

## Craig Garner

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Synaptopathy  
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## Curriculum vitae

Since 2017	Co-founder and advisor, Navan Technologies, Inc.
Since 2014	Co-founder and coordinator (with U. Dirnagl), SPARK-Berlin
Since 2014	Research group leader, German Center for Neurodegenerative Diseases (DZNE), Berlin
Since 2014	Professor, Neuronal Toxicity/Synaptopathy, Charité, Berlin
2003 – 2014	Director, Stanford Down Syndrome Center, US
2002 – 2014	Professor, Department of Psychiatry and Behavioral Science, Stanford University, US
2002 – 2014	Professor, Department of Neurology, Stanford University (by courtesy), US
2000 – 2002	Professor, Department of Neurobiology, University of Alabama, Birmingham, US
1996 – 2000	Associate professor, Department Neurobiology, University of Alabama, Birmingham, US
1993 – 1996	Scientist, Neurobiology Research Center, University of Alabama, Birmingham, US
1988 – 1993	Research group leader, Center for Molecular Neurobiology (ZMNH), Hamburg
1985 – 1988	Postdoctoral fellow, Friedrich Miescher Institute, Basel, CH
1984	Biochemistry (PhD), Purdue University, West Lafayette, US
1979	Biochemistry (BA), Rutgers University, New Brunswick, US

## Research fields

Our group is active in the field of cellular and molecular neuroscience with the following major areas:

- Cellular and molecular mechanisms of synaptic assembly and function
- Cellular mechanism regulating synapse integrity
- Mechanisms triggering synaptic dysfunction due to autoimmune-encephalitis
- ‘Synaptopathy’ in neurological-psychiatric disorders, such as Parkinson’s, Alzheimer’s disease, Down syndrome, and autism

## Activities in the scientific community, honors, awards

Since 2017	Co-founder and advisor, Navan Technologies, Inc.
2012 – 2016	Co-founder and advisor, Stealth Bioscience, Inc., US
2012	NeuroVentures/BioX Innovations Award, US
2011	Fulbright Specialist Program Awardee, US
Since 2009	Co-founder and advisor, Balance Therapeutics, Inc., US
2009	Fidelity Foundation Award for Neurodegenerative Research, US
2009	Stanford Neuro-Innovation Award for Translational Research, US
2009	Distinguished Russ Record Lecture, Baylor College of Medicine, US
2007 – 2014	Editorial advisor, Trends in Neuroscience
2007 – 2009	Chair, Stanford Neuroscience Graduate Admission Committee, US
2004	Beach Distinguished Research Award, Purdue University, US
2002 – 2009	Stanford Graduate Admission Committee, US
1993 – 2001	Long-Term Fellowship, Human Frontier Science Program (HFSP)
1989	Gian Tondury Prize for Distinguished Research, CH
1984	A.K. Balls Award for Distinguished Research, Purdue University, US

## Selected publications

- Hoffmann-Conaway, S., M. M. Brockmann, K. Schneider, A. Annamneedi, K. A. Rahman, C. Bruns, K. Textoris-Taube, T. Trimbuch, K. H. Smalla, C. Rosenmund, E. D. Gundelfinger, C. C. Garner, and C. Montenegro-Venegas. 2020. 'Parkin contributes to synaptic vesicle autophagy in Bassoon-deficient mice', *Elife*, 9.
- Falck, J., C. Bruns, S. Hoffmann-Conaway, I. Straub, E. J. Plautz, M. Orlando, H. Munawar, M. Rivalan, Y. Winter, Z. Izsvak, D. Schmitz, F. K. Hamra, S. Hallermann, C. C. Garner, and F. Ackermann. 2020. 'Loss of Piccolo Function in Rats Induces Cerebellar Network Dysfunction and Pontocerebellar Hypoplasia Type 3-like Phenotypes', *J Neurosci*, 40: 2943-59.
- Gehr, S., C. C. Garner, and K. N. Kleinhans. 2020. 'Translating academic careers into industry healthcare professions', *Nat Biotechnol*, 38: 758-63.
- Montenegro-Venegas, C., A. Annamneedi, S. Hoffmann-Conaway, E. D. Gundelfinger, and C. C. Garner. 2020. 'BSN (bassoon) and PRKN/parkin in concert control presynaptic vesicle autophagy', *Autophagy*, 16: 1732-33.
- Hoffmann, S., M. Orlando, E. Andrzejak, C. Bruns, T. Trimbuch, C. Rosenmund, C. C. Garner, and F. Ackermann. 2019. 'Light-Activated ROS Production Induces Synaptic Autophagy', *J Neurosci*, 39: 2163-83.
- Ackermann, F., K. O. Schink, C. Bruns, Z. Izsvak, F. K. Hamra, C. Rosenmund, and C. C. Garner. 2019. 'Critical role for Piccolo in synaptic vesicle retrieval', *Elife*, 8.
- Gehr, S., and C. C. Garner. 2016. 'Rescuing the Lost in Translation', *Cell*, 165: 765-70.
- Waites, C. L., S. A. Leal-Ortiz, N. Okerlund, H. Dalke, A. Fejtova, W. D. Altmann, E. D. Gundelfinger, and C. C. Garner. 2013. 'Bassoon and Piccolo maintain synapse integrity by regulating protein ubiquitination and degradation', *The EMBO Journal*, 32: 954-69.
- Arons, M. H., C. J. Thynne, A. M. Grabrucker, D. Li, M. Schoen, J. E. Cheyne, T. M. Boeckers, J. M. Montgomery, and C. C. Garner. 2012. 'Autism-associated mutations in ProSAP2/Shank3 impair synaptic transmission and neurexin-neuroigin-mediated transsynaptic signaling', *J Neurosci*, 32: 14966-78.
- Fernandez, F., W. Morishita, E. Zuniga, J. Nguyen, M. Blank, R. C. Malenka, and C. C. Garner. 2007. 'Pharmacotherapy for cognitive impairment in a mouse model of Down syndrome', *Nat Neurosci*, 10: 411-3.