



The Top 10

- 1) What are the causes and contributing factors of epilepsy-related deaths, including Sudden Unexpected Death in Epilepsy and how can these deaths be prevented?
- 2) What underlying mechanisms cause epilepsy in children and in adults?
- 3) What impact do epilepsy, seizures and anti-seizure medications (ASMs) have on brain health - including cognition, memory, learning, behaviour and mental health?
- 4) How does epilepsy and epilepsy treatment impact neurodevelopment, and can this be managed or prevented?
- 5) How can targeted, personalised medicine, such as gene therapy, be used to treat and/or prevent epilepsy?
- 6) How can tools, devices and biological markers be used to accurately predict and prevent seizures and the onset of epilepsy?
- 7) How do hormonal changes in women throughout their lifespan (puberty, pregnancy, menopause) impact epilepsy, and how can this impact be addressed?
- 8) How can quality of life be improved for people with epilepsy, their families and carers, including those bereaved by epilepsy?
- 9) What causes drug-resistant (refractory) epilepsy, and how can it be best treated?
- 10) How can big data analysis, through artificial intelligence (AI) and machine learning, aid the diagnosis and management of epilepsy?

Research proposals for questions highlighted in yellow particularly welcome under this call, following feedback to the consultation process with Epilepsy Ireland service-users in advance of this call.