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 http://fohs.bgu.ac.il/neurophysio/about.shtml

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:

Recognitions

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 - 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

User Profile

Researcher Status: Researcher
Research Career Start Date: 1985/07/01
Engaged in Clinical Research?: Yes

Research Interests: Epilepsy Blood-Brain Barrier Stroke Traumatic Brain Injury

Employment

2020/1 - 2022/1
Founder
N/A, 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

2016/7 - 2021/1
Founder
N/A, 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:

Research Funding History

Awarded [n=10]

2020/6 - 2024/5
Principal Investigator
The Blood-Brain Barrier as a Target for the Diagnosis and Treatment of Neurological Disorders, Grant, Operating

Funding Sources:

2020/6 - 2024/5 Israeli Science Foundation
Epilepsy
Total Funding - 1,350,000 (Israeli new sheqel)
Portion of Funding Received - 1,350,000 (Israeli new sheqel)
Funding Competitive?: Yes

Co-investigator : Merav Shamir; Ofer Prager

2020/1 - 2023/12
Co-investigator
Network of European Funding for Neuroscience Research (NEURON), Grant, Operating

Funding Sources:

2020/1 - 2023/12 Network of European Funding for Neuroscience Research
NEURON
Total Funding - 675,000 (Canadian dollar)
Portion of Funding Received - 224,760
Funding Competitive?: Yes

Funding by Year:

2020/1 - 2023/12 Total Funding - 675,000 (Canadian dollar)
Portion of Funding Received - 224,760

Co-investigator : AnnaMaria Vezzani; Jens Dreier

2019/10 - 2022/9
Co-investigator
The blood-brain barrier as a diagnostic and therapeutic target in traumatic brain injury., Grant, Operating

Funding Sources:

(United States dollar)

Co-investigator : Lee Goldstein

2018/8 - 2022/3
Principal Investigator

Neuroanatomical and neurofunctional assessment in acquired brain injury, Contract
Clinical Research Project?: Yes

Funding Sources:

2018/8 - 2022/12 Global Affairs Canada
MRI Study
Total Funding - 1,200,000 (Canadian dollar)
Portion of Funding Received - 1,200,000 (Canadian dollar)
Funding Renewable?: No
Funding Competitive?: Yes

Co-investigator : Chris Bowen; Cynthia Calkin; Maher Quraan; Matthias Schmidt

2017/10 - 2021/7
Principal Investigator

TGF-beta Signaling in Post-Traumatic Epileptogenesis: A Critical Role in Post-Traumatic Epilepsy, Contract
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
Principal Investigator

Microvascular injury and blood-brain barrier dysfunction as novel biomarkers and targets for treatment in traumatic injury, Grant, Operating
Clinical Research Project?: Yes

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

Funding by Year:

2016/7 - 2021/6 Total Funding - 955,625 (Canadian dollar)
Portion of Funding Received - 955,625 (Canadian dollar)

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

2018/3 - 2021/2
Co-investigator

Characterization of Brain Dysfunction with Multi-Modal Functional Neuroimaging in Patients with SLE and Cognitive Impairment., Grant, Operating

Funding Sources:

2018/4 - 2023/3 Canadian Institutes of Health Research (CIHR)
Project Grant
Total Funding - 600,000 (Canadian dollar)
Portion of Funding Received - 45,000
Funding Competitive?: Yes

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

Principal Investigator : John Hanly

2018/3 - 2021/2
Co-investigator

Blood Brain Barrier and Cognitive Dysfunction in Systemic lupus erythematosus, Grant, Operating

Funding Sources:

2018/4 - 2021/3 Nova Scotia Health Authority
NSHA Research Fund
Total Funding - 45,000 (Canadian dollar)
Portion of Funding Received - 45,000
Funding Competitive?: Yes

Principal Applicant : John Hanly

2015/10 - 2020/9
Principal Investigator

The Blood-Brain Barrier as a Target for the Diagnosis and Treatment of Acquired Brain 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
Principal Investigator

Mechanisms underlying neural activity-dependent albumin transport across brain 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

Student/Postdoctoral Supervision

Bachelor’s Honours [n=5]

2019/9 - 2020/9
Principal Supervisor

Alaa Abu Ahmad (Completed) , Ben Gurion University
Student Degree Start Date: 2019/9
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, Ben- Gurion University
Student Country of Citizenship: Israel

2019/4 - 2020/4
Principal Supervisor
Griffin Mumby (Completed) , Dalhousie University
Student Degree Start Date: 2019/9
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 Student, 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 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: 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: Student, Dalhousie University
Student Country of Citizenship: Canada

Master’s Thesis [n=6]

2019/9 - 2021/8
Principal Supervisor
Lior Schori (In Progress) , Ben Gurion University
Student Degree Start Date: 2019/9
Student Degree Expected Date: 2021/8
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Hypertensive rats as a model for blood-brain barrier disruption
Student Country of Citizenship: Israel

2018/10 - 2020/10
Principal Supervisor
Ayala Tabak (In Progress) , Ben Gurion University
Degree Name: MSc
Student Degree Start Date: 2018/10
Student Degree Expected Date: 2020/10
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

2018/10 - 2021/4
Principal Supervisor
Uri Monsonego (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
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: MD, QE11 Hospital Halifax
Student Country of Citizenship: Nigeria

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
Present Position: Research Assistant, Ben- Gurion University
Student Country of Citizenship: Israel

2015/1 - 2018/1
Principal Supervisor
Evyatar Swissa (Completed) , Ben Gurion University
Degree Name: Doctorate
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: PhD student, Ben Gurion University
Student Country of Citizenship: Israel

Doctorate [n=13]

2021/9 - 2025/8
Principal Supervisor
Hamza Imtiaz, Dalhousie University
Thesis/Project Title: Brain Imaging
Present Position: Graduate Student

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: Canadian Citizen
Thesis/Project Title: Epilepsy and Blood-Brain Barrier Dysfunction

2020/9 - 2024/8
Principal Supervisor
Sheida Mirloo (In Progress) , Dalhousie University
Student Degree Start Date: 2020/9
Student Degree Expected Date: 2024/8
Student Canadian Residency Status: Student Work Permit
Thesis/Project Title: Blood-Brain Barrier Imaging
Present Position: Graduate Student
Student Country of Citizenship: Iran, Islamic Republic of

2020/7 - 2024/6
Principal Supervisor
Saara Mansour (In Progress) , Dalhousie University
Student Degree Start Date: 2020/7
Student Degree Expected Date: 2024/6
Student Canadian Residency Status: Canadian Citizen
Thesis/Project Title: Insecticide-Induced Neurotoxicity in a Rat Model
Present Position: Graduate Student PhD student, Dalhousie University
Student Country of Citizenship: Canada

2019/9 - 2023/8
Principal Supervisor
Florent Boyer-Ayme (In Progress) , Ben Gurion University
Degree Name: PhD
Student Degree Start Date: 2019/9
Student Degree Expected Date: 2023/8
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Spreading depression in a stroke model
Present Position: Graduate Student, Ben- Gurion University
Student Country of Citizenship: France

2018/9 - 2022/8
Principal Supervisor
Pooyan Moradi (In Progress) , Dalhousie University
Student Degree Start Date: 2018/9
Student Degree Expected Date: 2022/8
Student Canadian Residency Status: Study Permit
Thesis/Project Title: Brain Vasculature after TBI
Present Position: Graduate Student

2017/9 - 2021/8
Principal Supervisor
Shayna Cort (In Progress) , Dalhousie University
Degree Name: PhD
Specialization: Medical Neuroscience
Student Degree Start Date: 2017/9
Student Degree Expected Date: 2022/8
Student Canadian Residency Status: Study Permit
Thesis/Project Title: Characterization of a Moderate TBI Model
Present Position: Graduate Student
Student Country of Citizenship: Antigua and Barbuda

2017/1 - 2021/12
Principal Supervisor
Evyatar Swissa (In Progress) , Ben Gurion University
Student Degree Start Date: 2017/1
Student Degree Expected Date: 2021/12
Student Canadian Residency Status: Not Applicable
Thesis/Project Title: Medical image processing of vessel permeability
Present Position: Graduate Student, 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: Research Associate, Dalhousie 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: Medical School, 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: Canadian Citizen
Thesis/Project Title: Neuropsychiatric Correlates of Blood-Brain Barrier Leakage
Present Position: Post-doc, Dalhouise University
Student Country of Citizenship: Canada

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: Post-Doctoral Fellow, Ben Gurion University
Student Country of Citizenship: Israel

2014/8 - 2018/7
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: MRI Analysis
Present Position: Post doctorate, Boston University
Student Country of Citizenship: Israel

Post-doctorate [n=1]

2019/8 - 2021/8
Principal Supervisor
Gerben Van Hameren (In Progress) , Dalhousie University
Student Degree Start Date: 2018/8
Student Canadian Residency Status: Work Permit
Thesis/Project Title: Effect of reactive oxygen species on neurovascular decoupling in epilepsy
Present Position: Post-Doctoral Fellow, Dalhousie University
Student Country of Citizenship: Netherlands

Project Funding Sources: Mathematics of Information Technology and Complex Systems (MITACS) (Canadian dollar)

Research Associate [n=2]

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

Technician [n=3]

2019/9 - 2020/8 Principal Supervisor	Nofar Shemen (Completed) , Ben Gurion University Degree Name: MSc Student Canadian Residency Status: Not Applicable Thesis/Project Title: MRI analysis Present Position: Graduate Student, Weizmann Institute 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: MRI Analysis Present Position: Technician, Private Industry Student Country of Citizenship: Israel
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: 12

Number of Visiting Researchers: 6

Number of Highly Qualified Personnel in Research Training: 12

Number of Employees: 10

Number of Volunteers: 9

Event Administration

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
2019/5 - 2019/5	Organizer, Picchione Lecture Series, Seminar, Dalhousie University, 2019/5 - 2019/5 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

Event Participation

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.

International Collaboration Activities

2014/7 - 2025/8 Principle Investigator, Canada
Research collaboration with Dr. Jens Dreier (Charite' Berlin) and Dr. Annamaria Vezzani (Milan) on the role of brain pathological activity and neuroinflammation in epileptogenesis. Both visited the lab in Halifax. Partly funded by a European grant (ERANET).

2014/1 - 2025/8 Principle Investigator, Canada
Research collaboration with Dr. Daniela Kaufer (UC Berkeley) on the role of blood-brain barrier in brain pathology. Partly funded by Department of Defence grant (USA).

2014/7 - 2023/7 Principle Investigator, Canada
Continuous research collaboration with Dr. Lee Goldstein (Boston University) on the role of blood-brain barrier dysfunction in post-traumatic complication and neurodegeneration. Few mutual visits.

Committee Memberships

2017/9 Committee Member, Dalhousie Brain Repair Executive Committee, Dalhousie University

Presentations

1. (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
2. Cindy Calkin. (2019). Blood-brain barrier imaging as a new biomarker in psychiatric disorders. Society of Biological Psychiatry, Chicago, United States
   Main Audience: Researcher
   Invited?: Yes, Keynote?: Yes
3. Griffin Mumby, E. Parker, P. Moradi O. Adegunna, D. Milikovsky, N. Hacohen, E. Hanael A. Friedman. (2019). TGFβ 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
4. 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

5. (2018). Blood-Brain Barrier Dysfunction in Epilepsy: A Translational Approach. Mechanisms of Epilepsy and Neuronal Synchronization. Gordon Research Conference, United States
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes

6. (2018). Blood-brain barrier dysfunction and epileptogenesis.13th European Congress on Epileptology,, Vienna, Austria
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes

Publications

Journal Articles

1. Yonatan Serlin*, Gal Ben-Arie, Svetlana Lublinsky*, Hagit Flusser, Alon Friedman, Ilan Shelef. (2021). Distorted optic nerve portends neurological complications in infants with external hydrocephalus. Frontiers in Neurology, section Applied Neuroimaging. 12: 596294.
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 6
Editors: Amgad Droby

2. Daniela Kaufer and Alon Friedman. (2021). Holes in the Shield. Scientific American. May(1): 43-47.
Last Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 2

3. M. A. MacLean* , L. Kamintsky*, E. D. Leck and A. Friedman. (2020). The potential role of microvascular pathology in the neurological manifestations of coronavirus infection. Fluids and Barriers of the CNS. 17(55): 1-10.
Last Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 4

4. Lyna Kamintsky*, Steven D. Beyea, John D.Fisk, Javeria A.Hashmi, Antonina Omisade, Cynthia Calkin, Tim Bardouille, Chris Bowen, Maher Quraan, Arnold Mitnitski, Kara Matheson, Alon Friedman, John G.Hanly. (2020). Blood-brain barrier leakage in systemic lupuserythematosus is associated with gray matter loss and cognitive impairment.Annals of the Rheumatic Diseases. 79(12): 1.
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 13

5. Mia Levite, Daniel Zelig*, Alon Friedman, Nili Ilouz, Raya Eilam, Zohar Bromberg, Ally Ahmed Ramadhan Lasu, Sagit Arbel-Alon, Shimon Edvardson, Mark Tarshish Lul P. Riek, Richard Lino Lako, Benjamin Reubinoff, Mario Lebendiker, Dayana Yaish, Alexandra Stavsky, Eithan Galun. (2020). Dual-Targeted Autoimmune Sword in Fatal Epilepsy: Patient's glutamatereceptor AMPA GluR3B peptide autoimmune antibodies bind, induce Reactive Oxygen Species (ROS) in, and kill both human neural cells and T cells. Journal of Autoimmunity. 112: 102462.
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 17

6. Wolfgang Löscher and Alon Friedman. (2020). Structural, Molecular, and Functional Alterations of the Blood-Brain Barrier during Epileptogenesisand Epilepsy: A Cause, Consequence, or Both?. International Journal of Molecular Sciences. 21(591): 1-19.
   Last Author
   Published,
   Refereed?: Yes, Open Access?: Yes
   Number of Contributors: 2

7. Evyatar Swissa,* Guy Bar-Klein,* Yonatan Serlin*, Itai Weissberg*, Lyna Kamintsky,* Arik Eisenkraft, Liran Statlender, Shai Shroti, Yossi Rosman, Ofer Prager,* Alon Friedman. (2020). Midazolam and isoflurane combination reduces late brain damage in the paraoxon-induced status epilepticus rat model. NeuroToxicology. 78: 99-105.
   http://dx.doi.org/https://doi.org/10.1016/j.neuro.2020.02.007
   Last Author
   Published,
   Refereed?: Yes, Open Access?: Yes
   Number of Contributors: 11

8. Ronel Veksler*, Udi Vazana,* Yonatan Serlin,*Ofer Prager*, Jonathan Ofer*, Nofar Shemen*, Andrew M. Fisher, Olga Minaeva, Ning Hua, Rotem Saar-Ashkenazy*, Itay Benou,* Tammy Riklin-Raviv, Ellen Parker*, Griffin Mumby*, Lyna Kamintsky*, Steven Beyea, Chris V. Bowen, Ilan Shelef, Eoin O'Keefe, Matthew Campbell, Daniela Kaufer, Lee E. Goldstein, Alon Friedman. (2020). Slow blood-to-brain transport underlies enduring barrier dysfunction in American football players. Brain. 143(6): 1826-1842.
   http://dx.doi.org/https://doi.org/10.1093/brain/awaa140
   Last Author
   Published, Oxford University Press,
   Refereed?: Yes, Open Access?: Yes
   Number of Contributors: 23

9. Karl Schoknecht*, Majed Kikhia, Coline Lemale, Agustin Liotta, Svetlana Lublinsky*, Susanne Müller, Philipp Böhm-Sturm, Alon Friedman, Jens P. Dreier. (2020). The role of spreading depolarizations and electrographic seizures in early injury progression in the rat photothrombosis stroke model. Journal of Cerebral Blood Flow and Metabolism. 41(2): 413-430.
   http://dx.doi.org/https://doi.org/10.1177/0271678X20915801
   Co-Author
   Published,
   Refereed?: Yes, Open Access?: Yes
   Number of Contributors: 9

10. Udi Vazana *, Lior Schori*, Uri Monsonego*, Evyatar Swissa*, Gabriel Pell, Yiftach Roth, Pnina Brodt, Alon Friedman, Ofer Prager*. (2020). TMS-induced controlled BBB opening: Pre-clinical characterization and implications for treatment of brain cancer. Pharmaceutics. 12(10): 946.
    Co-Author
    Published,
    Refereed?: Yes, Open Access?: Yes
    Number of Contributors: 9

11. Abo Ghazleh, Refa't*, Parker Ellen*, Dreier Jens, Friedman, Alon. (2020). Spreading Depolarization as the Electrophysiological Signature of Concussion. Journal of Neurotrauma.
    Last Author
    Submitted,
    Refereed?: Yes, Open Access?: Yes, Synthesis?: Yes
    Number of Contributors: 4

12. Pavel Klein, Alon Friedman, Mustafa Q. Hameed, Rafal M. Kaminski, Guy Bar-Klein*, Henrik Klitgaard, Mathias Koepp, Sergiusz Jozwiak, David A. Prince, Alexander Rotenberg, Roy Twyman, Annamaria Vezzani, Michael Wong, Wolfgang Löscher. (2020). Repurposed molecules for antiepileptogenesis: Missing an opportunity to prevent epilepsy?. Epilepsia. 61(3): 359-386.
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 14

13. Kamintsky L*, Cairns KA, Veksler R*, Bowen C, Beyea SD, Friedman A, Calkin C. (2020). Blood-brain barrier imaging as a potential biomarker for bipolar disorder progression. Neuroimage Clin.26(Oct22:1020): 1.
http://dx.doi.org/doi: 10.1016/j.nicl.2019.102049
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 7

14. Massimo Rizzi, Claudia Brandt, Itai Weissberg*, Dan Z. Milikovsky*, Alberto Pauletti, Gaetano Terrone, Alessia Salamone, Federica Frigerio, Wolfgang Löscher, Alon Friedman, Annamaria Vezzani. (2019). Changes of dimension of EEG/ECoG nonlinear dynamics predict epileptogenesis and therapy outcomes. Neurobiology of Disease. 124: 373-378.
http://dx.doi.org/https://doi.org/10.1016/j.nbd.2018.12.014
Co-Author
Published, Elsevier,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 11

15. Senatorov, V.V. Jr., Friedman, A.R., Milikovsky, D.Z.*, Ofer, J.*, Saar-Ashkenazy, R*., Charbash, A.*, Jahan, N., Chin, G., Mihaly, E., Lin, J.M., Ramsay, H.J., Moghbel, A., Preininger, M.K., Eddings, C.R., Harrison, H.V., Patel, R., Shen, Y., Ghanim, H., Sheng, H., Veksler, R.*, Sudmant, P.H., Becker, A., Hart, B., Rogawski, M.A., Dillin, A., Friedman, A., and Kaufer, D. (2019). Blood-brain barrier dysfunction in aging induces hyper-activation of TGF-beta signaling and chronic yet reversible neural dysfunction. Science Translational Medicine. 11(521): 1-11.
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 27

16. Svetlana Lublinsky*, Sebastian Major, Vasilis Kola, Viktor Horst, Edgar Santos, Johannes Platz, Oliver Sakowitz, Michael Scheel, Christian Dohmen, Rudolf Graf, Hartmut Vatter, Stefan Wolf, Peter Vajkoczy, Ilan Shelef, Johannes Woitzik, Peter Martus, Jens P. Dreier, Alon Friedman. (2019). Early Blood-Brain Barrier Dysfunction Predicts Neurological Outcome Following Aneurysmal Subarachnoid Hemorrhage. EBioMedicine. 43: 460-472.
Last Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 18

17. Itay Benou*, Ronel Veksler*, Alon Friedman and Tammy Raviv. (2019). Combining White Matter Diffusion and Geometry for Tract-Specific Alignment and Variability Analysis. Neuroimage. 13(200): 674-689.
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 4

18. Hanael E*, Veksler R*, Friedman A, Bar-Klein G*, Senatorov VV Jr, Kaufer D, Konstantin L, Elkin M, Chai O, Peery D, Shamir MH. (2019). Blood-brain barrier dysfunction in canine epileptic seizures detected by dynamic contrast-enhanced magnetic resonance imaging. Epilepsia. 60(5): 1005-1016.
http://dx.doi.org/doi: 10.1111/epi.14739
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 11

19. Evyatar Swissa*, Yonatan Serlin*, Ofer Prager*, Udi Vazana* and Alon Friedman. (2019). Blood-Brain Barrier Dysfunction in Status Epileptics: Mechanisms and Role in Epileptogenesis. Epilepsy and Behavior. 101(106285): 1-4.
http://dx.doi.org/10.1016/j.yebeh.2019.04.038
Last Author
Published, Elsevier,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 5

20. Yonatan Serlin*, Jonathan Ofer*, Gal Ben-Arie, Ronel Veksler*, Gal Ifergane, Ilan Shelef, Jeffrey Minuk, Anat Horev, Alon Friedman. (2019). Blood-brain barrier leakage: a new biomarker in transient ischemic attacks. Stroke. 50(5): 1266-1269.
Last Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 9

21. Prager O*, Kamintsky L*, Hasam-Henderson LA, Schoknecht K*, Wuntke V, Papageorgiou I, Swolinsky J, Muoio V, Bar-Klein G*, Vazana U*, Heinemann U, Friedman A, Kovács R. (2019). Seizure-induced microvascular injury is associated with impaired neurovascular coupling and blood-brain barrier dysfunction. Epilepsia. 60: 322-336.
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 13

22. Dan Z. Milikovsky*, Vladimir V. Senatorov Jr. Aaron R. Friedman, Ofer Prager*, Liron Sheintuch*, Netta Elazari*, Ronel Veksler*, Daniel Zelig*, Itai Weissberg*, Guy Bar-Klein*, Evyatar Swissa*, Erez Hanael*, Gal Ben-Arie, Osnat Schefenbauer*, Lyna Kamintsky*, Rotem Saar-Ashkenazy*, Ilan Shelef, Merav H. Shamir, Ilan Goldberg, Amir Glik, Felix Benninger, Daniela Kaufer, Alon Friedman. (2019). Paroxysmal slow cortical activity in Alzheimer's disease and epilepsy is associated with blood-brain barrier dysfunction. Science Translational Medicine. 11(521): 1-11.
http://dx.doi.org/DOI: 10.1126/scitranslmed.aaw8954
Last Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 24

23. Lena Schindler, Mohammed Shaheen Rotem Saar-Ashkenazy*, Kifah Bani Odeh Sophia-Helen Sass, Alon Friedman and Clemens Kirschbaum. (2019). Victims of War: Dehydroepiandrosterone Concentrations in Hair and Their Associations with Trauma Sequelae in Palestinian Adolescents Living in the West Bank. Brain Sciences. 9(20): 1-13.
http://dx.doi.org/doi:10.3390/brainsci9020020
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 7

24. Alon Friedman, Cynthia Calkin, Amanda Adams*, Guillermo Aristi Suarez, Tim Bardouille, Noa Hacohen*, Laine Green, R. Rishi Gupta, Javeria Ali Hashmi, Lyna Kamintsky*, Jong Sung Kim, Robert Laroche, Diane MacKenzie, Dan Milikovsky*, Darren Oystreck, Jillian Newton*, Greg Noel, Jonathan Ofer*, Maher Quraan, Claire Reardon, Rylan Smith*, Margaux Ross, Derek Rutherford, Matthias Schmidt, Yonatan Serlin*, Crystal Sweeney, Janine Verge, Leah Walsh and Chris Bowen. (2019). Havana Syndrome Among Canadian Diplomats: Brain Imaging Reveals Acquired Neurotoxicity. medRxiv. 1(1): 1-48.
http://dx.doi.org/doi: https://doi.org/10.1101/19007096
First Listed Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 29

25. Ofer Prager*, Lyn Kamintsky*, Luisa Austin Hasam-Henderson, Karl Schoknecht*, Vera Wuntke, Ismini Papageorgiou, Jutta Swolinsky, Mihaela Chirica, Valeria Muoio, Guy Bar-Klein*, Udi Vazana*, Uwe Heinemann, Alon Friedman, Richard Kovács. (2019). Microvascular injury and the associated neurovascular decoupling and opening of the blood-brain barrier during seizure. Epilepsia. 60: 322-336.
http://dx.doi.org/https://onlinelibrary.wiley.com/doi/full/10.1111/epi.14631
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 14

26. Tagge CA, Fisher AM, Minaeva OV, Gaudreau-Balderrama A, Moncaster JA, Zhang XL, Wojnarowicz MW, Casey N, Lu H, Kokiko-Cochran ON, Saman S, Ericsson M, Onos KD, Veksler R*, Senatorov VV Jr, Kondo A, Zhou XZ, Miry O, Vose LR, Gopaul KR, Upreti C, Nowinski CJ, Cantu RC, Alvarez VE, Hildebrandt AM, Franz ES, Konrad J, Hamilton JA, Hua N, Tripodis Y, Anderson AT, Howell GR, Kaufer D, Hall GF, Lu KP, Ransohoff RM, Cleveland RO, Kowall NW, Stein TD, Lamb BT, Huber BR, Moss WC, Friedman A, Stanton PK, McKee AC Goldstein LE. (2018). Concussion, microvascular injury, and early tauopathy in young athletes after impact head injury and an impact concussion mouse model. Brain. 141(2): 422-458.
http://dx.doi.org/doi: 10.1093/brain/awx35
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 46

27. Shaheen M, Schindler L, Saar-Ashkenazy R*, Bani Odeh K, Soreq H, Friedman A, Kirschbaum C. (2018). Victims of war-Psychoendocrine evidence for the impact of traumatic stress on psychological well-being of adolescents growing up during the Israeli-Palestinian conflict. Psychophysiology. 1(1): 1-10.
http://dx.doi.org/doi: 10.1111/psyp.13271
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 7

28. Dreier JP, Lemale CL, Kola V, Friedman A, Schoknecht K*. (2018). Spreading depolarization is not an epiphenomenon but the principal mechanism of the cytotoxic edema in various gray matter structures of the brain during stroke. Neuropharmacology. 134(Part B): 189-207.
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 5

29. Theodor Rüber, Bastian David, Guido Lüchters, Daniel Nass, Alon Friedman, Rainer Surges, Bernd Weber, Ralf Deichman, Gottfried Schlaug, Elke Hattingen, and Christian E. Elger. (2018). Evidence for peri-ictal blood-brain barrier disruption in epilepsy patients. Brain. 141: 2952-2965.
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 11

30. Milakara D, Grozea C, Dahlem M, Major S, Winkler MKL, Lückl J, Scheel M, Kola V, Schoknecht K*, Lublinsky S*, Friedman A, Martus P, Hartings JA, Woitzik J, Dreier JP. (2018). Simulation of spreading depolarization trajectories in cerebral cortex: Correlation of velocity and susceptibility in patients with aneurysmal subarachnoid hemorrhage. NeuroImage Clin.16: 524-538.
http://dx.doi.org/https://doi.org/10.1016/j.nicl.2017.09.005.
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 15

31. Richard Kovacs, Zoltan Gerevich, Alon Friedman, Jakub Otahal, Siegrun Gabriel, Ofer Prager*, Nikolaus Berndt. (2018). Bioenergetic mechanisms of seizure control. Frontiers in Cellular Neuroscience. 12(335): 1-14.
Co-Author
Published, Switzerland
Refereed?: Yes
Number of Contributors: 7

32. Helen E. Scharfman, Andres M. Kanner, Alon Friedman, Ingmar Blumcke, Candice E. Crocker, Fernando Cendes, Ramon Diaz-Arrastia, Hans Förstl, André Fenton, Anthony A. Grace, Jorge Palop, Jason Morrison, Astrid Nehlig, Asuri Prasad, Karen Wilcox, Bernd Pohlmann-Eden. (2018). Epilepsy as a Network Disorder (2): What can we learn from other network disorders such as dementia and schizophrenia,and what are the implications for translational research?. Epilepsy & Behavior. 78: 302-312.
Co-Author
Published,
Refereed?: Yes
Number of Contributors: 16

33. Dan Milikovsky*, Itai Weissberg*, Lyna Solomon-Kamintsky*, Kristina Lippmann, Osnat Schefenbauer*, Federica Frigerio, Massimo Rizzi, Liron Sheintuch*, Daniel Zelig*, Jonathan Ofer*, Annamaria Vezzani and Alon Friedman. (2017). Electrocorticographic dynamics as a novel biomarker in five models of epileptogenesis. The Journal of Neuroscience. 37(17): 4450-4461.
http://dx.doi.org/DOI: https://doi.org/10.1523/JNEUROSCI.2446-16.2017
Last Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 12

34. Soo Young Kim, Vladimir V. Senatorov Jr., Christopher S. Morrissey, Kristina Lippmann, Oscar Vazquez, Dan Z. Milkovsky*, Feng Gu, Isabel Parada, David A. Prince, Albert J. Becker, Uwe Heinemann, Alon Friedman, Daniela Kaufer. (2017). TGFbeta signaling is associated with changes in inflammatory gene expression and perineuronal net degradation around inhibitory neurons following various neurological insults. Scientific Reports. 7(1): 7711.
http://dx.doi.org/doi: 10.1038/s41598-017-07394-3.
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 13

35. Bekenstein U, Mishra N, Milikovsky DZ*, Hanin G, Zelig D*, Sheintuch L*, Berson A, Greenberg DS, Friedman A, Soreq H. (2017). Dynamic changes in murine forebrain miR-211 expression associate with cholinergic imbalances and epileptiform activity. Proc Natl Acad Sci U S A.114(25): 4996-5005. http://dx.doi.org/doi: 10.1073/pnas.1701201
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 10

36. Prager O*, Friedman A, Nebenzahl YM. (2017). Role of neural barriers in the pathogenesis and outcome of streptococcus pneumoniae meningitis. Exp Ther Med.13(3): 799-809.
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 3

37. Karl Schoknecht*, Nikolaus Berndt, Jörg Rösner, Uwe Heinemann, Jens P Dreier, Richard Kovács, Alon Friedman, Agustin Liotta. (2017). Event-associated oxygen consumption rate increases ~5-fold when interictal activity transforms into seizure-like events *in vitro*. International Journal of Molecular Sciences. 18(9): 19-25.
Co-Author
Published,
Refereed?: Yes
Number of Contributors: 8

38. Uriya Bekenstein, Nibha Mishra, Dan Milikovsky*, Geula Hanin, Daniel Zelig*, Liron Sheintuch*, Amit Berson, David S. Greenberg, Alon Friedman and Hermona Soreq. (2017). MiR-211 attenuates cholinergic-induced epileptic seizures via synaptic and TGF-Beta pathways. PNAS. 114(25): 4996-5005.
Co-Author
Published,
Refereed?: Yes, Open Access?: Yes
Number of Contributors: 10

39. Lublinsky S*, Friedman A, Kesler A, Zur D, Anconina R, Shelef I. (2016). Automated Cross-Sectional Measurement Method of Intracranial Dural Venous Sinuses.AJNR Am J Neuroradiol.37(3): 468-74. http://dx.doi.org/doi: 10.3174/ajnr.A4583
Co-Author
Published,
Refereed?: Yes
Number of Contributors: 6

Intellectual Property

Patents

1. Methods for Diagnosing and treating Neural Diseases. United States. Attorney Docket Number:06950-P0046A. 2019/09/19.
Patent Status: Granted/Issued
Year Issued: 2019
Inventors: Alon Friedman, Dan Milikovsky, Ronel Veksler