REBECCA JANNET KOCERHA

➢ EDUCATION AND TRAINING

INSTITUTION AND LOCATION DEGREE FIELD OF STUDY

- *Mayo Clinic, Jacksonville, Florida* Postdoctoral Neuroscience
- *Scripps Research Institute, Jupiter, Florida* Postdoctoral Neuroscience *University of Florida, Gainesville, Florida* Ph.D Biochemistry
- *Purdue University, Indianapolis, Indiana* M.S. Biology
- *Indiana University, Bloomington, Indiana* B.S. Chemistry

➢ PROFESSIONAL EXPERIENCE

Associate Editor, Frontiers in Genetics and Frontiers in Molecular Biosciences
2012-Present

➢ TEACHING EXPERIENCE AND INVITED LECTURES

Course Director for the following semester courses, Georgia Southern University:

- Survey of Chemistry I (Chem 1151, 4 credits)
- Survey of Chemistry II (Chem 1152, 4 credits)
- Principles of Chemistry I (General Chemistry I) (Chem 1211, 4 credits)
- Principles of Chemistry II (General Chemistry II) (Chem 1212, 4 credits)
- Comprehensive General Chemistry (engineering majors) (Chem 1310, 4 credits)
- Principles of Biochemistry (Chem 3530, 3 credits)
- Organic Chemistry I Laboratory (3401, 4 credits)
- Organic Chemistry II Laboratory (3402, 4 credits)

➢ PUBLICATIONS AND BOOK CHAPTERS (CAREER TOTAL OF 20)

- Hanna J, Hossain GS, **Kocerha J**. The potential for microRNA therapeutics and clinical research. *Frontiers in Genetics*. 2019. In press
- **Kocerha J** and Aggarwal N. Epigenomics and Neurobehavioral Disease. Chapter for *Elsevier* book "Epigenetics in Human Disease (Second Edition)". 2018.
- McCall R, Miles MH, **Kocerha J**, Sessler JL, Sittaramane V, Arumugam K, Arambula JF. Dual Targeting of the Cancer Antioxidant Network with Naphthoquinone Fused Gold(I) N-heterocyclic Carbene Complexes. *Chemical Science*. 2017 Sep 1; 8(9)
- Carrick W, Burks B, Cairns M, **Kocerha J**. Noncoding RNA regulation of dopamine signaling in diseases of the central nervous system. *Front Mol Biosci. 2016* Oct 25;3:69
- **Kocerha J*,** Dwivedi Y, Brennand KJ* **.** Noncoding RNAs and neurobehavioral mechanisms in psychiatric disease. *Molecular Psychiatry.* 2015 Jun;20(6):677-84. *** corresponding authors** • **Kocerha J**, Xu Y, Prucha MS, Chan AWS. microRNA-128a dysregulation in transgenic Huntington's disease monkeys. 2014 Jun. 7:46*. Mol Brain*.
- Chan AWS, Xu Y, Jiang J, Rahim T, **Kocerha J**, Zhao D, Chi T, Engelhardt H, Moran S, Larkin K, Neumann A, Cheng H, Li C, Nelson K, Banta H, Zola S, Villinger F, Yang J, Testa C, Mao H, Zhang X, Bachevalier J. A two years longitudinal study of a transgenic Huntington disease monkey. *BMC Neurosci*. 2014 Mar 3;15:36.
- **Kocerha J**, Liu Y, Willoughby D, Chidamparam K, Benito J, Nelson K, Xu Y, Chi T, Engelhardt H, Moran S, Yang SH, Li SH, Li XJ, Larkin K, Neumann A, Banta H, Yang JJ, Chan AW. Longitudinal transcriptomic dysregulation in the peripheral blood of transgenic Huntington's disease monkeys. *BMC Neurosci*. 2013 Aug. 14(1):88.
- Cairns MJ and **Kocerha J**. Advances in profiling of noncoding RNAs in neurological disease. *Front Genet*. (invited Opinion article). 2013 Jan. 4:5.
- Putkhao K, **Kocerha J**, Cho IK, Yang JJ, Parnpai R, Chan AW. Pathogenic cellular phenotypes are germline transmissible in a transgenic primate model of Huntington's Disease. *Stem Cells Dev*. 2012 Nov 29. 22(8):1198-205.
- Verbeeck C, DeJesus-Hernandez M, Ceballos-Diaz C, **Kocerha J**, Golde T, Das P, Rademakers R, Dickson DW, Kukar T. Expression of *Fused in sarcoma* mutations in mice recapitulates the neuropathology of FUS proteinopathies and provides insight into disease pathogenesis. *Mol. Neurodegener*. 2012 Oct 10;7(1):53.
- Chan AW and **Kocerha J**. The Path to microRNA Therapeutics in Psychiatric and Neurodegenerative Disorders. *Front Genet*. 2012 May ;3:82.. (invited review)
- **Kocerha J**, Kouri N, Baker M, Finch N, DeJesus-Hernandez M, Gonzalez J, Chidamparam K, Josephs KA, Boeve BF, Graff-Radford N, Crook J, Dickson DW, Rademakers R. Altered microRNA expression in frontotemporal lobar degeneration with TDP-43 pathology caused by progranulin mutations. *BMCGenomics*. 2011 Oct 27;12:527.
- Faghihi MA, **Kocerha J**, Modarresi F, Engström PG, Chalk AM, Brothers SP, Koesema E, St Laurent G, Wahlestedt C. RNAi screen indicates widespread biological function for human natural antisense transcripts. *PLoS On*e. 2010 Oct 4;5(10). pii: e13177.
- Hollander JA, Im HI, Amelio AL, **Kocerha J**, Bali P, Lu Q, Willoughby D, Wahlestedt C, Conkright MD,Kenny PJ. Striatal microRNA controls cocaine intake through CREB signalling. *Nature*. 2010 2010 Jul 8;466(7303):197-202.
- DeJesus-Hernandez M, **Kocerha J**, Finch N, Crook R, Baker M, Desaro P, Johnston A, Rutherford N, Wojtas A, Kennelly K, Wszolek ZK, Graff-Radford N, Boylan K, Rademakers R. De novo

truncating
FUS gene mutation as a cause of sporadic amyotrophic lateral sclerosis. *Hum Mutat*. 2010 May;31(5):E1377-89.

- **Kocerha J**, Prucha MS, Kroll KJ, Steinhilber D, Denslow N. Regulation of Steroidogenic Acute Regulatory Protein transcription by orphan nuclear receptor signaling pathways. *Endocrinology*. 2010 Jan;151(1):341-9.
- **Kocerha J**, Kauppinen S, Wahlestedt C. microRNAs in CNS disorders. *Neuromolecular Med*. 2009;11(3):162-72.
- **Kocerha J**, Faghihi MA, Lopez-Toledano MA, Huang J, Ramsey AJ, Caron MG, Sales N, Willoughby D, Elmen J, Hansen HF, Orum H, Kauppinen S, Kenny PJ, Wahlestedt C. MicroRNA-219 modulates NMDA receptor-mediated neurobehavioral dysfunction. *Proc Natl Acad Sci U S A*. 2009 Mar 3;106(9):3507-12.
- Denslow ND, **Kocerha J**, Sepúlveda MS, Gross T, Holm S. Gene Expression Fingerprints of Largemouth Bass (*Micropterus salmoides)* Exposed to Pulp and Papermill Effluents. *Mutation Research*; invited manuscript, 2004 Aug 18;552(1-2):19-34.

➢ FELLOWSHIPS AND GRANTS

Current Support

Georgia Southern Research Committee Award Role: Co-Investigator (PI: Dr. Aiken, K)
2020-2021
The Design and Study of Novel Therapeutics: Taking Advantage of the High Nutrient Demand of Cancer Cells

Pending Support

NSF Planned Pathways (P2): Incorporation of Freshmen in Research for Early Experience (iFREE); (ECR EHR Core Research); Role: Key Personnel (PI: Dr. Landge, S. M)

Completed Support

NIH R21 Role: CO-I 2013
Development of a knockout monkey model for Autism spectrum disorder.

Cure PSP Grant Role: CO-I 08/01/09- 08/01/11
Molecular characterization of noncoding RNA regulators in Frontotemporal Dementia: The goals of this grant were to identify noncoding microRNAs with distinct regulatory roles in the various subclasses of Frontotemporal Dementia (FTLD). Using a collection of human samples from the Mayo Clinic brain bank, we analyzed tissue from FTLD patients with Tau or TDP43 pathology.

*Mayo Clinic Robert and Clarice Smith Fellowshi*p Role: PI 05/01/09- 05/01/2010 Genomic profiling and *in vitro* analysis of microRNAs in neurodegenerative disorders: The aims of this proposal were to uncover novel noncoding microRNA-mRNA mechanisms in dementia caused by mutations in the Progranulin gene. We uncovered specific noncoding RNA-mediated pathways in response to Progranulin haploinsufficiency in the frontal cortex of brains from a large cohort of patients.

➢ HONORS

Peer Reviewer for: Molecular Psychiatry, Molecular Autism, Schizophrenia Bulletin, Ageing Research Reviews, Psychopharmacology, PLoS One, American Journal of Psychiatry, Neurobiology of Disease, Molecular Neurobiology

2017 Nominated & selected for Marquis Who's Who of America
2016 Nominee for "Outstanding Student Advocate for First Year Students" award at Georgia Southern University
2014-present Associate Editor for Frontiers in Molecular Biosciences (Molecular Diagnostics) journal
2012-present Associate Editor for Frontiers in Genetics (RNA) journal
2009 Keystone Scholarship (1 of 3 selected at the Keystone Symposium on The Molecular Basis of Schizophrenia and Bipolar Disorder)
2006 Licensed cloned genes to EcoArray