

BIOGRAPHICAL SKETCH

Casper Hoogenraad

PRESENT ADDRESS

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PERSONAL INFORMATION

Name: Casper C. Hoogenraad
Born: January 31, 1973, Delft, The Netherlands
Gender: male
Citizenship: Dutch (NL)

UNIVERSITY EDUCATION

Erasmus University Rotterdam, Rotterdam, The Netherlands	Cell Biology	PhD 2001
Utrecht University, Biology, Utrecht, The Netherlands	Molecular Biology	MSc 1996
School for applied sciences, Rotterdam, The Netherlands	Biochemistry	BSc 1994

APPOINTMENTS

01/2011-present	Chair of Cell Biology Department of Biology at the Faculty of Science, Utrecht University, The Netherlands
01/2011-present	Full Professor Molecular Neuroscience, Department of Biology at the Faculty of Science, Utrecht University, The Netherlands
08/2006-06/2011	Associate Professor Department of Neuroscience, Erasmus Medical Center, Rotterdam, The Netherlands

- 08/2005-08/2006 Assistant Professor
Department of Neuroscience, Erasmus Medical Center, Rotterdam, The Netherlands
- 08/2002-08/2005 Postdoctoral research
Laboratory of Prof. dr. M. Sheng, The Picower Center for Learning and Memory, Massachusetts Institute of Technology, USA
- 08/2001-08/2002 Postdoctoral research
Laboratory of Prof. dr. C.I. De Zeeuw, Department of Neuroscience, Erasmus Medical Center, Rotterdam, The Netherlands

HONORS AND AWARDS

- 2016 10th International Brain Research Organization (IBRO) / Kemali Prize
2015 Member of the European Molecular Biology Organization (EMBO)
2015 Member of Young Academy of Europe (YAE)
2014 Member of FENS-Kavli Network of Excellence (2014-2018)
2013 European Research Council (ERC) Consolidator grant
2011 Member of “De Jonge Akademie (DJA)”, which is part of the The Royal Netherlands Academy of Arts and Sciences (KNAW) (2011-2016)
2011 VICI grant from NWO - Dutch Innovational Research Incentives Scheme
2009 Member of the EMBO Young Investigator Program (YIP) (2009-2012)
2005 Human Frontiers Career Development Award (HFSP-CD)
2005 European Young Investigators (EURYI) award from the European Science Foundation
2004 VIDI grant from NWO - Dutch Innovational Research Incentives Scheme
2003 Human Frontiers Long-Term Fellowship (HFSP-LTF)
2002 Dutch Organization for Scientific Research (NWO) TALENT stipendium

RESEARCH FIELDS

Neurobiology (neuronal cells, synapse formation and function, molecular aspects of differentiation, neuronal plasticity, neuropathologies, etc), Membranes and transport (structure and function of cellular membranes and compartments, exo- and endocytic processes, protein and vesicle sorting, molecular motors) and cell and tissue architecture (cell polarity and shape, cytoskeleton, microtubules, neurite growth, axon pathfinding, dendrite development, etc).

OTHER ACADEMIC ACTIVITIES

- 2016 Course director of the CAJAL Advanced Neuroscience Training Programme “Neuronal Cell Biology - Cytoskeleton and Trafficking” in Bordeaux, France
2015 Evaluation Committee VIB Center for the Biology of Disease (Leuven, Belgium)
2015-present Panel member of the NWO-ALW-VIDI review committee
2015-2016 Member of the Life Science Committee of the ‘National Science Agenda’ (NWA)
2014-2016 KNAW Committee ‘Large-scale research facilities’
2014-present Scientific advisor at Crossbeta Biosciences

2014 French National Research Agency Scientific Evaluation Committee
 2013-present Chair of Utrecht University (UU) committee 'Science for Life Science'
 2013-2015 Member of the Utrecht University (UU) Strategic Theme 'Youth and Identity'
 2013-present Member of the Dutch FOM advisory committee 'Physics of life processes'
 2013-present Organizer Utrecht Summerschool 'Neuronal Circuit Development and Plasticity'
 2013 Panel member of the NWO-ALW Open Program review committee
 2012-2013 Member of the Utrecht University (UU) committee 'Neuroscience and Cognition'
 2011-2012 Organizer of the Dutch meeting on Molecular and Cellular Biophysics
 2011 Organizer EMBO workshop: "Cell Biology: polarity, plasticity and regeneration" in Heraklion, Greece
 2010-2016 Vice-chair of the Scientific Advisory Board of 'The International Foundation for Alzheimer's Research (ISAO)'
 2008-present Editorial Board of *Frontiers in Neuroscience* (2015) and *Molecular Brain* (2011)
 2007-2010 Panel member of the Erasmus MC (MRace)-grant review committee,

LIST OF PUBLICATIONS

- Total number of publications: 135
- Total number of citations: 7156 (average 53 citations per publication)
- H-index: 45

List of ten selected publications (last 5 years)

1. Kuijpers M, van de Willige D, Freal A, Chazeau A, Franker MA, Hofenk J, Rodrigues RJ, Kapitein LC, Akhmanova A, Jaarsma D, Hoogenraad CC (2016). Dynein Regulator NDEL1 Controls Polarized Cargo Transport at the Axon Initial Segment. *Neuron* 89(3):461-71
2. van Bergeijk P, Adrian M, **Hoogenraad CC**[#], Kapitein LC[#] (2015) Optogenetic control of organelle transport and positioning. *Nature* 518:111-4. ([#]corresponding author)
3. van Beuningen SF, Will L, Harterink M, Chazeau A, van Battum EY, Frias CP, Franker MA, Katrukha EA, Stucchi R, Vocking K, Antunes AT, Slenders L, Doukeridou S, Sillevius Smitt P, Altelaar AF, Post JA, Akhmanova A, Pasterkamp RJ, Kapitein LC, de Graaff E, Hoogenraad CC (2015). TRIM46 Controls Neuronal Polarity and Axon Specification by Driving the Formation of Parallel Microtubule Arrays. *Neuron* 88(6):1208-26
4. Yau KW, van Beuningen SFB, Cunha-Ferreira I, Cloin BMC, van Battum EY, Will L, Schätzle P, Tas RP, van Krugten J, Katrukha EA, Jiang K, Wulf PS, Mikhaylova M, Harterink M, Pasterkamp RJ, Akhmanova A, Kapitein LC, **Hoogenraad CC** (2014) Microtubule minus-end binding protein CAMSAP2 controls axon specification and dendrite development. *Neuron* 82(5):1058-73
5. Geiger JC, Lipka J, Segura I, Hoyer S, Schlager MA, Wulf PS, Weinges S, Demmers J, **Hoogenraad CC**[#], Acker-Palmer A[#] (2014) The GRIP1/14-3-3 Pathway Coordinates Cargo Trafficking and Dendrite Development. *Dev Cell*. 28(4):381-93 ([#]corresponding author)
6. Jaarsma D, van den Berg R, Wulf PS, van Erp S, Keijzer N, Schlager MA, de Graaff E, De Zeeuw CI, Pasterkamp RJ, Akhmanova A, **Hoogenraad CC** (2014). A role for Bicaudal-D2 in radial cerebellar granule cell migration. *Nat Commun* 5:3411
7. van Spronsen M, Mikhaylova M, Lipka J, Schlager MA, van den Heuvel DJ, Kuijpers M, Wulf PS, Keijzer N, Demmers J, Kapitein LC, Jaarsma D, Gerritsen HC, Akhmanova A and

Hoogenraad CC (2013) TRAK/Milton Motor-Adaptor Proteins Steer Mitochondrial Trafficking to Axons and Dendrites, *Neuron*. 77(3):485-502

8. Hellal F, Hurtado A, Ruschel J, Flynn KC, Laskowski CJ, Umlauf M, Kapitein LC, Strikis D, Lemmon V, Bixby J, **Hoogenraad CC**, Bradke F (2011) Microtubule stabilization reduces scarring and causes axon regeneration after spinal cord injury. *Science* 331(6019):928-31

9. Stuess M, Maghelli N, Kapitein LC, Gomis-Rüth S, Wilsch-Bräuninger M, **Hoogenraad CC**, Tolic Nørrelykke IM, Bradke F. (2010) Axon extension occurs independently of centrosomal microtubule nucleation. *Science* 327(5966):704-7

10. Jaworski J, Kapitein LC, Gouveia SM, Dortland BR, Wulf PS, Grigoriev I, Camera P, Spangler SA, Di Stefano P, Demmers J, Krugers H, Defilippi P, Akhmanova A, Hoogenraad CC (2009). Dynamic microtubules regulate dendritic spine morphology and synaptic plasticity. *Neuron* 61(1):85-100.

(CO-)PROMOTOR OF PHD THESES

1. Eva Teuling "Aggregates and disrupted dynein-dependent trafficking in ALS", April 23, 2008 Erasmus University Rotterdam, promotor: Prof. Dr. Chris de Zeeuw; copromotor: Dr. Casper Hoogenraad and Dr. Dick Jaarsma

2. Bjorn Dortland, "Dendritic spine morphology: the role of microtubules and endosomes", September 23, 2009 Erasmus University Rotterdam, promotor: Prof. Dr. Chris de Zeeuw and co-promotor: Dr. Casper Hoogenraad

3. Samantha Spangler "Liprin-alpha regulates neuronal development and synapse function", November 18, 2009 Erasmus University Rotterdam, promotor: Prof. Dr. Chris de Zeeuw and co-promotor: Dr. Casper Hoogenraad

4. Max Schlager "Role of adaptor proteins in motor regulation and membrane transport", October 27, 2010 Erasmus University Rotterdam, promotor: Prof. Dr. Chris de Zeeuw and co-promotor: Dr. Casper Hoogenraad

5. Linda Bralten "Identification and functional analysis of genes involved in gliomagenesis", December 14, 2011, Erasmus University Rotterdam, Promotor: Prof. Dr. Peter Sillevius Smitt and Prof. Dr. Casper Hoogenraad and co-promotor: Dr. Pim French.

6. Myrrhe van Spronsen "Motors and adaptors: transport regulation within neurons", April 17, 2012, Utrecht University, Promotor Prof. Dr. Casper Hoogenraad (*thesis received the Dutch Neurofederation PhD thesis prize 2013; IB Publication Prize Winner 2013*)

7. Vera van Dis "The role of inclusions in ALS pathogenesis", September 19, 2012 Erasmus University Rotterdam, promotor: Prof. Dr. Chris de Zeeuw and Prof. Dr. Casper Hoogenraad and co-promotor: Dr. Dick Jaarsma

8. Raimond Heukers "Clustering-Induced, Clathrin-Mediated Endocytosis (CIC-ME) for Cancer Therapy" January 20, 2014, Utrecht University, Promotor Prof. Dr. Casper Hoogenraad and co-promotor: Dr. Paul van Bergen en Henegouwen

9. Marijn Kuijpers "Neuronal trafficking: basic mechanisms and ALS pathology" May 28, 2014, Utrecht University, Promotor Prof. Dr. Casper Hoogenraad and co-promotor: Dr. Dick Jaarsma (*IB Publication Prize Winner 2014*)
10. Mariella Franker "Getting the upper hand: Regulating motor protein transport and their tracks in neurons" October 14, 2015, Utrecht University, Promotor Prof. Dr. Casper Hoogenraad and co-promotor: Dr. Lukas Kapitein
11. Joanna Lipka "Sorting out polarized transport mechanisms in neurons" November 4, 2015, Utrecht University, Promotor Prof. Dr. Casper Hoogenraad and co-promotor: Dr. Lukas Kapitein
12. Josta Kevenaar "The axon in health and disease. Regulating molecular motors and presynaptic function" January 13, 2016, Utrecht University, Promotor Prof. Dr. Casper Hoogenraad
13. Kah Wai Yau, May 18, 2016, Utrecht University, Promotor Prof. Dr. Casper Hoogenraad and co-promotor: Dr. Lukas Kapitein
14. Sam van Beuningen, May 25, 2016, Utrecht University, Promotor Prof. Dr. Casper Hoogenraad and co-promotor: Dr. Esther de Graaff
15. Petra van Bergeijk, June 8, 2016, Utrecht University, Promotor Prof. Dr. Casper Hoogenraad and co-promotor: Dr. Lukas Kapitein