



## Boryana Stamova, M.S., M.S., Ph.D.

### Research/Academic Interests

Dr. Stamova's research focuses on deciphering how gene expression networks change in neurological diseases and neurodevelopmental disorders to ultimately pinpoint clinically useful biomarkers and determinants of pathogenesis, pathophysiology, and etiology. She and her colleagues have studied the molecular changes in ischemic stroke, intracerebral hemorrhage, subarachnoid hemorrhage, Alzheimer's Disease and Autism Spectrum Disorders. Another main interest of Dr. Stamova's research is how modifying factors, such as biological sex and age affect the molecular response in disease. In addition, Dr. Stamova is interested in personalized medicine. In particular, identifying peripheral immune system biomarkers to predict which patients would respond to a particular treatment before that treatment is administered.

**Title** Associate Adjunct Professor

**Specialty** Neurology

**Department** [Neurology](#)

**Division** Neurology

**Additional Phone** Physician Referrals: 800-4-UCDAVIS (800-482-3284)

**Languages** Bulgarian

**Education** Ph.D., Genetics, UC Davis, Davis CA 2007  
M.S., Plant Biology, UC Davis, Davis CA 1999  
M.S., Genetics, UC Davis, Davis CA 2001  
Equivalent to B.S., University of Sofia (Sv. Kliment Ohridski), Sofia, Bulgaria 1996

**Fellowships** Neurology, Post-Doctoral Scholar, Human Transcriptomic Studies, UC Davis, Sacramento CA 2007-2011

**Professional Memberships** American Heart Association  
International Society for Autism Research  
Society for Neuroscience

**Select Recent Publications** Durocher M, Knepp B, Yee A, Jickling G, Rodriguez F, Ng K, Zhan X, Hamade F, Ferino E, Amini H, Carmona-Mora P, Hull H, Ander BP, Sharp FR, Stamova B. Molecular Correlates of Hemorrhage and Edema Volumes following Human Intracerebral Hemorrhage Implicate Inflammation, Autophagy, mRNA Splicing, and T Cell Receptor Signaling. *Transl Stroke Res.* 2020. In production.



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Carmona-Mora P, Ander BP, Jickling GC, Dykstra-Aiello C, Zhan X, Ferino E, Hamade F, Amini H, Hull H, Sharp FR, Stamova B. Distinct peripheral blood monocyte and neutrophil transcriptional programs following intracerebral hemorrhage and different etiologies of ischemic stroke. *J Cereb Blood Flow Metab.* 2020 Sep 22:271678X20953912. doi:10.1177/0271678X20953912. Epub ahead of print. PMID:32960689.

Cheng X, Ander BP, Jickling GC, Zhan X, Hull H, Sharp FR, Stamova B. MicroRNA and their target mRNAs change expression in whole blood of patients after intracerebral hemorrhage. *J Cereb Blood Flow Metab.* 2020 Apr;40(4):775-786. doi:10.1177/0271678X19839501. Epub 2019 Apr 9. PMID:30966854.

Navi BB, Mathias R, Sherman CP, Wolfe J, Kamel H, Tagawa ST, Saxena A, Ocean AJ, Iadecola C, DeAngelis LM, Elkind MSV, Hull H, Jickling GC, Sharp FR, Ander BP, Stamova B. Cancer-Related Ischemic Stroke Has a Distinct Blood mRNA Expression Profile. *Stroke.* 2019 Nov;50(11):3259-3264. doi:10.1161/STROKEAHA.119.026143. Epub 2019 Sep 12. PMID:31510897.

Stamova B, Ander BP, Jickling G, Hamade F, Durocher M, Zhan X, Liu DZ, Cheng X, Hull H, Yee A, Ng K, Shroff N, Sharp FR. The intracerebral hemorrhage blood transcriptome in humans differs from the ischemic stroke and vascular risk factor control blood transcriptomes. *J Cereb Blood Flow Metab.* 2019 Sep;39(9):1818-1835. doi:10.1177/0271678X18769513. Epub 2018 Apr 13. PMID:29651892.

Durocher M, Ander BP, Jickling G, Hamade F, Hull H, Knepp B, Liu DZ, Zhan X, Tran A, Cheng X, Ng K, Yee A, Sharp FR, Stamova B. Inflammatory, regulatory, and autophagy co-expression modules and hub genes underlie the peripheral immune response to human intracerebral hemorrhage. *J Neuroinflammation.* 2019 Mar 5;16(1):56. doi:10.1186/s12974-019-1433-4. PMID:30836997.

Schumann CM, Sharp FR, Ander BP, Stamova B. Possible sexually dimorphic role of miRNA and



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other sncRNA in ASD brain. *Mol Autism*. 2017 Feb 7;8:4. doi:10.1186/s13229-017-0117-0. PMID: 28184278.

Dykstra-Aiello C, Jickling GC, Ander BP, Shroff N, Zhan X, Liu D, Hull H, Orantia M, Stamova BS, Sharp FR. Altered Expression of Long Noncoding RNAs in Blood After Ischemic Stroke and Proximity to Putative Stroke Risk Loci. *Stroke*. 2016 Dec;47(12):2896-2903. doi:10.1161/STROKEAHA.116.013869. Epub 2016 Nov 10. PMID:27834745.

Zhan X, Stamova B, Jin LW, DeCarli C, Phinney B, Sharp FR. Gram-negative bacterial molecules associate with Alzheimer disease pathology. *Neurology*. 2016 Nov 29;87(22):2324-2332. doi: 10.1212/WNL.0000000000003391. Epub 2016 Oct 26. PMID: 27784770.

Dykstra-Aiello C, Jickling GC, Ander BP, Zhan X, Liu D, Hull H, Orantia M, Ho C, Stamova B. Intracerebral Hemorrhage and Ischemic Stroke of Different Etiologies Have Distinct Alternatively Spliced mRNA Profiles in the Blood: a Pilot RNA-seq Study. *Transl Stroke Res*. 2015 Aug;6(4):284-9. doi:10.1007/s12975-015-0407-9. Epub 2015 May 22. PMID:25994285.

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