CURRICULUM VITAE
DR. NOA LIPSTEIN THOMS

PERSONAL INFORMATION

Birth date	21.11.1981 in Herzliya, Israel
Family status	Married with one daughter (2010)
Work address	Leibniz-Forschungsinstitut für Molekulare Pharmakologie (FMP) Department of Molecular Physiology and Cell Biology Campus Berlin-Buch Robert-Roessle-Str. 10 13125 Berlin, Germany
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FIELDS OF INTEREST

Synaptic diversity – Synaptic plasticity – Disorders of the synapse – GPCR modulation of synaptic function – Neuronal inflammation
Proteomics – Mouse genetics – Electrophysiology – Biochemistry

EDUCATION, POSITIONS, AND ACADEMIC OFFERS

04/2026	Call to a W3 Professorship in Physiology, Faculty of Medicine, Leipzig University (negotiations ongoing)
10/2020 –	**Junior Group Leader** Leibniz-Forschungsinstitut für Molekulare Pharmakologie (FMP), Department of Molecular Physiology and Cell Biology, Berlin, Germany
01/2019 – 09/2020	**Departmental Group Leader** Max Planck Institute of Experimental Medicine, Department of Molecular Neurobiology, Göttingen, Germany (Dr. Nils Brose)
06/2013 – 12/2018	**Postdoctoral fellow** Max Planck Institute of Experimental Medicine, Department of Molecular Neurobiology, Göttingen, Germany (Dr. Nils Brose)
09/2006 – 06/2013	**Dissertation** Tel Aviv University, Department of Neurobiology, Tel Aviv, Israel (Dr. Uri Ashery), Max Planck Institute of Experimental Medicine, Department of Molecular Neurobiology, Göttingen, Germany (Dr. Nils Brose)
10/2004 – 08/2006	**Excellence short-track program to PhD** Tel Aviv University, Department of Neurobiology and Zoology, Tel Aviv, Israel (Dr. Uri Ashery and Dr. Amir Ayali). Score: 97.42 (/100)
09/2001 – 08/2004	**Undergraduate studies (B.Sc.)** The combined Life and Medical Sciences program, Tel Aviv University, Tel Aviv, Israel. Score: 95.00 (/100), Summa cum Laude

RESEARCH EXPERIENCE

09/2006 – 09/2020	Max Planck Institute of Experimental Medicine, Department of Molecular Neurobiology, Göttingen, Germany, and Tel Aviv University, Department of Neurobiology, Tel Aviv, Israel Dr. Nils Brose, Dr. Uri Ashery *Mechanisms of synaptic function and plasticity: Mouse genetics, molecular*

biology and biochemistry, whole-cell voltage clamp electrophysiology in neuronal cultures and in neuronal slices, proteomic methodologies

07/2012 – 09/2020 Max Planck Institute of Biophysical Chemistry, Department of Membrane Biophysics, Göttingen, Germany
Prof. Erwin Neher
Dr. Takeshi Sakaba
Dr. Holger Taschenberger
Mechanisms of synaptic plasticity: Electrophysiology at the calyx of Held synapse

04/2005 – 08/2006 Faculty of Life Sciences, Department of Neurobiology, Tel Aviv University, Tel Aviv, Israel
Dr. Uri Ashery
Mechanisms of synaptic function: Molecular biology and electrophysiology in Chromaffin cells

AWARDS AND FELLOWSHIPS

2018 **Christiane Nüsslein-Volhard Stipend** for excellent women in science

06/2015 **Otto-Hahn award** for excellence during the doctoral studies, Max Planck Society

06/2007 – 06/2010 **Feodor Lynen Minerva PhD Fellowship**, Max Planck society

01/2006 **Minerva Short-Term Research Grant**, Max Planck society

09/2004 – 09/2005 **Scholarship**, Excellence short-track PhD program, George S. Wise Faculty of Life Sciences, Tel-Aviv University, Tel Aviv, Israel

07/2004 **Scholarship** in honor of the Thalheimer family for academic achievements as an undergraduate student, the Wolf Foundation

2002 – 2005 **Dean's Scholarships**, and citation on the Dean's List for academic achievements during all three years of undergraduate studies
Faculty of Medicine and George S. Wise Faculty of Life Sciences,
Tel Aviv University, Tel Aviv, Israel

THIRD PARTY FUNDING

Running

01/2026 – 12/3032 **Cluster of Excellence NeuroCure (2049/2):** Comprehensive approaches to neurological and psychiatric disorders – from mechanisms to interventions.
Project: Molecular mechanisms of synaptic diversity (710 k€)

01/2025 – 12/2028 **FOR5705: NEUROFLAME - Defense and demise of inflamed neurons**
P02: Axonal transport and presynaptic function during neuroinflammation
Collaborative project with Matthias Kneussel (272 k€)

12/2024 – 12/2026 **Integrated FMP Project**
Optical control of proximity biotinylation during neuronal activity
With Christian Hackenberger (150 k€)

01/2026 – 06/2029 **Collaborative Research Centre 1286: Quantitative Synaptology**, project A11: cAMP-dependent regulation of synaptic functional heterogeneity and diversity (250 k€)

Terminated

05/2023 – 04/2025 **Target ALS Foundation, industry-academia consortia grants**
Correcting Aberrant Splicing of UNC13A as a Therapeutic Approach for ALS and FTD (260 k€)

06/2021 – 12/2025 **Collaborative Research Centre 1286: Quantitative Synaptology**
A11: Molecular architecture of the presynaptic compartment (250 k€)

Grants obtained to support the 9th European Synapse Meeting, 2024 Berlin:

2024 **International Society for Neurochemistry conference committee** (ISN-CC) (5 k€)
2023 **German research foundation (DFG)** International Cooperation Conference Funding (20 k€)
2023 **International Brain Research Organization (IBRO)** conference grant (9 k€)

PATENTS

Patent application: **Lipstein N**, Dragana Ilic, Moritz Boll. A human motor neuron platform for synaptic phenotyping. Patent application no. 26209490.7, filed 2/10/2026. Status: pending.

SUPERVISION

Current: Postdoc (1), PhD (5), B.Sc (1)
Graduated: PhD (3), M.Sc (5), B.Sc (2)

RESEARCH FOCUS AND COLLABORATIONS

Diversity of the synaptic proteome. Recruiting spatial proteomic methodologies to study how compositions of the synaptic proteome encode diverse synaptic functions (NeuroCure cluster of Excellence; Sondermann et al., *Eur J Pain* 2026, Lohse et al., *Methods Mol Biol* 2025).

Guus Smit, Vrije Universiteit Amsterdam
Olaf Jahn, Max Planck Institute for Multidisciplinary Sciences
Joshua Levitz, Weill Cornell Medical College, USA
Manuela Schmidt, University of Vienna, Austria

Mechanisms of synaptic function. (SFB1286 Quantitative Synaptology; Aldahabi et al., *Sci Adv* 2026, Ranjan et al., *Sci Adv* 2026, López-Murcia et al., *Cell Reports* 2026, Lin et al., *J Physiol* 2025, Lopez-Murcia et al., *PNAS* 2024, Lipstein et al., 2021).

Erwin Neher, Max Planck Institute for Multidisciplinary Sciences
Stefan Hallermann, University of Leipzig
Jeremy Dittman, Weill Cornell Medical College
Matthijs Verhage, Vrije Universiteit Amsterdam
Zoltán Nusser, Institute of Experimental Medicine, Hungary

Mechanisms of synaptic dysfunction
(1) Characterization rare and novel neurodevelopmental synaptopathies (Asadollahi et al., *Nature Genetics* 2025, Lipstein et al., *JCI* 2017)

Reza Asadollahi, University of Greenwich
Matthijs Verhage, Vrije Universiteit Amsterdam

(2) Synaptic contribution in amyotrophic lateral sclerosis (ALS) (Target ALS Foundation; Guo et al., *Science Translational Medicine* 2026, Keuss et al., provisionally accepted in *Nature*)

Aaron Gilter, Stanford University
Pietro Fratta, University College London
Christian Simon, University of Leipzig
TRACE Neuroscience inc., San Francisco, USA

(3) Synaptic mechanisms in neuroinflammation (FOR 5705 NeuroFlame)

Manuel Friese, ZMNH, Germany
Matthias Kneussel, ZMNH, Germany

Internal FMP collaborations

Christian Hackenberger	Development of light-inducible proximity biotinylation for the nervous system (Internal FMP grant; Franke et al., accepted in Chem)
Han Sun	Molecular dynamics modelling for deciphering disease mechanisms (Asadollahi et al., Nature Genetics 2025)
Marc Nazaré	pharmacophores targeting the nervous system (Hentsch et al., JACS 2025, Hentsch et al., Angew Chem Int Ed Engl,2025)
Johannes Broichhagen	Dye development for synapse imaging (Rossmann et al., *Nature* Communications 2026, Kowald et al., JACS Au 2025)

PRESENTATIONS AT INTERNATIONAL CONFERENCES (RECENT AND SELECTED)

03/2027	German Neuroscience Society meeting.
07/2026	GRC 'Synaptic Transmission', Lucca, Italy.
05/2026	NEURIZONS 2026 - 12th Biennial Neuroscience Conference, Göttingen, Germany
05/2026	Spanish Society of Neuropaediatrics – Annual meeting.
01/2026	Molecular Physiology of Neuronal Signaling, Circuits and Behavior, Japan Society for the Promotion of Science Core-to-core program, Akita, Japan
11/2025	Synaptic Mechanisms in Health and Disease (meeting in recognition of Tom Südhof), Baeza, Spain
01/2025	Synapse Biology in health and Disease, Copenhagen, Denmark
07/2024	GRC synaptic transmission 2024, Lucca, Italy. Discussion leader
05/2024	Blankenese Conference: Synapthopathies: Molecular mechanisms of brain disease, Hamburg, Germany.
04/2024	International Winter Neuroscience Conference. Sölden, Austria. Invited speaker
04/2024	Core2Core Synapse Symposium 2024 (80th birthday celebration of Dr. Erwin Neher), Göttingen, Germany.
10/2023	Cell Physics 2023, Saarland, Germany.
09/2023	Membrane Fusion and Budding Biophysical Society Conference, Colorado, USA.
07/2023	GPF Symposium 2023: Proteins in company – approaching biomolecular interactions, Göttingen, Germany.
01/2023	Core2Core Synapse Symposium 2023, Kyoto, Japan. Invited speaker
06/2022	GRC synaptic transmission 2022, Lucca, Italy.
10/2021	The Synaptic Dimension of Brain Disorders, Baeza, Spain.
09/2021	100th annual meeting of the German Physiological Society, Frankfurt am Main, Germany.

COMMISSIONS OF TRUST

Since 2025	Steering committee member: TRR 478 initiative 'From molecules to meaning: Mechanistic principles underlying synaptic diversity'
Since 2025	Coordinator of the section Maintenance, NeuroCure Cluster of Excellence, Berlin
Since 2025	Mercator Fellow: DFG Research Training Group 3102 NeuroTune, Leipzig, Germany
Since 2024	Scientific board of directors, TRACE Neurosciences
Since 2023	Executive Board Member: Einstein Center for Neurosciences (ECN) Berlin
2022-2024	Member of the Scientific council, LeibnizFMP
Since 2022	Board Member: Einstein Center for Neuroscience (ECN) Berlin.
2022-2024	Head of the organization committee: The 9th European Synapse Meeting, May 2024, Berlin
2023	Symposium organizer. 15th Göttingen meeting of the German Neuroscience Society, Germany
Since 2021	Member of Thesis Advisory Committees (10 ongoing: LeibnizFMP (5), Max Delbrück Center (2), Humboldt-University Berlin (1), University of Zurich (1), Charité Universitätsmedizin (1))
Since 2022	Member of PhD examination committees: Vrije Universiteit Amsterdam (2022, 2024, 2026), Université Bordeaux (2024), University of Copenhagen (2024)

2024	My Name'5 Doddie Foundation (Motoneuron disorder foundation UK): grant application review
Since 2019	Peer-review in academic journals (e.g. Nature, Science Advances, Molecular Psychiatry, Science Translational Medicine, eLife, Cell reports, ect.)

TEACHING

2023-2026	**Molecular Pharmacology and Cellular Signal Transduction.** Seminar and practical course for students studying Biochemistry, Pharmacy, Biology and Medicine, Freie Universität Berlin and Charité-Universitätsmedizin Berlin
2023-2025	**Biophysical Methods.** Seminar and practical course, Biochemistry MSc studies Department of Biology, Chemistry, and Pharmacy, Freie Universität Berlin
2019-2020	**Organelle Pathology** \Seminar, Molecular Medicine MSc Program Göttingen University, Medical School
2018-2020	**Frontiers in Neural Development.** Practical Course, Developmental, Neural and Behavioral Biology M.Sc Program, Faculty of Biology, Göttingen University

PUBLIC OUTREACH

2022-2025	The Long Night of Sciences Berlin: hosting the public in the laboratory to disseminate science
2022-2024	Hosting female high-school students in the lab to encourage and inform future careers in science.

FULL LIST OF PUBLICATIONS

The full list of publications can also be found here:
https://www.ncbi.nlm.nih.gov/myncbi/noa.lipstein.1/bibliography/public/

Publications in Peer Reviewed Journals (*corresponding author)

1. Guo C, Chen K, Vatsavayai S, Akiyama T, Liu C, Zeng Y, Sianto O, Yang E, Bombosch J, Powell R, Zhen S, Mekhoubad S, Morrie RD, Miller G, Ilic D, Boll M, Parnell E, Penzes P, **Lipstein N**, Green EM, Petrucelli L, Seeley WW, Gitler AD (2026). Cryptic splicing in synaptic and membrane excitability genes links TDP-43 loss to neuronal dysfunction. ***Science Translational Medicine***, 18(852), eaeb8517. https://doi.org/10.1126/scitranslmed.aeb8517
2. Aldahabi M, Balint F, Lorincz A, **Lipstein N**, Brose N, Nusser Z (2026). Selective, genetically induced increase in synaptic vesicle priming. ***Science Advances***, 12(15), eaee6848. https://doi.org/10.1126/sciadv.aee6848
3. Asadollahi R, Ahmad A, Boonsawat, P., Shahanoor Hinzen, J., Lohse, M., Bouazza-Arostegui, B., Sun, S., Utesch, T., Sommer, J. D., Ilic, D., Padmanarayana, M., Fischermanns, K., Ranjan, M., Boll, M., Ka, C., Piton, A., Mattioli, F., Isidor, B., Ounap, K., . . . **Lipstein, N*** (2025). Pathogenic UNC13A variants cause a neurodevelopmental syndrome by impairing synaptic function. ***Nature Genetics***, 57(11), 2691-2704. https://doi.org/10.1038/s41588-025-02361-5. **FMP collaboration**
4. Hentsch, A., Guberman, M., Radetzki, S., Kaushik, S., Huizenga, M., He, Y., Contzen, J., Kuhn, B., Benz, J., Schippers, M., Paul, J., Leibrock, L., Collin, L., Wittwer, M., Topp, A., O'Hara, F., Heer, D., Hochstrasser R, Blaising J, von Kries JP, Mu L, van der Stelt M, Mergenthaler P, **Lipstein N**, Grether U, Nazare, M (2025). Highly Specific Miniaturized Fluorescent Monoacylglycerol Lipase Probes Enable Translational Research. ***J Am Chem Soc***. https://doi.org/10.1021/jacs.4c15223. **FMP collaboration**
5. Hentsch A, Guberman M, Radetzki S, Kaushik S, Huizenga M, Paul J, Schippers M, Benz J, Kuhn B, Heer D, Topp A, Esteves Gloria L, Walter A, Hochstrasser R, Wittwer MB, von Kries JP, Collin L, Blaising J, van der Stelt M, **Lipstein N**, Grether U, Nazare M (2025). A Highly Selective and Versatile Probe Platform for Visualization of Monoacylglycerol Lipase. ***Angew Chem Int Ed Engl***, e202413405. https://doi.org/10.1002/anie.202413405. **FMP collaboration**
6. Kowald M, Bachollet SPJT, Benseler F, Steinecker M, Boll M, Kaushik S, Soykan T, Sun S, Birke R, Ilic D, Brose N, Hörnberg H, Lehmann M, Rizzoli SO, Broichhagen J*, **Lipstein N*** (2025). Endogenous SNAP-Tagging of Munc13-1 for Monitoring Synapse Nanoarchitecture. ***JACS Au***. https://doi.org/10.1021/jacsau.4c00946. **FMP collaboration**
7. Lin KH, Ranjan M, **Lipstein N**, Brose N, Neher E, Taschenberger H (2025). Number and relative abundance of synaptic vesicles in functionally distinct priming states determine synaptic strength and short-term plasticity. ***J Physiology***. https://doi.org/10.1113/JP286282
8. Lohse M, Sun S, Fiosins M, Bonn S, Zamorano P, Jahn O, **Lipstein N*** (2025). Investigating the Molecular Composition of Neuronal Subcompartments Using Proximity Labeling. ***Methods Molecular Biololy***, 2910, 105-125. https://doi.org/10.1007/978-1-0716-4446-1_7
9. López-Murcia FJ, Krueger-Burg D, Wenger S, López-Hernández T, **Lipstein N**, Taschenberger H, Brose N (2026). Ca^{2+}-phospholipid-dependent regulation of Munc13-1 is essential for post-tetanic potentiation at mossy fiber synapses and supports working memory. ***Cell Reports***, 45(3). https://doi.org/10.1016/j.celrep.2026.117029
10. Ranjan M, Lin KH, Mueller BD, Wojcik SM, Lohse M, Südhof TC, Jorgensen EM, Neher E, **Lipstein N***, Brose N*, Taschenberger H* (2026). Munc13-1 couples DAG and Ca^{2+} signaling to dynamic vesicle priming, synaptic short-term plasticity, and posttetanic potentiation. ***Science Advances***, 12(7), eaea0449. https://doi.org/doi:10.1126/sciadv.aea0449
11. Rossmann K, Pabst U, Baciu BC, Sun S, Huhn C, Olesen CH, Kowald M, Tapp E, Bieck M, Birke R, Shields BC, Jeong P, Hong J, Tadross MR, Levitz J, Lehmann M, **Lipstein N**, Broichhagen J (2026). A general one-step protocol to generate impermeable fluorescent HaloTag substrates for in situ live cell application and super-resolution imaging. ***Nature Communications***, 17(1), 426. https://doi.org/10.1038/s41467-025-68134-0. **FMP collaboration**
12. Sondermann JR, Barry AM, Xian F, Haberl T, Gomez-Varela D, Benseler F, Schreiner D, Brose N, **Lipstein N**, Schmidt M (2026). Proximity Labelling Reveals the Compartmental

Proteome of Murine Sensory Neurons. ***European Journal of Pain***, 30(5), e70277. https://doi.org/10.1002/ejp.70277

13. Wang X, Wei H, Hu Z, Jiang J, Dong X, Zhu J, Chen H, Brose N, **Lipstein N**, Xu T, Connor SA, Ma D, Xie Y (2025). Chronic stress induces depression through MDGA1-Neuroligin2 mediated suppression of inhibitory synapses in the lateral habenula. ***Theranostics***, 15(5), 1842-1863. https://doi.org/10.7150/thno.104282
14. Lopez-Murcia FJ, Lin KH, Berns MMM, Ranjan M, **Lipstein N**, Neher E, Brose N, Reim K, and Taschenberger H (2024) Complexin has a dual synaptic function as checkpoint protein in vesicle priming and as a promoter of vesicle fusion. ***Proc Natl Acad Sci USA*** *121*, e2320505121. 10.1073/pnas.2320505121
15. Houy S, Martins JS, **Lipstein N**, and Sorensen JB (2022). Phorbolester-activated Munc13-1 and ubMunc13-2 exert opposing effects on dense-core vesicle secretion. ***Elife*** *11*. 10.7554/eLife.79433
16. Banerjee A, Imig C, Balakrishnan K, Kershberg L, **Lipstein N**, Uronen RL, Wang J, Cai X, Benseler F, Rhee JS, Cooper BH, Liu C, Wojcik SM, Brose N, Kaeser PS (2022). Molecular and functional architecture of striatal dopamine release sites. ***Neuron*** *110*, 248-265 e249. 10.1016/j.neuron.2021.10.028.
17. **Lipstein N**, Chang S, Lin KH, Lopez-Murcia FJ, Neher E, Taschenberger H, and Brose N (2021) Munc13-1 is a Ca(2+)-phospholipid-dependent vesicle priming hub that shapes synaptic short-term plasticity and enables sustained neurotransmission. ***Neuron*** *109*, 3980-4000 e3987. 10.1016/j.neuron.2021.09.054.
18. Piotrowski C, Moretti R, Ihling CH, Haedicke A, Liepold T, **Lipstein N**, Meiler J, Jahn O, Sinz A (2020) Delineating the Molecular Basis of the CalmodulinbMunc13-2 Interaction by Cross-Linking/Mass Spectrometry-Evidence for a Novel CaM Binding Motif in bMunc13-2. ***Cells*** *9*. 10.3390/cells9010136.
19. Koopmans F, van Nierop P, Andres-Alonso M, Byrnes A, Cijsouw T, Coba MP, Cornelisse LN, Farrell RJ, Goldschmidt HL, Howrigan DP, Hussain NK, Imig C, de Jong APH, Jung H, Kohansalnodehi M, Kramarz B, **Lipstein N**, Lovering RC, MacGillavry H, Mariano V, Mi H, Ninov M, Osumi-Sutherland D, Pielot R, Smalla KH, Tang H, Tashman K, Toonen RFG, Verpelli C, Reig-Viader R, Watanabe K, van Weering J, Achsel T, Ashrafi G, Asi N, Brown TC, De Camilli P, Feuermann M, Foulger RE, Gaudet P, Joglekar A, Kanellopoulos A, Malenka R, Nicoll RA, Pulido C, de Juan-Sanz J, Sheng M, Südhof TC, Tilgner HU, Bagni C, Bayés À, Biederer T, Brose N, Chua JJE, Dieterich DC, Gundelfinger ED, Hoogenraad C, Huganir RL, Jahn R, Kaeser PS, Kim E, Kreutz MR, McPherson PS, Neale BM, O'Connor V, Posthuma D, Ryan TA, Sala C, Feng G, Hyman SE, Thomas PD, Smit AB, Verhage M (2019) SynGO: An Evidence-Based, Expert-Curated Knowledge Base for the Synapse. ***Neuron*** *103*, 217-234 e214. 10.1016/j.neuron.2019.05.002.
20. Ritzau-Jost A, Jablonski L, Viotti J, **Lipstein N**, Eilers J, and Hallermann S (2018) Apparent calcium dependence of vesicle recruitment. ***J Physiol*** *596*, 4693-4707. 10.1113/JP275911.
21. **Lipstein N**, Verhoeven-Duif NM, Michelassi FE, Calloway N, van Hasselt PM, Pienkowska K, van Haaften G, van Haelst MM, van Empelen R, Cuppen I, van Teeseling HC, Evelein AM, Vorstman JA, Thoms S, Jahn O, Duran KJ, Monroe GR, Ryan TA, Taschenberger H, Dittman JS, Rhee JS, Visser G, Jans JJ, Brose N (2017) Synaptic UNC13A protein variant causes increased neurotransmission and dyskinetic movement disorder. ***J Clin Invest*** *127*, 1005-1018. 10.1172/JCI90259.
22. Frank JA, Yushchenko DA, Hodson DJ, **Lipstein N**, Nagpal J, Rutter GA, Rhee JS, Gottschalk A, Brose N, Schultz C, and Trauner D (2016) Photoswitchable diacylglycerols enable optical control of protein kinase C. ***Nat Chem Biol*** *12*, 755-762. 10.1038/nchembio.2141.
23. Okamoto Y, **Lipstein N**, Hua Y, Lin KH, Brose N, Sakaba T, and Midorikawa M (2016). Distinct modes of endocytotic presynaptic membrane and protein uptake at the calyx of Held terminal of rats and mice. **Elife** *5*. 10.7554/eLife.14643.
24. **Lipstein N**, Sakaba T, Cooper BH, Lin KH, Strenzke N, Ashery U, Rhee JS, Taschenberger H, Neher E, and Brose N (2013) Dynamic control of synaptic vesicle replenishment and short-term plasticity by Ca(2+)-calmodulin-Munc13-1 signaling. ***Neuron*** *79*, 82-96. 10.1016/j.neuron.2013.05.011.
25. Dolev I, Fogel H, Milshtein H, Berdichevsky Y, **Lipstein N**, Brose N, Gazit N, and Slutsky, I (2013). Spike bursts increase amyloid-beta 40/42 ratio by inducing a presenilin-1 conformational change. ***Nat Neurosci*** *16*, 587-595. 10.1038/nn.3376.

26. **Lipstein N**, Schaks S, Dimova K, Kalkhof S, Ihling C, Kolbel K, Ashery U, Rhee J, Brose N, Sinz A, and Jahn O (2012) Nonconserved Ca(2+)/calmodulin binding sites in Munc13s differentially control synaptic short-term plasticity. ***Mol Cell Biol*** *32*, 4628-4641. 10.1128/MCB.00933-12.
27. Cooper B, Hemmerlein M, Ammermüller J, Imig C, Reim K, **Lipstein N**, Kalla S, Kawabe H, Brose N, Brandstätter JH, Varoqueaux F. (2012). Munc13-independent vesicle priming at mouse photoreceptor ribbon synapses. ***J Neurosci*** *32*, 8040-8052. 10.1523/JNEUROSCI.4240-11.2012
28. Orenbuch A, Shulman Y, **Lipstein N**, Bechar A, Lavy Y, Brumer E, Vasileva M, Kahn J, Barki-Harrington L, Kuner T, Gitler D (2012). Inhibition of exocytosis or endocytosis blocks activity-dependent redistribution of synapsin. ***J Neurochem*** *120*, 248-258. 10.1111/j.1471-4159.2011.07579.x.
29. Rodriguez-Castaneda F, Maestre-Martinez M, Coudevylle N, Dimova K, Junge H, **Lipstein N**, Lee D, Becker S, Brose N, Jahn O, Carlomagno T, Griesinger C (2010). Modular architecture of Munc13/calmodulin complexes: dual regulation by Ca2+ and possible function in short-term synaptic plasticity. ***EMBO J*** *29*, 680-691. 10.1038/emboj.2009.373.
30. Cohen L, **Lipstein N**, Karbat I, Ilan N, Gilles N, Kahn R, Gordon D, and Gurevitz M (2008). Miniaturization of scorpion beta-toxins uncovers a putative ancestral surface of interaction with voltage-gated sodium channels. ***J Biol Chem*** *283*, 15169-15176. 10.1074/jbc.M801229200.
31. Yizhar O, Lipstein N, Gladycheva SE, Matti U, Ernst SA, Rettig J, Stuenkel EL, Ashery U (2007). Multiple functional domains are involved in tomosyn regulation of exocytosis. ***J Neurochem*** *103*, 604-616. 10.1111/j.1471-4159.2007.04791.x.
32. Cohen L, **Lipstein N**, and Gordon D (2006). Allosteric interactions between scorpion toxin receptor sites on voltage-gated Na channels imply a novel role for weakly active components in arthropod venom. ***FASEB J*** *20*, 1933-1935. 10.1096/fj.05-5545fje.

Reviews, News and Views, and large consortia maunscripts

33. Feuermann, M., Mi, H., Gaudet, P., Muruganujan, A., Lewis, S. E., Ebert, D., Mushayahama, T., **Gene Ontology Consortium**, Thomas, P. D. (2025). A compendium of human gene functions derived from evolutionary modelling. ***Nature***. https://doi.org/10.1038/s41586-025-08592-0
34. Reshetniak S, Bogaciu CA, Bonn S, Brose N, Cooper BH, D'Este E, Fauth M, Fernández-Busnadiego R, Fiosins M, Fischer A, Georgiev SV, Jakobs S, Klumpp S, Köster S, Lange F, **Lipstein N**, Macarrón Palacios V, Milovanovic D, Moser T, Müller M, Opazo F, Outeiro TF, Pape C, Priesemann V, Rehling P, Salditt T, Schlüter O, Simeth-Crespi N, Steinem C, Tchumatchenko T, Tetzlaff C, Tirard M, Urlaub H, Wichmann C, Wolf F, Rizzoli SO (2024) The synaptic vesicle cluster as a controller of pre- and postsynaptic structure and function. ***J Physiol***, accepted.
35. Roig Adam A, Martinez-Lopez JA, van der Spek SJF, **SynGO consortium**, Sullivan PF, Smit AB, Verhage M, Hjerling-Leffler J (2023). Transcriptional diversity in specific synaptic gene sets discriminates cortical neuronal identity. ***Biol Direct*** *18*, 22. 10.1186/s13062-023-00372-y
36. **Lipstein N** (2022) Mechanism underlying a risk gene in neurodegeneration. ***Nature*** *603*, 33-34. 10.1038/d41586-022-00383-1.
37. Trubetskoy V, Pardiñas AF, Qi T, Panagiotaropoulou G, Awasthi S, Bigdeli TB, Bryois J, Chen CY, Dennison CA, Hall LS, Lam M, Watanabe K, Frei O, …… Indonesia Schizophrenia Consortium, PsychENCODE, Psychosis Endophenotypes International Consortium, **SynGO Consortium**, Adolfsson R, Arango C, ….. Vassos E, Verhage M, Visscher PM, Yang J, Posthuma D, Andreassen OA, Kendler KS, Owen MJ, Wray NR, Daly MJ, Huang H, Neale BM, Sullivan PF, Ripke S, Walters JTR, O'Donovan MC (2022) Mapping genomic loci implicates genes and synaptic biology in schizophrenia. ***Nature*** *604*, 502-508. 10.1038/s41586-022-04434-5.
38. Cortes-Saladelafont E, **Lipstein N**, and Garcia-Cazorla A (2018) Presynaptic disorders: a clinical and pathophysiological approach focused on the synaptic vesicle. ***J Inherit Metab Dis*** *41*, 1131-1145. 10.1007/s10545-018-0230-z.
39. **Lipstein N**, Goth M, Piotrowski C, Pagel K, Sinz A, Jahn O (2017) Presynaptic Calmodulin targets: lessons from structural proteomics. ***Expert Rev Proteomics*** *14*, 223-242. 10.1080/14789450.2017.1275966.
40. Herbst S, **Lipstein N**, Jahn O, Sinz A (2014) Structural insights into calmodulin/Munc13 interaction. ***Biol Chem*** *395*, 763-768. 10.1515/hsz-2014-0134.

Provisionally accepted manuscripts or manuscripts under review

1. Keuss, MJ, Harley P, Ryadnov E, Jackson RE, Boll M, Zanovello M, Wilkins OG, Barattucci S, Ilic D, Simkin RL, Chien MZYJ, Cammack AJ, Šoltić D, Mehta PR, Ling YT, Kowald M, Morrie RD, Miller G, Oliveira MG, Duddy G, Wood S, Parkes JE, Sinha A, Correa-Sánchez AF, Isaacs AM, Oliver PL, Hamid F, Green EM, Fisher EMC, Davies B, Schiavo G, Shah M, **Lipstein N**, Burrone J*, Fratta P*. UNC13A splice correction rescues synaptic dysfunction induced by TDP-43 loss. Provissionally accepted in ***Nature***.
2. Franke J, Dubatouka P, Yourdkhani A, Soni S, Boll M, Utesch T, Serrano J, Soykan T, Lehmann M, **Lipstein N**, Sun H, Arafiles JVV, Hackenberger CPR. Cellular protein delivery through cell-penetrating peptide-mediated water pores driven by membrane potential. Provissionally accepted in ***Chem***. **FMP collaboration**
3. El Khallouqi A, Heck J, Amaral C, Schroder Lassen A, Weißbach S, Werkmann C, Bikbaev A, **Lipstein N**, Mark MD, Herlitze S, Walter AM, Heine M. Functional relevance of mobile and clustered CaV2.1 channels in central synapses. Under revision in ***Science Advances*.**