

CURRICULUM VITAE**Name:** Hannes Erich Bülow (Buelow)**Title:** Ph.D./Dr. rer. nat. (Doctor rerum naturalium)

Affiliation: Department of Genetics (1^o appointment)
 Dominick P. Purpura Dept. Neuroscience (2^o appointment)
 Albert Einstein College of Medicine
 Ullmann Building Rm 709
 1300 Morris Park Avenue
 Bronx, NY 10461
 Tel. (718) 430 3621 (office)
 (718) 430 3622 (lab)
 Fax (718) 430 8778
 e-mail: hannes.buelow@einsteinmed.edu
<http://www.einsteinmed.org/faculty/profile.asp?id=10331>

Home address: 447 Fort Washington Avenue
 Apt. 33
 New York, NY 10033
 home +1 (212) 781 5373
 cell +1 (917) 270 0313

EDUCATION AND EMPLOYMENT**EDUCATION:**

Institution	Position	Dates	Degree
Albert-Ludwigs-Universität in Freiburg im Breisgau, Germany	pharmacy	1987-1992	Pharmacy, Board certified (Germany)
Max-Delbrück-Center for Molecular Medicine (Humboldt Universität zu Berlin), Germany	Ph.D. student Molecular Biology	1993-1998	Ph.D. (Dr. rer. nat.)

POST-GRADUATE TRAINING:

Institution	Position	Dates	
Universitätsklinikum Rudolf-Virchow, Berlin	Intern (Clinical Pharmacy)	1992	
Apotheke Niedersedlitz, Dresden	Intern (Pharmacy)	1992-1993	
Cold Spring Harbor Labs, Cold Spring Harbor, NY	Visiting Scientist	1999	Dr. Linda van Aelst
Columbia University, New York, NY	Postdoctoral fellow	1999-2004	Dr. Oliver Hobert

PROFESSIONAL EMPLOYMENT

Institution	Position	Dates	
Columbia University, New York, NY, Dept. Biochemistry and Molecular Biophysics	Associate Research Scientist	2004-2005	Dr. Oliver Hobert

Albert Einstein College of Medicine, Bronx, NY, Departments of Genetics & Dominick P. Purpura Department of Neuroscience	Assistant Professor	2006-2012	
Albert Einstein College of Medicine, Bronx, NY, Departments of Genetics & Dominick P. Purpura Department of Neuroscience	Associate Professor	2012-2016	
Albert Einstein College of Medicine, Bronx, NY, Departments of Genetics & Dominick P. Purpura Department of Neuroscience	Professor	2016-present	Tenure awarded on 07/01/2017
Albert Einstein College of Medicine, Bronx, NY, Department of Genetics	Professor & Associate Chair	2019-present	

AWARDS AND PROFESSIONAL SERVICE

AWARDS AND HONORS

1993	Final Pharmacy Exam ("3. Staatsexamen") grade: 1.5 (on scale from 1.0 to 5.0 – 1 being the best)
1998	Ph.D. degree, Humboldt-Universität zu Berlin, "summa cum laude".
1999-2001	Postdoctoral Fellowship (DAAD, German Academic Exchange Organization)
2007	Alfred P. Sloan Research Fellow
2014	Irma T. Hirschl/Monique Weill-Caulier Research Fellow
2014	LaDonne Schulman Award for Excellence in Teaching (selected by students of the Sue Golding Graduate Division, Albert Einstein College of Medicine).
2017	Awarded tenure at Albert Einstein College of Medicine

AWARDS RECEIVED BY MENTEES

Dr. Janne Tornberg	2008, postdoctoral fellowship of the Academy of Finland.
Dr. Yehuda Salzberg	2014, " Dennis Shields Postdoctoral Research Prize " for outstanding postdoctoral research performed at Albert Einstein College of Medicine.
Dr. Leo Tang	2016, " Croucher Foundation Fellowship ", Hong Kong (postdoc. fellowship)
Dr. Carlos Díaz-Balzac	2017, " James And Ruth Scheuer Award " for outstanding thesis research by a MSTP (Medical Science Training Program) student at Albert Einstein College of Medicine.
	2021, F32 NRSA Postdoctoral Fellowship
	2021, Borroughs Wellcome Fund Career Awards For Medical Scientists

PROFESSIONAL SOCIETY MEMBERSHIPS

2006-present	Member, Genetics Society of America
2009-present	Member, Harvey Society
2010-present	Member Institute for Aging Research, Nathan Shock Centers of Excellence in the Basic Biology of Aging, Albert Einstein College of Medicine
2011-present	Member, American Society of Biochemistry and Molecular Biology
2013-present	Member, Society of Glycobiology
2019-present	Member, Society of Developmental Biology

OTHER PROFESSIONAL ACTIVITIES

Peer review – grant agencies:

2007-2009	<i>ad hoc</i> member, American Cancer Society; review committee: Development, Differentiation, and Cancer (DDC)
2010-2013	permanent member, American Cancer Society; review committee: Development, Differentiation, and Cancer (DDC)
2010	<i>ad hoc</i> reviewer, North West Cancer Research Fund, United Kingdom
2010, 2016	<i>ad hoc</i> reviewer, Natural Sciences and Engineering Research Council of Canada, Canada
2010	<i>ad hoc</i> reviewer, Medical Research Council (MRC), United Kingdom (declined due to conflict of interest)
2010	<i>ad hoc</i> reviewer, City University of New York, PSC-CUNY awards
2011-present	<i>ad hoc</i> reviewer, National Institute of Health, various Special Emphasis Panels
2012	<i>ad hoc</i> reviewer, French National Research Agency (ANR, L'Agence nationale del al recherché), Paris, France
2014	<i>ad hoc</i> reviewer, Binational Science Foundation (BSF), Israel
2014	<i>ad hoc</i> reviewer, Wellcome Trust, United Kingdom
2016	<i>ad hoc</i> member of ICI (Intercellular Interactions Study Section) for the National Institute of Health.
2016	<i>ad hoc</i> reviewer, National Science Foundation
2016	<i>ad hoc</i> reviewer, Natural Sciences and Engineering Research Council of Canada
2016-present	<i>ad hoc</i> reviewer, Israel Science Foundation (ISF), Israel
2018	<i>ad hoc</i> reviewer, The German Israeli Foundation for Scientific Research and Development
2021	<i>ad hoc</i> reviewer, Human Science Frontiers Program

Peer review – journals:

Advances in Radiation Oncology, Cell Reports, Current Biology, Development, Developmental Biology, Developmental Cell, eLife, ELS (Encyclopedia of Life Sciences), European Journal of Medical Genetics, FEBS Letters, Genes & Development, Genes Development Evolution, Genetics, Genome Research, Glycobiology, Journal of Biomedicine and Biotechnology, Journal of Cell Biology, Journal of Cellular Physiology, Journal of Histochemistry & Cytochemistry, Journal of Neuroscience, Molecular Cellular Biology, Molecular Psychiatry, Mutation Research, Nature Biotechnology, Nature Communications, Nature Methods, Neuron, PLoS Biology, PLoS Genetics, PLoS One, Polymers, Protein & Peptide letters, Scientific Reports, Science Advances, The Plant Cell, Traffic, Wormbook.

Editorial service:

2015-present	Section editor (Worm Methods) of Wormbook (published by <i>GENETICS</i> , I. Greenwald ed.)
2017-present	Editorial Board Member <i>GENETICS</i> , Associate Editor for “Methods, Technology and Resources”
2022-present	Editorial Board Member <i>Proteoglycan Research</i> , (inaugural editorial board).

Albert Einstein College of Medicine Service

Schoolwide Service:

2006-2008	Student Recruitment Committee
2009-2012	Student Admissions Committee

2009	Awards Committee
2009-present	Steering Committee, Cell and Molecular Biology training grant (directed by Dr. Charles Query)
2010, 2015	Julius Marmur Awards Committee
2012-2013	Senate Council (elected)
2012-2014	Committee on Appointments and Promotions (Associate Professor)
2017-2019	Committee on Appointments and Promotions (Professor and tenure)
2019	Middle States Accreditation Self-Study Working Group Standard V
2019-2020	Departmental Reorganization Task Force, Departmental Reorganization Working Group
2019-present	Patent Committee
2019-present	Senate Fiscal Affairs Committee
2020	Anti-Bias-Curriculum development committee
2022	Senate advisory committee for reappointment of the dean.

Departmental Service:

2006-2015	Representative in Faculty Senate for Department of Genetics
2008-2010	Member of Faculty Recruitment Committee in Department of Genetics
2008-2010	Coordinator of space renovations (e.g. Departmental library) and acquisitions (e.g. Departmental centrifuges)
2008-2014	Organizer of Departmental Work in Progress Series (including a major reorganization in 2012)
2010-present	Salome G. Waelsch Prize Committee (Chair), The Salome Waelsch Prize is awarded jointly between the University of Freiburg (Germany) and the Department of Genetics as Albert Einstein College of Medicine for the best thesis in Biology submitted in Freiburg or Albert Einstein College of Medicine.
2011	Co-organizer, 2011 Departmental Retreat at Mohonk, Department of Genetics
2011-2016	Member Faculty Mentoring Committee for Dr. Brett Abrahams
2016-2017	Member of Faculty Recruitment Committee in Dominick P. Purpura Department of Neuroscience
2018-2019	Chair of Faculty Recruitment Committee in Dominick P. Purpura Department of Neuroscience
2019- present	Member Faculty Mentoring Committee for Dr. Peri Kurshan, Dominick P. Purpura Department of Neuroscience
2019-present	Associate Chair, Department of Genetics

RESEARCH**RESEARCH SUPPORT****Active:**

Neuroendocrine control of synaptic connectivity 05/15/2022-04/30/2027

NINDS: R01NS125134 (PI: Buelow)

Effort: 3 cal

Total direct costs: \$ 1,694,808

The goal of this grant is to elucidate the function of insulins in asymmetric synaptic connectivity in the brain.

Genetic Analysis of dendrite morphogenesis in *Caenorhabditis elegans* 07/01/2023-06/30/2028

NINDS: R01NS129992-01 (PI: Buelow) scored in 6th percentile

Effort: 4.2 cal

Total direct costs: \$ 1,625,289

The goal of this grant is to elucidate the genetics of dendrite morphogenesis using *C. elegans* as a model system.

Pending:**Completed:**

Start-Up Funds, Albert Einstein College of Medicine 03/08/2006-03/07/2009

These funds cover the cost of setting up the laboratory with equipment, supplies and personnel.

Alfred P. Sloan Research Fellowship 2007 09/16/2007-09/15/2009

(PI: Buelow)

\$ 50,000

The Role of Glycosaminoglycans in Organismal Aging 07/01/2009-06/30/2010

Resnick Pilot Grant (Einstein internal), (PI: Buelow)

\$ 3,000

Genetic Analysis of Kallmann Syndrome in *C. elegans* 07/01/2010-06/30/2012

NICHD: 1R01HD055380-03S1 Administrative Supplement (PI: Buelow)

Effort: -

Total direct costs: \$103,814

The goal of this grant is to elucidate the genetics of Kallmann Syndrome using *C. elegans* as a model system.

Novel *in vivo* approaches to structure/function analyses of Heparan Sulfate 09/30/2009-08/31/2012

NIGMS: RC1 GM090825 (Challenge Grant) (PI: Buelow) Total direct costs: \$505,405

The goal of this grant is to (1) develop novel tools to visualize specific heparan sulfate sugars structures *in vivo* and (2) to directly correlate heparan sulfate structure with function.

A forward genetic screen for genes involved in dendrite development 01/01/2012-12/31/2012

Rose F. Kennedy Intellectual and Developmental Disabilities Research

\$ 30,000

Center Pilot Grant (Einstein internal), (PI: Buelow)

The goal of this grant is to elucidate the genetic mechanisms that control dendrite development using *C. elegans* as a model system.

Identification of novel genes involved in neurite branching	01/01/2013-06/30/2013
Rose F. Kennedy Intellectual and Developmental Disabilities Research Center Micro Grant (Einstein internal), (PI: Buelow)	
Effort: -	Total direct costs: \$3,000
The goal of this grant is to identify mutants that are involved in neurite branching through whole genome sequencing.	
Genetic Analysis of Kallmann Syndrome in <i>C. elegans</i>	05/01/2008-04/30/2014
NICHD: R01HD055380 (PI: Buelow)	
Effort: 4.08 cal	Total direct costs: \$1,033,073
The goal of this grant is to elucidate the genetics of Kallmann Syndrome using <i>C. elegans</i> as a model system.	
Establishing the Role of a Novel Conserved Gene in Dendrite Morphogenesis	07/01/2013-06/30/2015
NINDS: 1R21NS081505-01A1 (PI: Buelow)	
Effort: 1.8 cal	Total direct costs: \$275,000
The goal of this grant is to study a novel, previously uncharacterized conserved gene in dendrite development	
Genetic Analyses of Heparan Sulfate Function in Cell-Cell Interactions	12/01/2012-11/30/2016
NIGMS: 1R01GM101313 (PI: Buelow)	
Effort: 5.4 cal	Total direct costs: \$760,000
The goal of this grant is to study the function of defined heparan sulfate patterns in mediating cell-cell interactions.	
Defining a role for the UPR sensor IRE-1 in neuronal development	10/01/2014-09/30/2018
BSF 2013 Binational Science Foundation Application #2013188 (Co-PIs Buelow-Henis-Korenblit)	
Effort: 0.12 cal	Total direct costs: \$114,000
The goal of this grant is to understand the function of ire-1 in dendrite development.	
Irma T. Hirschl/Monique Weill-Caulier Fellowship	01/01/2014-12/31/2018
Effort: N/A (PI: Buelow)	Total direct costs: \$175,000
Investigating Asymmetric Synaptic Connectivity	04/01/2019-03/31/2022
NIH/NINDS & NIMH, R21NS111145-01 (PI: Buelow) NCE	
Effort: 1.8 cal	Total direct costs: \$275,000
The goal of this grant is to develop a project to characterize the development and function of asymmetric synaptic connectivity.	
Genetic Analysis of dendrite development in <i>Caenorhabditis elegans</i>	09/01/2016-05/31/2023
NINDS: 1R01NS096672 (PI: Buelow)	
Effort: 4 cal	Total direct costs: \$1,046,250
The goal of this grant is to elucidate the genetics of dendrite morphogenesis using <i>C. elegans</i> as a model system.	

A Fluorescence-Based High-Throughput Platform for Glycotyping the Hematopoietic Cell Lineage 07/01/2019-08/31/2023
NIH/OD: 1U01CA241981-01 (MPI: Buelow (contact), Steidl)
 Effort: 1.2 cal in NCE Total direct costs: \$1,614,350
 The goal of this grant is to establish a high-throughput platform using heparan sulfate specific single chain variable fragment (scFv) antibody reagents to 'glycotype' cells.

Current Mentored Grants

Completed Mentored Grants

Genetic analysis of Kallmann Syndrome 01/01/2007-12/31/2008
Postdoctoral Fellowship of the Academy of Finland (PI: Dr. Janne Tornberg)

In vivo analysis of the HS code 07/01/2012-12/31/2013
NIH/NINDS: F31NS076243 (NRSA) (PI: Matthew Attreed, PhD student)

Identification of Novel Loci Interacting with the Kallmann Syndrome Gene Kal-1 08/01/2010-07/31/2014
NIH/NICHD: F31HD066967 (NRSA) (PI: Carlos Diaz-Balzac, MSTP student)

HS in cancer progression and cell signaling 12/01/2013-11/30/2014
Coordenação de Aperfeiçoamento de Pessoal de Nível Superior
 (PI: Dayse S. da Cunha, PhD student, UNIFESP, São Paolo)

Fulbright Predoctoral Fellowship 08/01/2012-07/31/2016
Fulbright - Institute of International Education
 (PI: Nelson Ramirez, PhD student)

Investigation into the molecular mechanism of dendritic development 08/01/2016-07/31/2018
Postdoctoral Fellowship from the Croucher Foundation, Hong Kong (PI: Dr. Leo Tang)

Uncovering the role of leukocyte cell-derived chemotaxin 2 (lect-2) in dendrite morphogenesis 12/01/2016-11/30/2019
NIH/NINDS: F31 NS100370 (NRSA) (PI: Maisha Rahman, PhD student)

Characterizing Novel Regulations of Dendritic Tiling in *C. elegans* 07/01/2019-06/30/2022
NIH/NINDS: F31 NS111939 (NRSA) (PI: Meera Trivedi, MSTP student)

BIBLIOGRAPHY

Original Communications in peer reviewed Journals:

1. Erdmann, B., Gerst, H., **Bülow, H.**, Lenz, D., Bähr, V., and Bernhardt, R. (1995). Zone-specific localization of cytochrome P45011B1 in human adrenal tissue by PCR-derived riboprobes. *Histochem Cell Biol*, 104:301-307.
2. Erdmann, B., Gerst, H., Lippoldt, A., **Bülow, H.**, Ganten, D., Fuxe, K., and Bernhardt, R. (1996). Expression of cytochrome P45011B1 mRNA in the brain of normal and hypertensive transgenic rats. *Brain Res*, 733:73-82.
3. **Bülow, H.E.**, Möbius, K., Bähr, V., and Bernhardt, R. (1996). Molecular cloning and functional expression of the cytochrome P450 11B-hydroxylase of the guinea pig. *Biochem Biophys Res Commun*, 221:304-312.
4. **Bülow, H.E.**, Möbius, K., Bähr, V., and Bernhardt, R. (1996). Functional expression of the guinea pig 11b-hydroxylase in COS-1 cells. *Endocr Res*, 22:479-484.
5. Cao, P., **Bülow, H.**, Dumas, B., and Bernhardt, R. (2000). Construction and characterization of a catalytic fusion protein system: P-450(11beta)-adrenodoxin reductase-adrenodoxin. *Biochim Biophys Acta*, 1476(2):253-64.
6. **Bülow, H.E.**, and Bernhardt, R. (2002). Analyses of the CYP11B gene family in the guinea pig suggest the existence of a primordial CYP11B gene with aldosterone synthase activity. *Eur J Biochem*, 269:3838-3846.
7. **Bülow, H.E.**, Berry, K.L., Topper, L.H.; Peles, O.; and Hobert, O. (2002). Heparan sulfate proteoglycan-dependent induction of axon branching and axon misrouting by the Kallmann syndrome gene kal-1. *Proc Natl Acad Sci USA*, 99(9):6346-6351. PMID: PMC122951
8. Berry, K.L., **Bülow, H.E.**, Hall, D.H., and Hobert, O. (2003) A C.elegans CLIC ion channel homolog required for intracellular tube formation and maintenance. *Science*, 302:2134-2137.
 - a. Highlighted in an accompanying Perspectives piece: Paul SM & Beitel GJ. (2003). *Science*, 302:2077-8
 - b. Recommended by Faculty of 1000 (Jan. 2004)
9. **Bülow, H.E.**, and Hobert, O. (2004) Differential sulfations and epimerization define heparan sulfate specificity in nervous system development. *Neuron*, 41:723-736.
10. **Bülow, H.E.**, Boulin, T., and Hobert, O. (2004) Differential functions of the C. elegans FGF receptor in axon outgrowth and maintenance of axon position. *Neuron*, 42:367-374.
11. **Bülow, H.E.***, Tjoe, N., Townley, R.A., Didiano, D., van Kuppevelt, T.H., and Hobert, O. (2008) Extracellular sugar modifications provide instructive and cell-specific information for axon guidance choices. *Current Biology*, 18:1978–1985, * corresponding author. PMID: PMC2765105.
 - a. recommended by Faculty of 1000 (Jan. 2009).

12. Bhattacharya R., Townley, R.A., Berry K.L., and **Bülow, H.E.** (2009) The PAPS transporter *pst-1/let-462* is required for heparan sulfation and is essential for viability and neural development. *J Cell Science*, 122:4492-4504. <http://dx.doi.org/10.1242/jcs.050732>. PMID: PMC2787461.
13. Aguirre-Chen C., **Bülow H.E.**, and Kaprelian Z. (2011), *C. elegans bicd-1*, Homolog of the Drosophila Dynein Accessory Factor, Bicaudal D, Regulates the Branching of PVD Multidendritic Nociceptors. *Development*, 138:507-518. <http://dx.doi.org/10.1242/dev.060939>. PMID: PMC3014636.
14. Townley R.A., and **Bülow H.E.** (2011) Genetic Analysis of the Heparan modification network in *Caenorhabditis elegans*. *J. Biol. Chem*, 286:16824–16831, published online March 24, 2011. <http://dx.doi.org/10.1074/jbc.M111.227926>. PMID: PMC3089526.
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16. Attreed M., Desbois M., van Kuppevelt T.H., and **Bülow H.E.** (2012) Direct visualization of specifically modified extracellular glycans in living animals. *Nat. Methods*, 9(5):477-479, published online April 1, 2012. <http://dx.doi.org/doi:10.1038/nmeth.1945> PMID: PMC3437987.
 - a. Cover article highlighted by an accompanying News & Views piece, Kulkarni G & Wadsworth WG. (2012). *Nat. Methods*, 9(5):451-3
 - b. highlighted in ‘Research Highlights in Brief’, *Nat. Rev. Mol. Cell. Biol.* (2012), 13:281, doi:10.1038/nrm3345
 - c. recommended by Faculty of 1000 (July 2012).
17. Teclé E., Diaz-Balzac C.A., and **Bülow H.E.** (2013) Distinct 3-O-sulfated heparan sulfate modification patterns are required for *kal-1* dependent neurite branching in a context-dependent manner in *Caenorhabditis elegans*. *G3 (Bethesda)*, 3(3):541-52. <http://dx.doi.org/10.1534/g3.112.005199> PMID: PMC3583460.
18. Salzberg Y., Diaz-Balzac C.A., Ramirez-Suarez N.J., Attreed M., Teclé E., Desbois M., Kaprielian Z., and **Bülow H.E.** (2013) Skin-derived cues control arborization of sensory dendrites in *Caenorhabditis elegans*. *Cell*, 155(2): 308–320, published online on October 10 as <http://dx.doi.org/10.1016/j.cell.2013.08.058>. PMID: PMC3881433.
 - a. Highlighted by an accompanying Preview piece, Ziegenfuss J.S. & Grueber W.B. (2013). SAX-7 and Menorin Light the Path for Dendrite Morphogenesis, *Cell*, 155(2), 269-271.
 - b. Recommended by Faculty1000: Herman R: F1000Prime Recommendation of [Salzberg Y et al., Cell 2013, 155(2):308-320]. In F1000Prime, 25 Nov 2013; DOI: 10.3410/f.718140961.793487347. F1000Prime.com/718140961#eval793487347.
19. Díaz-Balzac C.A., Lázaro-Peña M.I., Teclé E., Gomez N., and **Bülow H.E.** (2014) Complex cooperative functions of heparan sulfate proteoglycans shape nervous system development in *C. elegans*. *G3*

- (Bethesda), 4(10):1859-70, 2014 Aug 5. pii: g3.114.012591., <http://dx.doi.org/10.1534/g3.114.012591>. PMID: PMC4199693.
20. Salzberg Y.*, Ramirez-Suarez N.J.*, and **Bülow H.E.** (2014) The proprotein convertase KPC-1/furin controls branching and self-avoidance of sensory dendrites in *Caenorhabditis elegans*. **PLoS Genetics**, 2014 Sep 18; 10(9):e1004657. <http://dx.doi.org/10.1371/journal.pgen.1004657>. eCollection 2014 Sep. PMID: PMC4169376.
 21. Levi-Ferber M., Salzberg Y., Safra M., Haviv-Chesner A., **Bülow H.E.**, Henis-Korenblit S. (2014) It's All in Your Mind: Determining Germ Cell Fate by Neuronal IRE-1 in *C. elegans*. **PLoS Genetics**, 2014 Oct 23; 10(10):e1004747. eCollection 2014 Oct. <http://dx.doi.org/10.1371/journal.pgen.1004747>. PMID: PMC4207656.
 22. Desbois M., Cook S.J., Emmons, S.W., and **Bülow H.E.** (2015) Directional trans-synaptic labeling of specific neuronal connections in live animals. **GENETICS**, 200(3):697-705, published online on April 27, 2015 as <http://dx.doi.org/10.1534/genetics.115.177006>. PMID: PMC4512537.
 23. Díaz-Balzac C.A., Lázaro-Peña M.I., Ramos-Ortiz G.O., **Bülow H.E.** (2015) The Adhesion molecule KAL-1/anosmin-1 regulates Neurite Branching through a SAX-7/L1CAM–EGL-15/FGFR Receptor Complex. **Cell Reports**, 11:1–8, published online on May 21, 2015 as <http://dx.doi.org/10.1016/j.celrep.2015.04.057>. PMID: PMC4464948.
 24. Attreed, M., Saied-Santiago, K., and **Bülow H.E.** (2016) Conservation of anatomically restricted glycosaminoglycan structures in divergent nematode species. **Glycobiology**, 26(8):862-870, published online on April 8, 2016 as <http://dx.doi.org/10.1093/glycob/cww037>. PMID: PMC5018047.
 25. Díaz-Balzac C.A., Rahman M., Lázaro-Peña M.I., Martin Hernandez L.A., Salzberg Y., Aguirre-Chen C., Kaprielian Z., and **Bülow H.E.** (2016) Muscle- and skin-derived cues jointly orchestrate patterning of somatosensory dendrites. **Current Biology**, 26:1-9, published online on July 21 as <http://dx.doi.org/10.1016/j.cub.2016.07.008>. PMID: PMC5021591.
 - a. Highlighted by an accompanying *Dispatch* piece, O'Brien B & Miller DM 3rd (2016). Neurodevelopment: Three's a Crowd, Four Is a Receptor Complex, **Current Biology**, 26(17):R799-801.
 26. Salzberg Y., Coleman, A., Celestrin K., Biederer T., Henis-Korenblit* S., and **Bülow* H.E.** (2017) Reduced insulin/insulin-like growth factor receptor signaling mitigates defective dendrite morphogenesis in mutants of the ER stress sensor IRE-1. **PLoS Genetics** 13(1):e1006579. published online on January 24, 2017 as <http://dx.doi.org/10.1371/journal.pgen.1006579>. * corresponding authors. PMID: PMC5293268.
 27. Ames K., da Cunha D. S., **Bülow H.E.**, and Meléndez A. (2017) A Non-Cell-Autonomous Role of BEC-1/BECN1/Beclin1 in Coordinating Cell-Cycle Progression and Stem Cell Proliferation during Germline Development. **Current Biology**, 27:1–9, published online on March 9 as <http://dx.doi.org/10.1016/j.cub.2017.02.015>. PMID: PMC5389117.

28. Saied-Santiago K., Townley R.A., Attonito J., da Cunha D.S., Teclé E., and **Bülow H.E.** (2017) Coordination of heparan sulfate proteoglycans with Wnt signaling to control cellular migrations and positioning in *Caenorhabditis elegans*. **GENETICS**, 206(4):1951-1967, published online on June 2, 2017 as <https://doi.org/10.1534/genetics.116.198739>. PMID: PMC5560800.
29. Lázaro-Peña M.I., Díaz-Balzac C.A., **Bülow H.E.**, and Emmons S.W. (2018) Heparan sulfate molecules mediate synapse formation and function of male mating neural circuits in *C. elegans*. **GENETICS**, 209(1):195-208, published online on March 20, 2018 as <https://doi.org/10.1534/genetics.118.300837>. PMID: PMC5937176.
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- a. News & Views by: Portman D.S. (2019) The minds of two worms, **Nature**, 571:40-42.
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35. Tang L.T.*, Trivedi M.*, Freund J., Salazar C.J., Lee G.L., Ramirez-Suarez N.J., Rahman M., Wang Y., Grant, B.D., **Bülow H.E.** (2021) The CATP-8/P5A-type ATPase is required for multiple aspects of neuronal patterning, **PLoS Genetics**, Jul 1;17(7):e1009475, published online July 1, 2021 as <https://doi.org/10.1371/journal.pgen.1009475>. PMID: PMC8279360.
36. Zhou X., Vachon C., Cizeron M., Romatif O., **Bülow H.E.**, Jospin M., Bessereau J.L. (2021) The HSPG Syndecan is a core organizer of cholinergic synapses in *C. elegans*, **J. Cell Biol.**, Sep 6;220(9), published online July 2, 2021 as <https://doi.org/10.1083/jcb.202011144>. PMID: PMC8258370.

37. Rahman M., Ramirez-Suarez N.J., Diaz-Balzac C.A., and **Bülow H.E.** (2022) Specific N-glycans regulate an extracellular adhesion complex during somatosensory dendrite patterning, *EMBO Reports*, July 5, 23(7):e54163, published online on May 19, 2022 as e54163, <https://doi.org/10.15252/embr.202154163>. PMID: PMC9253746.
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40. Ramirez-Suarez N.J., Belalcazar H.M., Rahman M., Trivedi M., Tang L.T.H., and **Bülow H.E.** (2023) Convertase-dependent regulation of a membrane tethered ligand in trans tunes dendrite adhesion, *Development*, Sept. 18, 150, dev201208, published online on August 10 as <https://doi.org/10.1242/dev.201208>. PMID: TBD.
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Books, Chapters in Books, and Review Articles:

1. **Bülow, H.E.** (1998) "Molecular and Evolutionary Investigations on the Steroidogenic System – The Adrenal Gland of the Guinea Pig as a Model", PhD Thesis, Humboldt-University Berlin ("summa cum laude").
2. Hobert, O. and **Bülow, H.** (2003) Development and maintenance of neuronal architecture at the ventral midline: New lessons from *C. elegans*. *Curr. Op. Neurobiol.*, 13(1):70-78. [http://dx.doi.org/10.1016/s0959-4388\(03\)00002-3](http://dx.doi.org/10.1016/s0959-4388(03)00002-3).
3. **Bülow H.E.***, and Hobert O.* (2006) The Molecular Diversity of Glycosaminoglycans shapes Animal Development. *Ann. Rev. Cell. Dev. Biol.*, 22:375-407. * corresponding authors <https://doi.org/10.1146/annurev.cellbio.22.010605.093433>.

4. MacColl G.S., Quinton R., **Bülow H.E.** (2010), Biology of KAL1 and its orthologs: implications for X-linked Kallmann's syndrome and the search for novel candidate genes. *Frontiers of Hormone Research*, 39:62-77. <http://dx.doi.org/10.1159/000312694>.
5. Attreed M., and **Bülow H.E.** (2015) A Transgenic Approach to Live Imaging of Heparan Sulfate Modification patterns. *Methods in Molecular Biology*, 1229:253-68. http://dx.doi.org/10.1007/978-1-4939-1714-3_22. PMID: PMC5893304.
6. Dong X, Shen K*, and **Bülow H.E.*** (2015) Intrinsic and extrinsic mechanisms of dendrite morphogenesis. *Ann. Rev. Physiol.*, 77:271-300, <http://dx.doi.org/10.1146/annurev-physiol-021014-071746>. Epub 2014 Oct 24. * corresponding authors.
7. Saied-Santiago K., **Bülow H.E.** (2018) Diverse Roles for Glycosaminoglycans in Neural Patterning. *Dev. Dyn.*, 247(1):54-74, published online on Jul 24, 2017 as <https://doi.org/10.1002/dvdy.24555>. [Epub ahead of print]. PMID: PMC5866094.
8. Townley, R.A., **Bülow H.E.** (2018) Deciphering functional glycosaminoglycan motifs in development, *Curr. Op. Struct. Biol*, 50:144-514, published online on March 23, 2018 as <https://doi.org/10.1016/j.sbi.2018.03.011>. PMID: PMC6078790.
9. **Bülow H.E.** (2021) Roles of glycoconjugates in neural patterning in *C. elegans*. *Current Topics in Developmental Biology*, 144:377-408, published online on April 16, 2021 as <https://doi.org/10.1016/bs.ctdb.2021.02.001>.
10. **Bülow, H.E.** (2022) Imaging glycosaminoglycan modification patterns *in vivo*, *Methods in Molecular Biology*, *Methods Mol Biol*, 2303:539-557, doi: 10.1007/978-1-0716-1398-6_42.
11. Piszczatowski R.T., **Bülow H.E.**, Steidl U.* (2023) Heparan Sulfate and Heparan Sulfate Proteoglycans in Hematopoiesis, *submitted*.
12. Heiman M.G. & **Bülow H.E.** (2022) Neuronal morphogenesis, WormBook, published in *GENETICS*, *in preparation*. (invited review).

PATENTS

ANTIBODY-BASED METHOD TO IDENTIFY, PURIFY, AND MANIPULATE CELL TYPES AND PROCESSES

U.S. PATENT PUBLICATION No.: US 2022/0227886 A1

Inventors: Buelow, Hannes E.; Steidl, Ulrich G.; Almo, Steven C.; Townley, Robert A.; Piszczatowski, Richard; Seidel, Ron.; Patent pending.

INVITED PRESENTATIONS

- 02/2003 Columbia University, New York, NY, Center for Neurobiology and Behavior.
- 02/2004 New York University (NYU), New York, NY, Skirball Institute.
- 04/2005 University of Pennsylvania, Philadelphia, PA, Children's Hospital of Philadelphia (CHOP), Department of Pathology.

- 04/2005 University of Medicine and Dentistry New Jersey (UMDNJ), Department of Pathology, Piscataway, NJ.
- 04/2007 North East Society of Developmental Biology Meeting, Marine Biological Laboratories, Woods Hole, MA, Invited Speaker.
- 04/2008 Queens College – City University of New York, Flushing, NY, Department of Biology.
- 04/2008 Massachusetts General Hospital, Harvard Medical School, Boston, MA.
- 02/2009 Hunter College – City University of New York, New York, NY, Department of Biology.
- 09/2009 6th International Conference on Proteoglycans, Aix-les-Bains, France (selected oral presentation).
- 04/2010 University of California San Diego, CA, Dept. of Cellular and Molecular Medicine & Ludwig Institute for Cancer Research.
- 05/2010 Samuel Lunenfeld Research Institute, Mount Sinai Hospital, Toronto, Canada.
- 07/2010 Gordon Research Conference (Proteoglycans), Procter Academy, Andover, NH, Invited Speaker.
- 03/2011 Yale University, New Haven, CT, Program in Cellular Neuroscience, Neurodegeneration and Repair.
- 05/2011 Gordon Research Conference (Glycobiology), Barga, Tuscany (Italy), Invited Speaker.
- 04/2012 2012 Annual Meeting of the American Society of Biochemistry and Molecular Biology (Experimental Biology 2012), San Diego, CA, Invited speaker.
- 03/2013 Dept. Cell and Developmental Biology, Weill Cornell Medical College in Qatar, Doha, Qatar
- 06/2013 22nd International Glycoconjugate Symposium/sponsored by the Society for Glycobiology, Dalian, China, Invited speaker.
- 08/2013, 8th International Conference on Proteoglycans, Frankfurt, Germany (selected oral presentation).
- 03/2014, Columbia University, New York, NY, Dept. of Genetics and Development.
- 03/2014, Nagoya International Symposium on Neural Circuits, Nagoya University, Japan, Invited speaker.
- 04/2014, North East Society of Developmental Biology Meeting, Marine Biological Laboratories, Woods Hole, MA, Invited speaker.
- 06/2014, University of Copenhagen, Biotech Research & Innovation Centre (BRIC), Denmark.
- 06/2014, Max-Delbrück Center for Molecular Medicine, Berlin-Buch, Germany.
- 02/2015, University College London, Research Department Of Cell And Developmental Biology, London, UK.
- 03/2015, Gordon Research Conference (Glycobiology), Barga, Tuscany (Italy), Invited Speaker.
- 07/2015, Centre de Génétique et de Physiol. Molécul. et Cell., Université Lyon 1, Villeurbanne, France.
- 09/2015, The Mina and Everard Goodman Faculty of Life Sciences, Bar-Ilan University, Israel.
- 04/2016, Universidade Federal de São Paulo (UNIFESP), São Paulo (Brazil).
- 02/2017, 1. “Latin American Worm Meeting”, Institute Pasteur, Montevideo, Uruguay, Invited Speaker.
- 03/2017, University of Massachusetts Medical School in Worcester, Dept. Neurobiology, MA.
- 01/2018, Goethe Universität Frankfurt, Buchmann Institute for Molecular Life Sciences.
- 07/2018, Gordon Research Conference (Proteoglycans), Procter Academy, Andover, NH, Invited Speaker.
- 09/2018, Complex Carbohydrate Research Center (University of Georgia, Athens).
- 03/2019, Technion, Israel Institute of Technology, Department of Biology, Haifa, Israel.

- 03/2019, The Mina and Everard Goodman Faculty of Life Sciences, Bar-Ilan University, Ramat Gan, Israel.
- 03/2019, Weizmann Institute of Science, Rehovot, Israel.
- 08/2019, 25th International Symposium on Glycoconjugates, Milan, Italy, Invited Speaker.
- 02/2020, 2. “Latin American Worm Meeting”, Rosario, Argentina, Invited Speaker.
- 03/2020, Centro Andaluz de Biología del Desarrollo, Seville, Spain (cancelled due to COVID-19, to be rescheduled).
- 04/2020, North East Society of Developmental Biology Meeting, Marine Biological Laboratories, Woods Hole, MA, Invited speaker (cancelled due to COVID-19, to be rescheduled).
- 06/2020, University of Massachusetts Medical School in Worcester, Dept. Neurobiology, MA (cancelled due to COVID-19, to be rescheduled)
- 06/2020, 2020 CF-GSP All Hands Meeting, NIH (invited speaker as grant recipient for oral presentation, virtual).
- 09/2020, NIH Common Fund Glycoscience Program workshop The Biology of Glycosaminoglycans in Health & Disease, Invited Speaker, virtual).
- 04/2021, North East Society of Developmental Biology Meeting, Marine Biological Laboratories, Woods Hole, MA, Invited speaker (virtual).
- 09/2021, NIH Common Fund Symposium, The Neurosciences: Degenerative Disorders, Neuroplasticity, & Intersection with Glycoscience, September 8 & 9, 2021, Invited speaker (virtual)
- 05/2022, 2022 CF-GSP All Hands Meeting, NIH (invited speaker as grant recipient)
- 11/2022, 2022 Society for Glycobiology Meeting, invited speaker (2 independent presentations)
- 04/2023, Johns Hopkins University, Department of Molecular Biology & Genetics
- 05/2023, ARVO Meeting, 2023, SIG (Special Interest Group “Role of the Glycocalyx in Ocular Health and Disease”, Panel), virtual.
- 07/2023, University of Freiburg, Germany, Spemann Graduate School of Biomedical Sciences.

TEACHING**TEACHING STATEMENT**

In my view, teaching is an essential part of being an academic. In addition to research, this is my single most important task: to teach, train and mentor the next generation of academics and students in scientific discourse and methodology. I seek to accomplish this in two ways. On the one hand, I enjoy the formal teaching, where I strive to engage and convey my own enthusiasm and excitement about research and the scientific method. On the other hand, I enjoy instructing students in small group settings that allow immediate interactions and discussions. For example, I hold regularly scheduled meetings with my trainees in the lab to challenge their independent thinking. This includes both formal meetings for an hour every other week as well as the (almost) daily informal interactions in the lab where I encourage them to critically question their work, and me. Students are often hesitant to do so, but eventually realize the value of these scientific discussions. I believe that this mixture of formal and informal interactions is the most effective method to train and mentor students.

Because of the significance of teaching for me, I was happy to lecture at Einstein while still a postdoc at Columbia University. Once I arrived, I became part of the Genetics curriculum in my first year as an Assistant Professor (despite not being required to do so). Ever since, I have lectured in the Molecular Genetics Course the section about *C. elegans* genetics, Advanced Mammalian Genetics Course, Developmental Neuroscience Course, and, lastly, the Molecular Cell Biology Course where I am traditionally giving a lecture about the extracellular matrix. In addition, I have led a number of literature discussion groups, Responsible conduct of Research Seminars etc. From 2012-2021, I have been course leader of the Molecular Genetics Course, which constitutes a key course of the PhD curriculum and is taken by almost all graduate and most Md/PhD students. In this position, I oversaw the restructuring of the course to conform with the changes in the shortened PhD curriculum to one year. I added a zebra fish segment as an important vertebrate model system and, more recently, a stem cell genetics section. These new sections complement the mouse, human, fly, worm, cancer, bacterial and yeast genetic sections of the course. Together with the Graduate School, I also instituted team-based learning sessions twice a week as part of this course. This latter change has in my opinion significantly contributed to the success of the Molecular Genetics Course and has made the shortening of the course into one 3 month block possible. In summary, teaching is an integral part of my academic endeavors and as important for the professional success of my trainees and myself.

FORMAL TEACHING (before joining the faculty at Einstein)

Year	Course name, University	Type	# Lectures	# Stud.	Comments
2003/4	Advanced Genetics, Columbia University	paper discussion	1 (x1h)	~5-10	
2004/5	Advanced Genetics, Columbia University	paper discussion	1 (x1h)	~5-10	
2005/6	Developmental Neuroscience, AECOM	lecture	1 (x1.5h)	13	

FORMAL TEACHING (after joining the faculty at Einstein)

Year	Course name, University	type	# lectures¹	# Stud.	Comments
2006/7	Molecular Genetics	lectures	3 (x1.5h)	35	
	Developmental Neuroscience	lecture	1 (x1.5h)	13	
	Advanced Mammalian Genetics	Paper discussion	1 (x1.5h)	17	
2007/8	Molecular Genetics	lectures	3 (x1.5h)	37	

	Developmental Neuroscience	lecture	1 (x1.5h)	14	
	Developmental Biology	lectures	3 (x1.5h)	9	
	Literature discussion	paper discussion	4 (x1.5h)	~10	
2008/9	Molecular Genetics	lectures	5 (x1.5h)	39	
	Developmental Neuroscience	lecture	1 (x1.5h)	10	
	Advanced Mammalian Genetics	paper discussion	1 (x1.5h)	12	
2009/10	Molecular Genetics	lectures	2 (x1.5h)	41	
	Developmental Neuroscience	lecture	1 (x1.5h)	14	
	Developmental Biology	lecture/discuss.	2 (x1.5h)	13	
	Molecular Cell Biology	lecture	1 (x1.5h)	26	
2010/11	Molecular Genetics	lectures	4 (x1.5h)	36	
	Developmental Neuroscience	lecture	1 (x1.5h)	12	
	Advanced Mammalian Genetics	paper discussion	1 (x1.5h)	13	
	Molecular Cell Biology	lecture	1 (x1.5h)	31	
	Respons. conduct of research (Mar 8)	session leader	1 (x1h)	67	
2011/12	Molecular Genetics	lectures	4 (x1.5h)	26	
	Developmental Neuroscience	lecture	1 (x1.5h)	12	
	Stem cells, Development, Disease	lectures/discuss.	2 (x1.5h)	8	
	Molecular Cell Biology	lecture	1 (x1.5h)	42	
2012/13	Molecular Genetics	lectures	4 (x1.5h)	32	Course leader²
	Developmental Neuroscience	lecture	1 (x1.5h)	7	
	Advanced Mammalian Genetics	paper discussion	1 (x1.5h)	7	
	Responsible conduct of research	Session leader	1 (x1h)	10	
	Molecular Cell Biology	lecture	1 (x1.5h)	24	
	Pillars of Biology	Paper discussion	1 (x1.5h)	11	
2013/14	Molecular Genetics	lectures/(TBL)	5/(1) (5x1h,1x1.5h)	34	Course leader³
	Developmental Neuroscience	lectures/discuss.	3/(2)(5x1.5h)	19	
	Advanced Mammalian Genetics	Paper discussion	1 (x1.5h)	7	
	Stem cells, Development, Disease	lecture	1 (x2h)	5	
	Molecular Cell Biology	lecture	1 (x1.5h)	19	
	Pillars of Biology	Paper discussion	1 (x1.5h)	8	
2014/15	Molecular Genetics	lectures/(TBL)	4/(1) (4x1h,1x1.5h)	18	Course leader
	Developmental Neuroscience	lectures/discuss.	3/(2)(5x1.5h)	9	
	Molecular Cell Biology	lecture	1 (x1.5h)	19	
2015/16	Molecular Cell Biology	lecture	1 (x1.5h)	15	
	Molecular Genetics	lectures/(TBL)	5/(1) (4x1h,1x1.5h)	24	Course leader
	Stem cells, Development, Disease	lecture	1 (x1.5h)	13	
	Developmental Neuroscience	lectures/discuss	3/(2)(5x1.5h)	7	
2016/17	Molecular Cell Biology	lecture	1 (x1.5h)	13	
	Molecular Genetics	lectures/(TBL)	5/(1) (4x1h,1x1.5h)	28	Course leader
	Stem cells, Development, Disease	lecture	1 (x1.5h)	7	
	Responsible conduct of research	Session leader	1 (x1h)	10	

	Developmental Neuroscience	lectures/discuss.	3 (x1.5h)	5	
2017/18	Molecular Cell Biology	lecture	1 (x1.5h)	22	
	Molecular Genetics	lectures/(TBL)	5/(1) (4x1h,1x1.5h)	39	Course leader
	Stem cells, Development, Disease	lecture	1 (x1h 10min)	13	
	Developmental Neuroscience	lectures/discuss.	3x2h	8	
	Responsible conduct of research	session leader	1 (x1h)	10	
2018/19	Molecular Cell Biology	lecture	1 (x1.5h)	17	
	Molecular Genetics	lectures/(TBL)	5/(1) (4x1h,1x1.5h)	23	Course leader
	Stem cells, Development, Disease	lecture	1 (x1h 10min)	7	
	Developmental Neuroscience	lectures/discuss.	3x2h	16	
	Responsible conduct of research	session leader	2 (x1h)	10	
2019/20	Molecular Cell Biology	lecture	1 (x1.5h)	11	
	Molecular Genetics	lectures/(TBL)	5/(1) (4x1h,1x1.5h)	35	Course leader
	Developmental Neuroscience, AECOM	lectures/discuss.	3x2h	7	
	Responsible conduct of research	session leader	2 (x1h)	10	
2020/21	Molecular Cell Biology	lecture	1 (x1.5h)	8	
	Molecular Genetics	lectures/(TBL)	3/(1) (2x1h,1x1.5h)	35	Course leader²
	Developmental Neuroscience	lectures/discuss.	2x2h	18	
	Responsible conduct of research	session leader	2 (x1h)	10	
2021/22	Molecular Cell Biology	lecture	1 (x1.5h)	13	
	Molecular Genetics	lectures/(TBL)	3/(1) (2x1h,1x1.5h)	36	
	Developmental Neuroscience	lectures/discuss.	2x2h	14	
	Responsible conduct of research	session leader	2 (x1h)	10	
2022/23	Molecular Cell Biology	lecture	1 (x1.5h)	13	
	Molecular Genetics	lectures/(TBL)	3/(1) (2x1h,1x1.5h)	26	
	Developmental Neuroscience	lectures/discuss.	2x2h	13	
2023/24	Molecular Cell Biology	lecture	1 (x1.5h)	TBD	
	Molecular Genetics	lectures/(TBL)	3/(1) (2x1h,1x1.5h)	35	
	Developmental Neuroscience	lectures/discuss.	2x2h	TBD	

¹ Numbers in parentheses indicate TBL-like sessions with contact hours indicated. ² Co-led course together with Dr. Nicholas Baker. ³ Developed new Syllabus to conform with restructured Curriculum.

CURRENT TRAINEES

Postdocs:

Leo Tang (11/2015-present)

Students:

Christopher Salazar (08/2016-present), Einstein PhD Program, Genetics
Jacquelin Ho (05/2023-present), Einstein MSTP Program, Neuroscience
Stefanie Henry (09/2023-present), Einstein PhD Program, Genetics

Undergraduate students:

High school students:

FORMER TRAINEES

Postdocs:

Raja Bhattacharya (06/2006-06/2010), Associate Professor & Ramalingaswami Fellow, Amity Institute of Biotechnology; Amity University Kolkata.
Janne Tornberg (01/2007-12/2010), Scientist, Evira Finnish Food Safety Authority.
Robert Townley (07/2007-06/2012), Res. Associate, University of Wisconsin, Milwaukee.
Reto Müller (09/2012-12/2012), Biochemist, Brookline MA.
Yehuda Salzberg (09/2010-11/2014), Senior Staff Scientist, Weizmann Institute, Rehovot, Israel.
Nelson Ramirez-Suarez (02/2018-08/2019), postdoc at IST Vienna, Lab of Dr. Mario De Bono
Sebastian Rojas Villa (10/2019-08/2022), lecturer at Lehman College/CUNY

Graduate students:

Erin Chu, Einstein PhD Program, Genetics, (04/2009-04/2010), left program and graduated from Nursing School at Columbia University.
Eillen Teclé, Einstein PhD Program, Genetics (05/2007-04/2013), graduated 04/11/2013, Assistant Professor at California State University Dominguez Hills.
Matthew Attreed, Einstein PhD Program, Genetics (05/2008- 04/2014), graduated 04/04/2014, Technical Applications Scientist, Oxford Nanopore Technologies.
Carlos Diaz-Balzac, Einstein MSTP Program, Genetics (08/2009- 07/2014), graduated 06/10/2014, Instructor - Department of Medicine , Endocrine/Metabolism (SMD), University of Rochester Medical School.
Muriel Desbois, PhD program of Université Paris Marie Curie (Sorbonne Universités), France (09/2011-09/2015), graduated 07/11/2015, postdoc at Seattle Children's Research Institute with Dr. Brock Grill.
Dayse C. S. da Cunha (12/2013-11/2015), UNIFESP, São Paulo (Brazil), Exchange PhD student, graduated 04/28/2016. Currently a professor in Brasil in Cuibá, FASIPE CPA.
Lourdes Alujandra Hernandez (06/2014-06/2016), Einstein PhD Program, Genetics, left program, currently with ASPHALION, Madrid, Spain.
Kevin Celestrin, Einstein PhD Program, Genetics (09/2011-08/2017), graduated 08/30/2017, Strategic Account Executive at Arima Genomics, Inc.
Nelson Ramirez-Suarez, Einstein PhD Program, Genetics (06/2012-12/2017), graduated 12/18/2017, postdoc at IST Vienna, Lab of Dr. Mario De Bono, Vienna, Austria.
Kristian Saied-Santiago, Einstein PhD Program, Genetics (06/2013-09/2018), graduated 09/12/2018, postdoc at U Penn with Dr. Michael Granato.
Maisha Rahman, Einstein PhD Program, Neuroscience (08/2015-10/2021), graduated 09/17/2021
Garrett Lee (06/2017-10/2022), Einstein MSTP program, Neuroscience, graduated 10/07/2022
Meera Trivedi (09/2017-10/2022), Einstein MSTP program, Neuroscience, graduated 10/13/2022

Jenna Freund (08/2019-04/2023), Einstein PhD Program, Neuroscience, switched labs.

Rotation students (excluding students who declared the lab):

Andrea Silva (08/2006-12/2006), rotation, graduated with PhD from Einstein, Dept. DMB
Rachel Freemont (07/2007-08/2007), (MSTP) rotation, graduated with PhD from Einstein, Dept. Neuroscience
Alexandra Mirina, Lomonossov University (02/2009-8/2009), summer student, graduated with PhD from Einstein, Dept. Systems & Computational Biology
Jonathan Chung (01/2010-03/2010), rotation, graduated with PhD from Einstein, Dept. Genetics
Ashley Byrnes (09/2010-12/2010), rotation, left program.
Julie Nadel (01/2011-03/2011), rotation, graduated with PhD from Einstein, Dept. Genetics
Benjamin Lorton, (11/2014-12/2014), rotation, graduated with PhD from Einstein, Dept. Genetics
Helen Belalcazar, (02/2016-03/2016), rotation, graduated with PhD from Einstein, Dept. Genetics
Hayden Hatch (06/2016-07/2016), (MSTP) rotation, graduated with PhD from Einstein, Dept. Genetics
Jenna Barnes, (10/2016-11/2016), rotation, graduated with PhD from Einstein, Dept. Genetics
Kelsey McDermott, (03/2017-06/2017), rotation
Anthony James, (09/2018-01/2019), rotation, left program to go to medical school.
Anastasia Nizhnik, (09/2019-12/2019), rotation
Elizabeth Yun, (01/2021-04/2021), rotation
Nadiya Nawsheen, (08/2021-11/2021), rotation
Jacqueline Ho, (05/2022-06/2022), rotation

Undergraduate students:

Boris Rozenfeld (2006) SURP student, now Drexel University, Medical School, Philadelphia, PA
Julia Klein (2007) SURP student from University of Pennsylvania, graduated from Albert Einstein College of Medicine Medical School
Matthew Koh (2008), SURP student from UC Berkeley, PhD from CSHL.
Alice Talpin (2008) University of Paris (04/2008-09/2008), now staff scientist with Enterome, France.
Muriel Desbois (2010), University of Paris (04/2010-08/2010), joined the lab as Ph.D. student.
Rahma Elayeb (2011), University of Paris (04/2011-08/2011), now in Ph.D. program in France.
Gibram Ramos (2013), UPR Rio Piedras (SURP Einstein), graduated from MSTP program at Einstein.
Marine Gueydan (2014) University of Paris (04/2014-08/2014), graduated from Dr. Jean-Louis Bessereau's Lab, Lyon, France.
Stefan Rodriguez (2015), Brown University (01/2015-09/2015), volunteer.
Ryan Peer (07/2015), graduated from Middlebury College.
Urieliz Cintron Torres (07/2016), UPR Ponce, SURP
Claudio Schmidt (10/2016-12/2016), Medizinische Universität Innsbruck, PhD program Universität Zürich.
Olivia Binder, University of Paris (04/2017-08/2017)
Lauren Fries, Oberlin College (06/2018-08/2018), SURP, Einstein
Daniel O'Grady, Middlebury College (06/2018-08/2018)

High school students:

Benjamin Starr (2006), Ethical Culture Fieldston School, went to Carlton College
Tamar Pilishvili (05/2006-08/2008), Forest Hills High School, went to NYU.
Manisha Joshi (07/2008)
Elizabeth Clayton (07/2009), Ethical Culture Fieldston School, went to Wellesley College.

Marina Montgomery (07/2010), Brearley, went to Carlton College.
Shyam Bhatt (07/2011, 06/2012-08/2012), Bronx Science Highschool, went to SUNY Stonybrook.
Elizabeth Klein (2013) Highschool student, went to University of Pennsylvania.
Alexandra Landauer (07/2014), Ethical Culture Fieldston School, went to Stanford.
Celine Arar (07/2014), Ethical Culture Fieldston School, went to Cornell.
Catarina Stein (03-06/2015), European School, Brussels, Belgium, went to University of Freiburg, Germany, PhD program at Charité Berlin.
William Corman (07/2015), Collegiate School (NYC), went to UCLA
Allison So (07/2016-08/2016), Ethical Culture Fieldston School
Jonas Contreras, Pelham Highschool, (07/2017)
Cassandra Potter (06/2018-08/2018), Ethical Culture Fieldston School, went to Wesleyan
Danielle Maydan (06/2019-08/2019), Hunter Highschool
Holly Wemple (06/2019-08/2019), Ethical Culture Fieldston School
Suyee Lee (09/2021-12/2021), Bronx Science Highschool
Abigail Behrendt (06/2022-08/2022), Ethical Culture Fieldston School
Lamine Camara (06/2022-08/2022), Ethical Culture Fieldston School
Abigail Behrendt (06/2023-08/2023), Ethical Culture Fieldston School
Anand Schwabe (07/2023-08/2023), City College Highschool

ADVISORY/QUALIFYING/THESIS DEFENSE COMMITTEES

Thesis Advisory Committees (active in bold):

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1. Evan Braunstein (Bernice Morrow Lab)
2. Laina Freyer (Bernice Morrow Lab)
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4. Abhishek Bhattacharya (Nicholas Baker Lab)
5. Gunnar Kleemann (Scott Emmons lab)
6. Rajarshi Ghosh (Scott Emmons Lab)
7. Chang Hyun Lee (Nicholas Baker Lab) (Chair)
8. Rebecca Nebel (Brett Abrahams Lab)
9. Ke Li (Nicholas Baker Lab)
10. Maria Lazaro-Peña (Scott Emmons Lab) (Chair)
11. Steven Cook (Scott Emmons Lab) (Chair)
12. Raven Harris Diacou (Wei Liu Lab)
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14. Adam Hudgins (Yousin Suh Lab)
15. Hansoo Song (Bernice Morrow Lab)
16. Michael Rogers (Julie Secombe Lab)
- 17. Jada Summerville (Peri Kurshan Lab)**

Department of Neuroscience:

1. Stacey Reeber (Zaven Kaprelian Lab)
2. Cristina Aguirre-Chen (Zaven Kaprelian Lab)
3. Edward Carlin (Zaven Kaprelian Lab)
4. Nozomi Sakai (Zaven Kaprelian Lab)

5. Michelle Antoine (Jean Hébert Lab)
6. Greg Gutin (Jean Hébert Lab)
7. Eduardo Arteaga-Bracho (Mark Mehler Lab)
8. Christopher De Jesus (Mark Mehler Lab)
9. Giang Nguyen (Mark Mehler Lab)
10. Marta Gronska (Jean Hébert Lab)
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12. Joanna Krzyspiak (Kamran Khodakhah/Jean Hébert Lab)
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Department of Biochemistry:

1. Tianqing Zheng (Peng Wu Lab)
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Department of Cellular and Developmental Biology:

1. Benjamin Caballero (Ana-Maria Cuervo Lab)

Department of Molecular Pharmacology:

1. Lu Xu (Ji Sze lab)
2. Mahfuzur Miah (Michael Aschner Lab)

**The City University of New York (CUNY):
Queens College/CUNY**

1. Nicholas Palmisano (Alicia Meléndez Lab)

Johns Hopkins University

- 1. Emilio Santillan (Luisa Cochella Lab)**

International:

1. Camille VACHON (Jean-Louis Bessereau Lab), Université de Lyon - Université Claude Bernard Lyon 1, France); (Institut NeuroMyoGène)

Qualifying Exam Committees:

Albert Einstein College of Medicine:

Department of Genetics:

1. Dennis Monks (Bernice Morrow Lab)
1. Laina Freyer (Bernice Morrow Lab)
2. Raquel Castellanos (Bernice Morrow Lab)
3. Chang Hyun Lee (Nicholas Baker Lab)
4. Jonathan Chung (Bernice Morrow Lab)
5. Devorah Rothenberg (Yousin Suh Lab)
6. Jeehae Han (Yousin Suh Lab)

7. Miook Cho (Yousin Suh Lab)
8. Rebecca Nebel (Brett Abrahams Lab)

Department of Neuroscience:

1. Arlene Bravo (Zaven Kaprelian Lab)
2. Edward Carlin (Zaven Kaprelian Lab)
3. Christopher De Jesus (Mark Mehler Lab)
4. Eduardo Arteaga-Bracho (Mark Mehler Lab)
5. Hayden Hatch (Chair, Julie Secombe Lab)
6. Kelsey McDermott (Tiago Gonçalves Lab)
7. Jada Summerville (Peri Kurshan Lab)
8. Jaslin Kalra (Alberto Pereda Lab)

Department of Cellular and Developmental Biology:

1. Joshua Weinreb (Teresa Bowman Lab)

The City University of New York (CUNY):

Queens College/CUNY

1. Nicholas Palmisano (Alicia Meléndez Lab)

City College/CUNY

1. Adanna Alexander (Chris Li Lab)
2. Ayesha Chowdhury (Itzhak Mano Lab)
3. Katherine A. Rivera Gomez (Chris Li Lab)

Stony Brook University, New York:

1. Nuri Kim (David Matus Lab)

Doctoral Thesis Defense Committees

Albert Einstein College of Medicine:

1. Stacey Reeber (Zaven Kaprelian Lab), Dept. Neuroscience
2. Cristina Aguirre-Chen (Zaven Kaprelian Lab), Dept. Neuroscience
3. Hunki Paek (Jean Hébert Lab), Dept. Neuroscience
4. Laina Freyer (Bernice Morrow Lab) (Chair), Dept. Genetics
5. Evan Braunstein (Bernice Morrow Lab), Dept. Genetics
6. Jun Liao (Bernice Morrow Lab), Dept. Genetics
7. Abhishek Bhattacharya (Nicholas Baker Lab), Dept. Genetics
8. Wei Li (Nicholas Baker Lab), Dept. Genetics
9. David Heslin (Jack Lenz Lab), Dept. Genetics
10. Gunnar Kleemann (Scott Emmons Lab), Dept. Genetics
11. Linchao Lu (Pamela Stanley Lab), Dept. Cell Biology
12. Rajarshi Ghosh (Scott Emmons Lab), Dept. Genetics
13. Sayan Nandi (Richard Stanley lab), Dept. Developmental & Molecular Biology
14. Zheng Wang (Greg Prelich Lab), Dept. Genetics
15. Dennis Monks (Bernice Morrow Lab), Dept. Genetics
16. Sheeba Mathew (Kalpana Lab), Dept. Genetics
17. Arlene Bravo-Ambrosio (Zaven Kaprelian Lab); Dept. Neuroscience (Alternate)

18. Nozomi Sakai (Zaven Kaprielian Lab), Dept. Neuroscience
19. Abhijit Kale (Nicholas Baker Lab) (Chair), Dept. Genetics
20. Robert P. Ruggiero (Nicholas Baker Lab) (Chair), Dept. Genetics
21. Frank Diaz (Jean Hébert lab), Dept. Genetics
22. Michelle Antoine (Jean Hébert Lab), Dept. Neuroscience
23. Wei Tan (Greg Prelich Lab), Dept. Genetics
24. Giang Nguyen (Mark Mehler Lab), Dept. Neuroscience
25. Aaron Richardson (Greg Prelich Lab), Dept. Genetics
26. Jeremy Fagan (Andreas Jenny Lab), Dept. Developmental & Molecular Biology (Alternate)
27. 04/2015, Philipp Campbell (Florence Marlow Lab), Dept. Developmental & Molecular Biology
28. 05/2015, Chang Hyun Lee (Nicholas Baker Lab), Dept. Genetics (chair)
29. 06/2015, Lu Xu (Ji Sze lab), Dept. Molecular Pharmacology
30. 10/2015, Magdalena Kalinowska (Anna Francesconi Lab), Dept. Neuroscience
31. 11/2015, Rebecca Nebel (Brett Abrahams Lab), Dept. Genetics (Alternate)
32. 08/2016, Abubakar Jalloh, (Peng Wu Lab), Dept. Biochemistry
33. 11/2016, Eduardo Arteaga-Bracho (Mark Mehler Lab), Dept. Neuroscience
34. 01/2017, Benjamin Caballero (Ana-Maria Cuervo Lab), Dept. Develop. & Molecular Biology
35. 04/2017, Ke Li (Nicholas Baker Lab), Dept. Genetics
36. 08/2017, Steven Cook (Scott Emmons Lab), Dept. Genetics (chair)
37. 09/2017, Maria Lazaro-Peña (Scott Emmons Lab), Dept. Genetics
38. 04/2018, Sumaira Zamurrad, (Julie Secombe Lab), Dept. Genetics
39. 05/2018, Christopher De Jesus (Mark Mehler Lab), Dept. Neuroscience
40. 09/2018, Raven Harris Diacou (Wei Liu Lab), Dept. Genetics
41. 12/2018, Zhejun Ji (Nicholas Baker Lab), Dept. Genetics
42. 01/2020, Marta Gronska (Jean Hébert Lab), Dept. Neuroscience
43. 05/2020, Richard Piszczatowski (Ulrich Steidl Lab), Dept. Cell Biology
44. 09/2020, Peter A John (Xingxing Zang Lab), Dept. Microbiology and Immunology (Alternate)
45. 04/2021, Virginia Folgado Marco (Nicholas Baker Lab, Dept. Genetics
46. 04/2021, Helen Belalcazar (Julie Secombe Lab), Dept. Genetics (chair)
47. 05/2021, Adam Hudgins (Yousin Suh Lab), Dept. Genetics
48. 09/2021, Joanna Krzyspiak (Kamran Khodakhah/Jean Hébert Lab), Dept. Neuroscience
49. 05/2022, Hayden Hatch (Julie Secombe Lab), Dept. Neuroscience (chair)
50. 03/2023, Hansoo Soo (Bernice Morrow Lab), Dept. Genetics
51. 03/2023, Mahfuzur Miah (Michael Aschner Lab), Dept. Neuroscience (chair) canceled
52. 06/2023, Xizhe Wang (Yousin Suh Lab), Dept. Genetics
53. 08/2023, Michael Rogers (Julie Secombe Lab), Dept. Genetics
54. 08/2023, Kelsey McDermott (Tiago Gonçalves Lab), Dept. Neuroscience

Columbia University, New York:

1. 06/2010, Siavash Karimzadegan (Martin Chalfie Lab), Dept. Biological Sciences
2. 05/2013, Brikha Shrestha (Wes Grueber Lab), Dept. Physiology and Cellular Biophysics
3. 06/2013, Lisa Kennedy (Alla Grishok Lab), Dept. Biochemistry and Molecular Biophysics
4. 12/2016, Peter Weinberg (Oliver Hobert Lab), Dept. Biological Sciences

The City University of New York (CUNY):

Queens College/CUNY

1. 03/2010, Thillini Ediriwickirama (Cathy Savage-Dunn Lab), Dept. Biology

2. 03/2017, Nicholas Palmisano (Alicia Meléndez Lab), Dept. Biology

City College/CUNY

1. 01/2020, Ayesha Chowdhury (Itzhak Mano Lab)
2. 03/2020, Adanna G. Alexander (Chris Li Lab)

New York University, New York:

1. 06/2017, John Wang (Holger Knaut Lab), Skirball Institute of Biomolecular Medicine, Developmental Genetics, New York University

International:

1. 06/2015, Nanna Torpe Jørgensen, (Roger Pocock Lab), University of Copenhagen, Biotech Research & Innovation Centre (BRIC), Denmark.
2. 05/2017, Steffen Nørgaard, (Roger Pocock Lab), University of Copenhagen, Biotech Research & Innovation Centre (BRIC), Denmark.
3. 10/2020, Camille VACHON (Jean-Louis Bessereau Lab), Université de Lyon - Université Claude Bernard Lyon 1, France); (Institut NeuroMyoGène).