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Professor Alon Friedman

Correspondence language: English

Sex: Male

Date of Birth: 10/09

Canadian Residency Status: Canadian Citizen

Country of Citizenship: Canada, Israel

Contact Information

The primary information is denoted by (*)

Address

Primary Affiliation (*)

The Department of Medical Neuroscience
Faculty of Medicine
Dalhousie University
Sir Charles Tupper Building
5850 College Street PO Box 15000
Halifax Nova Scotia B3H 4R2
Canada

Website

Personal	http://medicine.dal.ca/departments/department-sites/medical-neuroscience/our-people/our-faculty/alon
Personal	https://www.bbbscience.com/ http://fohs.bgu.ac.il/neurophysio/about.shtml

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Professor Alon Friedman

Degrees

- 1985/10 - 1991/9 Doctorate, PhD, Neuroscience, Ben-Gurion University of the Negev
 Degree Status: Completed
 Thesis Title: Active and Passive Properties of Neocortical Neurons and Their Role in Determining Neuronal Firing Pattern
 Supervisors: Professor Michael Gutnick, 1985/8 - 1991/9
 Research Disciplines: Neurosciences
- 1985/8 - 1991/6 Doctorate, Medicine, Health Sciences, Ben-Gurion University of the Negev
 Degree Status: Completed
 Research Disciplines:
 Fields of Application:
- 1982/10 - 1985/7 Bachelor's, Bachelor of Science, Medical Sciences, Ben-Gurion University of the Negev
 Degree Status: Completed

Recognitions

- 2024/3 Award for excellence in research for comprehensive and diverse approaches in studying traumatic brain injury and complications-
 Canadian Concussion Network
 Prize / Award
- 2014/7 The Dennis Chair in Epilepsy Research
 Dalhousie University
 Distinction
 The William Dennis Chair in Pediatric Epilepsy Research is the first of its kind in Canada and was created to increase new knowledge and understanding of epilepsy. Epilepsy is a neurological disorder affecting approximately one per cent of the population. The disorder is a common one, and funding for this research can lead to better treatments capable of helping a greater number of people. The support of the William Dennis Fund and the establishment of the William Dennis Chair will: Develop a research program of excellence and international stature, turn new information into improved care for epilepsy, train future neurologists in basic research on epilepsy, bring international attention to the quality of research at Dalhousie University, reinforce the region's ability to recruit and retain health professionals and strengthen the region as a strong, viable place to work and live.
 Research Disciplines: Neurosciences
 Areas of Research: Convulsive Disorders/ Epilepsy
 Fields of Application: Pathogenesis and Treatment of Diseases
- 2013/1 Dr. Helena Rachmanska-Putzman Chair in Neurology
 Ben-Gurion University of the Negev
 Distinction

2009/1	The Moritz Heinrich Romberg Visiting Professorship Charite Medical University , Stroke Center Honor
2009/1	The Students Excellency Award for Teaching Ben-Gurion University of the Negev Honor
2009/1 - 2009/12	Mercator Program for Visiting Professorships at German Universities Charite Medical University Prize / Award
2007/1 - 2007/12	The Michael Prize for Epilepsy Research The Stiftung Michael Foundation Prize / Award
2001/1 - 2001/12	The APS Kass Award for Medical Research The American Physicians Fellowship for Medicine in Israel Prize / Award
2000/1	The Zigler Prize for Original Research The Israeli Institute of Technolgy, The Bruce Rappaport Faculty of Medicine, Prize / Award
1997/1	Foulkes Research Award for the Contribution of Scientific Research to Medicine Foulkes Foundation
1997/1 - 1997/12	The Teva Research Prize for Young Investigators Teva Pharmaceuticals Prize / Award
1991/1	The Volunteer Award The Association for Civil Rights in Israel
1986/1 - 1988/12	Goulton Award Ben-Gurion University of the Negev

User Profile

Researcher Status: Researcher

Research Career Start Date: 1985/07/01

Engaged in Clinical Research?: Yes

Research Interests: My research focuses on the pathophysiology of brain disorders and the effects of stress on the nervous system. My group is involved in a multidisciplinary, human and animal research studying novel therapies for the prevention and treatment of brain diseases, specifically injury-related epilepsy and neurodegeneration.

Countries: Germany, United States of America, Ireland, Italy

Employment

2020/1 - 2026/1	Founder Mend Neuroscience Co-founder of Mend Neuroscience, a start-up company continuing the development of new therapeutics targeting the blood-brain barrier Research Disciplines: Neurosciences
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2016/7 - 2026/1 Founder
 Emagix
 Part-time
 Founding and CEO of EMAGIX.Inc. A startup company developing new diagnostics for retinal and brain disorders
 Research Disciplines: Neurosciences
 Areas of Research:

Affiliations

The primary affiliation is denoted by (*)

2018/1 The Dr. Helena Rachmanska-Putzman Chair in Neurology at Ben-Gurion University, Israel, Neurology, Ben-Gurion University of the Negev

(*) 2014/7 The Dennis Chair in Epilepsy Research, Medical Neuroscience, Dalhousie University

Research Funding History

Awarded [n=28]

2023/4 - 2028/3 Diagnosis and Treatment of Blood-Brain Barrier Leakage in Repetitive Mild Traumatic
 Principal Investigator Brain Injury, Grant, Operating
 Clinical Research Project?: Yes

Funding Sources:

2023/4 - 2028/3 Canadian Institutes of Health Research (CIHR)
 Project Grant
 Total Funding - 887,400 (Canadian dollar)
 Funding Competitive?: Yes

Co-applicant : Chris Bowen; David Clarke; Gerben van Hameren; Kim Brewer; Lyna Kamintsky; Mark MacLean; Nelofar Kureshi;

Collaborator : Tina Atkinson

2022/4 - 2027/3 Microvascular Pathology as a Therapeutic Target for Epilepsy, Grant, Operating
 Principal Investigator Clinical Research Project?: Yes

Funding Sources:

2022/4 - 2027/3 Canadian Institutes of Health Research (CIHR)
 Project Grant
 Total Funding - 849,150 (Canadian dollar)
 Portion of Funding Received - 849,150 (Canadian dollar)
 Funding Competitive?: Yes

Co-investigator : Benjamin Whatley; Chris Bowen; David Clarke; David Volders; Lyna Kamintsky; Mark MacLean; Matthias Schmidt; Nelofar Kureshi; Stephen Beyea;

Collaborator : Alexander Easton

2022/10 - 2026/9 The blood-brain barrier as a target for diagnosis and treatment in epilepsy, Grant,
 Co-investigator Operating
 Clinical Research Project?: Yes
 Project Description: **Project Goals:** Using our well-established approach (dynamic-contrast-enhanced MRI), we will characterize, for the first time, the frequency and localization of BBBD in patients with epilepsy. In a complementary pre-clinical study, we

will test for overlap between BBBD and the seizure onset zone and test the efficacy of BBB-repair as an intervention in a rat model of epilepsy.

Funding Sources:

2022/10 - 2026/9 US-Israel Binational Science Foundation
 Science Foundation
 Total Funding - 309,327 (Canadian dollar)
 Portion of Funding Received - 122,962 (Canadian dollar)
 Funding Renewable?: No
 Funding Competitive?: Yes
 Funding Reference Number: 2021133

Co-investigator : Daniela Kaufer; Felix Benninger

2022/2 - 2026/1
 Co-investigator

Longitudinal MRI Investigation of Traumatic Microvascular Injury, Grant, Operating
 Clinical Research Project?: Yes

Funding Sources:

2022/2 - 2026/1 National Institutes of Health (NIH) (USA)
 PA-20-185
 Total Funding - 4,945,441 (Canadian dollar)
 Portion of Funding Received - 163,548 (Canadian dollar)
 Funding Competitive?: Yes

Principal Applicant : Dr. Jeffrey Ware

2020/10 - 2025/9
 Principal Applicant

The Blood-Brain Barrier as a Target for the Diagnosis and Treatment of Neurological
 Disorders, Grant, Operating
 Clinical Research Project?: No

Funding Sources:

2020/10 - 2025/9 Israel Science Foundation (Israel)
 Science Foundation
 Total Funding - 528,377 (Canadian dollar)
 Portion of Funding Received - 528,377 (Canadian dollar)
 Funding Renewable?: No
 Funding Competitive?: Yes
 Funding Reference Number: 2254/20

Co-investigator : Merav Shamir; Ofer Prager

2023/9 - 2025/8
 Principal Investigator

Cures Within Reach - Losartan for Individuals With Epilepsy in Zambia, Grant, Operating
 Clinical Research Project?: Yes

Funding Sources:

2023/9 - 2025/8 Cures Within Reach
 Cures within Reach
 Total Funding - 67,950
 Portion of Funding Received - 67,950 (Canadian dollar)
 Funding Renewable?: No
 Funding Competitive?: Yes

2024/5 - 2025/4
 Co-investigator

Brain Repair Center Innovation Grant: Test the relationship between PSWEs and the
 epileptogenic zone as a potential biomarker of epilepsy., Grant, Operating

Funding Sources:

2024/5 - 2025/4 Brain Repair Center
 Innovation and Technology
 Total Funding - 30,000 (Canadian dollar)
 Portion of Funding Received - 30,000 (Canadian dollar)
 Funding Renewable?: No
 Funding Competitive?: Yes

2018/8 - 2024/3 Neuroanatomical and neurofunctional assessment in acquired brain injury, Contract
 Principal Investigator Clinical Research Project?: Yes

Funding Sources:

2018/8 - 2024/3 Global Affairs Canada
 Government grant
 Total Funding - 1,414,781 (Canadian dollar)
 Portion of Funding Received - 1,414,781 (Canadian dollar)
 Funding Renewable?: Yes
 Funding Competitive?: No

2020/2 - 2023/1 Early mechanistic biomarkers for late epilepsy and long-term brain injury outcome, Grant,
 Co-investigator Operating

Funding Sources:

2020/2 - 2023/1 Network of European Funding for Neuroscience Research
 NEURON
 Total Funding - 675,000 (Canadian dollar)
 Portion of Funding Received - 224,760
 Funding Competitive?: Yes

Co-investigator : AnnaMaria Vezzani; Jens Dreier

2021/1 - 2022/12 Ramsay Grant Program Blood-Brain Barrier Imaging as a Biomarker for ME/CFS, Grant
 Principal Investigator Clinical Research Project?: No

Funding Sources:

2021/1 - 2022/12 Ramsay
 Ramsay Grant Program
 Total Funding - 53,000 (Canadian dollar)
 Portion of Funding Received - 53,000 (Canadian dollar)
 Funding Renewable?: No
 Funding Competitive?: Yes

Funding by Year:

2021/1 - 2022/12 Total Funding - 53,000 (Canadian dollar)
 Portion of Funding Received - 53,000 (Canadian dollar)

2018/3 - 2022/9 Characterization of Brain Dysfunction with Multi-Modal Functional Neuroimaging in
 Co-investigator Patients with SLE and Cognitive Impairment, Grant, Operating

Funding Sources:

2018/4 - 2022/9 Canadian Institutes of Health Research (CIHR)
 Project Grant
 Total Funding - 600,000 (Canadian dollar)
 Portion of Funding Received - 45,000 (Canadian dollar)
 Funding Renewable?: No
 Funding Competitive?: Yes

Funding by Year:

2018/4 - 2022/9 Total Funding - 600,000 (Canadian dollar)
Portion of Funding Received - 45,000 (Canadian dollar)

Co-investigator : Javeria Hashmi.; John Fisk; Steven Beyea;

Principal Investigator : John Hanly

2017/10 - 2021/7 TGF-beta Signaling in Post-Traumatic Epileptogenesis: A Critical Role in Post-Traumatic
Principal Investigator Epilepsy, Grant, Operating
Clinical Research Project?: No

Funding Sources:

2017/10 - 2020/9 Department of Defense (USA)
Foundation Award
Total Funding - 765,315 (Canadian dollar)
Portion of Funding Received - 362,508
Funding Competitive?: Yes

Co-investigator : Daniela Kaufer

2016/7 - 2021/6 Microvascular injury and blood-brain barrier dysfunction as novel biomarkers and targets
Principal Investigator for treatment in traumatic injury, Grant, Operating

Funding Sources:

2016/7 - 2021/6 Canadian Institutes of Health Research (CIHR)
Project Grant
Total Funding - 955,625 (Canadian dollar)
Portion of Funding Received - 955,625 (Canadian dollar)
Funding Renewable?: No
Funding Competitive?: Yes

Co-investigator : Christopher Bowen; David Clarke; Matthias Schmidt; Rob Green

2015/10 - 2020/9 The Blood-Brain Barrier as a Target for the Diagnosis and Treatment of Acquired Brain
Principal Investigator Injuries, Grant, Operating

Funding Sources:

2015/10 - 2020/9 Israel Science Foundation (Israel)
Regular Research Program
Total Funding - 230,000 (Israeli new sheqel)
Portion of Funding Received - 230,000
Funding Competitive?: Yes

Co-investigator : Merav Shamir

2018/4 - 2019/3 Mechanisms underlying neural activity-dependent albumin transport across brain
Principal Investigator endothelium, Grant, Operating

Funding Sources:

2018/4 - 2019/3 Natural Sciences and Engineering Research Council of Canada
(NSERC)
Discovery Grants Program
Total Funding - 29,000 (Canadian dollar)
Portion of Funding Received - 29,000
Funding Competitive?: Yes

2014/12 - 2018/12 The Role of the Blood-Brain Barrier Dysfunction in Acquired Epilepsy, Grant, Equipment
Principal Investigator Clinical Research Project?: No

Research Settings: Canada (Urban)

Funding Sources:

2014/12 - 2018/12 Canada Foundation for Innovation (CFI)
 John Evans Leaders Fund
 Total Funding - 493,527 (Canadian dollar)
 Portion of Funding Received - 493,527
 Funding Renewable?: No
 Funding Competitive?: Yes
 Funding Reference Number: 32806

Research Disciplines: Neurosciences

Areas of Research: Convulsive Disorders/ Epilepsy

2017/11 - 2018/10 Therapeutic efficacy of ultra-low dose of cannabinoids in a rat repetitive mild brain injury
 Principal Investigator model, Contract
 Clinical Research Project?: No

Funding Sources:

2017/11 - 2018/10 Therapix
 Contract
 Total Funding - 66,760 (Canadian dollar)
 Portion of Funding Received - 66,760
 Funding Renewable?: No
 Funding Competitive?: Yes

2015/9 - 2018/8 The Role of Blood-Brain Barrier Dysfunction and TGF-beta Mediated Signaling in Post-
 Principal Investigator Traumatic Epileptogenesis, Grant, Establishment
 Clinical Research Project?: No

Research Settings: Canada (Urban)

Funding Sources:

2015/9 - 2018/8 Nova Scotia Health Research Foundation (NSHRF)
 Establishment
 Total Funding - 144,851 (Canadian dollar)
 Portion of Funding Received - 144,851 (Canadian dollar)
 Funding Renewable?: No
 Funding Competitive?: Yes
 Funding Reference Number: 145

Funding by Year:

2015/9 - 2018/8 Total Funding - 144,851 (Canadian dollar)
 Portion of Funding Received - 144,851 (Canadian dollar)

Research Disciplines: Neurosciences

Areas of Research: Convulsive Disorders/ Epilepsy

Fields of Application: Biomedical Aspects of Human Health

2016/12 - 2018/7 Development of Image Analysis Technology for the Early Stage Diagnosis of Diabetes
 Principal Investigator Retinopathy, Grant

Funding Sources:

2016/12 - 2018/1 Innovacorp
 Early Stage Commercialization Fund
 Total Funding - 45,000 (Canadian dollar)
 Portion of Funding Received - 45,000
 Funding Competitive?: Yes

2013/1 - 2017/12 Targets and biomarkers for anti epileptogenesis, Grant, Operating

Principal Investigator

Funding Sources:

2013/1 - 2017/12 7th Framework Programme: Collaborative Project
 EPITARGET
 Total Funding - 300,000 (United States dollar)
 Portion of Funding Received - 300,000 (United States dollar)
 Funding Competitive?: Yes

Research Disciplines: Neurosciences

Areas of Research: Convulsive Disorders/ Epilepsy

Fields of Application: Pathogenesis and Treatment of Diseases

2014/10 - 2017/9

Co-investigator

Transforming Growth Factor Beta Signaling Following Traumatic Brain Injury as a Target for the Prevention of Acquired Epilepsy, Grant, Operating

Funding Sources:

2014/10 - 2017/9 CURE Foundation, USA
 Cure for Epilepsy
 Total Funding - 250,000 (United States dollar)
 Portion of Funding Received - 110,000 (United States dollar)
 Funding Competitive?: Yes

Co-investigator : Daniela Kaufer

2016/4 - 2017/4

Principal Investigator

Customization, implementation and testing of an image analysis algorithm in regards to UWFFA data, Grant, Operating

Funding Sources:

2016/4 - 2017/4 Brain Repair Center Dalhousie
 Knowledge Translation Grant
 Total Funding - 30,000 (Canadian dollar)
 Portion of Funding Received - 30,000 (Canadian dollar)
 Funding Renewable?: No
 Funding Competitive?: Yes

2014/1 - 2016/12

Co-investigator

Structural and functional connectivity alterations in stress exposed individuals, Grant

Funding Sources:

2014/1 - 2016/12 Israel Ministry of Health
 Regular Research Program
 Total Funding - 300,000 (Israeli new sheqel)
 Portion of Funding Received - 300,000
 Funding Competitive?: Yes

2014/1 - 2016/12

Co-investigator

The role of blood-brain barrier dysfunction and albumin-induced TGF-beta signaling in neuronal plasticity and associated network modifications, Grant, Operating

Funding Sources:

2014/1 - 2016/12 German Science Foundation (DFG)
 Research
 Total Funding - 313,000 (Euro)
 Portion of Funding Received - 100,000
 Funding Competitive?: Yes

Research Disciplines: Neurosciences

Areas of Research: Convulsive Disorders/ Epilepsy

Fields of Application: Pathogenesis and Treatment of Diseases

Co-investigator : Uwe Heinemann

2013/1 - 2015/12
 Co-investigator

Victims of War: Contribution of the Cholinergic System to the Development of PTSD in
 Palestine and Israel, Grant, Operating
 Clinical Research Project?: Yes

Research Settings: Israel, Germany

Funding Sources:

2013/1 - 2015/12 German Science Foundation
 Trilateral Program
 Total Funding - 300,000 (Euro)
 Portion of Funding Received - 60,000
 Funding Competitive?: Yes

Co-investigator : Clemens Kirschbaum; Hadar Shalev; Hermona Soreq; Mohammed
 A.M.Shaheen

2012/1 - 2015/12
 Co-investigator

Spreading Depolarization in Small Vessel Disease, Grant, Operating

Funding Sources:

2012/1 - 2015/12 ERA-NET
 SDSVD European Research Projects on Cerebrovascular diseases
 Total Funding - 180,000 (Euro)
 Portion of Funding Received - 60,000
 Funding Competitive?: Yes

Co-investigator : Brian MacVicar; Jens Dreier

2014/11 - 2015/10
 Co-investigator

TGF-beta Mediated Inflammatory Signaling: a critical role in epileptogenesis, Grant

Funding Sources:

2009/1 - 2012/1 National Institute of Health (RO1)
 Neurology / Epileptology
 Total Funding - 494,000 (United States dollar)
 Portion of Funding Received - 100,000
 Funding Competitive?: Yes

Principal Applicant : Daniela Kaufer

2014/7 - 2015/6
 Principal Investigator

In-vivo Seizure Recording, Grant, Equipment
 Clinical Research Project?: No

Research Settings: Canada (Urban)

Funding Sources:

2014/6 - 2015/5 Dalhousie Medical Research Foundation (The)
DMRF
Total Funding - 30,000 (Canadian dollar)
Portion of Funding Received - 30,000
Funding Competitive?: Yes

Funding by Year:

2014/7 - 2015/6 Total Funding - 30,000 (Canadian dollar)
Portion of Funding Received - 30,000 (Canadian dollar)

Research Disciplines: Neurosciences

Areas of Research: Convulsive Disorders/ Epilepsy

Courses Taught

Lecturer-Instructor, Dalhousie University
Course Title: Principles of Neuroscience
Course Level: Graduate
Number of Students: 10
Lab Hours Per Week: 4

Lecturer-Instructor, Dalhousie University
Course Title: Principles of Medical Neuroscience
Course Level: Graduate
Number of Students: 10
Lecture Hours Per Week: 2

2021/01/01 - , Medical Neuroscience, Dalhousie University
2021/04/30 Course Title: Graduate Neuroanatomy
Course Code: ANAT 5100
Course Level: Graduate
Academic Session: Winter
Number of Students: 10
Lecture Hours Per Week: 2

2020/09/01 - , Medical Neuroscience, Dalhousie University
2020/12/31 Course Title: Current topics in Neuroscience
Course Code: NESC 6100
Course Level: Graduate
Academic Session: Fall
Number of Students: 13
Lecture Hours Per Week: 4

Student/Postdoctoral Supervision

Bachelor's Honours [n=14]

- 2024/9 - 2025/4
Principal Supervisor Madison Dunbar (In Progress) , Dalhousie University
Student Degree Start Date: 2024/9
Thesis/Project Title: Does memantine, losartan, or a combination decrease fibrinogen leakage from the blood-brain barrier and microglial reactivity in a rat model of traumatic brain injury.
Present Position: Honours Student
- 2023/9 - 2024/4
Principal Supervisor Sophie Orr (Completed) , Dalhousie University
Student Degree Start Date: 2023/9
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: Mitochondrial Functional Adaptation to Neuronal Activation
Present Position: Research Assistant, Dalhousie University
- 2023/9 - 2024/4
Principal Supervisor Linzhi Wu (Completed) , Dalhousie University
Student Degree Start Date: 2023/9
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: Mitochondrial function as a target in post-traumatic epilepsy
Present Position: Research Assistant
- 2022/8 - 2023/5
Principal Supervisor Sammy Pham (Completed) , Dalhousie University
Student Degree Start Date: 2022/9
Student Degree Received Date: 2023/4
Student Canadian Residency Status: Student Work Permit
Thesis/Project Title: The effect of neuroinflammation on blood-brain barrier repair after traumatic brain injury
Present Position: Graduate Student, Dalhousie University
- 2022/8 - 2023/5
Principal Supervisor Sina Lash (Completed) , Dalhousie University
Specialization: EEG Analysis
Student Degree Start Date: 2022/9
Student Degree Received Date: 2023/4
Student Canadian Residency Status: Permanent Resident
Thesis/Project Title: Sudden slow electroencephalography (EEG) activity in untreated epilepsy patients in Zambia compared to treated epilepsy patients in the United States
Present Position: Research Staff, Friedman Lab Dalhousie University
- 2022/8 - 2023/5
Principal Supervisor Keiran Andrews (Completed) , Dalhousie University
Student Degree Start Date: 2022/9
Student Degree Received Date: 2023/4
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: Mitochondrial dysfunction and oxidative stress – Na⁺/K⁺ ATPase activity during neurometabolic challenges
Present Position: Research Assistant, Dalhousie University
- 2022/8 - 2023/5
Principal Supervisor Caitlin McKenna (Completed) , Dalhousie University
Degree Name: BSc. Nursing
Specialization: Health
Student Degree Start Date: 2022/9
Student Degree Received Date: 2023/4
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: The effect of hypoxia on blood-brain barrier opening following traumatic brain injury
Present Position: Nursing Degree, Dalhousie University

- 2021/7 - 2022/5
Principal Supervisor Anna Minarik (Completed) , Dalhousie University
Student Degree Start Date: 2021/9
Student Degree Received Date: 2022/5
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: The effects of spreading depolarization following traumatic brain injury on cell morphology and function
Present Position: Clinical Research Coordinator, Department of Epileptology- University of Bonn
- 2019/9 - 2020/8
Principal Supervisor Nofar Shemen (Completed) , Ben-Gurion University
Student Degree Start Date: 2019/9
Student Degree Received Date: 2021/8
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Blood-brain barrier dysfunction and MRI analysis
Project Description: Undergraduate Research Project
Present Position: Graduate Student, Weizmann Institute
Student Country of Citizenship: Israel
- 2019/9 - 2020/9
Principal Supervisor Alaa Abu Ahmad (Completed) , Ben-Gurion University
Student Degree Start Date: 2019/9
Student Degree Received Date: 2020/9
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: The Role of Blood-Brain Barrier Dysfunction in Traumatic Stress-Induced Neural Complications
Present Position: Graduate Student PhD, Ben-Gurion University-Dalhousie University
Student Country of Citizenship: Israel
- 2019/4 - 2020/4
Principal Supervisor Griffin Mumby (Completed) , Dalhousie University
Student Degree Start Date: 2019/9
Student Degree Received Date: 2020/4
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: TGF-beta inhibition as a treatment for blood-brain barrier and cortical network slowing in repetitive mild traumatic brain injury
Present Position: Medical Resident, University of Calgary
Student Country of Citizenship: Canada
- 2019/3 - 2020/4
Principal Supervisor Isabelle Roach (Completed) , Dalhousie University
Student Degree Start Date: 2019/9
Student Degree Received Date: 2020/4
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: The retinal blood barrier and traumatic brain injury
Present Position: Rhodes Scholar Graduate Student, Oxford University
Student Country of Citizenship: Canada
- 2018/6 - 2019/5
Principal Supervisor Klara Doelle (Completed) , Dalhousie University
Student Degree Start Date: 2018/9
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: Acute Convulsive Seizures, Blood-Brain Barrier Disruption, and Cognitive Impairment in a Rat Model of Moderate Traumatic Brain Injury
Present Position: PhD Graduate Student, University of Ottawa
Student Country of Citizenship: Canada

2017/9 - 2018/4
Principal Supervisor Jillian Newton (Completed) , Dalhousie University
Student Degree Start Date: 2017/9
Student Degree Received Date: 2018/4
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: Early onset brain pathology as a biomarker for sensitivity to traumatic brain injury
Present Position: Lawyer, Dalhousie University
Student Country of Citizenship: Canada

Master's Thesis [n=33]

2024/9 - 2026/8
Principal Supervisor Aminat Mustapha (In Progress) , Dalhousie University
Student Degree Start Date: 2024/9
Student Canadian Residency Status: Study Permit
Thesis/Project Title: The endocannabinoid system as it pertains to BBB leakage in TBI and epilepsy models.
Student Country of Citizenship: Nigeria

2024/9 - 2026/8
Principal Supervisor Joshua-Adache Ojile (In Progress) , Dalhousie University
Student Degree Start Date: 2024/9
Student Canadian Residency Status: Study Permit
Thesis/Project Title: Human imaging for traumatic brain injury
Student Country of Citizenship: Nigeria

2023/9 - 2025/8
Principal Supervisor Laith Alhadeed (In Progress) , Dalhousie University
Student Degree Start Date: 2023/9
Student Degree Expected Date: 2025/8
Student Canadian Residency Status: Permanent Resident
Thesis/Project Title: Paradoxical Slow Wave Events in a TBI Study
Present Position: Graduate Student MSc, Dalhousie University
Student Country of Citizenship: Jordan

2023/9 - 2025/8
Principal Supervisor Abdulla AlShanti (In Progress) , Dalhousie University
Student Degree Start Date: 2023/9
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: Diagnosis and Treatment of Blood-Brain Barrier Leakage in Repetitive Mild Traumatic Brain Injury
Present Position: Graduate MSc Student, Dalhousie University

2023/9 - 2025/8
Principal Supervisor Sammy Pham (In Progress) , Dalhousie University
Degree Name: MSc
Student Degree Start Date: 2023/9
Student Canadian Residency Status: Study Permit
Thesis/Project Title: TBI Microvessel Isolation
Present Position: Graduate Student, Dalhousie University
Student Country of Citizenship: Viet Nam

2023/5 - 2025/4
Principal Supervisor Wali Khan (In Progress) , Dalhousie University
Degree Name: MSc
Student Degree Start Date: 2023/5
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: Stress and Corticosterone levels in a Female TBI Model
Present Position: Graduate MSc Student, Dalhousie University
Student Country of Citizenship: Canada

- 2023/3 - 2025/6
Principal Supervisor Mazal Partook (In Progress) , Ben Gurion University
Student Degree Start Date: 2023/3
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Biochemical, neuroanatomical and behavioral correlates of stress susceptibility in rats
Present Position: Graduate MSc Student BGU
- 2023/1 - 2025/12
Principal Supervisor Sheizaf Shpilberg (In Progress) , Ben Gurion University
Student Degree Start Date: 2023/1
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: - Neuroanatomical and neurofunctional assessment in acquired brain injury.- Imaging BBB breakdown as a diagnostic and predictive biomarker in age-related cognitive impairments.- R406H mutation in STXBP1 gene as a target for therapy in epileptic encephalopathies and related neurodevelopmental disorders.
Present Position: Graduate Student, Ben Gurion University
Student Country of Citizenship: Israel
- 2022/1 - 2024/12
Principal Supervisor Sol Amara (In Progress) , Ben Gurion University
Student Degree Start Date: 2022/1
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Electroencephalogram data-based analysis of paroxysmal slow wave events patterns in brain pathologies
Present Position: Graduate Student, Ben Gurion University
Student Country of Citizenship: Israel
- 2021/9 - 2024/8
Principal Supervisor Mila Gelfond (In Progress) , Ben Gurion University
Student Degree Start Date: 2021/9
Student Degree Expected Date: 2024/11
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Imaging BBB permeability in MCI patients
Present Position: Graduate Student MSc, Ben-Gurion University
Student Country of Citizenship: Israel
- 2020/10 - 2023/6
Principal Supervisor Alaa Abu Ahmad (Completed) , Ben-Gurion University
Degree Name: PhD
Student Degree Start Date: 2020/10
Student Degree Received Date: 2023/6
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: The Role of Blood-Brain Barrier Dysfunction in Traumatic Stress-Induced Neural Complications
Present Position: Graduate PhD Student, Ben-Gurion University-Dalhousie University
Student Country of Citizenship: Israel
- 2019/10 - 2021/10
Principal Supervisor Ayala Tabak (Completed) , Ben-Gurion University
Degree Name: MSc
Student Degree Start Date: 2019/10
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Age-dependent changes in regional blood-brain barrier permeability: A contrast-enhanced MRI study
Present Position: Graduate Student, Ben-Gurion University
Student Country of Citizenship: Israel

- 2019/9 - 2021/8
Principal Supervisor Lior Schori (Completed) , Ben-Gurion University
Student Degree Start Date: 2019/9
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Hypertensive rats as a model for blood-brain barrier disruption
Present Position: Research Associate, Kadimastem-Biotechnology Company, Nes-Ziona, Israel
Student Country of Citizenship: Israel
- 2018/10 - 2021/4
Principal Supervisor Uri Monsonogo (Completed) , Ben-Gurion University
Student Degree Start Date: 2018/10
Student Degree Received Date: 2021/4
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: The mechanisms underlying blood-brain barrier modulation in response to neuronal activation
Present Position: Israeli Army, Israeli Government
Student Country of Citizenship: Israel
- 2017/9 - 2019/8
Principal Supervisor Olumide Adegunna (Completed) , Dalhousie University
Student Degree Start Date: 2017/9
Student Degree Received Date: 2019/8
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: The role of blood-brain barrier pathology in post-traumatic epilepsy and its co-morbidities
Present Position: PGY4 Neurology resident, University of Toronto/University Health Network
- 2015/10 - 2018/12
Principal Supervisor Dror Rosenbach (Completed) , Ben-Gurion University
Student Degree Start Date: 2015/10
Student Degree Received Date: 2018/1
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Mechanisms underlying neurodegeneration following mild traumatic brain injury
Present Position: PhD Graduate Student Ben-Gurion University
Student Country of Citizenship: Israel
- 2015/10 - 2017/10
Principal Supervisor Netta Elazari (Completed) , Ben-Gurion University
Student Degree Start Date: 2015/10
Student Degree Received Date: 2017/10
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: MRI Study
Present Position: Research Associate, Ben-Gurion University
Student Country of Citizenship: Israel
- 2015/1 - 2018/1
Principal Supervisor Evyatar Swissa (Completed) , Ben-Gurion University
Student Degree Start Date: 2015/1
Student Degree Received Date: 2018/1
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: New approaches for pharmacological prevention of paraoxon-induced brain damage
Present Position: Post-Doctorial Fellow, Ben-Gurion University
Student Country of Citizenship: Israel

- 2010/1 - 2013/12
Principal Supervisor
Chen Tiferet (Completed) , Ben-Gurion University
Student Degree Start Date: 2010/1
Student Degree Received Date: 2013/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: The effect of stress and perceptual load on selective attention using behavioural and EEG measurements The effect of stress on the interaction between attention and emotion perception using a cognitive load paradigm to find the role of attention in emotional visual perception, in stressed and non-stressed healthy subjects and to look for the electrical pattern underlying the emotional perception under these conditions
Present Position: Professor in the Psychology Department at CUNY Queens College, CUNY Queens College
Student Country of Citizenship: Israel
- 2009/8 - 2011/9
Principal Supervisor
Lavi Shachar (Completed) , Ben Gurion University
Student Degree Start Date: 2009/8
Student Degree Received Date: 2011/9
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Clinical research, signal processing and data analysis with humans Location of participating areas of the brain that help processing unconsciously perceived visual stimuli, the order of their activation, and the relevant frequencies used in this process.
Present Position: Product Manager-Algorithm Engineer, Applied Materials, Israel
Student Country of Citizenship: Israel
- 2009/1 - 2012/12
Co-Supervisor
Etti Ashkenazi (Completed) , Ben-Gurion University
Student Degree Start Date: 2009/1
Student Degree Received Date: 2012/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: EEG Analysis in Epileptogenesis and Seizures Signal processing, EEG signals, to predict epileptic seizures, using methods from both EEG and speech processing fields
Present Position: Biomedical Engineer, Israel
Student Country of Citizenship: Israel
- 2009/1 - 2011/12
Co-Supervisor
Ayelet Peer (Completed) , Ben-Gurion University
Student Degree Start Date: 2009/1
Student Degree Received Date: 2011/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Neuroinflammatory Response in Epileptogenesis
Present Position: Tel-Aviv University
Student Country of Citizenship: Israel
- 2009/1 - 2012/12
Co-Supervisor
Netalee Efrat (Completed) , Ben-Gurion University
Student Degree Start Date: 2009/1
Student Degree Received Date: 2012/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: EEG Analysis in Epileptogenesis and Seizures The improvement of Interictal Epilpetiform Discharges (IEDs) detection and classification increases the efficiency of combined EEG source localization and fMRI as complementary methods for non-invasive localization of the epileptic source Automated IED classification can result in objective BOLD response models of IEDs and lead to improvement of non-invasive pre surgical localization of interictal epileptiform activity
Present Position: Weizmann Institute
Student Country of Citizenship: Israel

- 2009/1 - 2012/12
Principal Supervisor
Lyna Kamintsky (Completed) , Ben-Gurion University
Student Degree Start Date: 2009/1
Student Degree Received Date: 2012/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: EEG Analysis in Epileptogenesis and Seizures The development of technologies for the research and treatment of epilepsy, focused on the development of a reliable and unbiased system for the detection of epileptic seizures in real time.
Present Position: Post-Doctoral Fellow Dalhousie University
Student Country of Citizenship: Canada
- 2008/10 - 2010/10
Principal Supervisor
Guy Bar-Klein (Completed) , Ben-Gurion University
Student Degree Start Date: 2008/10
Student Degree Received Date: 2010/10
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: TGFbeta signaling in the BBB deprived cortex with the focus on *in-vivo* electrophysiological recordings and molecular assays of epileptogenic processes and pathologies associated with blood-brain barrier dysfunction. a study of the mechanisms regulating BBB permeability and the following effects leading to potential therapeutic treatments for BBB-related processes, with the emphasis on post-traumatic epilepsy and other epileptogenic syndromes.
Present Position: Executive Director of Research & Strategy, Neurocentria Inc
Student Country of Citizenship: Israel
- 2008/1 - 2011/12
Principal Supervisor
Chen Klein (Completed) , Ben-Gurion University
Student Degree Start Date: 2008/1
Student Degree Received Date: 2011/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Blood-Brain Barrier Opening in a Rat Model of Stroke
Present Position: Researcher Optoelectronics, The Institute of Photonic Sciences, Barcelona, Spain
- 2007/1 - 2009/1
Principal Supervisor
Yehudit Gnatek (Completed) , Ben-Gurion University
Student Degree Start Date: 2007/1
Student Degree Received Date: 2010/1
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Cholinergic Modifications in Stress and Epileptogenesis
Present Position: Senior Research Assistant, Sheba Tel Hashomer Hospital, Israel
Student Country of Citizenship: Israel
- 2006/1 - 2009/12
Co-Supervisor
Merav Ben-Asher (Completed) , Ben-Gurion University
Student Degree Start Date: 2006/1
Student Degree Received Date: 2009/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Signal processing and pattern recognition
Present Position: Senior Computer Vision Researcher, Medtronic, Israel
Student Country of Citizenship: Israel
- 2006/1 - 2010/1
Principal Supervisor
Yifat Bitan (Completed) , Ben-Gurion University
Student Degree Start Date: 2006/1
Student Degree Received Date: 2010/1
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Stress-induced altered cholinergic-glutamatergic interactions in the mouse hippocampus
Present Position: Surgical Neurophysiologist, Tel Aviv Sourasky Medical Center, Israel
Student Country of Citizenship: Israel

- 2005/1 - 2008/12
Principal Supervisor Shy Hefetz (Completed) , Ben-Gurion University
Student Degree Start Date: 2008/1
Student Degree Received Date: 2010/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: EEG Analysis and Signal Processing
Present Position: Chief Scientist, Head of Bio-Medical Engineering, Hi-Sense, Israel
Student Country of Citizenship: Israel
- 2005/1 - 2010/12
Principal Supervisor Assaf Kreh (Completed) , Ben-Gurion University
Student Degree Start Date: 2005/1
Student Degree Received Date: 2010/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Blood-Brain Barrier Imaging: Human Studies Quantitative assessment of vascular permeability using dynamic contrast-enhanced MR imaging
Present Position: Chief MR Radiographer, Assuta Medical Center, Israel
Student Country of Citizenship: Israel
- 2003/1 - 2008/12
Principal Supervisor Haviv Levi (Completed) , Ben-Gurion University
Student Degree Start Date: 2007/1
Student Degree Received Date: 2009/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Blood-brain barrier protection in the photothrombotic stroke model
Present Position: Biomedical Engineer, R&D researcher in Pharmacology Department, Teva Pharmaceuticals, Israel
- 2000/1 - 2003/12
Principal Supervisor Akiva Korn (Completed) , Ben-Gurion University
Student Degree Start Date: 2000/1
Student Degree Received Date: 2003/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Focal cortical abnormal activity under BBB breakdown: a human study
Project Description: cortical electrophysiology
Present Position: Director of the Intraoperative Neurophysiology Service Tel Aviv Sourasky Medical Center
Student Country of Citizenship: Israel

Doctorate [n=33]

- 2023/9 - 2027/8
Principal Supervisor Alaa Abu Ahmad (In Progress) , Ben Gurion University
Student Degree Start Date: 2023/9
Student Degree Expected Date: 2027/8
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: The Role of Blood-Brain Barrier Dysfunction in Traumatic Stress-Induced Neural Complications
Present Position: Graduate PhD Student, Ben-Gurion University
- 2022/8 - 2026/7
Principal Supervisor Moussa Hamati (In Progress) , Dalhousie University
Student Degree Start Date: 2022/9
Student Degree Expected Date: 2026/7
Thesis/Project Title: Microvascular pathology as a therapeutic target for epilepsy
Present Position: Graduate Student PhD, Dalhousie University

2021/9 - 2025/8
Principal Supervisor Hamza Imtiaz (In Progress) , Dalhousie University
Student Degree Start Date: 2021/9
Student Degree Expected Date: 2025/8
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: Biomarkers for brain disorders
Present Position: Graduate Student PhD, Dalhousie University

2021/8 - 2025/8
Principal Supervisor Jamil Muradov (In Progress) , Dalhousie University
Student Degree Start Date: 2021/8
Student Degree Expected Date: 2025/7
Student Canadian Residency Status: Study Permit
Thesis/Project Title: Exploring mechanisms underlying traumatic brain injury-related microvasculopathy
Present Position: Graduate Student PhD, Dalhousie University
Student Country of Citizenship: Azerbaijan

2020/9 - 2025/8
Principal Supervisor Sheida Mirloo (In Progress) , Dalhousie University
Student Degree Start Date: 2020/9
Student Degree Expected Date: 2025/8
Student Canadian Residency Status: Student Work Permit
Thesis/Project Title: Processing, analyzing and implementing new algorithms for brain MR images
Present Position: Graduate Student PhD, Dalhousie University
Student Country of Citizenship: Iran

2020/7 - 2025/12
Principal Supervisor Saara Mansoor (In Progress) , Dalhousie University
Student Degree Start Date: 2020/7
Student Degree Expected Date: 2025/6
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: Exploring the therapeutic effect of corticosterone to reduce repetitive mild TBI susceptibility
Present Position: Graduate Student PhD, Dalhousie University
Student Country of Citizenship: Canada

2019/9 - 2025/12
Principal Supervisor Florent Boyer-Ayme (In Progress) , Ben-Gurion University
Student Degree Start Date: 2019/9
Student Degree Expected Date: 2025/2
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Spreading depression in models of epilepsy
Present Position: Graduate Student PhD, Ben-Gurion University
Student Country of Citizenship: France

2018/9 - 2024/12
Principal Supervisor Pooyan Moradi (In Progress) , Dalhousie University
Student Degree Start Date: 2018/9
Student Degree Expected Date: 2025/9
Student Canadian Residency Status: Study Permit
Thesis/Project Title: TGF β signalling and blood-brain barrier dysfunction as targets for treatment for repetitive mild traumatic brain injury
Present Position: Graduate Student PhD, Dalhousie University

2017/9 - 2024/7
Principal Supervisor Shayna Cort (Completed) , Dalhousie University
Student Degree Start Date: 2017/9
Student Degree Received Date: 2024/7
Student Canadian Residency Status: Permanent Resident
Thesis/Project Title: Blood-brain barrier Pathology as a Bio-marker and Target for Treatment of Traumatic Brain Injury and Post-traumatic epilepsy
Present Position: Graduate Student PhD, Dalhousie University Medical School
Student Country of Citizenship: Antigua and Barbuda

2017/1 - 2022/4
Principal Supervisor Evyatar Swissa (Completed) , Ben-Gurion University
Student Degree Start Date: 2017/1
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: BBB modulation in health and disease
Present Position: Post Doctoral Fellow, Ben-Gurion University

2016/9 - 2020/3
Principal Supervisor Refa't Abo Ghazleh (Completed) , Dalhousie University
Student Degree Start Date: 2016/8
Student Degree Received Date: 2020/3
Student Canadian Residency Status: Study Permit
Thesis/Project Title: The Role of Cortical Spreading Depolarizations in Traumatic Brain Injury Outcome
Present Position: Lecturer Al-Balqa Applied University Jordan, Al-Balqa Applied University
Student Country of Citizenship: Jordan

2016/9 - 2019/7
Principal Supervisor Ellen Parker (Completed) , Dalhousie University
Student Degree Start Date: 2016/8
Student Degree Received Date: 2019/7
Thesis/Project Title: Pro-inflammatory Transforming Growth Factor Beta Signalling as a Therapeutic Target for Repetitive Mild Traumatic Brain injury
Present Position: Resident QE11, Dalhousie University
Student Country of Citizenship: Canada

2015/9 - 2021/4
Principal Supervisor Lyna Kamintsky (Completed) , Dalhousie University
Specialization: MRI
Student Degree Start Date: 2015/9
Student Degree Received Date: 2021/4
Student Canadian Residency Status: Permanent Resident
Thesis/Project Title: Neuropsychiatric Correlates of Blood-Brain Barrier Leakage
Present Position: Post-Doctoral Fellow, Dalhousie Univ. & Emagix Inc. (Mitacs Fellow), Dalhousie University
Student Country of Citizenship: Canada

2015/1 - 2019/8
Principal Supervisor Svetlana Lublinsky (Completed) , Ben-Gurion University
Student Degree Start Date: 2015/1
Student Degree Received Date: 2019/8
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Dedicated image processing algorithm for quantitative assessment of BBB damage
Present Position: Biomedical Engineer, Intel. Israel
Student Country of Citizenship: Israel

- 2014/9 - 2019/9
Principal Supervisor Yehuda Vazana (Completed) , Ben-Gurion University
Student Degree Start Date: 2014/9
Student Degree Received Date: 2019/9
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Glutamatergic modulation of Blood-Brain Barrier Permeability: Underlying Mechanisms and Therapeutic Implications
Present Position: Head of Directed Studies, Lahav Contract Research, Israel, Lahav Contract Research, Israel
Student Country of Citizenship: Israel
- 2012/10 - 2020/4
Principal Supervisor Ronel Veksler (Completed) , Ben-Gurion University
Student Degree Start Date: 2012/10
Student Degree Received Date: 2020/4
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Development, Implementation and Evaluation of Imaging-Based Methods for Quantifying Blood-Brain Barrier Integrity in Human Patients: Towards a Routine Clinical Use in Neurological Disorders
Present Position: Co-Founder and CEO@ Promise Bio, Promise Bio
Student Country of Citizenship: Israel
- 2012/1 - 2019/11
Principal Supervisor Dan Milikovsky (Completed) , Ben-Gurion University
Student Degree Start Date: 2012/1
Student Degree Received Date: 2019/11
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: The role of the blood-brain barrier in neurodegeneration and epileptogenesis. To uncover mechanisms of interactions between albumin and white matter and an investigation of inflammatory processes underling epileptogenesis.
Present Position: Neurology Resident & Researcher, Tel-Aviv Medical Center
Student Country of Citizenship: Israel
- 2010/10 - 2014/12
Principal Supervisor Guy Bar-Klein (Completed) , Ben-Gurion University
Specialization: CEO and Co-Founder, Obex Therapeutics
Student Degree Start Date: 2010/10
Student Degree Received Date: 2014/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: The role of TGFbeta signaling in Epileptogenesis
Present Position: Executive Director of Research and Strategy, Neurocentria Inc.
Student Country of Citizenship: Israel
- 2010/1 - 2015/8
Principal Supervisor Mike Fassler (Completed) , Ben-Gurion University
Student Degree Start Date: 2010/9
Student Degree Received Date: 2015/8
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: The development of efficient lentiviral-mediated methods for specific gene targeting of cells from the rodent central nervous system (CNS). A novel approach in a model of epilepsy to study the role of astrocytes in the pathogenesis of the disease and challenge its use as a therapeutic tool.
Present Position: Head of Cardiology Research Laboratory, Kaplan Medical Center, Kaplan Medical Center
Student Country of Citizenship: Israel

- 2009/1 - 2017/1
Principal Supervisor Karl Schoknecht (Completed) , Charité Medical University
Student Degree Start Date: 2009/1
Student Degree Received Date: 2017/1
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Blood-brain barrier and epileptogenesis following cerebro-vascular injury
Present Position: Researcher, Carl-Ludwig-Institute for Physiology, Medical Faculty, University of Leipzig, Germany
Student Country of Citizenship: Germany
- 2009/1 - 2014/12
Principal Supervisor Rotem Saar-Ashkenazy (Completed) , Ben-Gurion University
Student Degree Start Date: 2009/1
Student Degree Received Date: 2014/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Structural and functional brain alterations and their relation to emotion regulation and memory deficits in post-traumatic patients using cognitive experimental psychology behavioral tasks.
Present Position: Senior Lecturer Ashkelon Academic College, Israel, Ashkelon Academic College, Israel
Student Country of Citizenship: Israel
- 2008/10 - 2012/10
Co-Supervisor Maya Ketzef (Completed) , Ben-Gurion University
Student Degree Start Date: 2008/10
Student Degree Received Date: 2012/10
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: The development of epilepsy (epileptogenesis) in a genetic model for epilepsy - the Synapsin triple knock out (TKO) mice using in-vitro intra and extra cellular recordings, RT-PCR, immunohistology, single channel surface and depth electrode EEG recordings
Present Position: Researcher, Assistant Professor Karolinska Institute Stockholm, Sweden, Karolinska Institute Sweden
Student Country of Citizenship: Israel
- 2008/9 - 2014/10
Principal Supervisor Itai Weissberg (Completed) , Ben-Gurion University
Student Degree Start Date: 2008/9
Student Degree Received Date: 2014/10
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: The mechanisms connecting brain insults to epilepsy and the role of albumin in EEG analysis, epileptogenesis and seizure detection (MD-PhD)
Present Position: Cardiology Fellow - Soroka Medical Center, Soroka Medical Center, Israel
Student Country of Citizenship: Israel
- 2008/1 - 2015/12
Co-Supervisor Nitzan Levy (Completed) , Ben-Gurion University
Student Degree Start Date: 2008/1
Student Degree Received Date: 2015/1
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Blood-Brain Barrier and Epileptogenesis
Present Position: Business Development Associate at Octomera, Octomera, Israel
Student Country of Citizenship: Israel

- 2007/1 - 2015/12
Principal Supervisor Ofer Prager (Completed) , Ben-Gurion University
Student Degree Start Date: 2007/1
Student Degree Received Date: 2015/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Neurovascular Coupling under Blood-Brain Barrier Injury: Focus on *in-vivo* imaging and quantification of dynamic changes in cerebral blood flow and blood-brain barrier (BBB) permeability under normal and pathological brain conditions, including a study of the mechanism underlying the relationship between the integrity of the BBB and neurovascular-coupling function
Project Description: blood-brain barrier and epileptogenesis
Present Position: Laboratory Manager and Research Associate, BGU Israel, Ben-Gurion University
Student Country of Citizenship: Israel
- 2006/1 - 2011/12
Principal Supervisor Yaron David (Completed) , Ben-Gurion University
Student Degree Start Date: 2003/1
Student Degree Received Date: 2011/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: The mechanisms of epileptogenesis following blood-brain barrier disruption and the effects of TGF-beta on the brain. Examined the role of the blood-brain barrier in various diseases and in particular, its role in the pathogenesis in secondary epilepsies. (MD-PhD)
Present Position: CTO & Co-Founder at BioRaptor.AI, Israel, BioRaptor, Israel
Student Country of Citizenship: Israel
- 2003/1 - 2006/12
Principal Supervisor Sebastian Ivens (Completed) , Charite Medical University
Student Degree Start Date: 2003/1
Student Degree Received Date: 2006/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Focal blood-brain-barrier disruption induces epileptiform activity in the rat neocortex
Present Position: Physician, Researcher at Charité Medical University, Berlin, Germany
Student Country of Citizenship: Germany
- 2002/1 - 2010/12
Principal Supervisor Jonathan Cohen (Completed) , Ben-Gurion University
Specialization: Senior Lecturer at Hebrew University, Israel
Student Degree Start Date: 2002/10
Student Degree Received Date: 2010/11
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Biochemical, Neuroanatomical and Neurophysiological Characteristics of the Stress Response The role of acetylcholinesterase in adult murine dentate gyrus neurogenesis and post traumatic stress disorder: genetic, biochemical, neuroanatomical, neurophysiological and cognitive aspects.
Present Position: Director of Clinical Research at the Sharett Institute of Oncology Senior Lecturer in Hebrew Uni, Sharett Institute, Israel
Student Country of Citizenship: Israel
- 2002/1 - 2005/12
Principal Supervisor Ernst Seiffert (Completed) , Charite Medical University
Student Degree Start Date: 2002/1
Student Degree Received Date: 2005/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Blood-Brain Barrier and Epileptogenesis: TGF- β receptor-mediated albumin uptake into astrocytes is involved in neocortical epileptogenesis
Present Position: MD Berlin-Brandenburg Germany
Student Country of Citizenship: Germany

- 2001/1 - 2006/12
Principal Supervisor Orié Brown (Completed) , Ben-Gurion University
Student Degree Start Date: 2001/1
Student Degree Received Date: 2006/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Cholinergic Modifications in Stress and Epileptogenesis
Present Position: Regional Medical Director at Physicians Immediate Care Israel
Student Country of Citizenship: Israel
- 2000/1 - 2010/12
Principal Supervisor Oren Tomkins-Netzer (Completed) , Ben-Gurion University
Specialization: Retina and Uveitis Consultant
Student Degree Start Date: 2001/1
Student Degree Received Date: 2011/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: TGF- receptor-mediated albumin uptake into astrocytes is involved in neocortical epileptogenesis
Present Position: Associate Professor of Ophthalmology, Faculty of Medicine, Technion, Israel, and Director of Ophthalmology, Carmel Medical Center Israel
Student Country of Citizenship: Israel
- 2000/1 - 2007/12
Principal Supervisor Lev Pavlovsky (Completed) , Ben-Gurion University
Student Degree Start Date: 2000/1
Student Degree Received Date: 2007/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Cholinergic Modifications in Stress and Epileptogenesis
Present Position: Clinical Associate Professor of Dermatology at Tel Aviv University's Medical School, Tel Aviv University's Medical School, Israel
Student Country of Citizenship: Israel
- 1998/1 - 2003/12
Co-Supervisor Nadav Astman (Completed) , Ben-Gurion University
Student Degree Start Date: 1998/1
Student Degree Received Date: 2003/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Cortical Electrophysiology
Present Position: Medical Doctor, Department of Dermatology, Sheba Medical Center, Ramat Gan, Israel
Student Country of Citizenship: Israel

Post-doctorate [n=10]

- 2023/9 - 2025/8
Principal Supervisor Hannah Reid (In Progress) , Dalhousie University
Student Degree Start Date: 2023/9
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: CB2 and the blood-brain barrier
Present Position: Post-Doctoral Fellow, Dalhousie University
- 2022/2 - 2023/1
Principal Supervisor Yonatan Serlin (Completed) , Dalhousie University
Student Degree Start Date: 2022/2
Student Degree Received Date: 2023/1
Thesis/Project Title: Canadian League Against Epilepsy Epilepsy Post-Graduate Training Fellowship Award
Present Position: Fellowship, NIH Maryland, Dalhousie University/QE11Hospital

- 2021/7 - 2022/6
Principal Supervisor Mark MacLean (Completed) , Dalhousie University
Student Degree Start Date: 2021/7
Student Degree Received Date: 2022/6
Thesis/Project Title: Exploring Mechanisms Underlying Mild Traumatic Brain Injury Related Microvasculopathy
Present Position: MD Neurology QE11 Hospital Halifax, NS
Student Country of Citizenship: Canada
- 2021/5 - 2024/9
Principal Supervisor Lyna Kamintsky (In Progress) , Dalhousie University
Student Degree Start Date: 2022/9
Thesis/Project Title: Biomarkers for BBB Dysfunction using MRI Analysis
Present Position: Post-Doctoral Fellow, Dalhousie University
- 2019/8 - 2024/6
Principal Supervisor Gerben Van Hameren (In Progress) , Dalhousie University
Student Degree Start Date: 2019/8
Student Canadian Residency Status: Work Permit
Thesis/Project Title: Effect of reactive oxygen species on neurovascular decoupling in epilepsy and mitochondrial functional adaptation to neuronal activation
Present Position: Post-Doctoral Fellow, Dalhousie University
Student Country of Citizenship: Netherlands

Project Funding Sources: Cure Foundation - Taking Flight Award
Amount - 125,538 (Canadian dollar) ; Mathematics of Information Technology and Complex Systems (MITACS) (Canadian dollar)
- 2016/1 - 2017/12
Principal Supervisor Aaron Winter (Completed) , Dalhousie University
Student Degree Start Date: 2018/9
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: Vascular pathology in TBI animals
Present Position: MD., Department of Ophthalmology, University of California, San Diego | UCSD · Department of Ophthalmology MD, MSc
- 2015/1 - 2015/8
Principal Supervisor Guy Bar-Klein (Completed) , Ben Gurion University
Specialization: CEO and Co-Founder, Obex Therapeutics
Student Degree Start Date: 2014/9
Student Degree Received Date: 2015/8
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Imaging blood-brain barrier as a biomarker for epileptogenesis: a pre-clinical study. Role of TGFbeta signaling in Epileptogenesis
Present Position: Executive Director of Research and Strategy, Neurocentria Inc
Student Country of Citizenship: Israel

Areas of Research: Convulsive Disorders/ Epilepsy
- 2012/10 - 2015/9
Principal Supervisor Yoash Chassidim (Completed) , Ben-Gurion University of the Negev
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Blood-brain barrier imaging and development of image analysis methods for quantifying vascular permeability The image and signal analysis and algorithmic perspectives of blood brain barrier imaging, cerebral blood flow analysis methods, retinal computer aided diagnostic, dynamic contrast enhanced MRI, early detection of seizures and fetus 4th ventricle shape analysis.
Present Position: Researcher and Instructor Sapir College, Israel, Sapir College, Israel
Student Country of Citizenship: Israel

2008/10 - 2010/9
Principal Supervisor Lev Pavlovsky (Completed) , Ben-Gurion University of the Negev
Student Degree Start Date: 2008/10
Student Degree Received Date: 2010/9
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Cholinergic hippocampal functional modulation under stress
Present Position: Professor Department of Dermatology Rabin Medical Center Israel

2004/1 - 2007/12
Principal Supervisor Naim Najami (Completed) , Ben-Gurion University
Student Degree Start Date: 2004/1
Student Degree Received Date: 2007/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Cholinergic Modifications in Stress and Epileptogenesis
Present Position: Head of the Biology Department. Academic Arab College for Education in Israel - Haifa, Arab College of Education, Haifa, Israel

Research Associate [n=6]

2022/9 - 2023/8
Principal Supervisor Laith Alhadeed (All But Degree) , Dalhousie University
Student Degree Start Date: 2022/1
Thesis/Project Title: Exploring the therapeutic effect of corticosterone
Present Position: Graduate Student, Dalhousie University

2019/4 - 2023/5
Principal Supervisor Rylan Smith, Dalhousie University
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: Global Affairs Canada- Havana Syndrome
Present Position: Medical Student Dalhousie University

2019/4 - 2019/9
Principal Supervisor Amanda Adams, Dalhousie University
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: Environmental Enrichment in a TBI model
Present Position: Graduate Student, Mount Saint Vincent University

2018/7 - 2021/6
Principal Supervisor Shahar Feiglin, Ben-Gurion University
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Cranial window model
Present Position: MD student, University Medical Center Israel
Student Country of Citizenship: Israel

2015/11 - 2023/3
Principal Supervisor Daniel Zelig, Ben-Gurion University
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: MRI analysis
Present Position: MD student, University Medical Center Israel
Student Country of Citizenship: Israel

2015/2 - 2017/11
Principal Supervisor Adiel Charbash, Ben-Gurion University
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Processing, analyzing and implementing new algorithms for brain MR images
Present Position: Biomedical Engineer, Applied Materials, Rehovot, Israel
Student Country of Citizenship: Israel

Technician [n=1]

2012/9 - 2014/10
Principal Supervisor Liron Sheintuch, Ben Gurion University
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: MRI Analysis
Present Position: Graduate Student, Weizmann Institute
Student Country of Citizenship: Israel

Staff Supervision

Number of Scientific and Technical Staff: 16

Number of Visiting Researchers: 6

Number of Highly Qualified Personnel in Research Training: 17

Number of Employees: 7

Number of Volunteers: 9

Event Administration

Organizer, 1st International Symposium: Drug Resistant Epilepsy: From Basic Science to Pharmacological and Surgical Management, Conference, 1st International Symposium Epilepsy Beer-Sheva, 2007/12 -

Organizer, Cholinergic signaling- From Genes to Environment, Conference, 2007/12 -

Organizer, Cortical Circuitry, Conference, 2006/12 -

Organizer, Blood-Brain Barrier Dysfunction in Neurological Diseases : Clinical Studies, Underlying Mechanisms and Therapeutic Implications, Conference, Beer-Sheva & Sde Boker, 2012/12 -

<http://bbb2012negev.med.ad.bgu.ac.il/index.html>

Organizer, Dalhousie University-Ben Gurion University-Trinity College Retreat, Workshop, Alon Friedman, 2023/9 - 2023/9

Joint lab retreat held at Trinity College in Dublin, Ireland to discuss related research and collaboration.

Organizer, International meeting in Epilepsy Genetics and the young researcher meeting, Conference, 2013/12 - 2013/12

International meeting (Sde Boker) for Epilepsy Genetics

Organizer, 2nd International Symposium: Drug Resistant Epilepsy: From Basic Science to Pharmacological and Surgical Management, Conference, 2nd International Symposium Epilepsy Beer-Sheva, 2009/12 -

2022/10 - 2022/10 Organizer/Host, Organized Retreat - The Brain Injury Cluster (BRC) and The Blood-Brain Barrier Group Retreat Oak Island Resort October 21-22, 2022, Workshop, Alon Friedman

2022/5 - 2022/5 Organizer, Picchione Lecture Series, Seminar, Dalhousie University, 2022/5 - 2022/5
Organizer and speaker-Picchione Lecture Series Research and the Future of Health Care: Childhood Adversity and Consequences on the Child and Society open to the public May 2019

2020/10 - 2020/10 Organizer/Host, Organized Retreat- The Blood-Brain Barrier Groups Annual Retreat Pathogenesis of Neurological Disorders: From Blood to Brain and Back Beer-Sheva – Rehovot – Zanjan – Mfuwe - Leipzig –Halifax- Berkeley October 20-21st, 2020 Inverness Resort Cape Breton, Workshop, Alon Friedman

2020/6 - 2020/6 Organizer/Host, Presenter, Conference-The Dalhousie Medical Research Foundation Canada- Israel-Atlantic Collaboration for Brain Studies, Conference, Alon Friedman

2019/11 - 2019/11 Presenter, Cuba at 60 Conference, Conference, Dalhousie University, 2019/11 - 2019/11
Cuba at 60 Conference Dalhousie University: Speaker at 3-day symposium with forty internationally renowned Cuba scholars, policymakers and policy analysts. Open to the public November 2019

2018/9 - 2018/9 Organizer, Trans-Atlantic Blood-Brain Barrier Group, Workshop, Alon Friedman, 2018/9 - 2018/9
Presentations by collaborating labs from Berkeley, Ben Gurion and Dalhousie Universities

Editorial Activities

2014/1 Editor, Neuroimmunology and Neuroinflammation, Journal
Research Disciplines: Neurosciences

2013/1 Editor, Seminars Cell and Dev. Biology, Journal
Special Issue; "Blood-brain barrier"

2011/1 Invited Guest Editor, Epilepsia Special Issue, Journal
Blood-brain Barrier Dysfunction in Epileptogenesis

2010/1 Invited Guest Editor, Cardiovascular Psychiatry and Neurology, Journal
Blood-Brain Barrier Breakdown and Blood-brain Barrier Communication in Neurological and Psychiatric Diseases

2009/1 Editor, The Open Biology Journal, Journal
Editor/Member of Editorial board

2009/1 Editor, TurkiyeKlinikleri Journal of Medical Sciences, Journal
Editor/Member of Editorial Board

2010/1 - 2012/12 Editorial Board, Epilepsia, Journal
Editor/Member of Editorial Board

Journal Review Activities

Reviewer, Epilepsy Research

Reviewer, FEBS Journal

Reviewer, Epilepsia

2009/1 Editor, The Open Biology Journal

2009/1 Editor, TurkiyeKlinikleri Journal of Medical Sciences

2008/1 Reviewer, GLIA
Number of Works Reviewed / Refereed: 3

2008/1 Reviewer, Journal of Cerebral Blood Flow and Metabolism
Number of Works Reviewed / Refereed: 3

2007/1 Reviewer, Brain
Number of Works Reviewed / Refereed: 6

2007/1 Reviewer, Neurobiology of Disease
Number of Works Reviewed / Refereed: 15

2006/1 Reviewer, Journal of Neurology
Number of Works Reviewed / Refereed: 7

2006/1 Reviewer, Nature Medicine
Number of Works Reviewed / Refereed: 3

2006/1 Reviewer, Neurosurgery and Psychiatry
Number of Works Reviewed / Refereed: 5

Organizational Review Activities

External Reviewer of Neuroscience grants, Canadian Institutes of Health Research
 Reviewer of Grants, The Psychobiology Institute
 Grant Reviewer

Reviewer for Grant Agency, European Union
 Reviewer for grant agencies

Reviewer of Grants, The German-Israeli Foundation
 Grant Reviewer

External Reviewer of Neuroscience Grants, Israeli Academy of Sciences
 Grant Reviewer

Reviewer of Grants, Deutsche-Forschung Gemeinschaft DFG, German Academy of Sciences) European Union
 Grant Reviewer

External Reviewer of Neuroscience grants, National Research Council Canada
 Reviewer of Grants, Binational Israel-USA Science Foundation (BSF)
 Grant Reviewer

Reviewer of Grants, French ANR
 Grant Reviewer

Event Participation

2014/4 Invited member, Translational task force of the neurobiology commission of the ILAE, Basic Science, Conference
 Invited member of the working group for the Translational Task Force of the Neurobiology commission of the ILAE

2010/1 Invited Member, Task Force on Basic Sciences The International League Against Epilepsy, Association

2022/5 - 2022/5 Presenter, "Current Challenges in Traumatic Brain Injury" Joyce Massey Traumatic Brain Injury Summit Ann Arbor, University of Michigan May 5th, 2022, Conference
 Panel discussion on "current challenges in TBI"

2019/11 - 2019/11 Presenter, Cuba at 60 Conference, Conference, 2019/11 - 2019/11
 Havana Syndrome and low level pesticide exposure

2019/9 - 2019/9 Attendee, EPITARGET meeting, Conference, 2019/9 - 2019/9

2019/6 - 2019/6 Attendee, XV Workshop on Neurobiology of Epilepsy, Conference, 2019/6 - 2019/6
 Discussion of epileptic seizure types, preclinical models and humans and highlighting possible limitations of existing approaches for seizure detection, classification and translation across species.

2019/5 - 2019/5 Attendee, Society of Biological Psychiatry, Conference, 2019/5 - 2019/5
 Blood brain barrier imaging as a new biomarker in psychiatric disorders.

2019/4 - 2019/4 Attendee, London Colloquium Status Epilepticus, Conference, 2019/4 - 2019/4
 The colloquium will provide an update for clinicians on cutting edge clinical practise in relation to the diagnosis and treatment of status epilepticus and acute seizures and put new developments into clinical context.

Community and Volunteer Activities

- 2021/6 - 2035/5 Volunteer/Research Coordinator, Mfuwe Medical Clinic-Zambia
 Volunteer in a rural medical clinic in Zambia Goals of Our Project: Improve diagnosis of epilepsy and encourage correct treatment. Research to better understand the causes of high prevalence of epilepsy in the Mfuwe Region. Educate, increase awareness, and reduce stigma of epilepsy in the community. Develop new approaches to diagnose epilepsy in rural settings, including the use of telemedicine. Our team visited the Kakumbi Rural Health Clinic and focused on seeing patients to confirm their diagnosis of epilepsy and to learn about the local challenges in the diagnosis and treatment in this region. We did this by conducting a structured interview, EEG testing, providing recommendations for medications, and educating patients and their families about epilepsy. We are continuing to work with healthcare professionals so they can continue to confirm the diagnosis of epilepsy.
- 2005/1 - 2011/12 Physician, Physicians for Human Rights
 Volunteering as a physician in a mobile clinic in the occupied territories, the West Bank and Palestine.
- 1988/1 - 1991/12 Coordinator of civil rights, Association for Civil Rights in Israel
 Coordinator of civil rights in the Gaza Strip

Knowledge and Technology Translation

- 2016/1 - 2030/12 Founder, Involvement in/Creation of Start-up
 Target Stakeholder: Healthcare Personnel
 Outcome / Deliverable: EMAGIX Inc., has commercialized patented algorithms, which will provide clinicians with a sensitive and quantitative means of evaluating the integrity of the blood-retinal barrier, as a proxy for assessing small-vessel pathology in the brain. This will enable non-invasive, inexpensive diagnosis of early brain pathology, so measures can be taken to slow down the damage.
 Activity Description: Foundation of EMAGIX, a start-up company for digital image analysis for the early diagnosis of retinal and neurodegenerative disorders

International Collaboration Activities

- 2015/1 - 2035/12 co-Investigator, Israel
 Dr. Merav Shamir, Hebrew University, continuous research collaboration with grants and journal publications.
- 2021/1 - 2031/12 co-Investigator, Ireland
 Dr. Mathew Campbell, Trinity College, Dublin (continuous research collaboration)
- 2021/1 - 2031/12 co-Investigator, Italy
 Dr. Annamaria Vezzani (Milan, Italy) on the role of brain pathological activity and neuroinflammation in epileptogenesis. Funded by a European grant (ERANET). continuous collaboration
- 2019/1 - 2031/12 co-Investigator, United States of America
 Dr. Ramon Diaz-Arrastia, University of Pennsylvania (research collaboration, under NIH grant)
- 2019/1 - 2031/12 co-Investigator, Germany
 Dr. Karl Schoknecht, Leipzig University, Germany (continuous research collaboration)

2021/1 - 2030/12	co-Investigator, Zambia Mr. Andrew Malunga – Global Health (continuous Research collaboration) on epilepsy diagnosis and awareness in Mfuwe District, Rural Zambia, joint grant
2014/7 - 2030/8	co-Investigator, Germany Continuous research collaboration with Dr. Jens Dreier (Charité, Berlin) on the role of brain pathological activity and neuroinflammation in epileptogenesis. Funded by a European grant (ERANET).
2014/1 - 2030/8	co-Investigator, United States of America Research collaboration with Dr. Daniela Kaufer (UC Berkeley) on the role of blood-brain barrier in brain pathology.
2014/7 - 2030/7	co-Investigator, United States of America Continuous research collaboration with Dr. Lee Goldstein (Boston University) on the role of blood-brain barrier dysfunction in post-traumatic complication and neurodegeneration.
2020/4 - 2030/3	co-Investigator, Jordan Dr. Refa't Abo Ghazleh, Balqa Applied University, Salt Jordan (continuous research collaboration)
2022/2 - 2026/1	co-Investigator, United States of America Longitudinal MRI Investigation of Traumatic Microvascular Injury with Dr. Jeffrey Ware, University of Pennsylvania (research collaboration under NIH grant)

Committee Memberships

2017/9	Committee Member, Dalhousie Brain Repair Executive Committee, Dalhousie University
2012/1 - 2014/7	Chair, Cognitive and Brain Sciences Teaching Program (undergraduate and graduate), Ben-Gurion University of the Negev
2011/1 - 2014/7	Chair, Director of the Zlotowski Center for Neuroscience, Ben-Gurion University of the Negev
2007/1 - 2011/12	Co-chair, Department of Biomedical Engineering, Ben-Gurion University of the Negev

Other Memberships

2022/1	Committee Member & Reviewer, Canadian Institute of Health Research Committee Member & Reviewer Neuroscience Panel Canadian Institute of Health Research
2004/1	member, International League Against Epilepsy
2000/1	member, Federation of European Neuroscience Societies
1996/1	member, Israeli Societies for Neuroscience
1984/1	member, Society for Neuroscience Research
2014/3 - 2016/12	Invited Member, The International League against Epilepsy Invited member of the working group of the Translational Task Force of the Neurobiology Commission of the ILAE, Basic Science
1996/1 - 2001/12	member, European Society of Clinical Neurophysiology

Presentations

1. Mark MacLean, David Clarke. (2024). Memantine for the treatment of complicated mild traumatic brain injury: proposal for a randomized trial. 16th Canadian Traumatic Brain Injury Research Consortium Scientific Meeting Lake Louise, Alberta. February 7-8th 2024., Lake Louise, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
2. (2023). Blood-brain barrier pathology in epilepsy: from bench to bedside. 35th International Epilepsy Conference 2-6 September 2023 Dublin, Ireland New Frontiers in Blood brain barrier regulation and epilepsy, Dublin, Ireland
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
3. (2023). Neuro-glia-vascular interactions in brain disorders: From bench to bed. 15th Göttingen Meeting of the German Neuroscience Society 2023, Gottingen, Germany
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
4. (2023). Brain Mechanisms of Concussion: From Bench to Bed. Canadian Concussion Network CCN-RCC 3rd Annual Meeting June 15-16, 2023, Calgary, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
5. Mark A. MacLean , Jamil H. Muradov , Ryan Greene , Gerben Van Hameren , David B. Clarke Alon Friedman. (2023). NMDA-Receptor Antagonism for the Prevention of Neurological Dysfunction in Traumatic Brain Injury: Results of a Randomized Pre-Clinical Trial. Canadian Neurological Sciences Federation's Congress 2023, Banff, Canada
Main Audience: Researcher, Competitive?: Yes
6. Maclean, M.A. Muradov, J. H., Pickett, G. E., Friedman, A., Weeks, A., Volders, D. (2022). Contrast-Induced Encephalopathy Following Endovascular Therapy for Cerebrovascular Disease. Clinical Neuroscience Research Day 2022, Halifax, Canada
Main Audience: Knowledge User
Invited?: Yes, Keynote?: No, Competitive?: No
7. Pooyan Moradi, Gerben Van Hameren, Ellen Parker, Alon Friedman. (2022). Concussion susceptibility and neurovascular dysfunction as a predictor for short- and long-term complications of repetitive mild traumatic brain injury. Dalhousie University Faculty of Medicine Research Day, Halifax, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No
8. (2022). Exploring Mechanisms Underlying Mild and Moderate Traumatic Brain Injury-Related Microvasculopathy. Current Challenges in Traumatic Brain Injury Joyce Massey Traumatic Brain Injury Summit Ann Arbor, University of Michigan May 5th, 2022, Ann Arbor, United States of America
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
- [9.](#) (2022). Blood-brain barrier dysfunction and associated neuroinflammatory response in neuropsychiatric disorders: time for translation. 21st Annual Congress of the Israeli Society of NeuroImmunology, Kfar Blum, Israel
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
10. (2022). The Role of Vascular Barriers in Neurological Disorders: From Bed to Bench and Back. Clinical Neuroscience Grand Rounds Guest Speaker QEII Health Sciences Centre, Halifax, Canada
Main Audience: Knowledge User
Invited?: Yes, Keynote?: Yes

11. (2021). Vascular dysfunction in epilepsy: a new target for diagnosis and therapy?. Canadian Epilepsy Research Initiative CERI Virtual Symposium, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
12. (2019). Neurovascular Interactions and blood-brain barrier dysfunction in neurological disorders: From bed to bench and back. Research Day, Dalhousie University Department of Physiology and Biophysics, Halifax, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
13. (2019). The Role of Blood-Brain Barrier Pathology in Post-Traumatic Epilepsy. Canadian League Against Epilepsy, Winnipeg, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No
14. (2019). Imaging blood-brain barrier permeability in health and disease—A mechanism-driven biomarker in brain disorders?. Society of Biological Psychiatry, Chicago, United States of America
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
15. Griffin Mumby, E. Parker, P. Moradi O. Adegunna, D. Milikovsky, N. Hacoheh, E. Hanael A. Friedman. (2019). Poster title: TGF β inhibition as a treatment for blood-brain barrier dysfunction and cortical network slowing in repetitive mild traumatic brain injury. Canadian League Against Epilepsy, Winnipeg, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No
16. (2019). Neurodegenerative Eye and Brain Diseases: Where do we go from here?. Innovation Conference, Halifax, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
17. (2019). Blood-brain barrier dysfunction in neurological disorders: From bed to bench and back. Rabin Medical Center Conference, Petah Tikva, Israel
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
18. (2019). Blood-brain barrier Dysfunction in Epilepsy. American Epilepsy Society Annual Meeting, Baltimore, United States of America
Main Audience: Researcher
Invited?: No, Keynote?: No
19. (2019). Role of microvascular pathology in neural dysfunction: mechanisms and clinical implications. Tel-Aviv University Conference, Tel-Aviv, Israel
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
20. (2019). Blood-Brain Barrier Dysfunction in Status Epileptics: Mechanisms and Role in Epileptogenesis. The 7th London-Innsbruck Colloquium on Status Epilepticus, London, United Kingdom
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
21. (2018). Blood-Brain Barrier Dysfunction in Epilepsy: A Translational Approach. Gordon Research Conference, West Dover, United States of America
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes

22. E.Parker, V. Senatorov,, J.Newton, K.Doelle, J.Lin, E.Hanael, L.Kamintsky, M.H.Shamir, D.Kaufer, A.Friedman. (2018). Poster Title: Blood-brain barrier dysfunction, neuroinflammation and TGF-beta signalling are associated with sensitivity to traumatic brain injury. 11th Federation of European Neuroscience Societies Berlin, Germany, Berlin, Germany
Main Audience: Researcher
Invited?: No, Keynote?: No
23. (2018). Blood-brain barrier dysfunction and epileptogenesis. 13th European Congress on Epileptology, Vienna, Austria
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
24. (2018). Blood-Brain Barrier Dysfunction in Epilepsy: A Translational Approach. Mechanisms of Epilepsy and Neuronal Synchronization. Gordon Research Conference, United States of America
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
25. (2018). Post-Traumatic Epileptogenesis: Lessons from Animal Studies Towards Future Clinical Studies. Canadian League Against Epilepsy, St.John's, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
26. (2018). Blood-brain barrier dysfunction and epileptogenesis. 13th European Congress on Epileptology, Vienna, Austria
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
27. (2017). "Blood-Brain Barrier Dysfunction in Neurological Injuries: A New Diagnostic Biomarker and Target for Treatment ?". iCSD COSBID, Berlin, Germany
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes, Competitive?: No
28. (2017). "Blood-Brain Barrier Dysfunction as a Diagnostic and Therapeutic Target in Traumatic Brain Injuries". Hyperbaric Conference, Eilat, Israel
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes, Competitive?: No
29. (2017). Bridging Basic with Clinical Epileptology. "Glial Functions in Epileptology". San Servolo Epilepsy Summer Course:, San Servolo, Italy
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes, Competitive?: No
30. (2017). "Blood-Brain Barrier Dysfunction in Epileptogenesis: From Bed to Bench and Back". Grand Round, Department of Neurology University of Pennsylvania, Pittsburgh, United States of America
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes, Competitive?: No
31. (2017). Imaging-Based Quantitative Assessment of Blood-Brain Barrier Opening in Patients with Subarachnoid Haemorrhage. Vasospasm Conference. The 14th International Conference on Neurovascular Events after Subarachnoid Hemorrhage., San Francisco, United States of America
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
32. (2017). Blood-brain Barrier Pathology in Neurological Diseases: From Bed to Bench and Back". University of Kentucky, College of Pharmacy., Lexington, United States of America
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes, Competitive?: No

33. (2017). "Network Modifications During Epileptogenesis: Mechanism-Driven Biomarkers and Therapeutics". XIV Workshop on Neurobiology of Epilepsy ? WONOEP, Barcelona, Spain
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes, Competitive?: No
- [34.](#) (2016). Blood brain barrier in human epilepsy, MRI imaging. ILAE - 9th International Epilepsy Colloquium, London, United Kingdom
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes, Competitive?: No
- [35.](#) (2016). The Neuromuscular Unit in Aging and Epilepsy. 4th International Epilepsy Conference, Halifax, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
36. (2016). Imaging and electrophysiological biomarkers for neuroinflammation and epileptogenesis. Inflammation Meeting, Milan, Italy
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
37. (2016). Inflammation and Epilepsy. University of California Irvine lecture series, Irvine, United States of America
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
38. (2016). In search of biomarkers: from bed to bench and back. Mini symposium on Brain Injury, Halifax, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
39. (2016). Blood-brain barrier in health and disease. Zlotowski Center for Neuroscience, Beer-Sheva, Israel
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
40. (2016). Blood brain barrier pathology as a bio-marker and target for treatment in traumatic brain injury. Keystone Symposia on Molecular and Cellular Biology, Fort Worth, United States of America
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes, Competitive?: Yes
41. (2016). Blood-brain barrier, Neuroinflammation and Epilepsy. 7th annual Epilepsy Symposium, Calgary, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
42. (2015). Blood-Brain Barrier Dysfunction as a Target in the Diagnosis and Treatment of Neurological Disorders. 2nd Zing Barriers of the CNS Conference, Madrid, Spain
Main Audience: Researcher
Invited?: Yes, Keynote?: No, Competitive?: No
43. (2015). Blood-Brain Barrier Dysfunctions as Biomarker and Target in the Prevention of Acquired Epilepsy. 5th International Mediterranean Neuroscience Society Meeting, Cagliari, Italy
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
44. (2015). Vascular Integrity and Blood -Brain Barrier Functions as Biomarkers in Epilepsy. Workshop on the Neurobiology of Epilepsy (WONOEP), Istanbul, Turkey
Main Audience: Researcher
Invited?: Yes, Keynote?: No

45. (2015). Blood-brain barrier dysfunctions as biomarker and target target in epileptogenesis. Department of Neurology, Winnipeg, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
46. (2014). Imaging blood-brain barrier dysfunction as a biomarker for epileptogenesis. The 11th European Congress on Epileptology, Stockholm, Sweden
Main Audience: Researcher
Invited?: Yes, Keynote?: No
47. (2014). Blood-brain barrier dysfunction and neuronal hyper-excitability: the chicken and egg dilemma?. 17th International Symposium Signal Transduction in the Blood-Brain Barrier, Dublin, Ireland
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
48. (2013). Epileptogenesis: Cells, Molecules and the Blood-Brain Barrier. 30th International Epilepsy Congress, Montreal, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: No
49. (2013). Cerebrovascular Biology. 10th International Meeting on Cerebrovascular Biology (CVB), Montreal, Canada
Main Audience: Researcher
Invited?: Yes
50. (2013). Imaging Blood Brain Barrier in Pathology. 16th international Symposium of Signal Transduction in the Blood Brain Barrier, Sumeg, Hungary
Main Audience: Researcher
Invited?: Yes, Keynote?: No
51. (2012). Blood-Brain Barrier and Epilepsy. Swedish Epilepsy Society (Swedish Chapter of ILAE) Autumn Course- Bridging Clinical and Preclinical Epileptology, Lund, Sweden
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
52. (2012). Blood-Brain Barrier Failure: Mechanisms and Implications. Versailles International Neurointensive Care Symposium, Versailles, France
Main Audience: Researcher
Invited?: Yes, Keynote?: No
53. (2012). The Blood-Brain Barrier in Neurological Diseases. 4th France-Israel Binational Conference, Aussois, Israel
Main Audience: Researcher
Invited?: Yes, Keynote?: No
54. (2011). Blood-Brain Barrier Dysfunction and Epileptogenesis. 3rd London Colloquium on Status Epilepticus, Oxford, United Kingdom
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
55. (2011). The Blood-Brain Barrier in Health and Chronic Neurodegenerative Disorders. 24th European College of Neuropharmacology, Paris, France
Main Audience: Researcher
Invited?: Yes, Keynote?: No
56. (2011). Blood-brain barrier, immune response and seizures. Mario Negri Institute, Milan, Italy
Main Audience: Researcher
Invited?: Yes, Keynote?: No

57. (2011). Modulating BBB Permeability: Why is it that difficult and why do we want it?. 14th Symposium on Signal Transduction in the Blood-Brain Barrier, Istanbul, Turkey
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes
58. (2011). BBB Dysfunction, Epileptogenesis and Neurodegeneration: A puzzle of a chicken and egg?. Neurodegeneration and BBB Functionality, Conference on Cerebral Vascular Biology (CVB), Leiden, Netherlands
Main Audience: Researcher
Invited?: Yes, Keynote?: No
Description / Contribution Value: Speaker and Chair
59. Schoknecht, K., David, Y., Heinemann, U. and Friedman, A. (2010). Blood-brain barrier dysfunction: A target to prevent secondary stroke complications?. The Annual Meeting of the Israeli Society for Neuroscience, Eilat, Israel
Main Audience: Researcher
Invited?: Yes, Keynote?: No
Description / Contribution Value: Published online: The Journal of Molecular Neuroscience (supplementary)
60. Fassler, M., Weissberg, I., Sharony, E., Friedman, A. and Taube, R. (2010). Cell specific gene targeting to the CNS using engineered lentiviruses. The Annual Meeting of the Israeli Society for Neuroscience, Eilat, Israel
Main Audience: Researcher
Description / Contribution Value: Published online: The Journal of Molecular Neuroscience (supplementary)
61. Efrat, N., Dagan, A., Friedman, A. and Shallom, I. (2010). EEG fMRI study: Automatic localization of an epileptic focus based on parametric multi channel analysis and pattern recognition technologies. The Annual Meeting of the Israeli Society for Neuroscience, Eilat, Israel
Main Audience: Researcher
Description / Contribution Value: Published online: The Journal of Molecular Neuroscience (supplementary)
62. Kamintsky, L., Weissberg, I., Ketzef, M., Gitler, D., Becker, A., Zigel, Y. and Friedman, A. (2010). A multi-model unbiased algorithm for reliable detection of seizures. The Annual Meeting of the Israeli Society for Neuroscience, Eilat, Israel
Main Audience: Researcher
Description / Contribution Value: Published online: The Journal of Molecular Neuroscience (supplementary)
63. (2010). Blood-Brain Barrier Breakdown and Brain Dysfunction. 9th European Congress on Epileptology, Rhodes, Greece
Main Audience: Researcher
Invited?: Yes
64. (2010). Blood-Brain Barrier Breakdown in Neurological Disorders: From the Bed-Side to Bench and Back. USGEB Annual Meeting, Frontiers in Human Biology, Lugano, Switzerland
Main Audience: Researcher
Invited?: Yes
65. (2010). K⁺-Buffering via Kir Channels is Reduced in Seizure-Induced Blood-Brain-Barrier Disruption. 9th European Congress on Epileptology, Rhodes, Greece
Main Audience: Researcher
Invited?: Yes
66. (2010). Blood-Brain Barrier in Stroke and its Role in Epileptogenesis. Gordon Conference,
Main Audience: Researcher
Invited?: Yes

67. Weissberg,I., Becker,A.J., Schoknecht,K., Kamintsky,L. and Friedman,A. (2010). Albumin-induced model of mesial temporal lobe epilepsy in mice. The Annual Meeting of the Israeli Society for Neuroscience, Eilat, Israel
Main Audience: Researcher
Description / Contribution Value: Published online: The Journal of Molecular Neuroscience (supplementary)
68. (2010). Blood-Brain-Barrier and Inflammation in Epileptogenesis. 1st Meeting on Immunity and Inflammation in Epilepsy, Milan, Italy
Main Audience: Researcher
Invited?: Yes, Keynote?: No
69. Bar-Klein,G., Cacheaux,L., Kaufer,D. and Friedman,A. (2009). Blocking TGF-beta signaling as a potential anti-epileptogenic treatment. The Annual Meeting of the Israeli Society for Neuroscience, Eilat, Israel
Main Audience: Researcher
Invited?: Yes, Keynote?: No
Description / Contribution Value: Published online: The Journal of Molecular Neuroscience 39, sup.1
70. (2009). TGF beta Signaling in Epilepsy. 28th International Epilepsy Congress, Budapest, Hungary
Main Audience: Researcher
Invited?: Yes, Keynote?: No
71. Prager,O., Chassidim,Y., Litvan-Tannenbaum,M., Klein,C., Levi,H., Korn,A., Shelef,I. and Friedman,A. (2009). Dynamic in-vivo imaging of cerebral blood flow and blood-brain barrier permeability. The Annual Meeting of the Israeli Society for Neuroscience, Eilat, Germany
Main Audience: Researcher
Description / Contribution Value: Published online: The Journal of Molecular Neuroscience 39, sup.1
72. (2009). Rationality and Neuroscience. A Workshop Organized by the Berlin-Brandenburg Academy and the Israel Academy, Berlin, Germany
Main Audience: Researcher
Invited?: Yes, Keynote?: No
73. Cohen,J.E., Shalev,H., Shelef,I., Admon,R., Hendler,T. and Friedman,A. (2009). Emotional brain rhythms and their impairment in post-traumatic patients: Correlative EEG-fMRI study. The Annual Meeting of the Israeli Society for Neuroscience, Eilat, Israel
Main Audience: Researcher
Description / Contribution Value: Published online: The Journal of Molecular Neuroscience m39, sup.1
74. (2009). Hippocampal Cholinergic Dysfunction in Epilepsy: New and Classical Roles for an Old Player?. International Symposium on Hippocampal Function and Dysfunction, Berlin, Germany
Main Audience: Researcher
Invited?: Yes, Keynote?: No
75. (2009). Impaired Astrocytic Gene Expression Patterns due to Aberrant TGF-beta Receptor Signaling in Neocortical Epileptogenesis. 28th International Epilepsy Congress, Budapest, Hungary
Main Audience: Researcher
Invited?: Yes
76. Levi,H., Prager,O., Chassidim,Y. and Friedman,A. (2009). A novel method to determine dynamic changes in brain vessels diameter. The Annual Meeting of the Israeli Society for Neuroscience, Eilat, Israel
Main Audience: Researcher
Description / Contribution Value: Published online: The Journal of Molecular Neuroscience m39, sup.1
77. Ketzef,M., Friedman,A. and Gitler,D. (2008). Age-dependent cortical plasticity in synapsin knockout epileptic mice. European Epilepsy Meeting, Berlin, Germany
Main Audience: Researcher
78. (2008). Astrocytic-Neuronal Interactions in Epileptogenesis. European Epilepsy Meeting, Berlin, Germany
Main Audience: Researcher
Invited?: Yes, Keynote?: No

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Description / Contribution Value: **SIGNIFICANCE STATEMENT** In this study, we reveal a new mechanism that governs blood–brain barrier (BBB) function in the rat cerebral cortex, and, by using the discovered mechanism, we demonstrate bidirectional control over brain endothelial permeability. Obviously, the clinical potential of manipulating BBB permeability for neuroprotection and drug delivery is immense, as we show in preclinical and proof-of-concept clinical studies. This study addresses an unmet need to induce transient BBB opening for drug delivery in patients with malignant brain tumors and effectively facilitate BBB closure in neurological disorders.
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