Novin Balafkan (Website) **ORCID ID: 0000-0001-8868-3800**

Education and key qualifications

18/04/2018 Ph.D. in Cellular & Molecular Biology, University of Bergen, Norway
PI: Prof. Laurence Bindoff; Co-PI: Prof. Charalampos Tzoulis

2012 M.Sc. Medical Cell Biology, University of Bergen, Norway

Current position(s)

2025–present Adjunct Associate Professor, Dept. of Clinical Medicine, University of Bergen

2023–present Full-time senior scientist, Haukeland University Hospital, Norway
Principal Investigator, Bergen Center for Medical Stem Cell Research

Previous position(s)

2021–2025 Marie Skłodowska-Curie Postdoctoral Research Fellow, Yale University, USA

2018–2021 Postdoctoral Fellow, Haukeland University Hospital, Norway

PI Only Grants, Fellowships, and Awards (total ~20 NOK)

Date	Type	Grant/ Foundation	Total fund
2026-2030	Scientific project	Researcher Project for Early Career Scientists (FRIPRO), NO	10M NOK (~ USD 1M)
2026-2028	Scientific project	BBRF Young Investigator Grants/The Brain & Behavior Research Foundation (NARSAD), USA	70K USD
2025-2027	Postdoc Fellowship	Postdoctoral fellowship for 3 years/ Helse Vest, NO	NOK 3.2M (~USD 300K)
2022-2025	Postdoc Fellowship	Marie Skłodowska-Curie Individual Global Fellowships for 3 years/ERC, EU	Eur 307K (~USD 300K)
2018-2021	Postdoc Fellowship	Postdoctoral fellowship for 3 years/Norwegian Research Council, NO	NOK 3.5M (~USD 400K)
Feb. 2021 Feb. 2020	Positioning funding	MSCA and NFR-Mobility grant/PsykNett Vest, NO	NOK 360K (~USD 40K)
2013-2018	PhD Fellowship	Full Ph.D. scholarship for 5 years/University of Bergen, Norway	NOK 2.8M (~USD 300K)

Project Management Experience

Date	Role	Project	Funding
2026-2030	Project Manager	*Decoding Developmental Convergence: Mapping Genetic Risk Across Neural and Cardiac Lineages*	The Research Council of **Norway**
2026-2027	Project Manager	*Decoding Glutamatergic Dysfunction in Treatment-Resistant Schizophrenia: CRISPR Dissection of High-Risk Variants and Clozapine's Pathway-Specific Rescue*	The Brain & Behavior Research Foundation (NARSAD)
2022-2025	Project Manager	*Determining Genetic Bases of Differential Response to Antipsychotics Using Patient-Derived Neurons*	European Commission, Horizon Europe
2022-2025	Lead scientist	*Functional convergence following disruption of diverse genes associated with neurodevelopmental disorders*	NIH, R01MH123155, 5M USD over 4 years, Multi Center
2021-2026	Lead scientist	*Personalized medicine in psychosis treatment*	UiB/Helse Bergen/TMS, 2M USD over 5 years
2024-2029	Associate	*The SSPsyGene Consortium: Scalable and*	NIMH, USA, 25M USD

	scientist	*Systematic Neurobiology of Psychiatric and Neurodevelopmental Disorder Risk Genes*	over 5 years, Multi Center

Full Publication List

Citations (445) and h-index (8) based on Google Scholar 2025 (**5** first authors marked by "*" and **1** corresponding author marked by "†")

1) Pruitt A.*, Yang L.*, Lee S.*, **Balafkan N.***, ..., Hoffman E. J.†, Brennand K.† "Estradiol modulates neuronal network hyperexcitability in select NDD risk genes." **Under review**, Nature Neuroscience (2026).

2) Jamadagni P., Dai Y., Liu Y., Weinschutz Mendes H., Pruitt A., ..., **Balafkan N**., ..., Wang Z.†, Hoffman E. J.† "Pharmaco-behavioral profiling identifies suppressors of autism gene-associated phenotypes in zebrafish." Proceedings of the National Academy of Sciences (2026)

3) Garcia M. F.*, Retallick-Townsley K.*, Pruitt A.*, Davidson E.*, **Balafkan N.***, Dai Y., Fitzpatrick S. E., ... & Brennand K. "Dynamic convergence of autism disorder risk genes across neurodevelopment." Nature Neuroscience 29:1079–1094 (2026).

4) Powell S. K., Liao W., O'Shea C., Kammourh S., Ghorbani S., Rigat R., ..., **Balafkan N.**, ... & Brennand K. J. "3D genetic architecture of schizophrenia risk across three neuronal subtypes." Molecular Psychiatry 11 (2025).

5) **Balafkan N.*†**, Mostafavi S.*, Pettersen I. K. N., Siller R., Sullivan G., Bindoff L. A.† "Distinct mitochondrial remodeling during early cardiomyocyte development in a human-based stem cell model." Frontiers in Cell and Developmental Biology 9 (2021).

6) **Balafkan N.***, Mostafavi S., Schubert M., Siller R., Liang K. X., Sullivan G., Bindoff L. A. "A method for differentiating human induced pluripotent stem cells toward functional cardiomyocytes in 96-well microplates." Scientific Reports 10 (2020).

7) Liang K. X., Kristiansen C. K., ..., **Balafkan N.**, Hong Y., Siller R., Sullivan G. J., Bindoff L. A. "Disease-specific phenotypes in iPSC-derived neural stem cells with POLG mutations." EMBO Molecular Medicine 12 (2020).

8) Bhatt P. S., Tzoulis C., **Balafkan N.**, Miletic H., Tran G. T. T., Sanaker P. S., Bindoff L. A. "Mitochondrial DNA depletion in sporadic inclusion body myositis." Neuromuscular Disorders 29 (2019).

9) Tzoulis C., Tran G. T., Coxhead J., Bertelsen B., Lilleng P. K., **Balafkan N.**, Payne B., Miletic H., Chinnery P. F., Bindoff L. A. "Molecular pathogenesis of polymerase gamma–related neurodegeneration." Annals of Neurology 76 (2014).

10) **Balafkan N.***, Tzoulis C., Müller B., Haugarvoll K., Tysnes O. B., Larsen J. P., Bindoff L. A. "Number of CAG repeats in POLG1 and its association with Parkinson's disease in the Norwegian population." Mitochondrion 12 (2012).

Invited Speaker and Talks (poster presentations not reported here)

Date	Format	Title	Venue
Oct.2024	Invited speaker	"Deciphering Convergent Mechanisms Among Neurodevelopmental Risk Factor Genes"	Yale Stem Cell Center 16th Annual Retreat, Yale
Dec.2023	Invited speaker	"Convergent pathways of Autism Spectrum Disorder using CRISPR screen approaches."	RIBICOFF, Division of Molecular Psychiatry, Yale
Sep. 2021	Invited speaker	"Mapping Genes Associated with Heterogeneity in Response to Antipsychotics"	NORMENT, Center of Excellence, Norway
Mar.2019	Invited speaker	"Role of induced pluripotent stem cells in precision medicine"	The Norwegian Psychiatric Association Annual Congress

Sep. 2015	Talk	“Alteration in mitochondrial DNA level during differentiation”	Annual Norwegian Stem Cell Network, Norway
Sep. 2013	Talk	“Using pluripotent stem cells to model mitochondrial disease and study tissue-specific manifestations caused by POLG mutations.”	National Ph.D. Conference in Neuroscience, Norway

ROLE IN SCIENTIFIC COMMUNITY		
2025	Reviewer	Nature Communication (IF=15)| Co-reviewer with Dr. Brennand
2025	Reviewer	Brain (IF=12), Oxford University Press| Invited Reviewer
2023	Reviewer	Cell stem cell (IF=20), Cell Press| Co-reviewer with Dr. Brennand
2024	Grant Reviewer	PTEN Research Foundation| UK
2024	Grant Reviewer	IOCDF International OCD Foundation| USA
2022	Grant Reviewer	IOCDF International OCD Foundation| USA
2021	Co-organizer	“Probing Mechanisms Of Psychiatric Disorders Using Stem Cells”| 92 attendee| Norway
2019	Co-organizer	“Career Development Task Force” symposium at Internal NORMENT Center of Excellence| 84 attendee| Norway

SUPERVISION OF STUDENTS AND RESEARCH FELLOWS (if applicable)

Dates Of Training	Name	Level of Trainee/Training Venue	Next Position/Venue
04/2025 - 12/2025	Thony Ramos	Undergraduate student/Yale, USA	-
02/2025 - 12/2025	Jacquelyn Dye	Undergraduate student/Yale, USA	-
11/2024 - 10/2025	Andre L. T. E Silva	PhD Student (final year)/Yale, USA	PhD
09/2024 - 12/2025	Jenny Liu	Full-time research assistance/Yale	PhD/UChicago
01/2024 – 02/2024	Xinyun Li	PhD Candidate (rotation)/Yale, USA	PhD/Yale
09/2023 – 05/2025	Jaspreet Kandola	Undergraduate student/Yale, USA	MPH/Yale
09/2023 – 05/2025	Vivian Tong	Undergraduate student/Yale, USA	Res. Assis. /Harvard
05/2022 – 05/2025	Sydney Benson	Undergraduate student/Yale, USA	Med stud. /Sinai
07/2022 – 05/2024	Isabel Wood	Full-time research assistance/Yale	Med stud. /UMass
05/2023 – 04/2024	Stephen Maurer	Undergraduate student/Yale, USA	Physician Assistance
02/2022 – 05/2023	Esther Lee	Undergraduate student/Yale, USA	Med stud. /UChicago
05/2023 – 09/2023	Maya George	Undergraduate student/Yale, USA	Undergrad/Yale
01/2023 – 3/ 2023	Mike Scandura	PhD Candidate (rotation)/Yale, USA	PhD/Yale
05/2022 – 8/2022	Brianna Trippe	Undergraduate student/Yale, USA	Res. Assis. /Harvard
05/2016 – 12/2021	Sepideh Mostafavi	PhD candidate/University of Bergen	Scientist/HUH, NO
05/2014 – 09/2014	Padmanabh Bhatt	MD student/University of Bergen	MD/MGH, USA

INSTITUTIONAL RESPONSIBILITIES (name of university/institution/country)	
2022	PhD thesis of Pablo Leal Cardozo /Federal University of Minas Gerais (UFMG)/Brazil

Teaching position – topic, name of university/institution/country	
2023	Guest Lecturer– INP 610/680 Advanced Topics in Neurogenomics,Yale Univ./USA
2016-2017	Lecturer and lab instructor –Real-time PCR (laboratory course NUTR115), Univ. Of Bergen/Norway