

INVITED SPEAKER & PANELIST PRESENTATIONS

1. **Hussain, N.K.** with panelists Newton Howard, Tiago Fleming Outeiro, Ray Dorsey. 'Panel Discussion: How much is our understanding of the fundamental biology impacting CNS treatment?', CNS Leaders Forum July 15, 2021.
2. **Hussain, N.K.** featured panelist at the Alliance for Visible Diversity in Science Book Club, Oregon Health Sciences University, July 13, 2020.
3. **Hussain, N.K.** with panelists Elana Fertig, Paulette Clancy and Julie Reiser. Panel Discussion 'Stand Up: How and When to Speak Up', Women in Stem Symposium, Johns Hopkins University, Saturday April 6, 2019.
4. **Hussain, N.K.** Regulation of GluA1 surface expression by PAK3 phosphorylation of serine 863. Johns Hopkins Department of Neuroscience Lab Lunch Seminar, Baltimore, MD. September 1, 2015.
5. **Hussain, N.K.** Lead presenter and facilitator for strategic development of a synaptic compendium. Synapse Annotation Jamboree, Stanley Center, Cambridge MA. December 4-5, 2014.

REVIEWS, PERSPECTIVES & EDITORIALS

1. **Natasha Hussain**, 'I'm Muslim and live in Baltimore. Fear made me become a US Citizen.' [New York Times OpEd, July 19, 2019.](#)
2. Lissek, T., et al. Building Bridges through Science (2017) *Neuron* 96: 730-735. (PMID: 29144972)
3. Huganir, R.L., Nicoll, R.A. AMPARs and synaptic plasticity: the last 25 years. (2013) *Neuron* 80(3): 704-17 (*Designed and created the associated computer-generated graphic content*) (PMCID: PMC41995488)
4. Bhakar, A.L., **Hussain, N.K.**, Bear, M.F. The role of the NR2 NMDA receptor subunits in visual cortical plasticity. (2007) *Cellscience Reviews* 3(3): 68-84.
5. **Hussain, N.K.**, Sheng, M. Making synapses: a balancing act. (2005) *Science* 307(5713): 1207-8. (PMID: 1573140)
6. Legendre-Guillemain, V. Wasiak, S., **Hussain, N.K.**, Angers, A., and McPherson, P.S. ENTH/ANTH proteins and clathrin-mediated membrane budding. (2004) *The Journal of Cell Science* 117: 9-18. (PMID: 12750376)
7. Barker, P.A, **Hussain, N.K.**, and McPherson, P.S. Retrograde signaling by the neurotrophins follows a well-worn trk (2002) *Trends in Neurosciences* 25: 379-381. (PMID: 12127743)
8. McPherson, P.S. Kay, B.K., and **Hussain, N.K.** Signaling on the endocytic pathway. (2001) *Traffic* 2: 375-384. (PMID: 11389765)

BOOK CHAPTERS

Hussain, N.K., Huganir, R.L. (2016) Structure and Molecular Organization of the Postsynaptic Density. In G. Stuart, N. Spruston, and M. Hausser (Eds.), *Dendrites*. (3rd Edition) Oxford University Press.

PEER-REVIEWED ARTICLES

1. Koopmans, F, van Nierop, P., Andres-Alonso, M. et al. SynGO: an evidence-based, expert-curated knowledgebase for the synapse. (2019) *Neuron* 103(2): 217-234 (PMCID: PMC6764089)
2. Lissek T, Adams M, Adelman J, et al. Building Bridges through Science. *Neuron*. (2017) Nov 15;96(4):730-735. (PMCID: 29144972)

- Diering, G.H.*, Heo, S.*, **Hussain, N.K.***, Liu, B., Huganir, R.L. Extensive phosphorylation of AMPA receptors in neurons. *Proceedings of the National Academy of Sciences USA*. (2016) 113(33): E4920-7. (* indicates co-first authorship) (PMCID: PMC4995952)
- Hussain, N.K.**, Thomas, G.M., Luo, J., Huganir, R.L. Regulation of GluA1 surface expression by PAK3 phosphorylation of serine 863. (2015) *Proceedings of the National Academy of Sciences USA*. 112(43): E5883–E5890 (PMCID: PMC4629353)
- Hussain, N.K.**, Diering, G., Sole, J., Anggono, V., Huganir, R.L. Sorting Nexin 27 regulates basal and activitydependent trafficking of AMPARs. (2014) *Proceedings of the National Academy of Sciences USA*. 111(32):11840-5. (PMCID: PMC4136608)
- Selvakumar, B., Jenkins, M.A., **Hussain, N.K.**, Huganir, R.L., Traynelis, S.F., Snyder, S.H. S-Nitrosylation of AMPA Receptor GluA1 regulates phosphorylation, single channel conductance and endocytosis. (2013) *Proceedings of the National Academy of Sciences USA*. 110(3):1077-82. (PMCID: PMC3549090)
- Hussain, N.K.**, Hsin, H., Huganir, R.L., Sheng, M. MINK and TNIK differentially act on Rap2-mediated signal transduction to regulate neuronal structure and AMPA receptor function. (2010) *The Journal of Neuroscience* 30(44):14786-14794. (PMCID: PMC3070943)
- Blondeau, F., Ritter, B., Allaire, P.D., Wasiak, S., Girard, M., **Hussain, N.K.**, Angers, A., Legendre-Guillemain, V., Roy, L., Boismenu, D., Kearney, R.E., Bell, A.W., Bergeron, J.J.M., McPherson, P.S. Tandem mass spectrometry analysis of brain clathrin-coated vesicles reveals their critical involvement in synaptic vesicle recycling. (2004) *Proceedings of the National Academy of Sciences*, 101: 3833-3838. (PMCID: PMC374330)
- Hussain, N.K.**, Yamabhai, M., Bhakar, A.L., Metzler, M., Ferguson, S.S.G., Hayden, M.R., McPherson, P.S., and Kay, B.K. A role for Epsin N-terminal Homology/AP180 N-terminal Homology (ENTH/ANTH) domains in tubulin binding. (2003) *The Journal of Biological Chemistry* 278: 28823-30. (PMID: 12750376)
- Jenna, S., **Hussain, N.K.**, Danek, E., Triki, I., Wasiak, S., McPherson, P.S. and Lamarche-Vane, N. The activity of the GTPase-activating protein CdGAP is regulated by the endocytic protein intersectin. (2002) *The Journal of Biological Chemistry* 277: 6366-73. (PMID: 11744688)
- Hussain, N.K.**, Jenna, S., Glogauer, M., Quinn, C.C., Wasiak, S., Guipponi, M., Antonarakis, S.E., Kay, B.K., Stossel, T.P., Lamarche-Vane, N., and McPherson, P.S. Endocytic protein intersectin-I regulates actin dynamics via Cdc42 and N-WASP. (2001) *Nature Cell Biology* 3: 927-932. (PMID: 11584276)
- Tong, X-K., **Hussain, N.K.**, Adams, A., O'Bryan, J.P., and McPherson, P.S. Intersectin Can Regulate the Ras/MAP-kinase pathway independently of its role in endocytosis. (2000) *The Journal of Biological Chemistry* 275: 29894-29899. (PMID: 10896662)
- Tong, X-K., **Hussain, N.K.**, de Heuvel, E., Kurakin, A., Abi-Jaoude, E., Quinn, C.C., Olson, M.F., Marais, R., Baranes, D., Kay, B.K., and McPherson. The endocytic protein intersectin is a major binding partner for the RAS exchange factor mSOS in rat brain. (2000) *EMBO Journal* 19: 1263-271. (PMCID: PMC305667)
- Simpson, F.S., **Hussain, N.K.**, Qualmann, B., Kay, B.K., Kelly, R.B., McPherson, P.S., and Schmid, S.L. SH3 domain-containing proteins function at distinct steps in clathrin-coated vesicle formation. (1999) *Nature Cell Biology* 1: 119-124. (PMID: 10559884)
- Hussain, N.K.**, Yamabhai, M., Ramjaun, A.R., Guy, A.M., Baranes, D., O'Bryan, J.P., Der, C.J., Kay, B.K., and McPherson, P.S. Splice variants of intersectin are components of the endocytic machinery in neurons and nonneuronal cells. (1999) *The Journal of Biological Chemistry* 274: 15671-15677. (PMID: 10336464)

CONFERENCE PRESENTATIONS

- Hussain, N.K.**, Thomas, G.M., Luo, J., Huganir, R.L., Regulation of GluA1 surface expression by PAK3 phosphorylation of serine 863. Canadian Neuroscience 9th Annual Meeting. Vancouver, B.C. May 24-27, 2015.

2. **Hussain, N.K.**, Ramm, E., Sheng, M., NMDA mediates Rap2 interaction with MINK/TNIK proteins and their localization to synapses. Society for Neuroscience 38th Annual Meeting. Washington, D.C. November 15-19, 2008.
3. Ritter, B., Wasiak, S., Blondeau, F., **Hussain, N.K.**, Legendre-Guillemain, V., McPherson, P.S. The NECAPs are a family of clathrin coat-associated proteins identified through subcellular proteomics. The American Society for Cell Biology 42nd Annual Meeting. Washington, D.C. December 16-20, 2002.
4. Blondeau, F., Wasiak, S., Ritter, B., Angers, A., Girard, M., **Hussain, N.K.**, Legendre-Guillemain, V., Boismenu, D., Bell, A.W., McPherson, P.S. Determination of the protein composition of clathrin-coated vesicles, a global approach through proteomics analysis. The American Society for Cell Biology 42nd Annual Meeting. Washington, D.C. December 16-20, 2002.
5. **Hussain, N.K.**, Jenna, S., Glogauer, M., Quinn, C.C., Wasiak, S., Kay, B.K., Stossel, T.P., Lamarche-Vane, N., and McPherson, P.S. The endocytic protein intersectin-I regulates actin assembly via a novel mechanism of N-WASP activation. The American Society for Cell Biology 41st Annual Meeting. Washington, D.C. December 8-12, 2001.
6. Quinn, C.C., Wasiak, S., **Hussain, N.K.**, Kinjo, T.G., Bell, A., Kay, B.K., Baranes, D., Hockfield, S., and McPherson, P.S. Intersectin regulates of neurite outgrowth. Society for Neuroscience 31st Annual Meeting. San Diego, CA. November 10-15, 2001.
7. **Hussain, N.K.**, Jenna, S., Wasiak, S., Lamarche-Vane, N., and McPherson, P.S. The brain-specific long form of intersectin functions as a guanine-nucleotide exchange factor for Cdc42. The American Society for Cell Biology 40th Annual Meeting. San Francisco, CA. December 9-13, 2000.
8. Jenna, S. **Hussain, N.K.**, Danek, E., Wasiak, S., McPherson, P.S., and Lamarche-Vane, N. Intersectin interacts with Cdc42-activating protein and inhibits its GAP activity toward Rac-1. The American Society for Cell Biology 40th Annual Meeting. San Francisco, CA. December 9-13, 2000.
9. **Hussain, N.K.**, Yamabhai, M., de Heuvel, E., Ferguson, S.S.G., McPherson, P.S., and Kay, B.K. The ENTH domain is a novel modular domain that binds to tubulin. Society for Neuroscience 30th Annual Meeting. New Orleans, LA. November 4-9, 2000.
10. Tong, X-K., **Hussain, N.K.**, Adams, A., O'Bryan, J.P., Kay, B.K., and McPherson, P.S. (2000) Intersectin has multiple roles in endocytosis and RAS signaling. Society for Neuroscience 30th Annual Meeting. New Orleans, LA. November 4-9, 2000.
11. **Hussain, N.K.**, Yamabhai, M., de Heuvel, E., Ferguson, S.S.G., McPherson, P.S., and Kay, B.K. The ENTH domain binds to tubulin and microtubules. Gordon Research Conference: The Cell Biology of the Neuron. Plymouth, NH. June 18-23, 2000.
12. Tong, X-K., **Hussain, N.K.**, Adams, A., O'Bryan, J.P., Kay, B.K., and McPherson, P.S. (2000) Intersectin has multiple roles in endocytosis and RAS signaling. Gordon Research Conference: The Cell Biology of the Neuron. Plymouth, NH. June 18-23, 2000.
13. Kay, B.K., Yamabhai, M., **Hussain, N.K.**, Simpson, F., Schmid, S.L., and McPherson, P.S. Intersectin is an adaptor protein involved in endocytosis. Sixth Joint ASCB/EMBO/H. Dudley Wright Conference. Membrane Trafficking and the Cytoskeleton: An Integrated View. Santa Mari Imbaro, Italy. June 26-30, 1999.
14. **Hussain, N.K.**, Yamabhai, M., Ramjaun, A.R., Guy, A.M., Baranes, D., Kay, B.K., and McPherson, P.S. Characterization of neuronal and non-neuronal isoforms of intersectin and their involvement in endocytosis. Biochemistry and Molecular Biology 1999. San Francisco, CA. May 16-20, 1999.
15. **Hussain, N.K.**, Yamabhai, M., Ramjaun, A.R., Kay, B.K., McPherson, P.S. Intersectin: A novel adaptor protein functioning in endocytosis. Internet World Congress on Biomedical Sciences '98. McMaster University, December 7-16, 1998. (Invited Symposium)

16. Tong, X-K., **Hussain, N.K.**, de Heuvel, E., Quinn, C.C, Kay, B.K., and McPherson, P.S. Identification of mSOS as a major binding partner for the endocytic adaptor intersectin. The American Society for Cell Biology 38th Annual Meeting. San Francisco, CA. December 12-16, 1998.
17. Ramjaun, A.R., Bell, A.W., Au, K.E., Micheva, K.D., **Hussain, N.K.**, and McPherson, P.S. Identification of a synaptically-enriched endophilin-binding protein as the product of the DMXL1 gene. The American Society for Cell Biology 38th Annual Meeting. San Francisco, CA. December 12-16, 1998.
18. Yamabhai, M., **Hussain, N.K.**, Hoffman, N.G., Hardison, N.L., Ramjaun, A.R., McPherson, P.S., Kay, B.K. Intersectin: A novel adaptor protein involved in endocytosis. Symposium on Endocytosis and Intracellular Trafficking. Iowa State University, Ames, IA. September 10-13, 1998.