

# OLEKSII SHANDRA

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## EDUCATION

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<b>PhD</b>	Odesa National Medical University, Ukraine	2014
<b>Residency</b>	Odesa National University Medical, Ukraine Dermatology	2011
<b>MD</b>	Odesa National Medical University, Ukraine	2009

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## EMPLOYMENT

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<b>Assistant Professor, Biomedical Engineering</b> <b>College of Engineering and Computing</b> Florida International University Miami, FL	2022-Present
<b>Scientist</b> <b>Cell, Developmental and Integrative Biology</b> University of Alabama at Birmingham, Birmingham, AL	2022-2022
<b>Senior Research Scientist</b> Virginia Polytechnic Institute & State University Roanoke, VA	2020-2021
<b>Research Scientist</b> Virginia Polytechnic Institute & State University Roanoke, VA	2018-2020
<b>Postdoctoral Research Associate</b> Virginia Polytechnic Institute & State University Roanoke, VA	2016-2018
<b>Postdoctoral Research Fellow</b> Albert Einstein College of Medicine Bronx, NY	2014-2016

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## HONORS AND AWARDS

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Fellows Program Award, American Epilepsy Society	2018
Travel Award, American Society for Neurochemistry	2017
Travel Award, ADD Symposium: Therapy Development in the Era of Team Science and Big Data: What Will the Future Bring to Patient with Epilepsy?	2015

## PROFESSIONAL AFFILIATION

Member, American Epilepsy Society	2014-Present
Member, Sleep Research Society	2022-Present
Member, Society for Neuroscience	2015-2018
Member, Society for Neurotrauma	2017-2018
Member, American Society for Neurochemistry	2016-2017

## PROFESSIONAL DEVELOPMENT

Cultural Awareness Building Blocks, Diversity Education Course, University of Alabama at Birmingham	2022
MATLAB Programming And Scientific Computing, UDEMY, Online Course	2021
Speed Reading, Mindvalley, Online Course	2020
Team Leadership in Research, Online Course	2020
Grant Dynamo Elite, Online Course	2016

## TEACHING EXPERIENCE

<b>Virginia Polytechnic Institute &amp; State University, Blacksburg, VA</b>	Spring 2018
• NEUR3984 Principles of Epilepsy Research	

## GRANT PENDING

- CDMRP “Virtual Post-Traumatic Epilepsy Research Center Faculty Award” (\$500,000, 2023-2026).
- SRSF “Career Development Award” (\$50,000, 2023-2024).
- BME “Directed Research SEED Grant” (\$50,000, 2022-2023).

## IN THE MEDIA

[\*\*Traumatic Brain Injuries Linked to Epilepsy Development\*\*](#) MD Magazine, January 2019

[\*\*Scientists Link Concussions to Epilepsy Development\*\*](#) Drug Discovery and Development, January 2019

[\*\*Concussions linked to epilepsy development\*\*](#) Science Daily, January 2019

[\*\*Inducing Post-Traumatic Epilepsy in a Mouse Model of Repetitive Diffuse Traumatic Brain Injury\*\*](#) JOVE Journal Behavior, February 2020

## PUBLICATIONS

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### Journals

1. George KK, Heithoff BP, Shandra O, Robel S. [Mild Traumatic Brain Injury/Concussion Initiates an Atypical Astrocyte Response Caused by Blood-Brain Barrier Dysfunction](#). J Neurotrauma. 2022 Jan;39(1-2):211-226. doi: 10.1089/neu.2021.0204. PubMed PMID: 34806422; PubMed Central PMCID: PMC8785769.
2. Shandra O, Robel S. [Inducing Post-Traumatic Epilepsy in a Mouse Model of Repetitive Diffuse Traumatic Brain Injury](#). J Vis Exp. 2020 Feb 10;(156). doi: 10.3791/60360. PubMed PMID: 32090988.
3. Godlevsky LS, Shandra OO, Pervak MP, Shandra AA. [Diazepam and electrical stimulation of paleocerebellar cortex inhibits seizures in pentylenetetrazol-kindled rats](#). Acta Neurobiol Exp (Wars).2020;80(3):322-330. PubMed PMID: 32990289.
4. Shandra O, Winemiller AR, Heithoff BP, Munoz-Ballester C, George KK, Benko MJ, Zuidhoek IA, Besser MN, Curley DE, Edwards GF 3rd, Mey A, Harrington AN, Kitchen JP, Robel S. [Repetitive Diffuse Mild Traumatic Brain Injury Causes an Atypical Astrocyte Response and Spontaneous Recurrent Seizures](#). J Neurosci.2019 Mar 6;39(10):1944-1963. doi: 10.1523/JNEUROSCI.1067-18.2018. Epub 2019 Jan 21. PubMed PMID: 30665946; PubMed Central PMCID: PMC6407295.
5. Shandra O, Robel S. [Imaging and Manipulating Astrocyte Function In Vivo in the Context of CNS Injury](#). Methods Mol Biol. 2019;1938:233-246. doi: 10.1007/978-1-4939-9068-9\_16. PubMed PMID: 30617984.
6. Galanopoulou AS, Mowrey WB, Liu W, Li Q, Shandra O, Moshé SL. [Preclinical Screening for Treatments for Infantile Spasms in the Multiple Hit Rat Model of Infantile Spasms: An Update](#). Neurochem Res. 2017 Jul;42(7):1949-1961. doi: 10.1007/s11064-017-2282-0. Epub 2017 May 2. PubMed PMID: 28462453; PubMed Central PMCID: PMC5505786.
7. Shandra O, Moshé SL, Galanopoulou AS. [Inflammation in Epileptic Encephalopathies](#). Adv Protein Chem Struct Biol. 2017;108:59-84. doi: 10.1016/bs.apcsb.2017.01.005. Epub 2017 Feb 28. Review. PubMed PMID: 28427564; PubMed Central PMCID: PMC5753773.
8. Shandra OO. [\[Effect of deltaran and melatonin on immune system in rats with experimental contact dermatitis\]](#). Fiziol Zh (1994). 2014;60(1):78-83. PubMed PMID: 24809178.

## PROFESSIONAL SERVICE

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### Professional Society Committee

- Membership Committee, Sleep Research Society, 2022-Present

### Symposium/Meeting

- Organizing Chair, Translational Neuroscience in Central Virginia Chapter for Society for Neuroscience, “Advances in Neurobiology of Acquired Epilepsies”, Roanoke, VA 2018

### Journal Reviewer

- Neurobiology of Disease
- F1000 Research

## INVITED TALKS

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**Wallace H. Coulter Foundation Biomedical Engineering Seminar Series,**  
**Miami, FL**

Sep 2022

Title: “Altered signaling after brain injury at the level of a network, a domain and a single cell”

- American Epilepsy Society Annual Meeting, Investigators Workshop, Chicago, IL** Dec 2021  
 Title: "Novel techniques and models to identify epileptogenesis in post-traumatic epilepsy"
- Institute for Orthopedics and Neuroscience/ Carilion, Roanoke, VA** Mar 2019  
 Title: "Finding treatment targets for post-traumatic epilepsy"
- School of Neuroscience Seminars (Virginia Tech), Roanoke, VA** Oct 2018  
 Title: "Atypical astrocytes and epilepsy after mild TBI"
- Speaker and Symposium Organizer/Chair at Central Virginia Chapter of the Society of Neuroscience, Richmond, VA** Mar 2018  
 Title: "Dysfunctional astrocytes are the cause of post-traumatic epilepsy"
- Institute for Orthopedics and Neuroscience/ Carilion, Roanoke, VA** Nov 2017  
 Title: "Astrocytes in post-traumatic epilepsy: new targets for translational research"
- Society for Neuroscience, Nano-symposium – "Mechanisms of Epilepsy", Chicago, IL** Oct 2015  
 Title: "Role of anti-inflammatory and antioxidant drugs in the treatment of spasms in the multiple-hit rat model of infantile spasms"