

Curriculum vitae Anna Akhmanova

Personal Information

Name : Anna S. Akhmanova

Date and place of birth: 11-05-1967, Moscow

Nationality: Russian, Dutch

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Academic education and degrees

University Education: 1984-1989, Moscow State University

MS degree: June 1989 *Discipline:* Biochemistry

PhD thesis: March 4, 1997 *University:* Catholic University of Nijmegen

Promotor: Prof. Dr. W. Hennig

Title of thesis: Histone gene expression in *Drosophila*.

Appointments

January 1, 2011: Professor and co-chair, Division of Cell Biology, Faculty of Science, Utrecht University, Utrecht, The Netherlands.

2008-2010: Associate Professor (UHD), Department of Cell Biology, Erasmus Medical Centre, Rotterdam, The Netherlands.

2003-2008: Assistant Professor (UD), tenure position at the Department of Cell Biology, Erasmus Medical Centre, Rotterdam, The Netherlands.

2001-2002: group leader at the Erasmus Medical Centre, Rotterdam, The Netherlands.

1997-2001: postdoc, Department of Cell Biology and Genetics, Erasmus University of Rotterdam, The Netherlands.

1996-1997: postdoc, Department of Microbiology and Evolutionary Biology, Catholic University of Nijmegen, The Netherlands.

1992-1996: Ph.D. student, Department of Genetics, Catholic University of Nijmegen, The Netherlands.

1991-1992: Research Scholar, Microscopy Group, Department of Applied Physics, University of Twente, The Netherlands.

1989-1991: junior scientist at A.N.Belozersky Laboratory of Bioorganic Chemistry and Molecular Biology, Moscow State University.

Elected Memberships

- Member of the European Molecular Biology Organization (EMBO),
- Member the Royal Netherlands Academy of Arts and Sciences (KNAW)
- Chair of the board of the Netherlands Microscopy Society

Overview of scientific career

Dr. Anna Akhmanova is a Professor of Cell Biology at the Faculty of Science at the University of Utrecht, The Netherlands. Anna Akhmanova was trained as a biochemist and a molecular biologist and graduated from Moscow State University, Russia, in 1989. She completed her PhD on chromatin proteins in the fruit fly *Drosophila melanogaster* at the University of Nijmegen, the Netherlands in 1997. She did her first postdoctoral research on the early eukaryotic evolution in anaerobic environments at the Department of Microbiology at the University of Nijmegen (1997). During this period, A. Akhmanova demonstrated for the first time the presence of a genome in a hydrogen-producing organelle of an anaerobic protozoan (A.Akhmanova et al., 1998, Nature, 396,527-8). A. Akhmanova then moved to the Department of Cell Biology at the Erasmus MC, where she was first a postdoctoral fellow, and later, since 2001, a group leader.

Anna Akhmanova is a world-leading expert in the cell biology of the cytoskeleton. Her work is focused on the regulation of microtubule dynamics and microtubule-based membrane trafficking. As a postdoc, she has described one of the first examples of cytoskeletal polarization by a microtubule tip-binding protein (Akhmanova et al., Cell 2001) and the first example of microtubule plus end dynamics in a living mouse tissue (Akhmanova, Genes Dev. 2005).

After receiving a Vernieuwingsimpuls grant and starting her own group in 2001, Akhmanova has published over 100 papers including research studies and reviews in leading journals such as Cell, Developmental Cell, Neuron, Nature Reviews. In 2007, Akhmanova has received an ALW VICI award, showing national and international recognition of her research achievements. In 2013, Akhmanova has received the prestigious ERC Synergy award (together with M. Dogterom, 7.1 M€ total for two groups) to combine cell biological and biophysical approaches with complex reconstitution experiments to investigate regulatory principles of cytoskeletal networks.

Teaching

2011 -2015. Organization and teaching of the 1st year course “Molecular Cell Biology” for the new Bachelor programme Molecular Life Sciences, Utrecht University
Lectures for Bachelor courses in Biology, Biomedical Sciences, Master of Molecular and Cellular Life Sciences, Utrecht University.
Coordination of the study path “Cell Biology”, Biology, Utrecht University.
Junior College Utrecht: Module on microtubules and cancer.

2010. Master Course Molecular and Cell Biology – A and B, Erasmus MC. Course Director and Lecturer.

2004-2009. Lecturer for the Master and PhD courses at the Erasmus MC: Master of Molecular Medicine (Molecular and Cell Biology, Contemporary Research Topics); Master of Neuroscience.

2002-2010. Practical courses “Microscopic anatomy”, “Microscopic anatomy and pathology” for the 1st, 2nd and 3rd year, Erasmus MC.

- 2008, 2009.** Supervision of “task groups” embryology, 2nd year, Erasmus MC
- 2006-2008.** Lectures for the “In Vivo Imaging - from Molecule to Organism” course, Erasmus MC.
- 1997.** Organization of the Practical course and exam on Genetics, 1st year, Dept. of Microbiology, University of Nijmegen.
- 1994-1996.** Molecular Genetics lectures 3rd year, Dept. of Molecular Genetics, University of Nijmegen.
- 1992-1996.** Practical course on Genetics, 1st year, Dept. of Molecular Genetics, University of Nijmegen.

Supervisor/co-promotor/ promotor of completed PhD theses:

- 2015.** Andrea Serra Marques “Multimotor transport in constitutive exocytosis”
- 2015.** Carol Yu “Scaffolding proteins in membrane trafficking: the role of ELKS”
- 2014.** Marta Kijanka “Development of HER2-targeted nanobodies for molecular optical imaging and therapy of breast cancer”
- 2011.** Babet van der Vaart “Regulation of Microtubule dynamics by Protein Interaction Networks at Microtubule tips”
- 2010.** Susana Montenegro Gouveia “Tracking microtubule plus ends:EB proteins and friends”
- 2008.** G. Daniel Splinter “Bicaudal D: switching motors, cargo and direction”.
- 2006.** Gideon Lansbergen “Functional analysis of protein interactions at microtubule tips”.
- Currently, Akhmanova is the supervisor of 8 PhD students and co-supervisor of two other PhD students. Two of the current PhD students, Andrea Serra-Marques and Carol Yu, are currently completing their theses and will defend them in June 2015.

Membership of scientific committees

- 2016.** Chair of the ERC LS3 Starting grant panel, committee member EMBO Long Term Fellowship, NWO ZonMW VIDI committee.
- 2015.** EMBO Long Term Fellowship, NWO VENI committee.
- 2014.** Grant Panel member and vice-chair for ERC Starting Grant, Agence Nationale de la Recherche France, AERES evaluation committee of Curie Institute Genotoxic Stress and Cancer unit, EMBO Long Term Fellowship, Faculty Search committee Curie Institute France.
- 2013.** Agence Nationale de la Recherche France, Academy of Finland, EMBO Long Term Fellowship.
- 2012.** Grant Panel member for ERC Starting Grant, Agence Nationale de la Recherche France, Academy of Finland, EMBO Long Term Fellowship; Netherlands Organisation for Scientific Research ALW (Earth and Life Sciences) Open program;
- Faculty search committee Curie Institute France; Faculty Search Committee ETH Zurich, Switzerland.
- 2011.** Member of the Jury of the FOM projects (Netherlands Organisation for Scientific Research, Physics).

2009. Evaluator and committee member for the EU 7th Framework Programme in the area of Systems Biology

2008, 2009. Member of the Advisory Committee (Benoemingsadviescommissie (BAC)) Bionanoscience TU Delft

2007, 2008. Member of the Netherlands Organisation for Scientific Research (NWO) Mosaic advisory committee, which awards PhD grants for national minorities in the Netherlands

Organisation of scientific meetings

2011-2015 Organisation of the Joint Annual meeting of the Dutch Microscopy Society (NVvM) and the “Dutch meeting on Molecular and Cellular Biophysics”, Veldhoven, the Netherlands

2014. Biophysical Society meeting "Disordered Motifs and Domains in Cell Control", Dublin, Ireland.

2014. Co-organiser QBio Summer School, July 14-18, 2014, Utrecht University.

2009, 2010. Member of the program committee for the “Dutch meeting on Molecular and Cellular Biophysics”, Veldhoven, the Netherlands.

2006. Invited co-chair of the minisymposium “Life at the Microtubule Plus End” at the American Society for Cell Biology (ASCB) Annual Meeting, San Diego, USA.

2005. Invited co-chair of the minisymposium “The Cytoskeleton” at the European Life Scientist Organisation Meeting (ELSO), Dresden, Germany.

Editorial activities

- Journal of Cell Science, Advisory Board Member
- Elife, Reviewing Editor
- Journal of Biological Chemistry, Reviewing Editor
- BMC Cell Biology, Section Editor
- Traffic, Editorial Board Member
- Bioarchitecture, Editorial Board Member
- Encyclopedia of Cell Biology, Section Editor 2015
- Current Opinion in Cell Biology, Guest Editor 2012

Publications

1. 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, and Hoogenraad CC. TRIM46 Controls Neuronal Polarity and Axon Specification by Driving the Formation of Parallel Microtubule Arrays. *Neuron*, 2015. 88(6): 1208-26.
2. The I, Ruijtenberg S, Bouchet BP, Cristobal A, Prinsen MB, van Mourik T, Koreth J, Xu H, Heck AJ, **Akhmanova A**, Cuppen E, Boxem M, Munoz J, and van den Heuvel S. Rb and FZR1/Cdh1 determine CDK4/6-cyclin D requirement in *C. elegans* and human cancer cells. *Nat Commun*, 2015. 6: 5906.
3. Long Y, Smet W, Cruz-Ramirez A, Castelijn B, de Jonge W, Mahonen AP, Bouchet BP, Perez GS, **Akhmanova A**, Scheres B, and Blilou I. Arabidopsis BIRD Zinc Finger Proteins Jointly Stabilize Tissue Boundaries by Confining the Cell Fate Regulator SHORT-ROOT and Contributing to Fate Specification. *Plant Cell*, 2015. 27(4): 1185-99.

4. Long Y, Goedhart J, Schneijderberg M, Terpestra I, Shimotohno A, Bouchet BP, **Akhmanova A**, Gadella TW, Jr., Heidstra R, Scheres B, and Blilou I. SCARECROW-LIKE23 and SCARECROW jointly specify endodermal cell fate but distinctly control SHORT-ROOT movement. *Plant J*, 2015.
5. **Akhmanova A** and Steinmetz MO. Control of microtubule organization and dynamics: two ends in the limelight. *Nat Rev Mol Cell Biol*, 2015. 16(12): 711-26.
6. **Akhmanova A** and Hoogenraad CC. Microtubule minus-end-targeting proteins. *Curr Biol*, 2015. 25(4): R162-71.
7. Yau KW, van Beuningen SF, Cunha-Ferreira I, Cloin BM, van Battum EY, Will L, Schatzle P, Tas RP, van Krugten J, Katrukha EA, Jiang K, Wulf PS, Mikhaylova M, Harterink M, Pasterkamp RJ, **Akhmanova A**, Kapitein LC, and Hoogenraad CC. Microtubule minus-end binding protein CAMSAP2 controls axon specification and dendrite development. *Neuron*, 2014. 82(5): 1058-73.
8. Van Battum EY, Gunput RA, Lemstra S, Groen EJ, Yu KL, Adolfs Y, Zhou Y, Hoogenraad CC, Yoshida Y, Schachner M, **Akhmanova A**, and Pasterkamp RJ. The intracellular redox protein MICAL-1 regulates the development of hippocampal mossy fibre connections. *Nat Commun*, 2014. 5: 4317.
9. Schlager MA, Serra-Marques A, Grigoriev I, Gumy LF, Esteves da Silva M, Wulf PS, **Akhmanova A**, and Hoogenraad CC. Bicaudal d family adaptor proteins control the velocity of Dynein-based movements. *Cell Rep*, 2014. 8(5): 1248-56.
10. Preciado Lopez M, Huber F, Grigoriev I, Steinmetz MO, **Akhmanova A**, Koenderink GH, and Dogterom M. Actin-microtubule coordination at growing microtubule ends. *Nat Commun*, 2014. 5: 4778.
11. Preciado Lopez M, Huber F, Grigoriev I, Steinmetz MO, **Akhmanova A**, Dogterom M, and Koenderink GH. In vitro reconstitution of dynamic microtubules interacting with actin filament networks. *Methods Enzymol*, 2014. 540: 301-20.
12. Pedersen LB and **Akhmanova A**. Kif7 keeps cilia tips in shape. *Nat Cell Biol*, 2014. 16(7): 623-5.
13. Jiang K, Hua S, Mohan R, Grigoriev I, Yau KW, Liu Q, Katrukha EA, Altelaar AF, Heck AJ, Hoogenraad CC, and **Akhmanova A**. Microtubule minus-end stabilization by polymerization-driven CAMSAP deposition. *Dev Cell*, 2014. 28(3): 295-309.
14. 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**, and Hoogenraad CC. A role for Bicaudal-D2 in radial cerebellar granule cell migration. *Nat Commun*, 2014. 5: 3411.
15. Doodhi H, Katrukha EA, Kapitein LC, and **Akhmanova A**. Mechanical and geometrical constraints control kinesin-based microtubule guidance. *Curr Biol*, 2014. 24(3): 322-8.
16. van Spronsen M, van Battum EY, Kuijpers M, Vangoor VR, Rietman ML, Pothof J, Gumy LF, van Ijcken WF, **Akhmanova A**, Pasterkamp RJ, and Hoogenraad CC. Developmental and activity-dependent miRNA expression profiling in primary hippocampal neuron cultures. *PLoS One*, 2013. 8(10): e74907.
17. 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. TRAK/Milton motor-adaptor proteins steer mitochondrial trafficking to axons and dendrites. *Neuron*, 2013. 77(3): 485-502.
18. van der Vaart B, van Riel WE, Doodhi H, Kevenaar JT, Katrukha EA, Gumy L, Bouchet BP, Grigoriev I, Spangler SA, Yu KL, Wulf PS, Wu J, Lansbergen G, van Battum EY, Pasterkamp RJ, Mimori-Kiyosue Y, Demmers J, Olieric N, Maly IV,

- Hoogenraad CC, and **Akhmanova A**. CFEOM1-associated kinesin KIF21A is a cortical microtubule growth inhibitor. *Dev Cell*, 2013. 27(2): 145-60.
19. Shahbazi MN, Megias D, Epifano C, **Akhmanova A**, Gundersen GG, Fuchs E, and Perez-Moreno M. CLASP2 interacts with p120-catenin and governs microtubule dynamics at adherens junctions. *J Cell Biol*, 2013. 203(6): 1043-61.
 20. Sen I, Veprintsev D, **Akhmanova A**, and Steinmetz MO. End binding proteins are obligatory dimers. *PLoS One*, 2013. 8(9): e74448.
 21. Molina A, Velot L, Ghouinem L, Abdelkarim M, Bouchet BP, Luissint AC, Bouhleb I, Morel M, Sapharikas E, Di Tommaso A, Honore S, Braguer D, Gruel N, Vincent-Salomon A, Delattre O, Sigal-Zafrani B, Andre F, Terris B, **Akhmanova A**, Di Benedetto M, Nahmias C, and Rodrigues-Ferreira S. ATIP3, a novel prognostic marker of breast cancer patient survival, limits cancer cell migration and slows metastatic progression by regulating microtubule dynamics. *Cancer Res*, 2013. 73(9): 2905-15.
 22. Mohan R, Katrukha EA, Doodhi H, Smal I, Meijering E, Kapitein LC, Steinmetz MO, and **Akhmanova A**. End-binding proteins sensitize microtubules to the action of microtubule-targeting agents. *Proc Natl Acad Sci U S A*, 2013. 110(22): 8900-5.
 23. Larsen J, Grigoriev I, **Akhmanova A**, and Pedersen LB. Analysis of microtubule plus-end-tracking proteins in cilia. *Methods Enzymol*, 2013. 524: 105-22.
 24. Kuijpers M, Yu KL, Teuling E, **Akhmanova A**, Jaarsma D, and Hoogenraad CC. The ALS8 protein VAPB interacts with the ER-Golgi recycling protein YIF1A and regulates membrane delivery into dendrites. *EMBO J*, 2013. 32(14): 2056-72.
 25. Kapitein LC, van Bergeijk P, Lipka J, Keijzer N, Wulf PS, Katrukha EA, **Akhmanova A**, and Hoogenraad CC. Myosin-V opposes microtubule-based cargo transport and drives directional motility on cortical actin. *Curr Biol*, 2013. 23(9): 828-34.
 26. Jeffery JM, Grigoriev I, Poser I, van der Horst A, Hamilton N, Waterhouse N, Bleier J, Subramaniam VN, Maly IV, **Akhmanova A**, and Khanna KK. Centrobin regulates centrosome function in interphase cells by limiting pericentriolar matrix recruitment. *Cell Cycle*, 2013. 12(6): 899-906.
 27. Hu DJ, Baffet AD, Nayak T, **Akhmanova A**, Doye V, and Vallee RB. Dynein recruitment to nuclear pores activates apical nuclear migration and mitotic entry in brain progenitor cells. *Cell*, 2013. 154(6): 1300-13.
 28. Ferreira JG, Pereira AJ, **Akhmanova A**, and Maiato H. Aurora B spatially regulates EB3 phosphorylation to coordinate daughter cell adhesion with cytokinesis. *J Cell Biol*, 2013. 201(5): 709-24.
 29. Bulgakova NA, Grigoriev I, Yap AS, **Akhmanova A**, and Brown NH. Dynamic microtubules produce an asymmetric E-cadherin-Bazooka complex to maintain segment boundaries. *J Cell Biol*, 2013. 201(6): 887-901.
 30. Berends CW, Munoz J, Portegijs V, Schmidt R, Grigoriev I, Boxem M, **Akhmanova A**, Heck AJ, and van den Heuvel S. F-actin asymmetry and the endoplasmic reticulum-associated TCC-1 protein contribute to stereotypic spindle movements in the *Caenorhabditis elegans* embryo. *Mol Biol Cell*, 2013. 24(14): 2201-15.
 31. **Akhmanova A** and Stearns T. Cell architecture: putting the building blocks together. *Curr Opin Cell Biol*, 2013. 25(1): 3-5.
 32. van der Vaart B, Franker MA, Kuijpers M, Hua S, Bouchet BP, Jiang K, Grigoriev I, Hoogenraad CC, and **Akhmanova A**. Microtubule plus-end tracking proteins SLAIN1/2 and ch-TOG promote axonal development. *J Neurosci*, 2012. 32(42): 14722-8.

33. Splinter D, Razafsky DS, Schlager MA, Serra-Marques A, Grigoriev I, Demmers J, Keijzer N, Jiang K, Poser I, Hyman AA, Hoogenraad CC, King SJ, and **Akhmanova A**. BICD2, dynactin, and LIS1 cooperate in regulating dynein recruitment to cellular structures. *Mol Biol Cell*, 2012. 23(21): 4226-41.
34. Ratheesh A, Gomez GA, Priya R, Verma S, Kovacs EM, Jiang K, Brown NH, **Akhmanova A**, Stehbens SJ, and Yap AS. Centralspindlin and alpha-catenin regulate Rho signalling at the epithelial zonula adherens. *Nat Cell Biol*, 2012. 14(8): 818-28.
35. Pagano A, Honore S, Mohan R, Berges R, **Akhmanova A**, and Braguer D. Epothilone B inhibits migration of glioblastoma cells by inducing microtubule catastrophes and affecting EB1 accumulation at microtubule plus ends. *Biochem Pharmacol*, 2012. 84(4): 432-43.
36. Lui-Roberts WW, Stinchcombe JC, Ritter AT, **Akhmanova A**, Karakesisoglou I, and Griffiths GM. Cytotoxic T lymphocyte effector function is independent of nucleus-centrosome dissociation. *Eur J Immunol*, 2012. 42(8): 2132-41.
37. Louwen R, Nieuwenhuis EE, van Marrewijk L, Horst-Kreft D, de Ruiter L, Heikema AP, van Wamel WJ, Wagenaar JA, Endtz HP, Samsom J, van Baarlen P, **Akhmanova A**, and van Belkum A. *Campylobacter jejuni* translocation across intestinal epithelial cells is facilitated by ganglioside-like lipooligosaccharide structures. *Infect Immun*, 2012. 80(9): 3307-18.
38. Jiang K, Toedt G, Montenegro Gouveia S, Davey NE, Hua S, van der Vaart B, Grigoriev I, Larsen J, Pedersen LB, Bezstarosti K, Lince-Faria M, Demmers J, Steinmetz MO, Gibson TJ, and **Akhmanova A**. A Proteome-wide screen for mammalian SxIP motif-containing microtubule plus-end tracking proteins. *Curr Biol*, 2012. 22(19): 1800-7.
39. Huveneers S, Oldenburg J, Spanjaard E, van der Krogt G, Grigoriev I, **Akhmanova A**, Rehmann H, and de Rooij J. Vinculin associates with endothelial VE-cadherin junctions to control force-dependent remodeling. *J Cell Biol*, 2012. 196(5): 641-52.
40. Buey RM, Sen I, Kortt O, Mohan R, Gfeller D, Veprintsev D, Kretzschmar I, Scheuermann J, Neri D, Zoete V, Michielin O, de Pereda JM, **Akhmanova A**, Volkmer R, and Steinmetz MO. Sequence determinants of a microtubule tip localization signal (MtLS). *J Biol Chem*, 2012. 287(34): 28227-42.
41. Yu KL, Keijzer N, Hoogenraad CC, and **Akhmanova A**. Isolation of novel +TIPs and their binding partners using affinity purification techniques. *Methods Mol Biol*, 2011. 777: 293-316.
42. van der Vaart B, Manatschal C, Grigoriev I, Olieric V, Gouveia SM, Bjelic S, Demmers J, Vorobjev I, Hoogenraad CC, Steinmetz MO, and **Akhmanova A**. SLAIN2 links microtubule plus end-tracking proteins and controls microtubule growth in interphase. *J Cell Biol*, 2011. 193(6): 1083-99.
43. Tanenbaum ME, Medema RH, and **Akhmanova A**. Regulation of localization and activity of the microtubule depolymerase MCAK. *Bioarchitecture*, 2011. 1(2): 80-87.
44. Tanenbaum ME, Macurek L, van der Vaart B, Galli M, **Akhmanova A**, and Medema RH. A complex of Kif18b and MCAK promotes microtubule depolymerization and is negatively regulated by Aurora kinases. *Curr Biol*, 2011. 21(16): 1356-65.
45. Tanenbaum ME, **Akhmanova A**, and Medema RH. Bi-directional transport of the nucleus by dynein and kinesin-1. *Commun Integr Biol*, 2011. 4(1): 21-5.
46. Spangler SA, Jaarsma D, De Graaff E, Wulf PS, **Akhmanova A**, and Hoogenraad CC. Differential expression of liprin-alpha family proteins in the brain suggests functional diversification. *J Comp Neurol*, 2011. 519(15): 3040-60.

47. Schroder JM, Larsen J, Komarova Y, **Akhmanova A**, Thorsteinsson RI, Grigoriev I, Manguso R, Christensen ST, Pedersen SF, Geimer S, and Pedersen LB. EB1 and EB3 promote cilia biogenesis by several centrosome-related mechanisms. *J Cell Sci*, 2011. 124(Pt 15): 2539-51.
48. Lomakin AJ, Kraikivski P, Semenova I, Ikeda K, Zaliapin I, Tirnauer JS, **Akhmanova A**, and Rodionov V. Stimulation of the CLIP-170--dependent capture of membrane organelles by microtubules through fine tuning of microtubule assembly dynamics. *Mol Biol Cell*, 2011. 22(21): 4029-37.
49. Kovacs EM, Verma S, Ali RG, Ratheesh A, Hamilton NA, **Akhmanova A**, and Yap AS. N-WASP regulates the epithelial junctional actin cytoskeleton through a non-canonical post-nucleation pathway. *Nat Cell Biol*, 2011. 13(8): 934-43.
50. Kapitein LC, Yau KW, Gouveia SM, van der Zwan WA, Wulf PS, Keijzer N, Demmers J, Jaworski J, **Akhmanova A**, and Hoogenraad CC. NMDA receptor activation suppresses microtubule growth and spine entry. *J Neurosci*, 2011. 31(22): 8194-209.
51. Jiang K and **Akhmanova A**. Microtubule tip-interacting proteins: a view from both ends. *Curr Opin Cell Biol*, 2011. 23(1): 94-101.
52. Grigoriev I, Yu KL, Martinez-Sanchez E, Serra-Marques A, Smal I, Meijering E, Demmers J, Peranen J, Pasterkamp RJ, van der Sluijs P, Hoogenraad CC, and **Akhmanova A**. Rab6, Rab8, and MICAL3 cooperate in controlling docking and fusion of exocytotic carriers. *Curr Biol*, 2011. 21(11): 967-74.
53. Buey RM, Mohan R, Leslie K, Walzthoeni T, Missimer JH, Menzel A, Bjelic S, Bargsten K, Grigoriev I, Smal I, Meijering E, Aebersold R, **Akhmanova A**, and Steinmetz MO. Insights into EB1 structure and the role of its C-terminal domain for discriminating microtubule tips from the lattice. *Mol Biol Cell*, 2011. 22(16): 2912-23.
54. **Akhmanova A** and Steinmetz MO. Microtubule end binding: EBs sense the guanine nucleotide state. *Curr Biol*, 2011. 21(8): R283-5.
55. **Akhmanova A** and Dogterom M. Kinesins lead aging microtubules to catastrophe. *Cell*, 2011. 147(5): 966-8.
56. Tanenbaum ME, **Akhmanova A**, and Medema RH. Dynein at the nuclear envelope. *EMBO Rep*, 2010. 11(9): 649.
57. Splinter D, Tanenbaum ME, Lindqvist A, Jaarsma D, Flotho A, Yu KL, Grigoriev I, Engelsma D, Haasdijk ED, Keijzer N, Demmers J, Fornerod M, Melchior F, Hoogenraad CC, Medema RH, and **Akhmanova A**. Bicaudal D2, dynein, and kinesin-1 associate with nuclear pore complexes and regulate centrosome and nuclear positioning during mitotic entry. *PLoS Biol*, 2010. 8(4): e1000350.
58. Smal I, Grigoriev I, **Akhmanova A**, Niessen WJ, and Meijering E. Microtubule dynamics analysis using kymographs and variable-rate particle filters. *IEEE Trans Image Process*, 2010. 19(7): 1861-76.
59. Schlager MA, Kapitein LC, Grigoriev I, Burzynski GM, Wulf PS, Keijzer N, de Graaff E, Fukuda M, Shepherd IT, **Akhmanova A**, and Hoogenraad CC. Pericentrosomal targeting of Rab6 secretory vesicles by Bicaudal-D-related protein 1 (BICDR-1) regulates neuritogenesis. *EMBO J*, 2010. 29(10): 1637-51.
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