# CURRICULUM VITAE
# DR. NOA LIPSTEIN THOMS

## PERSONAL INFORMATION


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| Birth date | 21.11.1981 in Herzliya, Israel |
| Family status | Married with one daughter (2010) |
| Work address | Leibniz-Forschungsinstitut für Molekulare Pharmakologie (FMP)<br>Department of Molecular Physiology and Cell Biology<br>Campus Berlin-Buch<br>Robert-Roessle-Str. 10<br>13125 Berlin, Germany |
| Contact information | Phone office: +49 030 94973 250<br>Email: lipstein@FMP-berlin.de<br>Website: https://www.leibniz-fmp.de/lipstein<br>Orchid: 0000-0002-0755-5899 |


## FIELDS OF INTEREST

Synaptic diversity – Synaptic transmission – Synaptic plasticity – Calcium and lipid signaling – Disorders of the synapse – Mouse genetics – Electrophysiology – Biochemistry - Proteomics

## EDUCATION AND POSITIONS

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| 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**<br>Max Planck Institute of Experimental Medicine, Department of Molecular Neurobiology, Göttingen, Germany (Dr. Nils Brose) |
| 09/2006 – 06/2013 | **Dissertation**<br>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**<br>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.)**<br>The combined Life and Medical Sciences program, Tel Aviv University, Tel Aviv, Israel. Score: 95.00 (/100), Summa cum Laude |

## RESEARCH EXPERIENCE

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| 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<br>Dr. Nils Brose, Dr. Uri Ashery<br>*Mouse genetics, molecular biology and biochemistry, whole-cell voltage clamp electrophysiology in neuronal cultures and in neuronal slices, proteomic methodologies* |

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| 07/2012 – 09/2020 | Max Planck Institute of Biophysical Chemistry, Department of Membrane Biophysics, Göttingen, Germany<br>Prof. Erwin Neher<br>Dr. Takeshi Sakaba<br>Dr. Holger Taschenberger<br>*Electrophysiology at the calyx of Held synapse* |
| 04/2005 – 08/2006 | Faculty of Life Sciences, Department of Neurobiology, Tel Aviv University, Tel Aviv, Israel<br>Dr. Uri Ashery<br>*Molecular biology and electrophysiology in Chromaffin cells* |

## AWARDS AND FELLOWSHIPS

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

## THIRD PARTY FUNDING

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| 01/2025 – 12/2028 | **FOR5705: NEUROFLAME - Defence and demise of inflamed neurons**<br>P02: Axonal transport and presynaptic function during neuroinflammation<br>Collaborative project with Matthias Kneussel (total 582 k€, to Lipstein 272 k€) |
| 12/2024 – 12/2026 | **Integrated FMP Project**<br>Optical control of proximity biotinylation during neuronal activity<br>With Christian Hackenberger (Total 150 k€) |
| 05/2023 – 04/2025 | **Target ALS Foundation, industry-academia consortia grants**<br>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**<br>A11: Molecular architecture of the presynaptic compartment (250 k€) |

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

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| 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€) |

## STUDENT SUPERVISION

**Current:** Postdoc (1), PhD (4), M.Sc (2), B.Sc (1)
**Graduated:** PhD (1), M.Sc (2), B.Sc (2)

## NATIONAL AND INTERNATIONAL COLLABORATIONS

Since 2022 **UNC13A in ALS/FTD.**
Dr. Aaron Gilter, Stanford University
Dr. Pietro Fratta, University College London
Dr. Sami Barmada, University of Michigan
TRACE Neuroscience

Since 2019 **Synaptic composition and plasticity of sensory synapses.**
Dr. Tobias Moser, University Clinic Göttingen
Dr. Frank Schmitz, University Clinic Saarland

Since 2017 **SynGo consortium for expert annotation of synaptic proteins.** Active member of this international group encompassing world leaders in the synapse community, aimed at accurately transducing synaptic science to the global scientific community (see Koopmans et al., 2019)
Dr. Matthijs Verhage, Vrije Universiteit Amsterdam
Dr. Guus Smit, Vrije Universiteit Amsterdam

Since 2015 **Academy-clinic collaboration for the discovery and characterization of novel synaptopathies.** Including over 40 clinicians and geneticists world-wide for the identification and characterization of rare and novel synaptopathies.
Dr. Anita Rauch, University Clinic Zurich
Dr. Reza Asadollahi, University of Greenwich
Dr. Judith J. Jans, University Clinic Utrecht (see Lipstein et al., 2017).

Since 2008 **Structural and functional proteomics.** Recruiting proteomic methodologies for the studies of synaptic proteins (see Lipstein et al., 2017, Herbst et al., 2014, Lipstein et al., 2012).
Dr. Olaf Jahn, Max Planck Institute for Multidisciplinary Sciences
Dr. Andrea Sinz, Halle University
Dr. Guus Smit, Vrije Universiteit Amsterdam

Since 2007 **Munc13 Biology.** To elucidate mechanisms of presynaptic function and plasticity in diverse experimental systems (See Lipstein et al., 2013, Lipstein et al., 2017, Lipstein et al., 2021).
Dr. Erwin Neher, Max Planck Institute for Multidisciplinary Sciences
Dr. Stefan Hallermann, University of Leipzig
Dr. Christian Simon, University of Leipzig
Dr. Jeremy Dittman, Weill Cornell Medical College

## INTERNAL FMP COLLABORATIONS

Since 2024 Prof. Dr. Christian P. R. Hackenberger: development of light-inducible proximity biotinylation for the nervous system (Internal FMP project grant)
Since 2022 Prof. Dr. Han Sun, molecular dynamics modelling of for deciphering disease mechanisms
Since 2021 Dr. Marc Nazaré, pharmacophores targeting the nervous system
Since 2021 Dr. Martin Lehmann, microscopy techniques for synapse imaging
Since 2021 Dr. Johannes Broichhagen, dye development for super-resolution microscopy

## PRESENTATIONS AT INTERNATIONAL CONFERENCES (RECENT AND SELECTED)

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| 07/2024 | GRC synaptic transmission 2024, Lucca, Italy. Discussion leader |
| 05/2024 | Blankenese Conference: Synapthopathies: Molecular mechanisms of brain disease, Hamburg, Germany. Invited speaker |
| 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. Invited speaker |
| 10/2023 | Cell Physics 2023, Saarland, Germany. Invited speaker |
| 09/2023 | Membrane Fusion and Budding Biophysical Society Conference, Colorado, USA. Invited speaker |
| 07/2023 | GPF Symposium 2023: Proteins in company – approaching biomolecular interactions, Göttingen, Germany. Invited speaker |
| 01/2023 | Core2Core Synapse Symposium 2023, Kyoto, Japan. Invited speaker |
| 06/2022 | GRC synaptic transmission 2022, Lucca, Italy. Invited speaker |
| 10/2021 | The Synaptic Dimension of Brain Disorders, Baeza, Spain. Invited speaker |
| 09/2021 | 100th annual meeting of the German Physiological Society, Frankfurt am Main, Germany. Invited speaker |
| 02/2020 | Annual Biophysical Society meeting, San Diego, CA, USA. Invited speaker |
| 10/2019 | Giant Synapse meeting, Chicago, Il, USA. Invited speaker. |
| 06/2018 | Gordon Conference 'Cell Biology of the Neuron', Waterville vally, MA, USA. Invited speaker (Short talk) |
| 12/2017 | 6th European Synapse Meeting, Milano, Italy. Invited speaker. |
| 11/2017 | Society for Neuroscience meeting 2017, Washington, USA. Invited speaker (Nanosymphosium talk) |

## COMMISSIONS OF TRUST

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| 2024 | My Name'5 Doddie Foundation (Motoneuron disorder foundation UK): grant application review |
| Since 2024 | Scientific board of directors, TRACE Neurosciences |
| Since 2023 | Executive Board Member: Einstein Center for Neurosciences (ECN) Berlin |
| Since 2021 | Member of Thesis Advisory Committees (9 ongoing/1 completed)<br>LeibnizFMP (5), Max Delbrück Center (2), Humboldt-University Berlin (1), University of Zurich (1), Charité Universitätsmedizin (1) |
| 2022-2024 | Member of PhD assessment committees: Vrije Universiteit Amsterdam (2022), Vrije Universiteit Amsterdam (2024), Université Bordeaux (2024), University of Copenhagen (2024) |
| 2022-2024 | Head of the organisation committee: the 9th European Synapse Meeting 2024, Berlin |
| 2022-2024 | Member of the Scientific council, LeibnizFMP |
| Since 2022 | Board Member: Einstein Center for Neuroscience (ECN) Berlin. |
| Since 2019 | Peer-review in academic journals (e.g. Nature, Science Advances, Molecular Psychiatry, Science Translational Medicine, eLife, Cell reports) |

## TEACHING

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| 2023-2024 | **Biophysical Methods.** Seminar and practical course, Biochemistry MSc studies Department of Biology, Chemistry, and Pharmacy, Freie Universität Berlin |
| 2023-2024 | **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 |
| 2019-2020 | **Organelle Pathology**<br>Seminar, Molecular Medicine MSc Program<br>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 |

## FULL LIST OF PUBLICATIONS

Publications in Peer Reviewed Journals (#equal contribution; *corresponding author, ξconsortium manuscript)

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

**Original research:**

1. 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
2. Roig Adam A, Martinez-Lopez JA, van der Spek SJF, **SynGO consortium**ξ, Sullivan PF, Smit AB, Verhage M, and 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
3. 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
4. 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.
5. **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.
6. 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.
7. 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**ξ, 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.
8. 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.
9. **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.
10. 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.
11. 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.
12. **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.
13. 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.
14. **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.
15. 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
16. 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.
17. 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.
18. 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.
19. 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.
20. 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**

21. 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.
22. **Lipstein N** (2022) Mechanism underlying a risk gene in neurodegeneration. **Nature** *603*, 33-34. 10.1038/d41586-022-00383-1.
23. 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, Ge T, Harwood JC, Koopmans F, Magnusson S, Richards AL, Sidorenko J, Wu Y, Zeng J, Grove J, Kim M, Li Z, Voloudakis G, Zhang W, Adams M, Agartz I, Atkinson EG, Agerbo E, Al Eissa M, Albus M, Alexander M, Alizadeh BZ, Alptekin K, Als TD, Amin F, Arolt V, Arrojo M, Athanasiu L, Azevedo MH, Bacanu SA, Bass NJ, Begemann M, Belliveau RA, Bene J, Benyamin B, Bergen SE, Blasi G, Bobes J, Bonassi S, Braun A, Bressan RA, Bromet EJ, Bruggeman R, Buckley PF, Buckner RL, Bybjerg-Grauholm J, Cahn W, Cairns MJ, Calkins ME, Carr VJ, Castle D, Catts SV, Chambert KD, Chan RCK, Chaumette B, Cheng W, Cheung EFC, Chong SA, Cohen D, Consoli A, Cordeiro Q, Costas J, Curtis C, Davidson M, Davis KL, de Haan L, Degenhardt F, DeLisi LE, Demontis D, Dickerson F, Dikeos D, Dinan T, Djurovic S, Duan J, Ducci G, Dudbridge F, Eriksson JG, Fañanás L, Faraone SV, Fiorentino A, Forstner A, Frank J, Freimer NB, Fromer M, Frustaci A, Gadelha A, Genovese G, Gershon ES, Giannitelli M, Giegling I, Giusti-Rodríguez P, Godard S, Goldstein JI, González Peñas J, González-Pinto A, Gopal S, Gratten J, Green MF, Greenwood TA, Guillin O, Gülöksüz S, Gur RE, Gur RC, Gutiérrez B, Hahn E, Hakonarson H, Haroutunian V, Hartmann AM, Harvey C, Hayward C, Henskens FA, Herms S, Hoffmann P, Howrigan DP, Ikeda M, Iyegbe C, Joa I, Julià A, Kähler AK, Kam-Thong T, Kamatani Y, Karachanak-Yankova S, Kebir O, Keller MC, Kelly BJ, Khrunin A, Kim SW, Klovins J, Kondratiev N, Konte B, Kraft J, Kubo M, Kučinskas V, Kučinskiene ZA, Kusumawardhani A, Kuzelova-Ptackova H, Landi S, Lazzeroni LC, Lee PH, Legge SE, Lehrer DS, Lencer R, Lerer B, Li M, Lieberman J, Light GA, Limborska S, Liu CM, Lönnqvist J, Loughland CM, Lubinski J, Luykx JJ, Lynham A, Macek M Jr, Mackinnon A, Magnusson PKE, Maher BS, Maier W, Malaspina D, Mallet J, Marder SR, Marsal

S, Martin AR, Martorell L, Mattheisen M, McCarley RW, McDonald C, McGrath JJ, Medeiros H, Meier S, Melegh B, Melle I, Mesholam-Gately RI, Metspalu A, Michie PT, Milani L, Milanova V, Mitjans M, Molden E, Molina E, Molto MD, Mondelli V, Moreno C, Morley CP, Muntané G, Murphy KC, Myin-Germeys I, Nenadić I, Nestadt G, Nikitina-Zake L, Noto C, Nuechterlein KH, O'Brien NL, O'Neill FA, Oh SY, Olincy A, Ota VK, Pantelis C, Papadimitriou GN, Parellada M, Paunio T, Pellegrino R, Periyasamy S, Perkins DO, Pfuhlmann B, Pietiläinen O, Pimm J, Porteous D, Powell J, Quattrone D, Quested D, Radant AD, Rampino A, Rapaport MH, Rautanen A, Reichenberg A, Roe C, Roffman JL, Roth J, Rothermundt M, Rutten BPF, Saker-Delye S, Salomaa V, Sanjuan J, Santoro ML, Savitz A, Schall U, Scott RJ, Seidman LJ, Sharp SI, Shi J, Siever LJ, Sigurdsson E, Sim K, Skarabis N, Slominsky P, So HC, Sobell JL, Söderman E, Stain HJ, Steen NE, Steixner-Kumar AA, Stögmann E, Stone WS, Straub RE, Streit F, Strengman E, Stroup TS, Subramaniam M, Sugar CA, Suvisaari J, Svrakic DM, Swerdlow NR, Szatkiewicz JP, Ta TMT, Takahashi A, Terao C, Thibaut F, Toncheva D, Tooney PA, Torretta S, Tosato S, Tura GB, Turetsky BI, Üçok A, Vaaler A, van Amelsvoort T, van Winkel R, Veijola J, Waddington J, Walter H, Waterreus A, Webb BT, Weiser M, Williams NM, Witt SH, Wormley BK, Wu JQ, Xu Z, Yolken R, Zai CC, Zhou W, Zhu F, Zimprich F, Atbaşoğlu EC, Ayub M, Benner C, Bertolino A, Black DW, Bray NJ, Breen G, Buccola NG, Byerley WF, Chen WJ, Cloninger CR, Crespo-Facorro B, Donohoe G, Freedman R, Galletly C, Gandal MJ, Gennarelli M, Hougaard DM, Hwu HG, Jablensky AV, McCarroll SA, Moran JL, Mors O, Mortensen PB, Müller-Myhsok B, Neil AL, Nordentoft M, Pato MT, Petryshen TL, Pirinen M, Pulver AE, Schulze TG, Silverman JM, Smoller JW, Stahl EA, Tsuang DW, Vilella E, Wang SH, Xu S, Indonesia Schizophrenia Consortium, PsychENCODE, Psychosis Endophenotypes International Consortium, **SynGO Consortium**[ξ], Adolfsson R, Arango C, Baune BT, Belangero SI, Børglum AD, Braff D, Bramon E, Buxbaum JD, Campion D, Cervilla JA, Cichon S, Collier DA, Corvin A, Curtis D, Forti MD, Domenici E, Ehrenreich H, Escott-Price V, Esko T, Fanous AH, Gareeva A, Gawlik M, Gejman PV, Gill M, Glatt SJ, Golimbet V, Hong KS, Hultman CM, Hyman SE, Iwata N, Jönsson EG, Kahn RS, Kennedy JL, Khusnutdinova E, Kirov G, Knowles JA, Krebs MO, Laurent-Levinson C, Lee J, Lencz T, Levinson DF, Li QS, Liu J, Malhotra AK, Malhotra D, McIntosh A, McQuillin A, Menezes PR, Morgan VA, Morris DW, Mowry BJ, Murray RM, Nimgaonkar V, Nöthen MM, Ophoff RA, Paciga SA, Palotie A, Pato CN, Qin S, Rietschel M, Riley BP, Rivera M, Rujescu D, Saka MC, Sanders AR, Schwab SG, Serretti A, Sham PC, Shi Y, St Clair D, Stefánsson H, Stefansson K, Tsuang MT, van Os J, Vawter MP, Weinberger DR, Werge T, Wildenauer DB, Yu X, Yue W, Holmans PA, Pocklington AJ, Roussos P, 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.

24. 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.
25. 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.
26. **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.