

Freek Hoebeek
DDOD
Onderwijs
Brain
Child Health
Email: FHOEBEEK@UMCUTRECHT.NL



Biography

Freek obtained his doctorate degree at the Erasmus Medical Center in Rotterdam in March 2005 being supervised by Prof. Chris De Zeeuw. The title of his thesis was 'Electrophysiological responses of floccular Purkinje cells during compensatory eye movements in mutant mice'. The subsequent post-doc appointment in the laboratories of Prof. Ype Elgersma and Prof. Chris De Zeeuw at the Erasmus Department Neuroscience from 2005 to 2008 focused on the impact of CaMKII isoforms on cerebellar plasticity and motor behavior. From 2009-2011 Freek's research focused on the physiology and connectivity of the cerebellar nuclei in health and disease, which paved the way for starting his own research group. As an assistant and associate professor Freek focused on thalamic studies on cerebello-cerebral interactions. During this time his students came from various research disciplines (Biomedical Sciences, BioElectrical Engineering, Medicine, Nanobiology and Psychology), which provided a mixture of disciplines and expertise enabling several multidisciplinary studies. Freek's network extends from the (bio)medical and engineering faculties of several Dutch universities to expert centers in the UK, Germany, France, Italy, Spain, Sweden, Japan and the USA.

Since January 2018 Freek has been appointed as the Chair of 'Translation Research of Early Life Events' at UMC Utrecht, which allows him to achieve his ambitions in connecting bench- and bed-side research. His current position is Full Professor, head of the Department for Developmental Origins of Disease in the division Woman & Child (Vrouw en Baby) at the Wilhelmina Children's Hospital of the UMC Utrecht. The main focus of his current scientific research is how adverse early life events affect the development of the connections between cerebellum and cerebrum.

Freek has supervised >15 PhD-students, numerous postdoctoral fellows and junior PIs. He contributed >60 articles and performs peer-review for a wide range of journals (Nature Reviews Neuroscience, Nature Neuroscience, Nature Communications, Neuron, PNAS, Cell Reports, Pediatrics, Annals of Neurology, etc) and is a member of the Dutch Neurofederation, the Dutch League against epilepsy, the society of anatomists, the Dutch-Flemish brain innovations consortium, Federation of European Neuroscience Societies (FENS) and Society for Neuroscience (SFN, USA). Freek presented the work of his team and hosted sessions at various international meetings, such as Gordon Research Conference, FENS and SFN. His research has been supported by several local and national grants (VENI, VIDI, TOP, Gravitation).

Since 2017 Freek is certified for academic teaching (BKO certificate; CAT course for honors teaching) and is currently the manager education for the division Woman & Child. Since 2021 Freek has been appointed the chair of the Harmen Tiddens Society for dedicated educators in the UMC Utrecht, which focusses on building the education community.

MOST RECENT KEY PUBLICATIONS

1. Augmented Reticular Thalamic Bursting and Seizures in Scn1a-Dravet Syndrome
Ritter-Makinson, S., Clemente-Perez, A., Higashikubo, B., Cho, F. S., Holden, S. S., Bennett, E., Chkaidze, A., Eelkman Rooda, O. H. J., Cornet, M. C., Hoebeek, F. E., Yamakawa, K., Cilio, M. R., Delord, B. & Paz, J. T., 2 Jan 2019, In : Cell Reports. 26, 1, p. 54-64.
2. Differentiating Cerebellar Impact on Thalamic Nuclei
Gornati, S. V., Schäfer, C. B., Eelkman Rooda, O. H. J., Nigg, A. L., De Zeeuw, C. I. & Hoebeek, F. E., 2018, In : Cell Reports. 23, 9, p. 2690-2704.
3. Neurodevelopmental consequences of preterm isolated cerebellar hemorrhage: A systematic review
Hortensius, L. M., Dijkshoorn, A. B. C., Ecury-Goossen, G. M., Steggerda, S. J., Hoebeek, F. E., Benders, M. J. N. L. & Dudink, J., 1 Nov 2018, In : Pediatrics. 142, 5, e20180609.
4. Convergence of Primary Sensory Cortex and Cerebellar Nuclei Pathways in the Whisker System
Schafer, C. B. & Hoebeek, F. E., 1 Jan 2018, In : Neuroscience. 368, p. 229-239
5. Cerebello-cerebral connectivity in the developing brain
Pieterman, K., Batalle, D., Dudink, J., Tournier, J. D., Hughes, E. J., Barnett, M., Benders, M. J., Edwards, A. D., Hoebeek, F. E. & Counsell, S. J., 29 Aug 2016. In : Brain Structure and Function. p. 1-10 10 p.
6. Dysfunctional cerebellar Purkinje cells contribute to autism-like behaviour in Shank2-deficient mice
Peter, S., Ten Brinke, M. M., Stedehouder, J., Reinelt, C. M., Wu, B., Zhou, H., Zhou, K., Boele, H-J., Kushner, S. A., Lee, M. G., Schmeisser, M. J., Boeckers, T. M., Schonewille, M., Hoebeek, F. E. & De Zeeuw, C. I., 1 Sep 2016, In : Nature Communications. 7, p. 12627

Employment

DDOD
UMC Utrecht

1 Jan 2024 → 31 Dec 2024

Onderwijs

UMC Utrecht

1 Nov 2023 → 31 Dec 2024

Brain

Research UMC Utrecht

Utrecht, Netherlands

1 Nov 2018 → present

Child Health

Research UMC Utrecht

Utrecht, Netherlands

1 Jan 2018 → present

Research outputs

Anatomical Development of the Cerebellothalamic Tract in Embryonic Mice

Dumas, D. B., Gornati, S. V., Adolfs, Y., Shimogori, T., Pasterkamp, R. J. & Hoebeek, F. E., Dec 2022, In: *Cells*. 11, 23, 3800.

Controlling absence seizures from the cerebellar nuclei via activation of the Gq signaling pathway

Schwitalla, J. C., Pakusch, J., Mücher, B., Brückner, A., Depke, D. A., Fenzl, T., De Zeeuw, C. I., Kros, L., Hoebeek, F. E. & Mark, M. D., Apr 2022, In: *Cellular and Molecular Life Sciences*. 79, 4, 197.

Activity of Cerebellar Nuclei Neurons Correlates with ZebrinII Identity of Their Purkinje Cell Afferents

Beekhof, G. C., Gornati, S. V., Canto, C. B., Libster, A. M., Schonewille, M., De Zeeuw, C. I. & Hoebeek, F. E., 7 Oct 2021, In: *Cells*. 10, 10, p. 1-16 2686.

Homologous organization of cerebellar pathways to sensory, motor, and associative forebrain

Pisano, T. J., Dhanerawala, Z. M., Kislin, M., Bakshinskaya, D., Engel, E. A., Hansen, E. J., Hoag, A. T., Lee, J., de Oude, N. L., Venkataraju, K. U., Verpeut, J. L., Hoebeek, F. E., Richardson, B. D., Boele, H-J. & Wang, S. S-H., 21 Sept 2021, In: *Cell Reports*. 36, 12, p. 1-29 109721.

Single-pulse stimulation of cerebellar nuclei stops epileptic thalamic activity

Eelkman Rooda, O. H. J., Kros, L., Faneyte, S. J., Holland, P. J., Gornati, S. V., Poelman, H. J., Jansen, N. A., Tolner, E. A., van den Maagdenberg, A. M. J. M., De Zeeuw, C. I. & Hoebeek, F. E., 1 Jul 2021, In: *Brain stimulation*. 14, 4, p. 861-872 12 p.

Protein phosphatase 2b dual function facilitates synaptic integrity and motor learning

Lin, Z., Wu, B., Paul, M. W., Li, K. W., Yao, Y., Smal, I., Proietti Onori, M., Hasanbegovic, H., Bezstarosti, K., Demmers, J., Houtsmuller, A. B., Meijering, E., Hoebeek, F. E., Schonewille, M., Smit, A. B., Gao, Z. & De Zeeuw, C. I., 30 Jun 2021, In: *The Journal of neuroscience : the official journal of the Society for Neuroscience*. 41, 26, p. 5579-5594 16 p.

Differential spatiotemporal development of Purkinje cell populations and cerebellum-dependent sensorimotor behaviors

Beekhof, G. C., Osório, C., White, J. J., van Zoomeren, S., van der Stok, H., Xiong, B., Nettersheim, I. H., Mak, W. A., Runge, M., Fiocchi, F. R., Boele, H-J., Hoebeek, F. E. & Schonewille, M., 11 May 2021, In: *eLife*. 10, p. 1-34 e63668.

Temporal dynamics of the cerebello-cortical convergence in ventro-lateral motor thalamus

Schäfer, C. B., Gao, Z., De Zeeuw, C. I. & Hoebeek, F. E., 1 Apr 2021, In: *Journal of Physiology (London)*. 599, 7, p. 2055-2073 19 p.

Cerebellar injury in term neonates with hypoxic–ischemic encephalopathy is underestimated

Annink, K. V., Meerts, L., van der Aa, N. E., Alderliesten, T., Nikkels, P. G. J., Nijboer, C. H. A., Groenendaal, F., de Vries, L. S., Benders, M. J. N. L., Hoebeek, F. E. & Dudink, J., Apr 2021, In: *Pediatric Research*. 89, 5, p. 1171-1178 8 p.

Pavlovian eyeblink conditioning is severely impaired in tottering mice

de Oude, N. L., Hoebeek, F. E., Ten Brinke, M. M., de Zeeuw, C. I. & Boele, H-J., 1 Feb 2021, In: *Journal of Neurophysiology*. 125, 2, p. 398-407 10 p.

Causes and consequences of structural aberrations in cerebellar development

Dudink, J., Faneyte, S. J. & Hoebeek, F. E., 1 Jan 2021, *Factors Affecting Neurodevelopment: Genetics, Neurology, Behavior, and Diet*. Elsevier, p. 371-382 12 p.

The developmental code of the cerebellothalamocortical tract

Faneyte, S. J., Dudink, J. & Hoebeek, F. E., 1 Jan 2021, *Factors Affecting Neurodevelopment: Genetics, Neurology, Behavior, and Diet*. Elsevier, p. 383-393 11 p.

Prenatal Use of Sildenafil in Fetal Growth Restriction and Its Effect on Neonatal Tissue Oxygenation-A Retrospective Analysis of Hemodynamic Data From Participants of the Dutch STRIDER Trial

Terstappen, F., Richter, A. E., Lely, A. T., Hoebeek, F. E., Elvan-Taspinar, A., Bos, A. F., Ganzevoort, W., Pels, A., Lemmers, P. M. & Kooi, E. M. W., 3 Dec 2020, In: *Frontiers in Pediatrics*. 8, p. 1-11 595693.

Preterm infants with isolated cerebellar hemorrhage show bilateral cortical alterations at term equivalent age

Dijkshoorn, A. B. C., Turk, E., Hortensius, L. M., van der Aa, N. E., Hoebeek, F. E., Groenendaal, F., Benders, M. J. N. L. & Dudink, J., 1 Dec 2020, In: *Scientific Reports*. 10, 1, p. 5283 1 p., 5283.

AMPA Auxiliary Protein SHISA6 Facilitates Purkinje Cell Synaptic Excitability and Procedural Memory Formation

Peter, S., Urbanus, B. H. A., Klaassen, R. V., Wu, B., Boele, H-J., Azizi, S., Slotman, J. A., Houtsmuller, A. B., Schonewille, M., Hoebeek, F. E., Spijker, S., Smit, A. B. & De Zeeuw, C. I., 14 Apr 2020, In: *Cell Reports*. 31, 2, p. 1-13.e8 107515.

Consensus Paper: Experimental Neurostimulation of the Cerebellum

Miterko, L. N., Baker, K. B., Beckinghausen, J., Bradnam, L. V., Cheng, M. Y., Cooperrider, J., DeLong, M. R., Gornati, S. V., Hallett, M., Heck, D. H., Hoebeek, F. E., Kouzani, A. Z., Kuo, S-H., Louis, E. D., Machado, A., Manto, M., McCambridge, A. B., Nitsche, M. A., Taib, N. O. B., Popa, T., & 7 others Tanaka, M., Timmann, D., Steinberg, G. K., Wang, E. H., Wichmann, T., Xie, T. & Sillitoe, R. V., Dec 2019, In: *Cerebellum (London, England)*. 18, 6, p. 1064-1097 34 p.

Van Klein naar Groot

Hoebeek, FE., 18 Jan 2019

Augmented Reticular Thalamic Bursting and Seizures in Scn1a-Dravet Syndrome

Ritter-Makinson, S., Clemente-Perez, A., Higashikubo, B., Cho, F. S., Holden, S. S., Bennett, E., Chkaidze, A., Eelkman Rooda, O. H. J., Cornet, M. C., Hoebeek, F. E., Yamakawa, K., Cilio, M. R., Delord, B. & Paz, J. T., 2 Jan 2019, In: *Cell Reports*. 26, 1, p. 54-64.e6

The Potential of Stem Cell Therapy to Repair White Matter Injury in Preterm Infants: Lessons Learned From Experimental Models

Vaes, J. E. G., Vink, M. A., de Theije, C. G. M., Hoebeek, F. E., Benders, M. J. N. L. & Nijboer, C. H. A., 1 Jan 2019, In: *Frontiers in Physiology*. 10, MAY, 540.

Neurodevelopmental consequences of preterm isolated cerebellar hemorrhage: A systematic review

Hortensius, L. M., Dijkshoorn, A. B. C., Ecury-Goossen, G. M., Steggerda, S. J., Hoebeek, F. E., Benders, M. J. N. L. & Dudink, J., 1 Nov 2018, In: *Pediatrics*. 142, 5, p. 1-11 e20180609.

Differentiating Cerebellar Impact on Thalamic Nuclei

Gornati, S. V., Schäfer, C. B., Eelkman Rooda, O. H. J., Nigg, A. L., De Zeeuw, C. I. & Hoebeek, F. E., 29 May 2018, In: Cell Reports [E]. 23, 9, p. 2690-2704 15 p.

Cerebellar growth impairment characterizes school-aged children born preterm without perinatal brain lesions

Pieterman, K., White, T. J., Van Den Bosch, G. E., Niessen, W. J., Reiss, I. K. M., Tibboel, D., Hoebeek, F. E. & Dudink, J., 1 May 2018, In: American Journal of Neuroradiology. 39, 5, p. 956-962 7 p.

Chloride Homeostasis in Neurons With Special Emphasis on the Olivocerebellar System: Differential Roles for Transporters and Channels

Rahmati, N., Hoebeek, F. E., Peter, S. & De Zeeuw, C. I., 1 May 2018, In: Frontiers in Cellular Neuroscience [E]. 12, p. 1-23 101.

Impact of NMDA receptor overexpression on cerebellar purkinje cell activity and motor learning

Galliano, E., Schonewille, M., Peter, S., Rutteman, M., Houtman, S., Jaarsma, D., Hoebeek, F. E. & De Zeeuw, C. I., 22 Feb 2018, In: eNeuro. 5, 1, p. 1-13 e0270-17.2018.

A guide to in vivo optogenetic applications for cerebellar studies

Eelkman Rooda, O. H. J. & Hoebeek, F. E., 1 Jan 2018, *Extracellular recording approaches*. Sillitoe, R. V. (ed.). Humana Press Inc., p. 109-128 20 p. (NeuroMethods; vol. 134).

Convergence of Primary Sensory Cortex and Cerebellar Nuclei Pathways in the Whisker System

Schafer, C. B. & Hoebeek, F. E., 1 Jan 2018, In: Neuroscience. 368, p. 229-239 11 p.

Corrigendum: Synchronicity and Rhythmicity of Purkinje Cell Firing during Generalized Spike-and-Wave Discharges in a Natural Mouse Model of Absence Epilepsy (vol 11, 346, 2017)

Kros, L., Lindeman, S., Rooda, O. H. J. E., Murugesan, P., Bina, L., Bosman, L. W. J., de Zeeuw, C. I. & Hoebeek, F. E., 14 Nov 2017, In: Frontiers in Cellular Neuroscience [E]. 11, 1 p., 369.

Synchronicity and rhythmicity of purkinje cell firing during generalized spike-and-wave discharges in a natural mouse model of absence epilepsy

Kros, L., Lindeman, S., Rooda, O. H. J. E., Murugesan, P., Bina, L., Bosman, L. W. J., de Zeeuw, C. I. & Hoebeek, F. E., 31 Oct 2017, In: Frontiers in Cellular Neuroscience [E]. 11, 18 p., 346.

Cerebellar perineuronal nets in cocaine-induced pavlovian memory: site matters

Carbo-Gas, M., Moreno-Rius, J., Guarque-Chabrera, J., Vazquez-Sanroman, D., Gil-Miravet, I., Carulli, D., Hoebeek, F., de Zeeuw, C. I., Sanchis-Segura, C. & Miguel, M., Oct 2017, In: Neuropharmacology. 125, p. 166-180 15 p.

Cerebello-cerebral connectivity in the developing brain

Pieterman, K., Batalle, D., Dudink, J., Tournier, J. D., Hughes, E. J., Barnett, M., Benders, M. J., Edwards, A. D., Hoebeek, F. E. & Counsell, S. J., 1 May 2017, In: Brain Structure and Function. 222, 4, p. 1625-1634 10 p.

Impacts on prenatal development of the human cerebellum: a systematic review

Koning, I. V., Tielemans, M. J., Hoebeek, F. E., Ecury-Goossen, G. M., Reiss, I. K. M., Steegers-Theunissen, R. P. M. & Dudink, J., 2017, In: Journal of Maternal-fetal & Neonatal Medicine. 80, 20, p. 2461-2468 8 p.

SLC26A11 (KBAT) in Purkinje Cells Is Critical for Inhibitory Transmission and Contributes to Locomotor Coordination

Rahmati, N., Vinueza Veloz, M. F., Xu, J., Barone, S., Rodolfo Ben Hamida, N., Schonewille, M., Hoebeek, F. E., Soleimani, M. & De Zeeuw, C. I., 9 Jul 2016, In: eNeuro. 3, 3

Excitatory Cerebellar Nucleocortical Circuit Provides Internal Amplification during Associative Conditioning

Gao, Z., Proietti-Onori, M., Lin, Z., Ten Brinke, M. M., Boele, H.-J., Potters, J.-W., Ruigrok, T. J. H., Hoebeek, F. E. & De Zeeuw, C. I., 3 Feb 2016, In: Neuron. 89, 3, p. 645-57 13 p.

Controlling Cerebellar Output to Treat Refractory Epilepsy

Kros, L., Eelkman Rooda, O. H. J., De Zeeuw, C. I. & Hoebeek, F. E., Dec 2015, In: Trends in Neurosciences. 38, 12, p. 787-799 13 p.

Recent advancements in diffusion MRI for investigating cortical development after preterm birth—potential and pitfalls

Dudink, J., Pieterman, K., Leemans, A., Kleinnijenhuis, M., van Cappellen van Walsum, A. M. & Hoebeek, F. E., 21 Jan 2015, In: Frontiers in Human Neuroscience. 8, JAN, 1066.

Use of Hippocampal and Amygdalar Volumes on Magnetic Resonance Imaging to Predict Dementia in Cognitively Intact Elderly People

den Heijer, T., Geerlings, M. I., Hoebeek, F. E., Hofman, A., Koudstaal, P. J. & Breteler, M. M. B., 2006, In: Archives of General Psychiatry. 63, p. 57-62 6 p.

Simple spike and complex spike activity of floccular Purkinje cells during the optokinetic reflex in mice lacking cerebellar long-term depression

Goossens, H. H. L. M., Hoebeek, F. E., Van Alphen, A. M., Van Der Steen, J., Stahl, J. S., De Zeeuw, C. I. & Frens, M. A., Feb 2004, In: European Journal of Neuroscience. 19, 3, p. 687-97 11 p.

Calbindin in cerebellar Purkinje cells is a critical determinant of the precision of motor coordination

Barski, J. J., Hartmann, J., Rose, C. R., Hoebeek, F., Mörl, K., Noll-Hussong, M., De Zeeuw, C. I., Konnerth, A. & Meyer, M., 15 Apr 2003, In: The Journal of neuroscience : the official journal of the Society for Neuroscience. 23, 8, p. 3469-77 9 p.

Press/Media

Neurodevelopmental Consequences of Preterm Isolated Cerebellar Hemorrhage: A Systematic Review

LM Hortensius, Aicha B C Dijkshoorn, Ginette M Ecury-Goossen, Sylke J Steggerda, FE Hoebeek, m benders & J Dudink
20/10/18

1 Media contribution

Impacts

Courses and degrees

University

Erasmus Medical Center Rotterdam

Date

20-12-2000

Thesis supervisor

Prof. dr. F.H. Lopes da Silva

Title of thesis

Electrophysiology of the epileptic hippocampus and dentate gyrus

Doctorate

University

Erasmus Medical Center Rotterdam

Date

23-03-2005

Promotor

Prof. dr. C.I. de Zeeuw

Title of thesis

Electrophysiological responses of floccular Purkinje cells during compensatory eye movements in mutant mice

Postdoc appointments

2005 - 2008

Department

Neuroscience (Erasmus MC Rotterdam)

Principle Investigator
Prof. dr. Y. Elgersma
Research question
Impact of CaMKII isoforms on cerebellar plasticity and motor behavior

Education certificates

2017 - BKO
2018 - Honours Teaching Center for Academic Teaching (University of Utrecht)

Current position

Full Professor, head of department
NIDOD institute, Wilhelmina Children's Hospital, UMC Utrecht
Translational Research of Early Life Events

Prior positions

2009 - 2011
Senior Research associate
Erasmus Medical Center Rotterdam
Department
Neuroscience
Research question
Physiology and connectivity of the cerebellar nuclei in health and disease
2012 - 2017
Assistant / Associate professor
Erasmus Medical Center Rotterdam
Department
Neuroscience
Research question
Thalamic studies on cerebello - cerebral interactions

Selected academic distinctions and other merits

2006 - 2010
Erasmus University Fellowship (#1 rated - €200.000)
2008 - 2011
NWO - ALW VENI (#863.08.015 - €208.000)
2010 - 2016
NWO - TOP cross discipline (#1350186 - €675.000)
2012 - 2017
NWO - ALW VIDI (#016.121.346 - €800.000)
2011
Young talent lecture and travel grant - Gordon research conference
2013
Annual Top 3 publication in journal Cell reports
2015
Best poster award International League Against Epilepsy meeting
2016/8
FENS IBRO KAVLI network of excellence mentoring prize nomination

Current scientific activity

Freek obtained his doctorate degree at the Erasmus Medical Center in Rotterdam in March 2005 being supervised by Prof. Chris De Zeeuw.

The title of his thesis was 'Electrophysiological responses of floccular Purkinje cells during compensatory eye movements in mutant mice'.

The subsequent post-doc appointment in the laboratories of Prof. Ype Elgersma and Prof. Chris De Zeeuw at the Erasmus Department Neuroscience from 2005 to 2008 focused on the impact of CaMKII isoforms on cerebellar plasticity and motor behavior.

From 2009-2011 Freek's research focused on the physiology and connectivity of the cerebellar nuclei in health and disease, which paved the way for starting his own research group. As an assistant and associate professor Freek focused on thalamic studies on cerebello-cerebral interactions. During this time his students came from various research disciplines (Biomedical Sciences, BioElectrical Engineering, Medicine, Nanobiology and Psychology), which provided a mixture of disciplines and expertise enabling several multidisciplinary studies.

Freek's network extends from the (bio)medical and engineering faculties of several Dutch universities to expert centers in the UK, Germany, France, Italy, Spain, Sweden, Japan and the USA.

Since January 2018 Freek has been appointed as the Chair of 'Translation Research of Early Life Events' at UMC Utrecht, which allows him to achieve his ambitions in connecting bench- and bed-side research.

His current position is Full Professor, head of the research department of the division Woman & Child (Vrouw en Baby) at the Wilhelmina Children's Hospital of the UMC Utrecht.

The main focus of his current scientific research is how aberrant development from the earliest stages of life can have adverse effects on the outcome during later life.

Freek has supervised >10 PhD-students and numerous Postdoctoral fellows and junior PIs.

He contributed numerous articles in peer-reviewed journals (Nature Reviews Neuroscience, Nature Neuroscience, Nature Communications, Neuron, PNAS, Cell Reports, Pediatrics, Annals of Neurology, etc).

His research has been supported by several local and national grants.

Since 2017 Freek is certified for academic teaching (BKO certificate; CAT course for honours teaching) and is currently the manager education for the division Woman & Child.

International scientific congresses

Invited speaker or chair:

2003 & 2005 Study visit (total 3 months) Cold Spring Harbor - Prof. Robert Malinow

2008 Annual Neuroscience Graduate School (ONWAR) meeting - Chair

2008 University of Bordeaux (France) - Prof. Daniel Choquet

2010 FENS satellite meeting (Amsterdam, Netherlands) - Meeting Organizer

2010 Lecture at Society for Neuroscience meeting (SFN; San Diego, USA)

2011 Young Talent Lecture Gordon Research Conference (New London, USA)

2014 Annual International Epilepsy meeting (Newcastle, UK)

2014 Neonatal Development meeting FENS satellite (Genova, Italy)

2014 King's College St. Thomas Hospital (London, UK) - Prof. Serena Counsell

2014 Brazilian Neuroscience meeting (SBNeC) (Buzios, Rio de Janeiro, Brazil)

2015 Joint European Neonatal societies meeting (Budapest, Hungary)

2015 Albert Einstein Medical School (New York, USA) - Prof. Kamran Khodakhah

2016 International Symposium on Bioelectronics (Delft, Netherlands)

2016 European Neuroscience (FENS) meeting (Kopenhagen, Denmark) - Session Chair

2016 Ettore Majorana Advanced School for Brain Cells (Erice, Italy) - Discussion Leader

2017 Brain Stimulation International Conference (Barcelona, Spain) - Session Chair

2017 Dutch Neuroscience Meeting (Lunteren, Netherlands) - Session Chair

2018 Gordon Research Conference - thalamocortical interactions - Session Chair

2019 4th Dutch Neurodevelopmental Disorders Day - Meeting Organizer

2019 EMBO - EMBL conference (Heidelberg, Germany) - Meeting Organizer

2019 Society for Neuroscience (SFN; Chicago, USA) - Symposium Chair

Selected oral presentations:

2003 Cold Spring Harbor laboratory (New York, USA) - Prof. Robert Malinow

2005 Radboud University Nijmegen (Netherlands) - Dr. Jeroen Goossens

2008 University of Bordeaux (France) - Prof. Daniel Choquet

2011 University of Hertfordshire (UK) - Dr. Volker Steuber

2013 CNCR seminar at Vrije Universiteit (Amsterdam, Netherlands) - Dr. Christiaan de Kock

2014 Biomedical colloquium TU Delft (Netherlands) - Prof. Wouter Serdijn

2014 Gaslini Children's Hospital (Genova, Italy) - Prof. Luca Ramenghi

2014 King's college St. Thomas' Hospital (London, UK) - Prof. Serena Counsell

2014 Erasmus MC Biomedical research theme - annual lecture series

2014 Workshop on synaptic plasticity (Ribeirao Preto, Brazil) - FAPESP (Sao Paulo, Brazil)

2015 King's College MRC developmental neurobiology (London, UK) - Dr. Matt Grubb

2015 Albert Einstein Medical School (New York, USA) - Prof. Kamran Khodakhah

2016 University Medical Center (Utrecht, Netherlands) - Prof. Peter Burbach

2016 Chinese Academy of Sciences (Shanghai, China) - CAS - NWO workshop

2016 Universitätsklinik (Essen, Germany) - Prof. Felderhoff-Müser

2016 Institute de Biologie Paris Seine (Paris, France) - Dr. Laure Rondi-Reigg

2017 Neuromodulation symposium (Groningen, Netherlands) - Dr. Martijn Beudel

2017 Ruhr University (Bochum, Germany) - Prof. Stefan Herlitze

2019 EMBO - EMBL conference (Heidelberg, Germany)

Scientific collaborations

Since 2006

Prof. Arn van den Maagdenberg (Leiden University MC, Leiden, the Netherlands)

Unravelling the impact of calcium channelopathies on cerebellum

Since 2010

Dr. Volker Steuber (University of Hertfordshire, UK)

Computational modelling of cerebello-thalamo-cortical network activity

Since 2012

Prof. Wouter Serdijn (Technical University Delft, the Netherlands)
Bioengineering optimal cerebellar control of thalamo-cortical networks
Since 2012

Prof. Chris de Zeeuw (Neuroscience, Erasmus MC, Rotterdam, the Netherlands)
Behavioral assessment of mouse cerebellar phenotypes
Since 2012

Dr. Tom Ruigrok (Neuroscience Erasmus MC, Rotterdam, the Netherlands)
Comparative neuroanatomy of rodent cerebello-thalamo-cortical tract
Since 2012

Dr. Jeroen Dudink (WKZ Children's Hospital, UMC Utrecht, the Netherlands)
Visualizing the cerebello-thalamo-cortical tract in neonatal babies
Since 2013

Prof. Serena Counsell (St. Thomas'Hospital, King's College London, UK)
Visualizing the cerebello-thalamo-cortical tract in neonatal babies
Since 2013

Prof. Clemens Dirven (Neurosurgery, Erasmus MC, Rotterdam, the Netherlands)
Deep Brain Stimulation of cerebellar output tracts
Since 2014

Dr. Roy Sillitoe (Baylor College of Medicine, Houston, TX, USA)
Development of cerebellar output
Since 2015

Dr. Else Tolner (Leiden University MC, Leiden, the Netherlands)
Sudden unexpected death in epilepsy models
Since 2015

Prof. Thomas Kuner (University of Heidelberg, Germany)
Ultrastructural reconstructions of cerebellar synapses in thalamus
Since 2016

Dr. Jeanne Paz (Gladstone Institute, UCSF, San Francisco, USA)
Optogenetic deep brain stimulation to stop seizures in Dravet
Since 2016

Prof. Jeroen Pasterkamp (Translational Neuroscience, UMC Utrecht, the Netherlands)
Visualization of developing cerebello-thalamic tracts in mouse and human brain

Student supervision

Over 25 MSc students from Dutch universities (Erasmus MC, TU Delft, Leiden University and UMC Utrecht)
Over 10 PhD students, many of them now independent group leaders
Served over 20 times as thesis opponent at national and international PhD boards

Editorial and review services

Evaluator of research applications in (inter-)national competition:
Since 2014

NWO - open program grant committee
Since 2016

ERC - Consolidator Grant review board
Since 2017

ANR - French national research agency
Editor / deputy editor / associate editor of scientific journals
2010-2012

Guest editor for Journal 'the Cerebellum'

Referee for scientific journals
Neuron, PNAS, Journal of Neuroscience, Cerebellum, Plos One, JoVe, NeuroScience, Brain Stimulation, Scientific reports, Frontiers in Systems Neuroscience, ENeuro

Reviewer or advisor for other scientific bodies
Since 2016

Netherlands Institute for Neuroscience PostDoc Award committee

Consortia

Since 2013 Founding Chair of the NeuroDelta consortium (www.NeuroDelta.eu)
Since 2018 Founding Chair of the BrainInSight consortium (NWA-ORC)
*additionally I participate in numerous consortia for H2020, NIH, and NWO-gravitation research proposals.

Membership in scientific societies

From 2003 Dutch Neurofederation

From 2007 Society for Neuroscience (United-States)
From 2008 Federation of European Neuroscience societies
From 2008 Dutch-Belgium brain innovation consortium (www.braininnovations.nl)
From 2009 Dutch anatomie vereniging
From 2016 Dutch League against Epilepsy

Institutional responsibilities

2013-2018 Member of the Scientific Integrity Board of Erasmus MC
2015-2018 Member of Education Committee Erasmus MC Research Masters
2016-2018 Member of Executive Board Erasmus MC Academic Centre of Excellence 'Brain Motion'
05/2016 Member of Award Committee Netherlands Institute for Neuroscience (Amsterdam) 06/2016 Delegate of Erasmus MC Biomedical departments for Zhejiang University (China) 03/2017 Member of tenure track appointment advisory committee TU Delft
01/2018 - Head of department of developmental origins of disease UMC Utrecht
04/2018 - Manager education 4 departments 'Vrouw & Baby' UMC Utrecht
** in this role (0,2 fte) I head the division's educational efforts, for which I design the vision, mission and strategic plan for all the academic education (720 employees).

Outreach and Impact

Regular appearances in Utrecht University museum (from 2018), Brain awareness initiatives (open lab day Erasmus MC 2017; Dutch Neurodevelopmental Disorder Day 2018), patient participation days Wilhelmina Children's Hospital (from 2018), co-organization of first Dutch Neuroanatomy Championship for (Bio)Medical students (2019), Participation Meet the Professor visiting primary schools in region of Utrecht (2019) artist impressions of experimental models (2019 – link).