro.Psych/PhD, SSE
* Ellen Molteberg, MD, SSE and UiO

**Associated group members**

* Anette Huuse Farmen, MD, Innlandet Hospital and UiO
* Marte Syvertsen, MD, Vestre Viken and UiO
* Kaja Kristine Selmer, MD/PhD, OUS and UiO

**Research profile and aims**

Clinical research in patients with difficult-to-treat epilepsy, with particular focus on:

* + 1. Characterization of different epilepsy syndromes (genotype/phenotype)
		2. Clinical pharmacology of antiepileptic drugs
		3. Different diagnostic and treatment options; EEG, pharmacotherapy, surgery, VNS, diets
		4. Psychosocial, psychiatric and neurocognitive aspects
		5. Psychogenic non-epileptic seizures

### Ongoing projects

PhD candidates in the UiO PhD program:

* Kari Modalsli Aaberg: Epilepsy in young children. Supervisor: Camilla Stoltenberg. Co- supervisors: Pål Suren, Per Magnus, Richard Chin, and Morten I. Lossius Dissertation June 04, 2018
* Magnhild Kverneland: *Effect of modified Atkin’s diet in adult patients with pharmacoresistant focal epilepsy. A randomized controlled study*. Supervisor: Karl Otto Nakken. Co-supervisor: Erik Taubøll
* Antonia Villagran. *Psychiatric comorbidity in patients with psychogenic non-epileptic seizures (PNES)*. Supervisor: Morten I. Lossius. Co-supervisor: Roderick Duncan
* Torleiv Svendsen: *Tolerability and efficacy of new antiepileptic drugs*. Supervisor: Cecilie Johannessen Landmark. Co-supervisors: Ole Morten Rønning and Morten I. Lossius
* Sigrid Pedersen: *Epilepsy in Children: The Impact of the Gut Microbiota and Epigenetics in Successful Treatment of Epilepsy.* Supervisor: Kaja Kristine Selmer. Co-supervisors: Knut Rudi, Per Ole Iversen, and Benedicte Alexandra Lie
* **Ellen Molteberg**: *Long term effects of modified Atkins diet in therapy-resistant epilepsy.* Supervisor: Erik Taubøll. Co-supervisor: Per Medbøe Thorsby and Karl O. Nakken

**Dr. philos. candidate:**

* Oliver Henning: “*Sexuality, depression and side effects in refractory epilepsy patients*”. Supervisor: Morten I. Lossius

Post doc:

* Silje Alvestad: *“Scandinavian multi-registry study of antiepileptic drug teratogenicity:*

 *the SCAN-A study”*

PhD-candidates not yet in the UiO PhD program:

* Eli B. Kyte: *Impact of epilepsy surgery on cognition, psychiatry and quality of life at the commencement of aging.* Supervisor: Kristin Å. Alfstad
* **Kathrine C. Haavardsholm**: *Long term effect of ketogenic diet in children with epilepsy.* Supervisor: Anette Ramm Pettersen
* **Konstantin H. Kostov**: *Clinical outcomes and determinants of effectiveness of vagus nerve stimulation in a large nationalrefractory epilepsy population*. Supervisor: Jukka Peltola. Co-supervisor: Morten I. Lossius and Pål Gunnar Larsson

PhD-candidates in the UiO PhD program, associated to the group:

* Anette Huuse Farmen: *Effect of epilepsy and antiepileptic drugs in pregnancy: cognition, neurodevelopmental symptoms and obstetric outcome in offspring ‒ a prospective cohort study.* Supervisor: Morten I. Lossius. Co-supervisor: Merethe Øien

International projects:

* “*EURAP study. An International Antiepileptic Drugs and Pregnancy Registry”* (International concerted Action on the Teratogenesis of Anti-epileptic Drugs) [(http:](http://www.eurapinternational.org/%29%3B)/[/www.eurapinternational.org/);](http://www.eurapinternational.org/%29%3B) Silje Alvestad and Kari Mette Lillestølen, National coordinators
* *“E-PILEPSY”* is a pan European project, with the primary aim of improving awareness and accessibility of surgery for epilepsy across different countries. Epilepsy surgery is an established treatment in the management of individuals with drug resistant focal epilepsy [(http:](http://www.e-pilepsy.eu/%29%3B)/[/www.e-pilepsy.eu/);](http://www.e-pilepsy.eu/%29%3B) **Morten I. Lossius**, associated partner
* *“EpiCARE” European Reference Network (ERN) on rare and complex epilepsies associated member.* Head of Scientific Advisory Board *(***Morten I. Lossius**)
* *“NESREC” Nordic Epilepsy Surgery Research Consortium.* ***SSE***
* *“Nordic prospective observational study of outcomes after rare epilepsy surgery procedures”*; **Fridny Heimsdottir**
* *“TRACE”* ((Transcutan VNS (t-VNS) for drug resistant epilepsy)); **Oliver Henning** and **Konstantin Kostov**
* *“Pharmacokinetic variability, efficacy and tolerability of a new antiepileptic drug, brivaracetam”*. Scandinavian project between the National Centre for Epilepsy in Norway and Denmark (Filadelfia, Dianalund); **Torleiv Svendsen**, medical leader, **Cecilie Johannessen Landmark**, project leader
* *“Children with refractory epilepsy and use of the newest antiepileptic drugs”*. Scandinavian project between the National Center for Epilepsy in Norway and Denmark (Filadelfia, Dianalund); Margrete Larsen Burns, Marina Nikoronova, responsible in Denmark, **Cecilie Johannessen Landmark**, project leader
* *“EDDI EMG triggered seizure alarm”*; **Oliver Henning** in cooperation with Danish Epilepsy Center Dianalund
* *“Scandinavian multi-registry study of antiepileptic drug teratogenicity: the SCAN-A study”*;

**Silje Alvestad**, post-doc, in cooperation with UiB/Haukeland

* CMD Expert Group. **Cecilie Johannessen Landmark**
* EpiPed. ILAE Task Force. **Cecilie Johannessen Landmark**
* EpiEd. ILAE Task Force. **Cecilie Johannessen Landmark**
* Pediatric Treatment. ILAE Task Force. **Cecilie Johannessen Landmark**
* **Tosca**. Novartis. Prot.No CRAD001MIC03: *“TuberOus SClerosis Registry to IncreAse Disease Awareness”.* International multicenter study. **Marit Bjørnvold**, Principle Investigator, and **Caroline Lund**
* **EXIST 3**. Novartis (everolimus). Prot.No. CRAD001M2304: “*A three-arm, randomized, double- blind, placebo-controlled study of 2 trough-ranges of evereolimus as adjunctive therapy in patients with tuberous schlerosis complex (TSC) who have refractory partial-onset seizures*”. International multicenter study; **Marit Bjørnvold,** Principle Investigator, and **Caroline Lund**

### Most important national and international collaborators

### National

* Prof. Eylert Brodtkorb, St. Olavs University Hospital and Norwegian University of Science and Technology (NTNU),Trondheim
* Prof. Erik Taubøll, Dep. of Neurology, Oslo University Hospital and University of Oslo

### Ass. Prof. Jeanette Koht, Vestre Viken/Drammen Hospital and University of Oslo

### Marte Syvertsen; MD, Vestre Viken/Drammen Hospital and University of Oslo

### Ass. Prof. Marte Bjørk, Haukeland University Hospital and University of Bergen

### International

* Prof. Torbjörn Tomson, Karolinska University Hospital and Karolinska Institutet, Stockholm, Sweden: ***“European Registry of Antiepileptic drugs and Pregnancy”***
* Prof. Philipe Ryvlin, Lausanne University Hospital
* Prof. Marina Nikoronova, Dianalund, Denmark: ***“Children and new antiepileptic drugs”***
* Prof. Christoph Helmstaedter, Bonn University Hospital
* Prof. Kristina Malmgren, Sahlgrenska University Hospital
* Prof. Sándor Beniczky, Aarhus University
* Prof. Guido Rubboli, København University
* Ass. Prof. Rikke Steensbjerre Møller, University of Southern Denmark
* Prof. Jukka Peltola, Tampere University Hospital

**Funding**

* South-Eastern Norway Regional Health Authority
* Norwegian ExtraFoundation for Health and Rehabilitation
* Innlandet Hospital Trust

### Scientific production of the research group in 2018

##### Peer reviewed original research articles: 20

##### Other publications: 5

**Dissertations: 1**

Kari Modalsli Aaberg: “*Epilepsy in young children*”. June 04, 2018

Three selected publications:

**Aaberg KM**, Bakken IJ, **Lossius MI**, Lund Søraas C, Tallur KK, Stoltenberg C, Chin R, Surén P (2018)
Short-term Seizure Outcomes in Childhood Epilepsy
Pediatrics, 141 (6), (June 2018:e20174016)

**Kverneland M**, **Molteberg E**, Iversen PO, Veierød MB, Taubøll E, **Selmer KK**, **Nakken KO** (2018)
Effect of modified Atkins diet in adults with drug-resistant focal epilepsy: A randomized clinical trial
Epilepsia, 59 (8), 1567-1576

Farmen AH, Grundt JH, Nakling JO, Mowinckel P, **Nakken KO**, **Lossius MI** (2018)
Increased rate of acute caesarean sections in women with epilepsy: results from the Oppland Perinatal Database in Norway
Eur J Neurol, 26 (4), 617-623