Sponsorship Programme
EANS Research Fund
January - December 2024
The EANS Research fund has since 2018 awarded 44 projects to young neurosurgeon scientists. For some, this award was the first attempts to pursue a scientific journey, for others it provided a possibility to complete and further develop existing projects. The technical possibilities aiding neurosurgeons and patients are advancing at an astonishing speed, and their potential benefits should be carefully evaluated. For many neurosurgical disorders, current treatments lack sufficient efficacy and improved management is urgently needed. Neurosurgical research in Europe is generally at a high level, but for many young researchers the chance of receiving research grants is slim. Moreover, many young aspiring neurosurgeons need funds to get off the ground with their scientific endeavours and same is true for departments in countries with less resources available for neurosurgical research. The EANS Research fund has the possibility to facilitate neurosurgical research projects, specifically targeting the young. The Research Fund particularly promotes scientific excellence and novel ideas and aim at increasing collaborations between centers.

The EANS is truly grateful for the support of funders and our industrial partners. As the director of the EANS research fund I will be happy to discuss ideas how to further increase funding to young neurosurgeons and to promote scientific excellence in the neurosurgical field.

Words from the Research Fund Director

The purpose of the EANS Research Fund

Diseases of the brain and spine in Europe are of major importance to patients, their families and society. There are 165 million Europeans with brain disorders, causing a global cost (direct and indirect) exceeding 800 billion EUR for National Health budgets.

As the European Association of Neurosurgical Societies our focus is on neurosurgical conditions which include brain injuries, brain tumours, stroke, epilepsy, hydrocephalus and disorders of the spine. While advances have been made in the treatment of these conditions there remain many unanswered questions and major opportunities to improve treatment and outcome for patients.

Our mission is to achieve this through comprehensive research strategies including both basic science laboratory research and clinical studies including trials. Access to research funding from large grant funding bodies, for example, the European Union and national government agencies and charities is highly competitive and usually requires initial pilot research data. We have therefore established a research fund to pump prime projects to enable the acquisition of the pilot data necessary to apply for more substantial funding. We achieve this through the award of € 10000
seed grants for neurosurgical research projects. In 2023 edition we have received 82 applications from 20 different countries.

We thank our Industry Partners for their support to the Research Fund Project and making 2023 edition possible.

**OUR TARGETS**

**Young researchers** who are developing a research career across the various neurosurgical specialties addressing:

brain injury, vascular neurosurgery, oncology, spine surgery, functional neurosurgery, peripheral nerve surgery, cerebrospinal fluid disorders, paediatric neurosurgery and pre-clinical neuroscience.

**PAST EDITIONS WINNERS AND SUCCESSFUL STORIES**

The EANS Research Fund was established in 2017 and currently supports several young academic neurosurgeons every year with a €10,000 pilot grant. The first four awards were made in 2018, and since then the fund has grown to support 44 projects until 2023.

So far, applications have been received from a total of 22 countries all over Europe: Austria, Portugal, Poland, Switzerland, UK, Italy, The Netherlands, Croatia, Germany, Romania, Greece, Finland, France, Serbia, Belgium, Israel, Turkey, Armenia, Czech Republic, Hungary, Norway and Moldova.

The standards have been exceptionally high and cover all aspects of neurosurgery, with applications for projects in cerebrospinal fluid disorders, functional, epilepsy, oncology, paediatrics, peripheral nerve, radiosurgery, skullbase, spine, neurotrauma and neurovascular disorders.
4 WINNERS OF THE 2018 RESEARCH FUND GRANTS

Jean Brihaye EANS Research Grant:
Alkinoos Athanasiou - Thessaloniki, Greece
Adaptive and maladaptive plasticity of brain networks following spinal cord injury

Integra EANS Research Grant:
Md. Iftakher Hossain - Turku, Finland
Combining neuroimaging and blood biomarkers in the assessment of traumatic brain injuries

Stryker EANS Research Grant:
Jerôme Cochereau - Montpellier, France
Cognitive control neural networks organisation and reshaping: a functional and structural neuroimaging study in low grade glioma patients

EANS Research Grant:
Davide Croci - Aarau / Basel, Switzerland
The effects of Interleukin-6 receptor antagonist in reduction of vasospasm and delayed cerebral injury in a rabbit closed cranium subarachnoid haemorrhage model

6 WINNERS OF THE 2019 RESEARCH FUND GRANTS

Integra EANS Research Grant:
Vanessa Hubertus - Berlin, Germany
Alteration of neurovascular repair and blood spinal cord barrier disruption post traumatic spinal cord injury through modified expression of VEGF-A

Stryker EANS Research Grant:
Levin Haeni - Bern, Switzerland
Ex-vivo tissue diagnostic through impedance spectroscopy in neuro-oncology

Jean Brihaye EANS Research Grant:
Muhammad Sajjad - Helsinki, Finland
Monocyte/macrophage polarization and their therapeutic implications in SAH

EANS Research Grant:
Niek Djuric - Leiden, The Netherlands
Effect of infection, Modic and Inflammation on Clinical outcomes in Radiculopathy (EIMICOR)

EANS Research Grant:
Christian Blume - Aachen, Germany
Degenerative cervical myelopathy - The secondary harm

EANS Research Grant:
Alfredo Conti - Messina, Italy
Pre-conditioning of motor network by repetitive navigated transcranial magnetic stimulation (rTMS) in patients who are candidate to elective surgery in motor areas

9 WINNERS OF THE 2020 RESEARCH FUND GRANTS

Integra EANS Research Grant:
Davide Giampiccolo - Verona, Italy
Intraoperative neuropsychological recording of cortico-cortical connectivity from the arcuate fasciculus in the asleep patient

Stryker EANS Research Grant:
Aswin Chari - London, UK
MELD as an Adjunct for SEEG Trajectories , (The MAST Trial)

Jean Brihaye EANS Research Grant:
Giulia Cossu - Switzerland
PD-L1 expression in pituitary adenomas. A new marker for aggressiveness?

Elekta EANS Research Grant:
Guliz Acker - Berlin, Germany
Analysis of the radiobiological mechanisms of single- and multi-session radiosurgery and development and diagnosis of radionecrosis

EANS Research Grant:
Kristin Lucia - Berlin, Germany
Establishment of a spinal metastasis model to characterize endothelial premetastatic programming

EANS Research Grant:
Julia Velz - Zurich, Switzerland
Exploring the Antigenic Landscape of Medulloblastoma: Antigen discovery for T-cell based immunotherapy

EANS Research Grant:
Maria Kamenova - Basel, Switzerland
Low-Dose Aspirin and Burr-Hole Drainage of Chronic Subdural Hematoma: a Randomized, Placebo Controlled, DoubleBlinded, Multicentre Study Short title: Surgical Evacuation of CSDH and Aspirin (SECA-Trial)

EANS Research Grant:
Sajjad Muhammad - Dusseldorf, Germany
Uncovering Therapeutic Potential of HMGB1 Biologicals in SAH

Leica EANS Research Grant:
Sebastian Siller - Germany
The Predictive Value of D-Wave, Hand-Muscle MEPs and free-running EMG for the Upper Limbs’ Motor Outcome in Cervicothoracical Intramedullary Spinal Cord Tumor Microsurgery
10 WINNERS OF THE 2021 RESEARCH FUND GRANTS

Jean Brihaye Research Grant:
Stephanos Voglis - Zurich, Switzerland
Exploring new biomarkers for therapy-response and clinical outcome in brain metastases patients by in-depth characterization of the tumor microenvironment and the blood-tumor barrier using state-of-the-art imaging mass cytometry

Elekta Research Grant:
Francesca Roncelli - Milan, Italy
Glutamate excitotoxicity in brain metastases from lung, breast and melanoma treated with stereotactic radiosurgery

Integra Research Grant:
Jonas Ort - Aachen, Germany
Electrophysiomics of Seizures - Characterization of Electrophysiological Network-Properties in Epileptogenic Brain Lesions using ECoG and High-dimensional Micro-electrode Tissue Arrays

Leica Research Grant:
Victor Staartjes - Zurich, Switzerland
Automated intraoperative anatomical recognition using machine vision: Improving navigation and safety in microsurgery

Safe Orthopaedics Research Grant:
Aria Nouri - Geneva, Switzerland
Screening for Degenerative Cervical Myelopathy (SCREEN-DCM) in Patients Based on Signs, Symptoms and Known Risk Factors

Stryker Research Grant:
Valerie ter Wengel - The Hague, The Netherlands
Database of Spinal Cord Injury on Recovery and Evaluation of Timing (D-SCIRET)

Zeiss Research Grant:
Giulio Anichini - London, UK
Use of non-invasive optical analysis in Neurosurgery - A pilot study

EANS Research Grant:
Jesper Bomers - Glostrup, Denmark
Temporal change of mitochondrial dysfunction in a SAH rat model

EANS Research Grant:
Dan Fountain - Birmingham, UK
Characterising the developmental origins in the pathogenesis of mesenchymal tumours of the central nervous system

EANS Research Grant:
Alfo Spina - Milan, Italy
Determination of SARS-CoV-2 neuroinvasion in humans

8 WINNERS OF THE 2022 RESEARCH FUND GRANTS

ELEKTA Research Grant:
Matthias Tomschik, Vienna, Austria
Assessing functional outcome after epilepsy surgery - A connectomics approach

INTEGRA Research Grant:
Hugo Layard Horsfall, London, United Kingdom
First-in-human experience using novel ultraflexible low-impedance electrode arrays: an IDEAL Stage 1 study

OLYMPUS Research Grant:
Toma Spiriev, Sofia, Bulgaria
Three-Dimensional Photorealistic Atlas of Neurological Surgery

ZEISS Research Grant:
Francesco Restelli, Milan, Italy
Utilization of a new miniature confocal microscope (CONVIVO system) to identify tumor tissue during CNS tumors resection – a preliminary prospective observational in-vivo study

Jean Brihaye Research Grant:
Lucia Darie, London, United Kingdom
Understanding hydrocephalus in subarachnoid haemorrhage

EANS Research Grant:
Nagesh Shanbhag, Lund, Sweden
Fate of the glymphatic system and its implications for cognitive dysfunction in mild traumatic brain injury (GLYCO-TBI)

EANS Research Grant:
Anto Abramovic, Innsbruck, Austria
Biomechanical validation of CT-measured bone mineral density in the lumbar spine

EANS Research Grant:
Stefan Wanderer, Aarau, Switzerland
The role of the vasoprotectant losartan in prevention of delayed cerebral vasospasm and neuronal injury after experimentally induced subarachnoid hemorrhage in rabbits
8 WINNERS OF THE 2023 RESEARCH FUND GRANTS

**EANS Research Grant**
Anna-Baukje Lebouille-Veldman, The Netherlands
The use of Artificial Intelligence in classifying and predicting cervical spine deformity in patients with Rheumatoid Arthritis

**EANS Research Grant**
Tobias Mederer, Germany
Circulating cell-free DNA from plasma and CSF as a biomarker in meningioma – a quantitative and genetic analysis for minimal-invasive tumor monitoring

**EANS Research Grant**
Obada Alhalabi, Germany
Selective VEGFR inhibition improves functional outcome and modulates the phosphoproteomic and histological landscape after traumatic spinal cord injury in a rats

**EANS Research Grant**
Daniel Lewis, United Kingdom
A pilot study of USPIO enhanced MRI as an imaging biomarker of macrophage infiltration in NF2-associated vestibular schwannoma

**JEAN BRIHAYE Research Grant**
Pablo Andrade, Germany
Identification of cellular signalling cascades in antemortem Alzheimer’s and Parkinson’s disease brains by stereotactic surgical techniques

**INTEGRA Research Grant**
Philipp Geiger, Austria
DUAL ICP STUDY – Fundamental principles and changes Is ICP transmitted uniformly within the cranium? An animal porcine study

**OLYMPUS Research Grant**
Hamid-Reza Niknejad, The Netherlands
Intra-operative Ultrafast Doppler Ultrasound for the Evaluation of Ischemia: A Monocentric Pilot Study

**ZEISS Research Grant**
Alessandro Boaro, Italy
Machine learning approaches for the refinement and integration of intraoperative neuromonitoring criteria
We would like to invite you to participate in 2024!

Visit the EANS Research Fund's official webpage and don’t hesitate to contact us at IndustryRelations@eans.org for further details.

THANK YOU VERY MUCH!