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Munroe-Meyer Institute, University of Nebraska Med Center (UNMC)
Depts of Psychiatry, Biochemistry and Molecular Biology, Pharmacology and Exp Neuroscience, UNMC

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Citizenship: USA

Birth Date: August 6, 1962

Birth Place: Novi Sad, Former Yugoslavia (current Serbia)

Home Address: 24913 Chicago St, Waterloo, NE 68069

Marital Status: married to Zeljka Korade Mirnics, DVM, PhD

Children: Marco Istvan Mirnics (1998) and Emma Eva Mirnics (2002)

Military service: 1980-1981 Yugoslav National Army - Alpine Forces

Languages: English, Hungarian, Serbo-Croatian, elementary German

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I. EXECUTIVE SUMMARY



Károly Mirnics, M.D., Ph.D.

Director, Munroe-Meyer Institute

Hattie B. Munroe Professor of Psychiatry, Pharmacology and Experimental Neuroscience, Biochemistry & Molecular Biology, UNMC

Dr. Mirnics earned his medical degree from the University of Novi Sad (former Yugoslavia) School of Medicine, and his Ph.D. from Semmelweis University in Budapest, Hungary. He completed his postdoctoral fellowship at the University of Pittsburgh where he established his own laboratory in 2000. In 2006, his laboratory moved to the department of psychiatry at Vanderbilt University in Nashville, TN.

In 2010, Dr. Mirnics was named James G. Blakemore Professor of Psychiatry and served as the departmental vice chair for research and associate director of the Vanderbilt Kennedy Center, the oldest intellectual and developmental disabilities research center in the United States. In 2016 he joined the UNMC family, becoming the fourth *Director of the Munroe-Meyer Institute for Genetics and Rehabilitation (MMI)*. MMI is one of the oldest and largest clinical, research, education and outreach IDD institutes in the world, with a 103-year history, 570 employees and >400 long-term trainees. MMI provides services across >40 locations across the state with >90,000 clinical visits yearly.

As an internationally recognized, disease-oriented neuroscientist, Dr. Mirnics collaborates with scientists across the world. His research team is working to uncover the molecular basis of human brain disorders, and develop treatments for these conditions. His innovative research uses a variety of genetic, molecular, cell biology and behavioral tools across multiple diseases models, and has attracted more than \$15 million of extramural funding from the National Institutes of Health (NIH). Dr. Mirnics serves on the editorial boards of more than a dozen prominent scientific journals and numerous national scientific advisory committees. He has authored more than 150 scientific publications, which have been cited more than 17,000 times.

For all of Dr. Mirnics' accomplishments, as a researcher, teacher, community advocate, and administrator, his greatest passion and desire is to improve the lives of individuals with intellectual and developmental disabilities. Since arriving at UNMC in 2016, in recognition of his diversity, access and inclusion work he has received multiple prominent national and local awards and recognitions. These include (but are not limited to) the *2018 Help is Hope Award* from Autism Action Partnership and is recognized as the *2019 Friends of Scottish Rite Honoree*. He currently serves on the board of directors of Special Olympic International and chairs the SOI Global Medical Advisory Committee, advising on strategic health issue of more than 6 million athletes across >200 countries. Since 2022, he is also a member of the ASPR National Advisory Committee on Individuals with Disabilities & Disasters, and since 2023 he is a member of the Omaha Children's Museum Capital Project Advisory Group. Finally, under his leadership UNMC built the most advanced, award-winning, 220,000 sq ft multipurpose building – solely serving individuals with intellectual and developmental disability.

He is married to Zeljka Korade, DVM, PhD, Professor of Pediatrics at UNMC, and has two children (Marco and Emma). In his free time, he enjoys reading and fishing, and he is an avid chess player.

II. EDUCATION

- 1978-1980 School of Nursing “7th April”, Novi Sad, Yugoslavia
Degree: Registered Nurse
- 1987-1989 Psychology, University of Novi Sad, Yugoslavia
Program: Undergraduate studies of psychology
- 1981-1986 University of Novi Sad School of Medicine, Yugoslavia
Degree: Doctor of Medicine
- 1987-1989 University of Novi Sad School of Medicine, Yugoslavia
Program: Master of Science in Clinical Pharmacology
- 1990-1991 Special Student, Dept of Veterinary Anatomy, Iowa State University
Advisor: Dr. Srdija Jeftinija, Ph.D
- 1991-1996 Research Associate, Dept of Neurobiology, U of Pittsburgh
Advisor: H. Richard Koerber, Ph.D.
- 1998-2000 Research Assistant Professor, Dept of Neurobiology, U of Pittsburgh
Advisor: Pat R. Levitt, Ph.D.
- 2010 Semmelweis University, Budapest, Hungary
Degree: PhD in Biological Psychiatry (Advisor: Gabor Faludi, MD, PhD)

III. ACADEMIC APPOINTMENTS

- **University of Pittsburgh, Pittsburgh, PA (1991-2006):**

1991 - 1996 Research Associate, Department of Neurobiology
1997 - 1998 Instructor, Department of Neurobiology
1998 - 2000 Research Assistant Professor Department of Neurobiology
1999 - 2003 Director of DNA microarray core (PittArray)
2001 - 2006 Assistant Professor Departments of Psychiatry and Neurobiology
2006 Associate Professor, Department of Psychiatry
2006 - 2014 Adjunct Associate Professor, Department of Psychiatry

- **Vanderbilt University, Nashville, TN (2006 – 2016):**

2006 – 2008 Associate Professor with tenure, Department of Psychiatry
2006 - 2016 Investigator, Vanderbilt Kennedy Center for Research on Human Development
2008 - 2016 Vice Chair for Research, Department of Psychiatry
2008 - 2016 Professor with tenure, Department of Psychiatry
2009 - 2016 Director of Neurosciences Core, Vanderbilt Kennedy Center
2011 - 2016 James G. Blakemore Professor of Psychiatry, Department of Psychiatry
2012 - 2016 Associate Director, Vanderbilt Kennedy Center
2012 - 2016 Senior Fellow, Vanderbilt Institute for Integrative Biosystems Research and Education (VIIBRE)

- **University of Szeged, Hungary (2011 – 2020):**

2011 - 2020 Visiting Professor, University of Szeged, School of Medicine, Szeged, Hungary

- **University of Nebraska Medical Center, Omaha, NE - UNMC (2016 – ongoing):**

2016 - Director and Hattie B. Munroe Professor of Munroe-Meyer Institute for Genetics and Rehab.
2016 - Professor of Psychiatry, Biochem & Mol Biology, Pharm and Exp Neuroscience
2016 - Chancellor's Council Member, UNMC
2016 - Member, Interprofessional Academy of Educators
2016- Member, American College of Healthcare Executives (ACHE)
2016- Training faculty, Medical Sciences Interdepartmental Area (MSIA) Graduate Program

IV. HOSPITAL APPOINTMENTS

1987-1988 University Hospital of Novi Sad, Yugoslavia

Title: Medical Doctor

V. OTHER EMPLOYMENT

1988-1990 INEX-Hemofarm Pharmaceutical Company, Vrsac, Yugoslavia

Title: Associate in Marketing

VI. MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

1991 - Federation of Societies for Experimental Biology (FASEB)

1991 - International Brain Research Organization (IBRO)

1991 - Society for Neuroscience (SFN)

1994 - American Association for Advancement of Science (AAAS)

1994 - The New York Academy of Sciences (NYAS)

2003 - Society for Biological Psychiatry (SBP)

2005 - European College of Neuropsychopharmacology (ECNP)

2005 - American College of Neuropsychopharmacology (ACNP)

2005 - Hungarian Academy of Sciences Foreign Scientist Council

2006 - Hungarian Neuropsychopharmacological Society

2008 - International Society for Interferon and Cytokine Research

2012 - Schizophrenia International Research Society

2020 - American Chemical Society

VII. PROFESSIONAL ACTIVITIES

A. INTRAMURAL:

- **University of Pittsburgh, Pittsburgh, PA (1991-2006):**

1999 Microarray Seed Fund Reviewer
1999 Internal Grant Reviewer for Children's Hospital
1999 Internet Technology Task Force
1999-2002 Bioinformatics Task Force
1999-2003 Director of PittArray (University DNA Microarray Core)
1999-2003 Center for Human Genetics Board Member
2003-2006 Director of NeuroArray
1998-2006 Competitive Research Medical Fund Reviewer (CMRF)

- **Vanderbilt University, Nashville, TN (2006-2016):**

2007 Kennedy Center – Science Day Organizer and Moderator
2007 Kennedy Center – Strategic Planning Committee
2007 Kennedy Center – VKC Balance Group
2008 Center for Molecular Neurosci Web Development Committee
2009 Moderator, Vanderbilt Kennedy Center 2009 Science Day
2010 Chair of the Vanderbilt Kennedy Center 2010 Science Day committee
2013 Chair of Search Committee for Director of Addiction Division
2013 Chair of Search Committee for Mood Division
2013 Chancellor's Strategic Plan Academic Planning Group on EdTech
2014 MPB McGavock Endowed Professor Evaluation Committee
2014 Dept of Pharmacology Chair Search Committee
2008 – 2016 Kennedy Center – P30/U54 Neuroscience Core Director
2008 – 2016 Dept of Psychiatry – Faculty Recruitment Committee
2008 – 2016 Basic Science Planning - Measuring Excellence / Progress
2008 – 2016 Dept of Psychiatry – Appointments and Promotion Committee
2008 – 2016 Dept of Psychiatry – Leadership Council
2009 – 2016 Director of Neuroscience Cores, Vanderbilt Kennedy Center
2010 – 2016 Vanderbilt International Scholar Program in Biomedical Research committee member
2010 – 2016 Center for Molecular Neuroscience advisory board
2010 – 2016 Vanderbilt International Scholar Program Steering Committee Member
2011 – 2013 IMPACT group leader for [VISP students](#)
2011 – 2016 Vanderbilt Brain Institute Steering Committee Member
2012 – 2016 Associate Director, Vanderbilt Kennedy Center
2012 – 2016 Hobbs Grant Evaluation Committee, Vanderbilt Kennedy Center
2012 – 2016 VKC Leadership Council
2012 – 2016 VCTRS / VPSD selection committee
2012 – 2016 EDGE Review Committee
2012 – 2016 CISR Advisory Board
2012 – 2016 Appointments and Promotions Committee, Dept of Psychiatry, SOM
2012 – 2016 Endowed McGavock Chair Evaluation Committee SOM

- **University of Nebraska Medical Center (UNMC), Omaha, NE (2016 – ongoing) – Selected only:**
- 2016 - Director of Munroe-Meyer Institute for Genetics and Rehabilitation
- 2016 - UNMC Chancellor's Council Member
- 2016 - UNMC Deans and Directors Executive Council
- 2016 - Interprofessional Experiential Center for Enduring Learning (iEXCEL) Strategic Advisory Grp
- 2016 - Interprofessional Academy of Education Member
- 2016 - Faculty Excellence Awards Committee
- 2016 - Research Resources Board Member
- 2016 - UNMC Laboratory Services Optimization Workgroup
- 2016 - IAC: Center for Patient, Family, and Community Engagement in Chronic Care Management
- 2018 - 2019 Blueprint Nebraska Educational Attainment Industry Council
- 2016 - Participated in multiple dean, director, and vice-chancellor search committees

B. EXTRAMURAL

1) *Journal reviewer (ad hoc):*

Cell, Nature, Nature Neuroscience, Nature Medicine, Nature Biotechnology, Lancet, Neuron, Journal of Neuroscience, American Journal of Psychiatry, Neuroscience, Molecular Psychiatry, Neurobiology of Disease, Neuropsychopharmacology, PLOS Biology, EMBO J, Nucleic Acid Research, etc.

2) *Editorial Board*

The Scientific World (section editor), Biological Psychiatry, Biological Psychiatry Cognitive Neuroscience and Neuroimaging, Neurobiology of Disease, European Neuropsychopharmacology (ECNP Journal), Progress in Neurobiology, Neuroimmunology and Neuroinflammation, Molecular Neuropsychiatry, Faculty 1000 Neurogenetics, Frontiers in Neurogenetics (reviewing editor), Frontiers in Neurogenomics (reviewing editor), Journal of Neural Transmission, International Journal of Developmental Neuroscience, the Open Neuropsychopharmacology Journal, and Neuropsychopharmacologica Hungarica, Croatian Neuroscience Journal, Biomolecules, etc.

Guest editor: '**Assessment of Gene Expression in Neuropsychiatric Disease**' Special issue of Neurobiology of Disease, 2011.

Guest editor: "**Neurodevelopmental Aspects of Schizophrenia**" Special issue of International Journal of Developmental Neuroscience (IJDN), 2011.

Guest editor of "**Schizophrenia: Biology, Diagnostics and Therapy**" Special issue of Neuropsychopharmacologica Hungarica, 2011.

Gues editor of "**Brain Sterols: Biosynthesis and Physiology in Health and Disease**" Special issue of Biomolecules, 2024.

2023 - Editor-in-Chief for *Biomolecules* Synthetic Biology and Bioengineering section

3) *Grant reviewer:*

National Science Foundation, NIH Center for Scientific Review (MDCN5, SEP-A, ZGR1 BDCN-A11, NPAS, PMDA), BBRF, Wellcome Foundation, NARSAD, Alzheimer Association, Irish Research Council, MJ Fox Foundation, chartered NIH-NPAS member, chartered NIH-PMDA member, numerous minor foundation grants.

4) *Organizing activities:*

May 2004: International Society of Neurochemistry Focused Meeting: "*Changes in neuronal gene expression and CNS drug responses*"; 13-16 May in Avignon, France

Co-organizers: David J. Lockhart, Jacques Mallet, **Karoly Mirnics**, Hermona Soreq

October 2004: US-Japanese Information Exchange by NIH USA and NIH Japan: "*Bioinformatic Analysis of Brain Function*" September 30-October 2, Hawaii, HI, USA.

Co-organizers: Kazuhiro Ikenaka (Japan) and **Karoly Mirnics** (USA).

April 2009: IBRO CEERC “Neuroimaging and Neurogenomics of Developmental Disorders“

April 30 – May 6, Dubrovnik, Croatia

Co-organizers: Ivica Kostovic (Croatian Institute for Brain Research), Alan C. Evans (McGill University), Pasko Rakic (Yale University), **Karoly Mirnics** (Vanderbilt University)

- **2011-2014** ACNP Program Committee
- **2012** ACNP CME Course Director for 51st Annual Meeting
- **2013** ICOSR CME Course Director
- **2013** ACNP CME Course Director for 52nd Annual Meeting
- **2014** ACNP CME Course Director for 53rd Annual Meeting
- **2015 –** BBRF - NARSAD Young Investigator Award Committee
- **2015 - 2022** SOBP: Research Award Committee Member
- **2016 - 2020** ACNP Ethics Committee

C. RECOGNITIONS AND AWARDS:

- 2003-2005 Counterdrug Technology Assessment Center (Office of the President of the USA)
Elected task force member
- 2005- Hungarian Academy of Sciences
Elected member of the Foreign Scientist Advisory Council
- 2005- Faculty of 1000 Medicine, Neurogenetics section
Elected member
- 2005- American College of Neuropsychopharmacology
Elected member
- 2005- European College of Neuropsychopharmacology
Elected member
- 2005 Uppsala University, Sweden
Thesis opponent for Lina Emilsson
- 2006 National Alliance on Research on Schizophrenia and Depression (NARSAD)
Daniel X. Freedman Prize runner-up
- 2010 Research, Development and Innovation Program Committee of the European Union
Committee Member
- 2010 NARSAD Council Member
- 2011 'Assessment of Gene Expression in Neuropsychiatric Disease'
Guest Editor of Special Issue of Neurobiology of Disease
- 2011 “Neurodevelopmental Aspects of Schizophrenia”
Guest editor of Special Issue of International Journal of Developmental Neuroscience
- 2010 Hungarian Association of Neuropsychopharmacologists
Honorary member (5th in the history of the society)
- 2011-2014 Neural Basis of Psychopathology, Addictions and Sleep Disorders Study Section
Chartered NPAS/NIH membership starting July 1, 2011
- 2011 “Schizophrenia: biology, diagnostics and therapy”
Guest Editor of Special Issue of Neuropsychopharmacologica Hungarica
- 2011- 2016 Department of Psychiatry, Vanderbilt University, James G. Blakemore Professor of Psychiatry
- 2011 - Schizophrenia Research Forum, Advisory Board Member
- 2011 Nominated to Membership in Academia Europaea
- 2011 Hans Selye Visiting Professor, University of California, Long Beach VA Healthcare
- 2012 Plenary “State-of-the-art lecture” at 75th Anniversary of Albert Szent-Györgyi's Nobel Prize
Award Celebration, March 22-24, 2012, Szeged, HUNGARY
- 2012 NIH - Biobank Workgroup Member

2012 ACNP CME Course Director for 51st Annual Meeting
 2012-2015 ACNP Program Committee Member
 2012 Co-chair NPAS NIH Study section
 2013 ICOSR CME Course Director
 2013 Ad hoc review member of the NIMH Board of Scientific Counselors (BSC)
 2013 ACNP CME Course Director for 52st Annual Meeting
 2014 ACNP CME Course Director for 53st Annual Meeting
 2014-2018 Pathophysiological Basis of Mental Disorders and Addictions Study Section
 2015- Chair, External Advisory Committee of Johns Hopkins U. Schizophrenia Research Center
 2015 ACNP CME Course Director for 54th Annual Meeting
 2015-2018 ACNP Ethics Committee
 2015-2018 Society for Biological Psychiatry - A. E. Bennett Research Award Committee
 2016 Intramural program reviewer – NIH/NIEHS
 2016 - Elected Member, Interprofessional Academy of Educators, UNMC
 2017 - Elected Member, American College of Healthcare Executives (ACHE)
 2018 Autism Action Partnership - Annual “*Help is Hope*” Award Recipient
 2018 -2020 Chair, NIH Pathophysiological Basis of Mental Disorders and Addictions Study Section
 2019 - “*Friend of Scottish Rite*” Annual Award
 2020 - Board of Directors, Special Olympics International
 2020 - 2021 Chair of Research Committee, Special Olympics International
 2022 - Chair of Global Medical Advisory Committee, Special Olympics International
 2022 - National Advisory Committee on Developmental Disabilities & Disasters (NACIDD)
 2023 - Omaha Children’s Museum Capital Project Advisory Group
 2023 - Editor-in-Chief for *Biomolecules* Synthetic Biology and Bioengineering section

VIII. TEACHING AND MENTORING ACTIVITIES

A. COURSE TEACHING

- 1988-1989 University of Novi Sad, Yugoslavia
Course: Clinical Pharmacology
Contact hours: >100/year
- 1998 University of Pittsburgh School of Medicine
Course: Musculoskeletal Anatomy (Course Director)
Contact hours: >40/year
- 1998 Ross University School of Medicine, Portsmouth, Dominica
Course: Human Gross Anatomy
Contact hours: >40/year
- 1998-2003 Seton Hill College, Greensburg, PA
Course: Human Gross Anatomy
Contact hours: >40/year (Course Co-Director)
Developed course and wrote/published syllabus
- 1996-2004 University of Pittsburgh School of Medicine
Course: Human Gross Anatomy
Contact hours: >200/year
- 2004-2006 University of Pittsburgh School of Medicine
Course: CNUP Journal club (course facilitator)
Contact hours: ~20/year
- 2007- 2016 Vanderbilt University
Courses: NURO346, NURO292, NURO366, NSC235, Independent Study
Contact hours: ~40/year
- 2011- 2016 Vanderbilt University, Department of Psychiatry
Course: Teaching the residents and Fellows
Contact hours: ~16/year
- 2013-2016 Vanderbilt University, Department of Psychiatry
Course: Medical student teaching
Contact hours: ~8/year
- 2014-2016 Vanderbilt University, Department of Psychiatry
Course: Psychology Interns
Contact hours: ~8/year
- 2015-2016 Vanderbilt University, Vanderbilt Brain Institute
Course: Neurobiology of Disease, Course Director (developed a new course)
Contact hours: ~120/year

2016- UNMC: Guest lecturer on genetics and neurobiology of diseases
Courses: various minor teaching roles (graduate students, postdocs, residents)
Contact hours: ~10/year

B. RESEARCH SUPERVISION -POSTDOCTORAL TRAINEES/JUNIOR FACULTY

Name: Frank A. Middleton

Training period: 09/1998-09/1999
Degree: Ph.D.
Institution: Psychiatry, U of Pittsburgh
Research Project: 14-3-3 expression in schizophrenia
Last known position: Professor, SUNY Upstate
Role in training: Training grant committee member

Name: Julie Pongrac

Training period: 09/2002-09/2003
Degree: Ph.D.
Institution: Psychiatry, U of Pittsburgh
Research Project: Gene expression in the PFC of schizophrenia
Last known position: Trainee Program And Development Coordinator, U of British Columbia
Role in training: Major advisor

Name: Rehana Leak

Training Period: 2/2005 – 2008
Degree: Ph.D.
Institution: Neurology, U of Pittsburgh
Research Project: Neuroprotection and 6-OHDA models
Last known position: Professor, Duquesne University, Pittsburgh
Role in training: Co-advisor for genomic studies

Name: Armando Signore

Training period: 06/2002 – 06/2003
Degree: Ph.D.
Institution: Psychiatry, U of Pittsburgh
Research Project: Gene expression in the striatum of a Parkinsonian model
Last known position: Operations Director, Hillman Cancer Center, Cytometry Facility
Role in training: Gene expression advisor

Name: David Putz

Training Period: 1/2004 – 9/2004
Degree: Ph.D.
Institution: Anthropology, U of Pittsburgh
Research Project: Gene expression changes as a result of antipsychotic treatments
Last known position: Faculty, U of Michigan
Role in training: Research advisor

Name: Etienne Sibille

Training period: 12/2003 - 2008
Degree: Ph.D.
Institution: Psychiatry, U of Pittsburgh

Research Project: Gene expression profiling of major depression
Last known position: Professor and Scientific Director of Neurobiology of Depression and Aging and the Campbell Chair at the Centre for Addiction and Mental Health (CAMH), Toronto
Role in training: Co-sponsor on K01 award

Name: Kelly Wood

Training period: 09/2003 – 08/2008

Degree: MD

Institution: Department of Critical Care Medicine, U of Pittsburgh

Research Project: Microarray Determinants in Community-Acquired Pneumonia

Last known position: Associate Professor Department of Critical Care Medicine, U of Pittsburgh

Role in training: Co-sponsor on K23 award

Name: Dominique Arion

Training period: 03/2003 - 2011

Degree: Ph.D.

Institution: Psychiatry, U of Pittsburgh

Research Project: Layer-specific cortical gene expression

Last known position: Senior Research Principal, U of Pittsburgh

Role in training: Major advisor

Name: Krassimira Garbett

Training period: 09/2006 - 2016

Degree: Ph.D.

Institution: Psychiatry, Vanderbilt University

Research Project: Gene expression in autism, schizophrenia and animal models

Last known position: Senior Staff Scientist, Vanderbilt U

Role in training: Major advisor

Name: Philip Ebert

Training period: 03/2007 – 01/2008

Degree: Ph.D.

Institution: Psychiatry, Vanderbilt University

Research Project: miRNA driven animal models of psychiatric disorders

Last known position: Senior Director at Eli Lilly and Company, Bloomington, IN

Role in training: Major advisor

Name: Szatmar Horvath

Training period: 12/2008 – 12/2009

Degree: M.D./Ph.D.

Institution: Psychiatry, Vanderbilt University

Research Project: Characterization of miRNA-driven animal models of psychiatric disorders

Last known position: Associate Professor, U of Szeged, Hungary and Psychiatrist at Health New Zealand

Role in training: Major advisor

Name: Maximilian Michel

Training period: 12/2011 – 7/2012

Degree: Ph.D.

Institution: Psychiatry, Vanderbilt University

Research Project: Anatomical characterization of miRNA-driven animal models of psychiatric disorders

Last known position: Assistant Professor, University of Cologne Zoological Institute, Germany

Role in training: Major advisor

Name: Libin Xu

Training period: 07/2012 – 07/2016

Degree: Ph.D.

Institution: Chemistry, Vanderbilt University

Research Project: Characterization of SLOS models

Last known position: Professor of Chemistry, U of Washington

Role in training: Mentor on K99 award

Name: Troy Hackett

Training period: 07/2012 – 8/2014

Degree: Ph.D.

Institution: Hearing and Speech, Vanderbilt University

Research Project: Gene Expression During Postnatal Development of the Central Auditory Pathway

Last known position: Professor, Vanderbilt U

Role in training: Mentor on K18 Award

Name: Jacquelyn A. Brown

Training period: 07/2012 – 07/2014

Degree: Ph.D.

Institution: Engineering, Vanderbilt University

Research Project: Behavioral characterization of miRNA-driven animal models of psychiatric disorders

Last known position: Senior Scientist and Director of the AMOS core at Vanderbilt University

Role in training: Major advisor

Name: Rita Baldi

Training period: 01/2014 – 04/2015

Degree: Ph.D.

Institution: Psychiatry, Vanderbilt University

Research Project: Functional characterization of neurogliaform interneurons in transgenic models

Last known position: Assistant Professor, Vanderbilt U

Role in training: Major advisor

Name: Swarup Mitra

Training period: 09/2017 – 08/2018

Degree: Ph.D.

Institution: Munroe-Meyer Institute, UNMC

Research Project: Effect of MIA on interneuronal development and behavior

Last known position: Assistant Professor, Marshall University

Role in training: Major advisor

Name: Katalin Koczok, MD, PhD

Training period: 09/2017 – 08/2018

Degree: MD, Ph.D.

Institution: Munroe-Meyer Institute, UNMC

Research Project: Genotype-dependent effects of intrauterine antipsychotic exposure

Last known position: Assistant Professor, University of Debrecen, Hungary

Role in training: Major advisor

Name: Thiago Cardoso Genaro-Mattos

Training period: 12/2017 – 01/2022

Degree: Ph.D.

Research Project: Effects of medications on cholesterol biosynthesis

Last known position: Field Application Scientist, Thermo Fisher Scientific

Role in training: Major advisor

Name: Marta Balog

Training period: 03/2021 – 04/2022

Degree: Ph.D.

Research Project: Effects of medications on cholesterol biosynthesis

Last known position: Assistant Professor, JJ Strossmayer U, Osijek, Croatia

Role in training: Major advisor

C. RESEARCH SUPERVISION -PREDOCTORAL TRAINEES

Name: Elizabeth Crouch

Training period: 06/2002 – 09/2002 and 06/2003 – 09/2003

Degree: BS, accepted into medical school

Institution: Psychiatry, U of Pittsburgh

Research Project: Cortical gene expression of HBs

Role in training: Major advisor in summer student program

Name: Terrie Vasilopoulos

Training period: 06/2002 – 09/2002

Degree: BS, accepted into Ph.D. program

Institution: Psychiatry, U of Pittsburgh

Research Project: Cortical gene expression in schizophrenia

Role in training: Major advisor in summer student program

Name: David Putz

Training period: 1/2003 – 11/2003

Degree: BS, PhD program at Anthropology

Institution: Psychiatry and Anthropology, U of Pittsburgh

Research Project: Gene expression changes in response to antipsychotic medication

Last known position: Faculty at U of Michigan

Role in training: Major advisor for gene expression work

Name: Christos Colovos

Training period: 06/2004 – 05/2005

Degree: Ph.D.

Institution: Psychiatry, U of Pittsburgh

Research Project: Gene Gender-specific gene expression

Role in training: Major advisor for summer research program

Name: Christin Glorioso

Training period: 06/2004 – 09/2005

Degree: B.S.

Institution: Psychiatry, U of Pittsburgh

Research Project: Gene expression changes in BDNF-deficient mice

Last known position: Founder & CEO, NeuroAge Therapeutics and Founder & Executive Director, Longevity Global

Role in training: Major advisor for summer research program

Name: Michael Sabatini

Training period: 06/2002 – 08/2005

Degree: B.S. (defended PhD on August 15, 2005)

Institution: Psychiatry and Neurobiology, U of Pittsburgh

Research Project: Effect of maternal separation on amygdala gene expression

Last known position: Professor at U of Pittsburgh

Role in training: Major advisor for Ph.D. thesis

Name: Amanda Mitchell

Training period: 12/2007 – 12/2011

Degree: B.S.

Institution: Psychiatry, Vanderbilt University

Research Project: Neuroprotection by exercise

Last known position: Principal Scientist at Recursion

Role in training: Major advisor for Ph.D. thesis

Martin Schmidt

Training period: 07/2008 – 12/2014

Degree: Ph.D.

Institution: IGP, Vanderbilt University

Research Project: Animal models of psychiatric disorders

Last known position: Chief Scientific Officer – Kypha, St. Louis.

Role in training: Major advisor for Ph.D. thesis

Khine Lwin

Training period: 07/2008 - 2011

Degree: B.S.

Institution: Vanderbilt University

Research Project: Animal models of psychiatric disorders

Last known position: board-certified internal medicine physician, Kaiser Permanente

Role in training: Mentor

Sara Kalman

Training period: 07/2011-08/2016

Degree: PhD

Institution: University of Szeged, Hungary

Research Project: Gene expression pattern after maternal immune activation

Last known position: Associate Professor and psychiatrist, University of Szeged, Hungary

Role in training: VISRA advisor, PhD co-advisor

Name: Andrea Vereczkei

Training period: 02/2011 – 03/2012

Degree: PhD

Institution: Semmelweis University, Budapest, Hungary

Research Project: Gene expression pattern and epigenetic modification in major depression

Last known position: Assistant Professor, Semmelweis University, Budapest, Hungary

Role in training: Major advisor for PhD work in the USA

Name: Danielle DeCampo

Training period: 02/2011 – 12/2014

Degree: PhD

Institution: U of Rochester, NY

Research Project: Gene expression patterns in non-human primates

Last known position: Attending neurologist with the Division of Neurology and the Pediatric Epilepsy Program at Children's Hospital of Philadelphia.

Role in training: NRSA co-advisor for genomic studies

Name: Zita Olah

Training period: 02/2014 – 12/2014

Degree: BS, exchange graduate student

Institution: Vanderbilt U, Psychiatry – U Szeged, Hungary

Research Project: Peripheral biomarkers of MDD

Last known position: Assistant Professor, University of Szeged, Hungary

Role in training: Major advisor for PhD work in the USA

Name: Kelli Money

Training period: 09/2014 – 08/2016

Degree: PhD

Institution: Neurology resident, Vanderbilt University

Research Project: Peripheral biomarkers of MDD and gestational diabetes-ASD connection

Last known position: Assistant Professor and neurologist, University of Colorado

Role in training: Major advisor

Name: Luke Allen

Training period: 09/2020 – 2023

Degree: MS, PhD student

Institution: UNMC

Research Project: Lipid biosynthesis inhibition in the brain by commonly used beta-blockers.

Last known position: Between jobs

Role in training: Major advisor

Name: Andriana Miskovic

Training period: 07/2022- ongoing

Degree: MD, PhD student

Institution: JJ Strossmeyer University, Osijek, Croatia

Research Project: Lipid biosynthesis inhibition in the brain by antipsychotic medications.

Role in training: Co-major advisor

D. RESEARCH SUPERVISION – UNDERGRADUATE/HIGH SCHOOL TRAINEES (selected)

- Sara Hart, Neuroscience, Vanderbilt, 2011-2012
- Lauren Viehmann, Neuroscience, Vanderbilt, 2013-2014
- Adriana Ocon, Neuroscience, Vanderbilt, 2012-2013
- Rafayat Ahsen, Neuroscience, Vanderbilt, 2011-2012
- Nola Novak – Hume-Fogg High School, Nashville, Summer of 2012
- Reece Myre – Ashville, NC, High School Student, Winter of 2013
- Wesley Sun – Neuroscience, Vanderbilt, Spring 2013
- Devon Carter, Chemistry, Xavier U, Summer 2013

- Shezza Shagrabi, Neuroscience, Emory U, Summer 2013
- Rohan Tammala – Ravenwood High School, Summer 2013
- Jennifer Da, Ravenwood High School, Summer 2011
- Anastasia Koumtchev, MLK High School, Summer 2014
- Marco Mirnics, EHS High School, Summer 2014
- Anna Denton, EHS High School, Summer 2014
- Qian Chen, Shanghai Medical University, Summer of 2018

IX. RESEARCH PROGRAM AND FUNDING

A. MAJOR GRANT SUPPORT:

Three R01 applications pending.

R01 MH067234-11 (PI: Mirnics)

10/01/16-09/31/21

Role on Project: Principal Investigator, competitive renewal 3rd cycle

Granting Agency: NIMH

Total Cost: \$ 2,449,265

Title: Effects of environmental challenges on genetically modified interneuronal subpopulations

Description: We study how different inhibitory brain cell types control various behaviors, focusing on those that show alteration in schizophrenia. Furthermore, we are trying to understand how this process is influenced by two distinct environmental insults: cannabinoid exposure in adolescence and prenatal maternal immune activation during fetal life. We are taking advantage of a novel transgenic mouse technology developed in the previous grant cycle.

R01 MH110636 (PI: Mirnics)

6/01/2017-05/31/2022

Role on Project: Principal Investigator

Granting Agency: NIMH

Total Cost: \$ 2,843,211

Title: Vulnerability of DHCR7^{+/-} mutation carriers to aripiprazole and trazodone treatment

Description: This project will test the vulnerability of the DHCR7^{+/-} gene mutation carriers to aripiprazole (an atypical antipsychotic) and trazodone (an antidepressant) exposure. We will test biochemical, gene expression and behavioral consequences of the interaction between the DHCR7^{+/-} gene mutation and treatment, assessing the long-lasting effects on the progeny.

Supplement to R01 MH110636 (PI: Mirnics)

07/01/2019-06/30/2020

Role on Project: Principal Investigator

Granting Agency: NIMH

Total cost: \$100,000

U54 NICHD (PI: Dykens)

09/01/2015 – 08/31/2020

Role on Project: Director of Neurosciences Core

Granting Agency: NICHD

Total Cost: >\$5,000,000, Mirnics cost \$1,270,695

Mirnics cost: 20% salary support, core service support

Title: Eunice Kennedy Shriver Intellectual and Developmental Disability Research Center

Description: A diverse collection of core services for NIH-funded investigators involved in research of human development and developmental disabilities.

1R01 - MH093332 (PI: Akbarian)**04/01/11– 03/31/16**Role on Project: Co-InvestigatorGranting Agency: NIMHTotal Cost: \$1,500,000Mirnic's cost: \$750,000Title: *Epigenome Mapping in Cortical Interneurons*

Description: The two major goals of this project is to 1) provide the research community and public domain for the first time with a comprehensive genome-wide atlas of the histone methylation landscape in selected subpopulations of cortical GABAergic interneurons and other cells residing in mouse cerebral cortex; and 2) To gain first insights into chromatin remodeling mechanisms of GABAergic neurons during the transition from juvenile to mature age.

Hobbs Society 2015 (PI: Mirnic's)**07/01/15– 06/30/16**Role on Project: Principal Investigator (MPI with Wallace)Granting Agency: Nicholas Hobbs SocietyTotal Cost: \$30,542Title: *Autism and schizophrenia data mining in SD and BioVU*

Description: We hypothesize that mining Vanderbilt's electronic data resources using sophisticated machine learning algorithms employing a hypothesis-free, data-driven approach will allow us to uncover previously unknown relationships between different disease domains and descriptors, resulting in a meaningful pattern of sub-stratification of patients.

5 P30 HD15052-30 (Dykens)**07/01/09 – 06/30/14**Role on Project: Director of Neurosciences CoreGranting Agency: NICHDTotal Cost: >\$5,000,000Mirnic's cost: 20% salary support, core service supportTitle: *Eunice Kennedy Shriver Intellectual and Developmental Disability Research Center*

Description: A diverse collection of core services for NIH-funded investigators involved in research of human development and developmental disabilities.

1R01 MH079299-02 (Mirnic's)**03/12/07 – 02/28/13**Role on Project: Principle InvestigatorGranting Agency: NIMHTotal Cost: \$1,890,000Title: *Neuroimmune changes in schizophrenia*

Description: This study will examine the hypothesis that various environmental influences, via pro-inflammatory cytokine induction, trigger a strong transcriptome response in the developing brain that may persist into adult life.

2R01MH067234-06 (Mirnic's)**09/01/08 – 08/31/13**Role on Project: Principle InvestigatorGranting Agency: NIMHTotal Cost: \$1,890,000Title: *Consequences of Neocortical GAD67 Downregulation*

Description: This study will focus on creation and analysis of transgenic animals with GAD67 silencing in cortical interneurons using a novel, BAC-miRNA method. Analysis will be performed using anatomical and behavioral tools.

1R01 AG027854-01A1 (Sisodia)**02/01/07 – 01/31/12**Role on Project: Co-Investigator

Granting Agency: NIA

Total Cost: \$1,890,000

Mirnic's cost: \$300,000

Title: *Modulation of A β Deposition by Environmental Enrichment*

Description: We will investigate molecular, cellular and physiological framework by which environmental enrichment modulates amyloid deposition in transgenic mice.

1 P50 MH078028-01A1 (Blakely)

09/15/07 – 06/30/12

Role on Project: Co-Investigator

Granting Agency: NIMH

Total Cost: >\$5,000,000

Mirnic's cost: \$20,000

Title: *Genes Controlling Assembly and Function of Serotonin Systems*

Description: This proposal seeks the creation of an NIMH Silvio O. Conte Center for Neuroscience. Research at Vanderbilt University to investigate genes controlling assembly and function of serotonin systems. Dr. Mirnic is co-investigator in the Bioanalytical Core. He is a formal consultant to the core in the area of punch and laser-associated microdissection of brain regions for gene and protein profiling.

4 R37 MH43784-17 (Lewis)

02/01/06 – 01/31/11

Role on Project: Co-Investigator

Granting Agency: NIMH

Total Cost: >\$2,500,000

Mirnic's cost: \$200,000

Title: *GABA Neurons and Cortical Circuitry in Schizophrenia*

Description: The studies proposed in this application are designed to identify the affected subset of cortical GABA neurons in schizophrenia, to define the postsynaptic consequences of the alterations in these neurons, and to characterize the pathophysiological mechanisms that may produce these alterations.

K02 MH070786 (Mirnic's)

4/01/04 – 03/31/09

Role on Project: Principle Investigator

Granting Agency: NIMH

Total Cost: \$527,051

Title: *Uncovering complex expression patterns in schizophrenia*

Description: Salary award, research focusing on gene expression patterns in schizophrenia.

1 R01 MH067234-01A1 (Mirnic's)

7/1/03 - 6/30/08

Role on Project: Principal Investigator

Granting Agency: NIMH

Total cost: \$1,253,713

Title: *Neocortical Transcriptome Changes in Schizophrenia*

Description: These studies examined the gene expression profiles as a function of brain region, hemisphere and sex in schizophrenia.

2 P50 MH45156-14 (CNMD PI: Lewis, Project 2 PI: Mirnic's)

7/1/03 - 6/30/08

Role on Project: Principal Investigator on Project 2.

Granting Agency: NIMH

Total cost Project 2 Mirnic's: \$898,527

Title: *Cortical Circuitry and Cognition in Schizophrenia*

Description: This program focused on transcriptome profiling of the prefrontal cortex of subjects with schizophrenia. In particular, it attempted to define the putatively altered molecular phenotype of deep layer III pyramidal neurons.

2 P50 MH45156-14 (Lewis)**7/1/03 - 6/30/08**Role on Project: Co-InvestigatorGranting Agency: NIMHTotal cost: \$1,315,520Title: Cortical Circuitry and Cognition in Schizophrenia - Project 1

Description: The proposed studies investigated the specific subsets of pyramidal neurons that are affected in schizophrenia in order to determine both the potential causes of these abnormalities and their contributions to disturbed DLPFC information processing.

2 P01 NS019608-19A1 (UDALL Center PI: Zigmond)**8/1/03 - 4/30/08**Role on Project: Co-InvestigatorGranting Agency: NINDSMirnic costs: \$163,593Title: Neuroprotection and Early Detection in Parkinson's Disease

Description: This program project continued the line of research that focused on the compensatory changes that underlie the preclinical phase of Parkinson's Disease (PD) by focusing on strategies for inducing endogenous neuroprotective mechanisms in animal models.

5 R37 MH43784-14 (Lewis)**4/6/01 - 3/31/06**Role on Project: Co-InvestigatorGranting Agency: NIMHTotal cost: \$3,042,184Title: GABA Neurons and Cortical Circuitry in Schizophrenia

Description: These studies identified the affected subset of cortical GABA neurons in schizophrenia, defined the postsynaptic consequences of alterations in these neurons, and investigated the pathophysiological mechanisms that may have produced these alterations.

KAR1 (Mirnic)**10/1/02 - 9/30/05**Role on Project: Principal InvestigatorGranting Agency: Eli Lilly and CompanyTotal cost: \$340,000Title: Gene expression changes as a result of antipsychotic treatment

Description: This study focused on the transcriptome effects of two antipsychotic drugs (olanzapine & haloperidol) in a non-human primate model.

1 S10 RR16618-01 (Mirnic)**8/15/02 - 8/14/04**Role on Project: Principal InvestigatorGranting Agency: NCCRTotal cost: \$216,770Title: DNA microarray center

Description: This shared instrumentation grant established a resource that allowed the widespread use of this technology for the neuroscience community.

NARSAD Young Investigator Award 2002 (Mirnic)**07/01/02 - 06/30/04**Role on Project: Principal InvestigatorGranting agency: NARSADTotal cost: \$50,000Title: Identification and Validation of Molecular Mechanisms Associated with Schizophrenia

Description: This project assessed the function of an unknown gene that we named MK01 by performing electroporation and antisense-microarray studies.

5 P50 MH45156 Lewis (Center Director)

07/01/98 - 06/30/03

Role on Project: Co-Principal Investigator on Project 2

Granting Agency: NIMH

Conte CNMD title: Cortical Circuitry and Cognition in Schizophrenia (Lewis)

Project 2 title: Gene Expression Patterns in Prefrontal Cortical Circuitry (Mirnics and Levitt)

Project 2 total cost: \$400,000

This project used commercially-available cDNA microarrays to define the molecular changes in gene expression that are causal to the changes in dorsolateral prefrontal cortex circuit function associated with schizophrenia.

AFSP (Mirnics)

09/01/01 - 08/31/03

Role on Project: Principal Investigator

Granting agency: American Foundation for Suicide Prevention

Total cost: \$80,000

Title: Complex Patterns of Gene Expression in Suicide: A Study of Subjects with Schizophrenia

Description: This project examined complex gene expression patterns in the prefrontal cortex of subjects with schizophrenia who committed suicide and those who died of other causes.

5 R21 MH62760 (Mirnics)

09/19/00 - 08/31/02

Role on Project: Principal Investigator

Granting Agency: NIMH

Total cost: \$450,000

Title: cDNA Microarray Analysis of Synaptic Transmission

Description: The proposed studies improved experimental designs to allow for sensitive and reproducible assessment of changes in gene expression in neuropsychiatric diseases.

X. PUBLICATIONS AND PRESENTATIONS

SCIENTIFIC METRICS (Google Scholar) (April 1, 2024):

[ORCID ID: 0000-0002-5521-0254](https://orcid.org/0000-0002-5521-0254)

Scientific indices:
Citations: 17,263
H-index: 57
i10-index: 126

A. ORIGINAL DATA MANUSCRIPTS – REFEREED ARTICLES

1. Peeples ES, **Mirnic K**, Z Korade Z. Chemical Inhibition of Sterol Biosynthesis. 2024/3/28 *Biomolecules* 14 (4), 410. PMID in progress.
2. Freitas FP, Alborzinia H, Dos Santos AF, Nepachalovich P, Pedrera L, Zilka O, Inague A, Klein C, Aroua N, Kaushal K, Kast B, Lorenz SM, Kunz V, Nehring H, Xavier da Silva TN, Chen Z, Atici S, Doll SG, Schaefer EL, Ekpo I, Schmitz W, Horling A, Imming P, Miyamoto S, Wehman AM, Genaro-Mattos TC, **Mirnic K**, Kumar L, Klein-Seetharaman J, Meierjohann S, Weigand I, Kroiss M, Bornkamm GW, Gomes F, Netto LES, Sathian MB, Konrad DB, Covey DF, Michalke B, Bommert K, Bargou RC, Garcia-Saez A, Pratt DA, Fedorova M, Trumpp A, Conrad M, Friedmann Angeli JP. *Nature*. 2024 Feb;626(7998):401-410. doi: 10.1038/s41586-023-06878-9. Epub 2024 Jan 31. PMID: 38297129.
3. Korade Z, Anderson A, Balog M, Tallman KA, Porter NA, **Mirnic K**. Chronic Aripiprazole and Trazodone Polypharmacy Effects on Systemic and Brain Cholesterol Biosynthesis. *Biomolecules*, 2023 Aug 28;13(9):1321. doi: 10.3390/biom13091321, PMC10526910.
4. Nygaard KR, Maloney SE, Swift RG, McCullough KB, Wagner RE, Fass SB, Garbett K, **Mirnic K**, Veenstra-VanderWeele J, Dougherty JD. Extensive characterization of a Williams syndrome murine model shows Gtf2ird1-mediated rescue of select sensorimotor tasks, but no effect on enhanced social behavior. *Genes Brain Behav*. 2023 Aug;22(4):e12853. doi: 10.1111/gbb.12853. Epub 2023 Jun 27. PMID: 37370259
5. Korade Z, Tallman KA, Kim HH, Balog M, Genaro-Mattos TC, Pattnaik A, **Mirnic K**, Pattnaik AK, Porter NA. Dose-Response Effects of 7-Dehydrocholesterol Reductase Inhibitors on Sterol Profiles and Vesicular Stomatitis Virus Replication. *ACS Pharmacol Transl Sci*. 2022 Oct 25;5(11):1086-1096. doi: 10.1021/acspsci.2c00051. eCollection 2022 Nov 11. PMID: 36407960.
6. Balog M, Anderson AC, Heffer M, Korade Z, **Mirnic K**. Effects of Psychotropic Medication on Somatic Sterol Biosynthesis of Adult Mice. *Biomolecules*. 2022 Oct 21;12(10):1535. doi: 10.3390/biom12101535. PMID: 3629174.
7. Balog M, Anderson A, Gurusurthy CB, Quadros RM, Korade Z, **Mirnic K**. Knock-in mouse models for studying somatostatin and cholecystokinin expressing cells. *J Neurosci Methods*. 2022 Nov 1;381:109704. doi: 10.1016/j.jneumeth.2022.109704. Epub 2022 Sep 5. PMID: 36070817.
8. Balog M, Anderson A, Genaro-Mattos TC, Korade Z, **Mirnic K**. Individual and simultaneous treatment with antipsychotic aripiprazole and antidepressant trazodone inhibit sterol biosynthesis in the adult

brain. *J Lipid Res.* 2022 Aug;63(8):100249. doi: 10.1016/j.jlr.2022.100249. Epub 2022 Jul 14. PMID: 35839864.

9. Peebles ES, Sahar NE, Snyder W, **Mirnic K**. Early Brain microRNA/mRNA Expression is Region-Specific After Neonatal Hypoxic-Ischemic Injury in a Mouse Model. *Front Genet.* 2022 Feb 16;13:841043. doi: 10.3389/fgene.2022.841043. eCollection 2022. PMID: 35251138.
10. Gunda V, Genaro-Mattos TC, Kaushal JB, Chirravuri-Venkata R, Natarajan G, Mallya K, Grandgenett PM, **Mirnic K**, Batra SK, Korade Z, Rachagani S. Ubiquitous Aberration in Cholesterol Metabolism across Pancreatic Ductal Adenocarcinoma. *Metabolites.* 2022 Jan 7;12(1):47. doi: 10.3390/metabo12010047. PMID: 35050168.
11. Peebles ES, Sahar NE, Snyder W, **Mirnic K**. Temporal brain microRNA expression changes in a mouse model of neonatal hypoxic-ischemic injury. *Pediatr Res.* 2021 Aug 31. doi: 10.1038/s41390-021-01701-5. PMID: 34465878.
12. Koczok K, Horváth L, Korade Z, Mezei ZA, Szabó GP, Porter NA, Kovács E, **Mirnic K**, Balogh I. Biochemical and Clinical Effects of Vitamin E Supplementation in Hungarian Smith-Lemli-Opitz Syndrome Patients. *Biomolecules.* 2021 Aug 17;11(8):1228. doi: 10.3390/biom11081228. PMID: 34439893.
13. Allen LB, **Mirnic K**. Metoprolol Inhibits Developmental Brain Sterol Biosynthesis in Mice. *Biomolecules.* 2022 Aug 31;12(9):1211. doi: 10.3390/biom12091211. PMID: 36139049.
14. Genaro-Mattos TC, Klingelsmith KB, Allen LB, Anderson A, Tallman KA, Porter NA, Korade Z, **Mirnic K**. Sterol Biosynthesis Inhibition in Pregnant Women Taking Prescription Medications. *ACS Pharmacol Transl Sci.* 2021 Feb 17;4(2):848-857. doi: 10.1021/acspsci.1c00012. eCollection 2021 Apr 9. PMID: 33860207.
15. Genaro-Mattos TC, Anderson A, Allen LB, Korade Z, **Mirnic K**. Altered Cholesterol Biosynthesis Affects Drug Metabolism. *ACS Omega.* 2021 Feb 17;6(8):5490-5498. doi: 10.1021/acsomega.0c05817. eCollection 2021 Mar 2. PMID: 33681590.
16. Anderson A, Genaro-Mattos TC, Allen LB, Koczok K, Korade Z, **Mirnic K**. Interaction of maternal immune activation and genetic interneuronal inhibition. *Brain Res.* 2021 May 15;1759:147370. doi: 10.1016/j.brainres.2021.147370. Epub 2021 Feb 15. PMID: 33600830.
17. Tallman KA, Allen LB, Klingelsmith KB, Anderson A, Genaro-Mattos TC, **Mirnic K**, Porter NA, Korade Z. Prescription Medications Alter Neuronal and Glial Cholesterol Synthesis. *ACS Chem Neurosci.* 2021 Feb 17;12(4):735-745. doi: 10.1021/acchemneuro.0c00765. Epub 2021 Feb 2. PMID: 33528983.
18. Korade Z, Allen LB, Anderson A, Tallman KA, Genaro-Mattos TC, Porter NA, **Mirnic K**. Trazodone effects on developing brain. *Transl Psychiatry.* 2021 Feb 1;11(1):85. doi: 10.1038/s41398-021-01217-w. PMID: 33526772.
19. Genaro-Mattos TC, Anderson A, Allen LB, Tallman KA, Porter NA, Korade Z, **Mirnic K**. Maternal cariprazine exposure inhibits embryonic and postnatal brain cholesterol biosynthesis. *Mol Psychiatry.* 2020 Nov;25(11):2685-2694. doi: 10.1038/s41380-020-0801-x. Epub 2020 Jun 5. PMID: 32504050.
20. Allen LB, Genaro-Mattos TC, Anderson A, Porter NA, **Mirnic K**, Korade Z. Amiodarone Alters Cholesterol Biosynthesis through Tissue-Dependent Inhibition of Emopamil Binding Protein and

- Dehydrocholesterol Reductase 24. *ACS Chem Neurosci*. 2020 May 20;11(10):1413-1423. doi: 10.1021/acscemneuro.0c00042. Epub 2020 Apr 29. PMID: 32286791.
21. Genaro-Mattos TC, Anderson A, Allen LB, Korade Z, **Mirnic K**. Cholesterol Biosynthesis and Uptake in Developing Neurons. *ACS Chem Neurosci*. 2019 Aug 21;10(8):3671-3681. doi: 10.1021/acscemneuro.9b00248. Epub 2019 Jun 19. PMID: 31244054.
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23. Allen LB, Genaro-Mattos TC, Porter NA, **Mirnic K**, Korade Z. Desmosterolosis and desmosterol homeostasis in the developing mouse brain. *J Inherit Metab Dis*. 2019 Mar 19. doi: 10.1002/jimd.12088. [Epub ahead of print] PubMed PMID: 30891795.
24. Genaro-Mattos TC, Allen LB, Anderson A, Tallman KA, Porter NA, Korade Z, **Mirnic K**. Maternal aripiprazole exposure interacts with 7-dehydrocholesterol reductase mutations and alters embryonic neurodevelopment. *Mol Psychiatry*. 2019 Apr;24(4):491-500. doi: 10.1038/s41380-019-0368-6. Epub 2019 Feb 11. PubMed PMID: 30742019.
25. Koczok K, Gurumurthy CB, Balogh I, Korade Z, **Mirnic K**. Subcellular localization of sterol biosynthesis enzymes. *J Mol Histol*. 2019 Feb;50(1):63-73. doi: 10.1007/s10735-018-9807-y. Epub 2018 Dec 8. PubMed PMID: 30535733; PubMedCentral PMCID: PMC6467513.
26. Schwede M, Nagpal S, Gandal MJ, Parikshak NN, **Mirnic K**, Geschwind DH, Morrow EM. Strong correlation of downregulated genes related to synaptic transmission and mitochondria in post-mortem autism cerebral cortex. *J Neurodev Disord*. 2018, Jun 1;10(1):18. doi: 10.1186/s11689-018-9237-x. PubMed PMID: 29859039; PMCID: PMC5984825.
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28. Korade Z, Genaro-Mattos TC, Tallman KA, Liu W, Garbett KA, Koczok K, Balogh I, **Mirnic K**, Porter NA. Vulnerability of DHCR7(+/-) mutation carriers to aripiprazole and trazodone exposure. *J Lipid Res*. 2017 Nov;58(11):2139-2146. doi: 10.1194/jlr.M079475. Epub 2017 Sep 28. PubMed PMID: 28972118; PubMed PMCID: PMC5665669.
29. Money KM, Barke T, Serezani A, Gannon M, Garbett KA, Aronoff D, **Mirnic K** (2017) Gestational diabetes exacerbates maternal immune activation effects in the developing brain. *Mol Psychiatry*. 2017 Sep 26. doi: 10.1038/mp.2017.191. [Epub ahead of print] PubMed PMID: 28948973.
30. deCampo D, Cameron JC, Miano J, Lewis DA, **Mirnic K**, Fudge J. (2017) Maternal deprivation alters expression of neural maturation gene *tbr1* in the amygdala paralaminar nucleus in infant female macaques. *Developmental Psychobiology* (impact factor **2.2**), 59(2):235-249, PMID: 27917473
31. Money KM, Olah Z, Korade Z, Garbett KA, Shelton RC, **Mirnic K**. (2016) An altered peripheral IL6 response in major depressive disorder. *Neurobiol Dis*. (Impact factor **5.6**) 89:46-54. PMCID: PMC4785068.

32. Kim HY, Korade Z, Tallman KA, Liu W, Weaver CD, **Mirnic K**, Porter NA. (2016) Inhibitors of 7-Dehydrocholesterol Reductase: Screening of a Collection of Pharmacologically Active Compounds in Neuro2a Cells. *Chem Res Toxicol*. (Impact factor **3.5**), 29(5):892-900. PMID: PMC4868769.
33. Korade Z, Kim HY, Tallman KA, Liu W, Koczok K, Balogh I, Xu L, **Mirnic K**, Porter NA. (2016) The Effect of Small Molecules on Sterol Homeostasis: Measuring 7-Dehydrocholesterol in Dhcr7-Deficient Neuro2a Cells and Human Fibroblasts. *J Med Chem*. (Impact factor **5.6**), 59(3):1102-15. PMID: PMC4838819.
34. Mitchell AC, Javidfar B, Bicks LK, Neve R, Garbett K, Lander SS, **Mirnic K**, Morishita H, Wood MA, Jiang Y, Gaisler-Salomon I, Akbarian S. (2016) Longitudinal assessment of neuronal 3D genomes in mouse prefrontal cortex. *Nat Commun*. (Impact factor **11.3**) 6;7:12743, PMID: PMC5025847.
35. Ingason A, Giegling I, Hartmann AM, Genius J, Konte B, Friedl M, Schizophrenia Working Group of the Psychiatric Genomics Consortium (PGC)*, Ripke P, Sullivan PF, StClair D, Collier DA, O'Donovan MC, **Mirnic K**, Rujescu D (2015) Expression analysis in a rat psychosis model identifies novel candidate genes validated in a large case-control sample of schizophrenia. *Translational Psychiatry*, (Impact factor **4.5**), 5:e656. PMID: PMC4930128.
36. Martin MV, **Mirnic K**, Nisenbaum L, Vawter MP (2015) Olanzapine reverses brain gene expression changes induced by phencyclidine treatment in non-human primates. *Molecular Neuropsychiatry*, 1(2): 82-94, PMID: PMC4578732.
37. Brown JA, Ramikie TS, Schmidt MJ, Báldi R, Garbett K, Everheart MG, Warren LE, Gellért L, Horváth S, Patel S, **Mirnic K**. (2015) Inhibition of parvalbumin-expressing interneurons results in complex behavioral changes. *Mol Psychiatry* (Impact factor **15.1**) 2015 Dec;20(12):1499-507, PMID: 25623945.
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41. Brown JA, Sherrod SD, Goodwin CR, Brewer B, Yang L, Garbett KA, Li D, McLean JA, Wikswo JP, **Mirnic K**. (2014). Metabolic consequences of interleukin-6 challenge in developing neurons and astroglia. *J Neuroinflammation* (Impact Factor: **4.4**). 11/2014; 11(1):183. DOI: 10.1186/s12974-014-0183-6. PMID: 25374324.
42. Brown JA, Horváth S, Garbett KA, Schmidt MJ, Everheart M, Gellért L, Ebert P, **Mirnic K** (2014) The role of cannabinoid 1 receptor expressing interneurons in behavior. *Neurobiol Dis* (impact factor **4.9**), 2014 Mar; 63:210-21. doi: 10.1016/j.nbd.2013.11.001. Epub 2013 Nov 13. PMID: 24239560.
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33. **Mirnics K**, Levitt P and Lewis DA (2004). DNA Microarray Analysis of Postmortem Brain Tissue. *Int Rev Neurobiol*, 60:153-81, (Journal impact factor: **1.78**), PMID: 15474590.
34. **Mirnics K**, Pevsner J (2004). Progress in the use of microarray technology to study the neurobiology of disease. *Nat Neurosci*, 7(5):434-439, (Journal impact factor: **15.14**) (Peer-reviewed), PMID: 15114354.
35. **Mirnics K** (2003). Analysis of mental disorders using DNA microarrays, In J Mallet (ed) *Neurosciences at the Post-Genomic Era*, IPSEN Foundation, Paris, 25-42, PMID: not available.
36. **Mirnics K** (2001). Gene expression microarrays in brain research: It is all about design! In DH Geschwind (ed) *DNA Microarray Workshop Syllabus*, SFN Annual Meeting, 56-67, PMID: not available.
37. **Mirnics K**, Middelton FA, Lewis DA, Levitt PR (2001). Delineating novel signature patterns of altered gene expression in schizophrenia using gene microarrays. *Scientific World Journal* 1:114-116, PMID: 12805694.

38. **Mirnics K**, Middleton FA, Lewis DA, Levitt PR (2001). Analysis of complex brain disorders with gene expression microarrays: Schizophrenia as a disease of synapse. *Trends Neurosci* 24(8):479-86, (Journal impact factor: **14.47**) (Peer-reviewed), PMID: 11476888.
39. **Mirnics K**, Lewis DA, Levitt PR (2001). DNA microarray in human brain disorders. In S Moldin and H Chin (eds) *Methods in Neurogenetics*, CRC Press LLC, Boca Raton, pp 188-217, PMID: not available.
40. **Mirnics K** (2001). Microarrays in brain research: The good, the bad and the ugly. *Nat Rev Neurosci* 2(6):444-447, (Journal impact factor: **24.05**) (Peer-reviewed), PMID: 11389480.
41. **Mirnics K** and Lewis DA (2001). Genes and subtypes of schizophrenia. *Trends Mol Med* 7(7):281-183, 2001, (Journal impact factor: **7.16**), PMID: 11425621.
42. Djakovic-Svajcer K, Banic B, **Mirnics K** (1988). Opioid Analgesics in Memory Consolidation, *Advances in the Biosciences*, Vol 70, Neuron, Brain and Behavior, Ed: B. Bajic, Pergamon Press Inc., 136-141, PMID: not available.

C. PATENTS (1)

1. Levitt P, Chowdari VK, Nimgaonkar VL and **Mirnics K**. Methods and systems for facilitating the diagnosis and treatment of schizophrenia. US Patent Application: 20030113721, June 19, 2003.

D. INVITED LECTURESHIPS SINCE 2000 (selected from >100)

“Building a better brain microarray – technical considerations”
Clontech, Inc., Palo Alto, CA, USA, 2000.

“Characterization of schizophrenia with cDNA microarrays”
Merck Headquarters, Whitehall Station, PA, USA, 2000.

“Gene expression changes in schizophrenia – cDNA microarray view”
Department of Neuroscience, USUHS, Bethesda, MD, USA, 2000.

“Gene expression changes in schizophrenia- analyzing microarray data”
Bioinformatics, Pitt Workshop, Department of Bioinformatics, University of Pittsburgh, Pittsburgh, PA, USA, 2000.

“Microarrays in human brain disorders”
Department of Human Genetics, University of Pittsburgh, Pittsburgh, PA, USA, 2000.

“Microarrays – technology and choices”
Departments of Pharmacology and Clinical Pharmacology, School of Pharmacy, Microarray Workshop, University of Pittsburgh, Pittsburgh, PA, USA, 2000.

“Molecular characterization of schizophrenia with microarrays – impairment of synaptic function”
Cleveland Clinic, Department of Neuroscience, January 8th, Cleveland, USA, 2001.

“Making and using microarrays”
Microarray Workshop, Magee Womens Hospital, March 8th, Pittsburgh, PA, USA, 2001.

“Delineating Novel Signature Patterns of Altered Gene Expression in Schizophrenia”
Building a Better Brain Workshop, Vanderbilt University, May 23-25, Nashville, TN, USA, 2001.

“Analysis of Complex Brain Disorders: Schizophrenia as a Disease of Synapse”
Keynote Speaker, Fifth Dutch Endo-Neuro Meeting, June 4-5, Doorwerth, The Netherlands, 2001.

“Analysis of Complex Brain Disorders with Gene Expression Microarrays”
New Technologies to Catalyze Breakthroughs in Understanding Addiction, ONDCP Workshop, June 16th, San Diego, CA, USA, 2001.

“Gene expression microarrays in brain research: it is all about design!”
Short Course on DNA Microarrays, Society for Neuroscience Annual Meeting, November 10th, San Diego, CA, USA, 2001.

“Schizophrenia as a disease of the synapse”
7th Annual Meeting of the Stanley Medical Research Institute, November 15-16, Bethesda, MD, USA, 2001.

“Analysis of Mental Disorders Using DNA Microarrays”
IPSEN Workshop on Human Genomics; December 3, Paris, France, 2001.

“Analysis of Postmortem Brain Tissue Using DNA Microarrays”
NIH Brain Bank Workshop, March 11-12, Bethesda, MD, USA, 2002.

“DNA Microarrays and Human Brain Disorders”
Neuroscience Symposium on Microarrays in Neuroscience Research, Virginia Commonwealth University (MCV), March 25, Richmond, VA, USA, 2002.

“Transcriptome Changes in Schizophrenia”
Genomics and Psychiatry, Society for Biological Psychiatry, April 4-6, Paris, France, 2002.

“Analyzing the Transcriptome in Brain Disorders”
University of California at Davis, Department of Biotechnology, May 20th, Davis, CA, USA, 2002.

“Microarrays in Brain Research: It’s all about design!”
Short Course on DNA Microarrays, Society for Neuroscience Annual Meeting, November 1st, Orlando, FL, USA, 2002.

“Microarray Experiments: Design and Pitfalls”
Winter Brain Research Convention, January 25-28, Salt Lake City, UT, USA, 2003.

“Schizophrenia as a Disease of Synapse”
Juan March Workshop: *Schizophrenia as a Disease of the Synapse*; February 8-13, Madrid, Spain, 2003.

“DNA Microarrays in Brain Research”
International Congress on Schizophrenia Research, March 29 – April 1, Colorado Springs, CO, USA, 2003.

1st : *“Schizophrenia as a Disease of the Synapse”*
2nd : *“DNA Microarrays in Psychiatry”*
16th ECNP Congress, September 20-24, Prague, Czech Republic, 2003.

“Schizophrenia: From Genomics to Genetics”
XI World Conference of Psychiatric Genetics, October 4-8, Quebec City, Canada, 2003.

“Transcriptome Changes in Schizophrenia”
Intramural Research Program, NIMH, NIH, Bethesda, 2004

“Transcriptome alterations in the prefrontal cortex of primates: effects of olanzapine and haloperidol”
Eli Lilly and Company Research Headquarters, Indianapolis, 2004.

“Presenilin-1 Dependent Transcriptome Changes”
International Society for Neurochemistry, May 13-17, Avignon, France, 2004.

“Transcriptome changes in schizophrenia”
Conference on Schizophrenia, Cold Spring Harbor Laboratories, NY, June 14, 2004.

“Transcriptome profiling of schizophrenia”
MATRICS Conference #6: New Approaches to Assessing and Improving Cognition in Schizophrenia, Potomac, MD, September 9-10, 2004.

“Molecular fingerprints of schizophrenia”
Functional Genomics of Signal Transduction, Mont Sainte-Odile, France, September 17-20, 2004.

“Presenilin-dependent transcriptome changes”

Bioinformatic Analysis of Brain Function, September 29-October 3, Hawaii, HI, 2004.

“DNA microarray analysis of human brain disorders: today and tomorrow”

ACNP Meeting Teaching Day, December 12, 2004 Puerto Rico, PR.

“Transcriptome profiling of schizophrenia”

University of California at Davis, Davis, CA, February 2, 2005.

“Transcriptome profiling of brain tissue: implications for schizophrenia research”

APA annual Meeting, May 21-26, 2005 Atlanta, GA, USA.

“The impact of genomics on schizophrenia: first schizophrenia genes”

8th World Congress of Biological Psychiatry in Vienna, 28 June - 3 July 2005.

“Transcriptome profiling of schizophrenia”

Distinguished International Scholar Seminar Series
Uppsala University, Sweden, September 29, 2005.

“Gene expression in schizophrenia”

2005 Cold Spring Harbor Workshop on Schizophrenia
Cold Spring Harbor, New York, July 9-12, 2005.

“DNA microarray analysis of human brain disorders: today and tomorrow”.

18th ECNP Congress, Amsterdam, October 22 - 26, 2005 (Session chair)

“Gene expression in schizophrenia”

Vanderbilt University, Nashville, TN, Nov 2, 2005

“How to find biomarkers for complex brain disorders?”

Stanley Research Conference on Biomarkers of Psychiatric Disorders, Annapolis, November 10, 2006

Plenary lecture: *“The role of transcriptome profiling in deciphering neurodegenerative disorders”*

17th International Symposium on ALS/MND, Yokohama, Japan, November 30-December 2, 2006

“Gene expression profile of patients with schizophrenia who committed suicide”

10th Congress of Hungarian Society for NeuroPsychoPharmacology with International Participation
Tihany, Hungary, October 4-6, 2007

“Putative drug targets for schizophrenia: Too few or too many?”

AstraZeneca Pharmaceuticals, Wilmington, DE, October 12, 2007

“Future studies on postmortem brain tissue – where should be go?”

SMRI Neuropathology Symposium, Washington, DC, November 30, 2007.

“Making most of your microarray”

18th International Symposium on ALS/MND, Toronto, Canada, December 1-3, 2007

“Generation of subpopulation-specific cortical gad1 knock-down mice”

Hot Topics, ACNP 46th Annual Meeting Boca Raton Resort & Club, FL, December 9-13, 2007

“Exercise your amyloid! (The neuroprotective effect of physical exercise)”

The Cleveland Clinic, Cleveland, OH, March 10, 2008.

“Transcriptome profiling of schizophrenia: from postmortem work to model animals”

MIT McGovern Institute Symposium: "The Biological Basis Of Psychiatric Disease"

Boston, MA, April 28–29, 2008

“Schizophrenia: from genomics to genetics and function”

Dept of Pathology, Vanderbilt University, Nashville, TN, March 3, 2008

“Transcriptome alterations in the prefrontal cortex of subjects with schizophrenia who committed suicide”

SOBP Symposium “Use of Epigenetic, Genetic, and Molecular Approaches in Suicide Research” Washington,

DC, May 1-3, 2008

“Convergent findings from genome-wide association studies and functional genomics”

Symposium “Genomic studies in schizophrenia, towards understanding the pathophysiology”

50th Anniversary CINP Congress, Munich, Germany, July 13–17, 2008.

“Putative drug targets for schizophrenia: Too few or too many?”

(A less than objective view of a skeptic)

Eli Lilly and Company Headquarters

Indianapolis, July 23, 2008

“Schizophrenia: from genomics to functional imaging”

“Neuroimaging of Developmental Disorders” IBRO Symposium

Dubrovnik, Croatia, 12-16 September 2008

“Gene expression changes in autism”

OSHU/Oregon National Primate Research Center

Portland, April 10, 2009.

“Transcriptome profiling of schizophrenia: from postmortem work to model animals”

Maryland Psychiatric Research Center

Baltimore, April 15, 2009

“Schizophrenia: from genomics to functional imaging”

“Neurogenomics and Neuroimaging of Developmental Disorders” IBRO Symposium

Dubrovnik, Croatia, 1-3 May, 2009.

“Transgenic mouse model for GAD67 down-regulation in cortical interneurons”

12th Congress of Hungarian Society for Neuropsychopharmacology with International Participation

Tihany, Hungary, October 1-3, 2009.

“Schizophrenia: from postmortem findings to novel animal models”

Nathan Kline Institute, Center for Dementia Research, NYU, Orangeburg, NY, February 4, 2010.

“BAC-driven miRNA-mediated in vivo silencing of gene expression in the brain”

43rd Annual Winter Conference on Brain Research, Breckenridge, CO, February 26, 2010

“Novel animal models for studying schizophrenia: BAC-driven miRNA-mediated in vivo silencing of gene expression.”

2nd Schizophrenia International Research Conference, Florence, Italy, April 11, 2010

“The future of human postmortem brain research”

2nd Schizophrenia International Research Conference, Florence, Italy, April 13, 2010

“GABA-ergic dysfunction in schizophrenia: from postmortem studies to animal models”

2nd Schizophrenia International Research Conference, Florence, Italy, April 14, 2010

“Gene expression changes in autism and schizophrenia – signature of environmental exposure”

California Institute of Technology, Pasadena, May 27, 2010

“Synaptic changes in the prefrontal cortex of subjects with schizophrenia”

“Synaptic biology in schizophrenia” Workshop, NIMH, Bethesda, June 2-3, 2010

“Schizophrenia: from postmortem findings to model animals”

Merck and Co, West Point, July 23rd, 2010.

“Schizophrenia: from postmortem findings to model animals”

University of Alabama, Birmingham, September 24, 2010.

“Schizophrenia: from a gene to a disturbed brain function”

13th Congress of Hungarian Society for Neuropsychopharmacology with International Participation
Tihany, Hungary, October 4-6, 2010.

“Gene expression, aging and schizophrenia”

NIMH Symposium: Neurobiological Trajectories of Chronic Mental Illness with Advancing Age Meeting
Rockville, MD, November 1-2, 2010.

“Gene Expression Changes in Schizophrenia: From Postmortem Findings to Model Animals”

The 11th Annual Vanderbilt Genetics Symposium *“Beyond Disease Dichotomy”*

Vanderbilt University, Nashville, TN, October 13, 2010

“GABA-ergic Dysfunction in Schizophrenia: from Postmortem Studies to Animal Models”

Department of Basic Medical Sciences, U of Arizona

Phoenix, AZ, February 17, 2011.

“Neuroimmune Changes in Schizophrenia and Autism”

14th Congress of Hungarian Society for Neuropsychopharmacology with International Participation
Tihany, Hungary, October 6-8, 2011.

“Molecular Psychiatry: dead-end or basis for new therapies?”

14th Congress of Hungarian Society for Neuropsychopharmacology with International Participation
Tihany, Hungary, October 6-8, 2011.

“GABA-ergic Dysfunction in Schizophrenia: from Postmortem Studies to Animal Models”

VA Long Beach Healthcare System

Southern California Institute for Research and Education

Long Beach, CA, December 2, 2011

“GABA-ergic Dysfunction in Schizophrenia: from Postmortem Studies to Animal Models”

Duquesne University, Department of Biology

Pittsburgh, PA, March 1, 2012

“GABA-ergic Dysfunction in Schizophrenia: from Postmortem Studies to Animal Models”
Plenary “State-of-the-art lecture” at 75th Anniversary of Albert Szent-Györgyi's Nobel Prize Award Celebration, March 22-24, 2012, Szeged, Hungary.

“GABA-ergic Dysfunction in Schizophrenia: from Postmortem Studies to Animal Models”
Lieber Institute, Baltimore, MD, April 24, 2012.

“Future of Brain Banking: Regulating Access and Sharing”
NIH Biobanking WorkShop, Bethesda, MD, May 15, 2012

“GABA-ergic Dysfunction in Schizophrenia: from Postmortem Studies to Animal Models”
Simmelweis Symposium, Budapest, Hungary, November 9-10, 2012 Section Co-Chair

“Neuroimmune Changes in the Brain of Subjects with Schizophrenia and Autism”
51st ACNP Annual Meeting, Integrative Panel Session, Hollywood, FL, December 4th, 2012

“GABA-ergic Dysfunction in Schizophrenia: from Postmortem Studies to Animal Models”
Dept of Neuroscience, Case Western U, Cleveland, OH, April 17, 2013

“Neuroimmune Changes in Schizophrenia”
Dept of Psychiatry, Case Western U, Cleveland, OH, April 18, 2013

“Neuroimmune Changes in Schizophrenia and Autism”
McLean Hospital, Harvard University, Boston, MA, June 18, 2013

“Neuroimmune Changes in Schizophrenia”
1st Annual Molecular Psychiatry Association Meeting, San Francisco, CA, Nov 8, 2013

“Gene expression changes in the adolescent brain”
The Adolescent Brain Workshop, Cold Spring Harbor Laboratories, Cold Spring Harbor, NY, Dec 4, 2013.

“Multi-scale Understanding of Schizophrenia”
Annual ORNL Biomedical Science and Engineering Conference “The Multi-Scale Brain: Spanning Molecular, Cellular, Systems, Cognitive, Behavioral, and Clinical Neuroscience.” May 6-8, 2014 — Oak Ridge, TN.

“Neuroimmune Changes in Schizophrenia and Autism”
Department of Psychiatry, U of Pittsburgh, May 15, 2014

“Neuroimmune Changes in Schizophrenia and Autism”
Department of Psychiatry, University of Illinois Chicago, Nov 19, 2014

“Neuroimmune Changes in Schizophrenia and Autism”
Department of Psychiatry, UT Southwestern, Dallas, TX, Feb 4, 2015

“New Approaches to Finding Treatments: Combining Phenotypic Information with High-Throughput Drug Screening and Disease Models”
2015 ORNL Biomedical Science and Engineering Conference “Collaborative Biomedical Innovations: Data Sciences for Actionable Health Insights” Aug 25-27, 2015 — Oak Ridge, TN.

“Immune System Activation and Predisposition to Brain Disease”
Maryland Psychiatric Research Center (MPRC), Baltimore, MD, March 6, 2016

“Immune System Activation and Predisposition to Brain Disease”
Department of Pediatrics Grand Rounds, UNMC, Omaha, NE, August 2016.

“Effects of prenatal maternal immune activation on the brain and behavior of the offspring”
UNMC Research Forum: Pain to Parkinson's, Omaha, NE, Aug 31, 2016

“Advice to a young clinician-scientist”
Phi Rho Society, UNMC, October 17, 2016

“Effects of prenatal maternal immune activation on the brain and behavior of the offspring”
CanDo Interest group, UNMC, May 9, 2017

“Effects of prenatal maternal immune activation on the brain and behavior of the offspring”
Mind and Brain Health Seminar Series, UNMC, May 31st, 2017

“Inhibition of interneurons: consequences on behavior”
Gordon Research Conferences, Les Diablerets, Switzerland; 06/25/2017 - 06/30/2017

“Immune System Activation and Predisposition to Brain Disease”
Croatian Neurosci Meeting, Presidential Lecture, Osijek, Croatia, September 23, 2017

“Ethics of Genetics”
Slowdown Public Lecture, Omaha, NE, October 2017

“Clinical Genetic Testing and Lessons Learned”
3rd International Symposium on Translational Cancer Research, November 17th-18th, 2018 in Tianjin, China.

*“Genotype*Environment*Treatment interaction and brain cholesterol biosynthesis”*
Neuroscience lecture, Beijing University, China, November 16, 2018

*“Genotype*Environment*Treatment interaction and brain cholesterol biosynthesis”*
Neuroscience lecture, George Washington University, Washington, DC, May 23, 2019

“Neuronal cholesterol biosynthesis and homeostasis”
Presidential Lecture, 7th Croatian Neuroscience Congress, Zadar, Croatia, September 2019

*“Genotype*Environment*Treatment interaction and brain cholesterol biosynthesis”*
George Washington University grand rounds, Washington, DC, May 22, 2019

*“Genotype*Environment*Treatment interaction and brain cholesterol biosynthesis”*
Children’s National Hospital grand rounds, Washington, DC, October 24, 2019

“Interaction of genetics, pregnancy and medications on the developing brain”
7th Croatian Neuroscience Symposium, September 24, 2021, Zagreb, Croatia – online

“Disruption of brain sterol biosynthesis by commonly used prescription medications”
8th Conference of the Mediterranean Neuroscience Society (MNS), Dubrovnik, Croatia, May 30, 2022

“Respecting Neurodiversity”

2023 Smith-Lemli-Opitz Syndrome Scientific Conference, Seattle, June 2023 - online

“Mental Health and Intellectual Disabilities”

Pardes Humanitarian Prize acceptance speech at BBRF Gala, Washington, DC, October 29, 2023

“Neuroimmune changes in schizophrenia and autism: role of maternal immune activation”

8th Croatian Neuroscience Symposium, Osijek, Croatia, November 19, 2023 - online