

Prof. Andrea Musacchio, PhD
Director, Department of Mechanistic Cell Biology, Max Planck
Institute of Molecular Physiology, Dortmund, Germany

Curriculum vitae

(March 2016)

Personal

Born in Rome, 11 July 1964

Married to Dr. Roberta Palumbo

Father of Edoardo (born 03/02/2006) and Tommaso (born 14/12/2008)

Italian citizenship

Education

1985-90 Degree in Biology, University of Rome-Tor Vergata (summa cum laude), Rome (Italy), Advisor Prof Giovanni Cesareni

1991-95 PhD in Biochemistry at EMBL-University of Heidelberg (summa cum laude). Heidelberg (Germany). Advisor Dr Matti Saraste

Postdoctoral

1995-98 Postdoctoral Fellow at Harvard Medical School, Boston (USA). Advisor: Prof Stephen C. Harrison

Appointments

1999-03 Assistant Professor, Department of Experimental Oncology, European Institute of Oncology, Milan (Italy)

2003-06 Associate Professor, Department of Experimental Oncology, European Institute of Oncology, Milan (Italy)

2006-2011 Full Professor, Department of Experimental Oncology, European Institute of Oncology, Milan (Italy)

2011- Director, Department of Mechanistic Cell Biology, Max Planck Institute of Molecular Physiology, Dortmund (Germany)

Honors

Human Frontier Science Program postdoctoral fellow (1995-1997)

American Cancer Society Senior postdoctoral fellow (1997-1998)

Scholar of the Italian Foundation for Cancer Research (1999-2004)

EMBO Young Investigator (2000-2004)

Scientific Director of the Milan branch of SEMM (European School of Molecular Medicine) (2003-2006)

Chiara D'Onofrio Prize (2006)

Mendel Lecture 2008 (Brno, Czech Republic)

5th Randall lecture, King's College, London (2013)

ERC Senior Investigator Grant Awardee (2008-2013)

ERC Senior Investigator Grant Awardee (2015-2020)

EMBO Member (since 2009)

Adjunct Professor, University of Duisburg-Essen (since 2012)

More than 100 invited lectures at international meetings or at national or foreign scientific institutions (detailed list available upon request)

Recipient of research grants of the Human Frontier Science Program, the European Commission Framework Programs, the Association for International Cancer Research, the Italian Association for Cancer Research, the Telethon Foundation, the Italian Ministry of Health, the Italian Research Council, the Deutsche Forschung Gemeinschaft (DFG), the European Research Council (detailed list available upon request).

Community service

Ad hoc reviewer for scientific journals and granting agencies, including among others, Cell, Molecular Cell, Developmental Cell, Nature Cell Biology, EMBO Journal, Current Biology, Journal of Cell Science, Journal of Cell Biology, Nature, EMBO Reports, Cancer Cell, Science

Advisory Editor of *EMBO Journal* (2009-2011)

Advisory Editor of *EMBO Reports* (2009-present)

Associate Editor of *Chromosoma* (since 2006)

Member of Editorial Board of *Cell Research* (since 2009)

Member of Editorial Board of *Journal of Cell and Molecular Biology* (since 2009)

Member of Editorial Board of *Current Biology* (since 2012)

Member of Advisory Board of *Biology Open* (since 2012)

Member of Editorial Board of *Journal of Structural Biology* (2014-now)

Chair of LS1 Review Panel for ERC Starting Investigator Grants (since 2011)

Member of EMBL's Scientific Advisory Committee (SAC, since 2011)

Ad hoc on-site reviewer for Cancer Research UK

Member of the Scientific Advisory Committee of the Netherlands Cancer Institute, Amsterdam (since 2013)

Elected member of the Perspectives Committee of the Max Planck Society (2015)

Organization of scientific meetings

-“Chromatin Regulation in Proliferation and Differentiation” (supported by the DFG graduate research training program (RTG1431), Sept. 2-4 (2015) Haus der Technik, Essen, Germany (co-organizer with Hemmo Meyer, Ralf Küppers, and George Iliakis)

-CNRS Jacques Monod Conference Cell cycle: bridging scales in cell division, October 11-15 (2014) Roscoff, France (co-organizer with Renata Basto)

-EMBO Conference Series Microtubules: Structure, Regulation and Functions. May 28-31 (2014) EMBL Heidelberg, Germany (co-organizer with Carsten Janke and Marileen Dogterom)

-106th International Titisee Conference: Reconstituting chromatin: from self-assembly to self-organization, October 10-14 (2012), Titisee (Germany), Chair (with Tom Muir, co-Chair)

-CNRS Jacques Monod Conference Cell division: from single molecule mechanics to multicellular organisms, September 5-9 (2012) Roscoff, France (co-organizer with Ariane Abrieu)

-The 4th EMBO Meeting, September 22-25 (2012), Nice, France (Chair of a Concurrent session on the microtubule cytoskeleton)

-First IFOM-IEO-Campus Meeting on Cancer, March 11-14 (2004), Milan, Italy (co-organizer with Kristian Helin and Marco Foiani)

-5th International School on the Crystallography of Biological Macromolecules, May 13-17 (2001). Co-Organizer with Sue Bailey (Daresbury Laboratory) and Bauke Dijkstra (University of Groningen)

Teaching

A 30-hour course on protein structure and diffraction theory for undergraduates of the University of Milan (2005-6)

Occasional teaching by invitation for students of PhD programs worldwide, including Porto, Hong Kong, Essen and several others

Publications

1. Friese A, Faesen AC, Huis in 't Veld PJ, Fischböck J, Prumbaum D, Petrovic A, Raunser S, Herzog F & **Musacchio A** (2016) Molecular requirements for the inter-subunit interaction and kinetochore recruitment of SKAP and Astrin. *Nature Communications, in press*
2. Pesenti ME, Weir JR & **Musacchio A** (2016) Progress in the structural and functional characterization of kinetochores, *Curr Op Struct Biol*, in press
3. Liu Y, Petrovic A, Rombaut P, Mosalaganti S, Keller J, Raunser S, Herzog F, **Musacchio A** (2016) Insights from the reconstitution of the divergent outer kinetochore of *Drosophila melanogaster*. *Open Biol.* **6**. doi: 10.1098/rsob.150236.
4. O'Connor A, Maffini S, Rainey MD, Kaczmarczyk A, Gaboriau D, **Musacchio A** & Santocanale C (2015) Requirement for PLK1 kinase activity in the maintenance of a robust spindle assembly checkpoint. *Biol Open* bio.014969. doi: 10.1242/bio.014969.
5. Breit C, Bange T, Petrovic A, Weir JR, Müller F, Vogt D & **Musacchio A** (2015) Role of Intrinsic and Extrinsic Factors in the Regulation of the Mitotic Checkpoint Kinase Bub1. *PLoS One* **10**:e0144673. doi: 10.1371/journal.pone.0144673.
6. Krenn V & **Musacchio A** (2015) The Aurora B Kinase in Chromosome Bi-Orientation and Spindle Checkpoint Signaling. *Front Oncol.* **5**:225. doi: 10.3389/fonc.2015.00225.
7. **Musacchio A** (2015) The Molecular Biology of Spindle Assembly Checkpoint Signaling Dynamics. *Curr Biol.* **25**:R1002-18. doi: 10.1016/j.cub.2015.08.051.
8. Klare K, Weir JR, Basilico F, Zimniak T, Massimiliano L, Ludwigs N, Herzog F & **Musacchio A** (2015) CENP-C is a blueprint for constitutive centromere-associated network assembly within human kinetochores. *J Cell Biol.* **210**:11-22. jcb.201412028.
9. **Musacchio A** (2015) Closing the Mad2 cycle. *Elife* **4**. doi: 10.7554/eLife.08283.

10. Altenfeld A, Wohlgemuth S, Wehenkel A, Vetter IR & **Musacchio A** (2015) Complex assembly, crystallization and preliminary X-ray crystallographic analysis of the human Rod-Zwilch-ZW10 (RZZ) complex. *Acta Crystallogr F Struct Biol Commun.* **71**:438-42. doi: 10.1107/S2053230X15004343
11. Tachiwana H, Müller S, Blümer J, Klare K, **Musacchio A** & Almouzni G (2015) HJURP Involvement in De Novo CenH3(CENP-A) and CENP-C Recruitment. *Cell Rep.* **11**:22-32. doi: 10.1016/j.celrep.2015.03.013.
12. Faesen AC & **Musacchio A** (2015) The (Phospho) Needle in the (MELT) Haystack. *Mol Cell* **57**:765-6. doi: 10.1016/j.molcel.2015.02.026.
13. Meyer R, Faesen A, Vogel K, Jeganathan S, **Musacchio A** & Niemeyer CM. (2015) DNA-Directed Assembly of Capture Tools for Constitutional Studies of Large Protein Complexes. *Small* **11**:2669-74. doi: 10.1002/smll.201403544.
14. Overlack K, Primorac I, Vleugel M, Krenn V, Maffini S, Hoffmann I, Kops GJ & **Musacchio A** (2015) A molecular basis for the differential roles of Bub1 and BubR1 in the spindle assembly checkpoint. *Elife* **4**:e05269. doi: 10.7554/eLife.05269.
15. Vader G & **Musacchio A** (2014) HORMA Domains at the Heart of Meiotic Chromosome Dynamics. *Dev Cell.* **31**:389-91. doi: 10.1016/j.devcel.2014.11.009.
16. Eiteneuer A, Seiler J, Weith M, Beullens M, Lesage B, Krenn V, **Musacchio A**, Bollen M & Meyer H (2014) Inhibitor-3 ensures bipolar mitotic spindle attachment by limiting association of SDS22 with kinetochore-bound protein phosphatase-1. *EMBO J.* **33**:2704-2720.
17. Basilico F, Maffini S, Weir JR, Prumbaum D, Rojas AM, Zimniak T, De Antoni A, Jeganathan S, Voss B, van Gerwen S, Krenn V, Massimiliano L, Valencia A, Vetter IR, Herzog F, Raunser S, Pasqualato S & **Musacchio A** (2014) The pseudo GTPase CENP-M drives human kinetochore assembly. *Elife* **8**:e02978. doi: 10.7554/eLife.02978
18. Overlack K, Krenn V & **Musacchio A** (2014) When Mad met Bub. *EMBO Rep.* **15**:326-8. doi: 10.1002/embr.201438574
19. Petrovic A, Mosalaganti S, Keller J, Mattiuzzo M, Overlack K, Krenn V, De Antoni A, Wohlgemuth S, Cecatiello V, Pasqualato S, Raunser S & **Musacchio A** (2014) Modular Assembly of RWD Domains on the Mis12 Complex Underlies Outer Kinetochore Organization. *Mol Cell* **53**:591-605. doi: 10.1016/j.molcel.2014.01.019.
20. Krenn V, Overlack K, Primorac I, van Gerwen S & **Musacchio A** (2014) KI motifs of human Knl1 enhance assembly of comprehensive spindle checkpoint complexes around MELT repeats. *Curr Biol* **24**:29-39. doi: 10.1016/j.cub.2013.11.046.
21. **Musacchio A** & Helin K (2013) Cell cycle, differentiation and disease. *Curr Opin Cell Biol.* 2013 Oct 16. doi:pii: S0955-0674(13)00151-8. 10.1016/j.ccb.2013.09.003.
22. Primorac I, Weir JR, Chirolì E, Gross F, Hoffmann I, van Gerwen S, Ciliberto A & **Musacchio A** (2013) Bub3 reads phosphorylated MELT repeats to promote spindle assembly checkpoint signaling. *Elife* **2**:e01030. doi: 10.7554/eLife.01030.
23. Primorac I & **Musacchio A** (2013) Panta rhei: The APC/C at steady state. *J Cell Biol.* **201**:177-89. doi: 10.1083/jcb.201301130.
24. Earnshaw WC, Allshire RC, Black BE, Bloom K, Brinkley BR, Brown W, Cheeseman IM, Choo KH, Copenhaver GP, Deluca JG, Desai A, Diekmann S, Erhardt S, Fitzgerald-Hayes M, Foltz D, Fukagawa T, Gassmann R, Gerlich DW, Glover DM, Gorbsky GJ, Harrison SC, Heun P, Hirota T, Jansen LE, Karpen G, Kops GJ, Lampson MA, Lens SM, Losada A, Luger K, Maiato H, Maddox PS,

- Margolis RL, Masumoto H, McAinsh AD, Mellone BG, Meraldi P, **Musacchio A**, Oegema K, O'Neill RJ, Salmon ED, Scott KC, Straight AF, Stukenberg PT, Sullivan BA, Sullivan KF, Sunkel CE, Swedlow JR, Walczak CE, Warburton PE, Westermann S, Willard HF, Wordeman L, Yanagida M, Yen TJ, Yoda K & Cleveland DW (2013) Chromosome Res. 21:101-6. doi: 10.1007/s10577-013-9347-y
25. Hagemann S, Wohlschlaeger J, Bertram S, Levkau B, **Musacchio A**, Conway EM, Moellmann D, Kneiseler G, Pless-Petig G, Lorenz K, Sitek B & Baba HA (2013) Loss of Survivin influences liver regeneration and is associated with impaired Aurora B function. *Cell Death Differ* **20**:834-44. doi: 10.1038/cdd.2013.20.
 26. **Musacchio A** & Ciliberto A (2012) The spindle-assembly checkpoint and the beauty of self-destruction. *Nat Struct Mol Biol* **19**:1059-61
 27. De Antoni A, Maffini S, Knapp S, **Musacchio A*** & Santaguida S* (2012) A small-molecule inhibitor of Haspin alters the kinetochore functions of Aurora B. *J Cell Biol* **199**:269-84 (* co-corresponding author)
 28. **Musacchio A** (2012) Q&A: Andrea Musacchio. *Curr Biol* **22**:R552-4
 29. Mariani L, Chiroli E, Nezi L, Muller H, Piatti S, **Musacchio A** & Ciliberto (2012) A Role of the Mad2 Dimerization Interface in the Spindle Assembly Checkpoint Independent of Kinetochores. *Curr Biol* **22**:1900-8
 30. Elkins JM, Santaguida S, **Musacchio A** & Knapp S (2012) Crystal Structure of Human Aurora B in Complex with INCENP and VX-680. *J Med Chem.* **55**:7841-8
 31. Krenn V, Wehenkel A, Li X, Santaguida S & **Musacchio A** (2012) Structural analysis reveals features of the spindle checkpoint kinase Bub1-kinetochore subunit Knl1 interaction, *J Cell Biol* **196**:451-67
 32. Deluca JG & **Musacchio A** (2012) Structural organization of the kinetochore-microtubule interface. *Curr Opin Cell Biol.* **24**:48-56
 33. Varetti G, Guida G, Santaguida S, Chiroli E & **Musacchio A** (2011) Homeostatic control of mitotic arrest. *Mol. Cell* **44**: 710-720
 34. **Musacchio A** (2011) Spindle assembly checkpoint: the third decade. *Philos Trans R Soc Lond B Biol Sci.* **366**:3595-604
 35. Kwiatkowski N, Deng X, Wang J, Tan L, Villa F, Santaguida S, Huang HC, Mitchison T, **Musacchio A** & Gray NS (2012) Selective Aurora kinase inhibitors identified using a Taxol-induced checkpoint sensitivity screen. *ACS Chem Biol.* **7**:185-96.
 36. Balzano D, Santaguida S, **Musacchio A*** & Villa F* (2011) A General Framework for Inhibitor Resistance in Protein Kinases. *Chem Biol* **18**:966-975 (*co-corresponding)
 37. **Musacchio A** (2011) Travel notes from the equatorial circle. *Cell* **146**:499-501.
 38. Mattiuzzo M, Vargiu G, Totta P, Fiore M, Ciferri C, **Musacchio A** & Degrassi F (2011) Abnormal kinetochore-generated pulling forces from expressing a N-terminally modified hec1. *PLoS One* **6**:e16307.
 39. Screpanti E, De Antoni A, Alushin GM, Petrovic A, Melis T, Nogales E & **Musacchio A** (2011) Direct binding of Cenp-C to the Mis12 complex joins the inner and outer kinetochore. *Curr Biol* **21**:391-8
 40. Maure JF, Komoto S, Oku Y, Mino A, Pasqualato S, Natsume K, Clayton L, **Musacchio A** & Tanaka TU (2011) The Ndc80 Loop Region Facilitates Formation of Kinetochore Attachment to the Dynamic Microtubule Plus End. *Curr Biol* **21**:207-

41. Abrahams JP, Apweiler R, Balling R, Bertero MG, Bujnicki JM, Chayen NE, Chène P, Corthals GL, Dyląg T, Förster F, Heck AJ, Henderson PJ, Herwig R, Jehenson P, Kokalj SJ, Laue E, Legrain P, Martens L, Migliorini C, **Musacchio A**, Podobnik M, Schertler GF, Schreiber G, Sixma TK, Smit AB, Stuart D, Svergun D & Taussig MJ (2010) "4D Biology for Health and Disease" Workshop Report. *N Biotechnol* **28**:291-3
42. Alexander J, Lim D, Joughin BA, Hegemann B, Hutchins JR, Ehrenberger T, Ivins F, Sessa F, Hudecz O, Nigg EA, Fry AM, **Musacchio A**, Stukenberg PT, Mechtler K, Peters JM, Smerdon SJ & Yaffe MB (2011) Spatial exclusivity combined with positive and negative selection of phosphorylation motifs is the basis for context-dependent mitotic signaling. *Sci Signal*. **4**:ra42.
43. Perrakis A, **Musacchio A**, Cusack S & Petosa C (2011) Investigating a macromolecular complex: The toolkit of methods. *J Struct Biol* **175**:106-12
44. Santaguida S, Vernieri C, Villa F, Ciliberto A & **Musacchio A** (2011) Evidence that Aurora B is implicated in spindle checkpoint signalling independently of error correction. *EMBO J* **30**:1508-19
45. Maspero E, Mari S, Valentini E, **Musacchio A**, Fish A, Pasqualato S & Polo S. (2011) Structure of the HECT:ubiquitin complex and its role in ubiquitin chain elongation. *EMBO Rep* **12**:342-9
46. Alushin GM, Ramey VH, Pasqualato S, Ball DA, Grigorieff N, **Musacchio A** & Nogales E. (2010) The Ndc80 kinetochore complex forms oligomeric arrays along microtubules. *Nature* **467**:805-10
47. **Musacchio A** (2010) Surfing chromosomes (and Survivin). *Science* **330**:183-4
48. Petrovic A, Pasqualato S, Dube P, Krenn V, Santaguida S, Cittaro D, Monzani S, Massimiliano L, Keller J, Tarricone A, Maiolica A, Stark H & **Musacchio A** (2010) The MIS12 complex is a protein interaction hub for outer kinetochore assembly. *J Cell Biol* **190**:835-52
49. **Musacchio A** (2010) Cell cycle: deconstructing tension. *Curr Biol* **20**:R634-7
50. Screpanti E, Santaguida S, Nguyen T, Silvestri R, Gussio R, **Musacchio A**, Hamel E & De Wulf P (2010) A screen for kinetochore-microtubule interaction inhibitors identifies novel antitubulin compounds. *PLoS One* **5**:e11603
51. Santaguida S, Tighe A, D'Alise AM, Taylor SS & **Musacchio A** (2010) Dissecting the role of MPS1 in chromosome biorientation and the spindle checkpoint through the small molecule inhibitor reversine. *J Cell Biol* **190**:73-87
52. Hewitt L, Tighe A, Santaguida S, White AM, Jones CD, **Musacchio A**, Green S & Taylor SS. (2010) Sustained Mps1 activity is required in mitosis to recruit O-Mad2 to the Mad1-C-Mad2 core complex. *J Cell Biol* **190**:25-34
53. Civril F, Wehenkel A, Giorgi FM, Santaguida S, Di Fonzo A, Grigorean G, Ciccarelli FD & **Musacchio A** (2010) Structural analysis of the RZZ complex reveals common ancestry with multisubunit vesicle tethering machinery. *Structure* **18**:616-26
54. Villa F, Capasso P, Tortorici M, Forneris M, de Marco A, Mattevi A & **Musacchio A** (2009) Crystal structure of the catalytic domain of Haspin, an atypical kinase implicated in chromatin organization. *PNAS* **106**:20204-9
55. Nezi L & **Musacchio A** (2009) Sister chromatid tension and the spindle assembly checkpoint. *Curr Opin Cell Biol* **21**(6):785-95
56. Trazzi S, Perini G, Bernardoni R, Zoli M, Reese JC, **Musacchio A** & Della Valle G

- (2009) The C-terminal domain of CENP-C displays multiple and critical functions for mammalian centromere formation. *PLoS ONE* **4**:e5832
57. Santaguida S & **Musacchio A** (2009) The life and miracles of kinetochores. *EMBO J* **28**:2511-31
58. Demoe JH, Santaguida S, Daum JR, **Musacchio A**, Gorbsky GJ (2009) A High Throughput, Whole Cell Screen for Small Molecule Inhibitors of the Mitotic Spindle Checkpoint Identifies OM137, a Novel Aurora Kinase Inhibitor. *Cancer Res* **69**:1509-16
59. Simonetta M, Manzoni R, Mosca R, Mapelli M, Massimiliano L, Vink M, Novak B, **Musacchio A*** & Ciliberto A* (2009) The influence of catalysis on Mad2 activation dynamics. *PLoS Biology* **7**, e10 (*corresponding authors)
60. Amabile G, D'Alise AM, Iovino M, Jones P, Santaguida S, **Musacchio A**, Taylor S, Cortese R (2009) The Aurora B kinase activity is required for the maintenance of the differentiated state of murine myoblasts. *Cell Death Differ* **16**:321-30
61. Civril F & **Musacchio A** (2008) Spindly attachments. *Genes Dev* **22**:2302-7
62. Varetti G & **Musacchio A** (2008) The spindle assembly checkpoint. *Curr Biol* **18**:R591-5
63. Girdler F, Sessa F, Patercoli S, Villa F, **Musacchio A** & Taylor S (2008) Molecular basis of drug resistance in aurora kinases. *Chem Biol.* **15**:552-62
64. Ciferri C, Pasqualato S, Screpanti E, Varetti G, Santaguida S, Dos Reis G, Maiolica A, Polka J, De Luca JG, De Wulf P, Salek M, Rappsilber J, Moores CA, Salmon ED & **Musacchio A** (2008) Implications for kinetochore-microtubule attachment from the structure of an engineered Ndc80 complex. *Cell* **133**, 427-439
65. D'Alise AM, Amabile G, Iovino M, Di Giorgio FP, Bartiromo M, Sessa F, Villa F, **Musacchio A** & Cortese R (2008) Reversine, a novel Aurora kinases inhibitor, inhibits colony formation of human acute myeloid leukemia cells. *Mol Cancer Ther* **7**,1140-9
66. Andersen CB, Wan Y, Chang J, Riggs B, Lee C, Liu Y, Sessa F, Villa F, Kwiatkowski N, Suzuki M, Nallan L, Heald R, **Musacchio A** & Gray NS (2008) Discovery of Selective Aminothiazole Aurora Kinase Inhibitors. *ACS Chem Biol* **3**, 180-9
67. Mapelli M, Massimiliano L, Santaguida S & **Musacchio A** (2007) The Mad2 Conformational Dimer: Structure and Implications for the Spindle Assembly Checkpoint. *Cell* **131**, 730-43
68. Derewenda U, Tarricone C, Choi W-C, Cooper DR, Lukasik S, Perrina F, Tripathy A, Kim M-H, Cafiso DS, **Musacchio A*** & Derewenda ZS* (2007) The structure of the coiled-coil domain of Ndel1 and the basis of its interaction with Lis1, the causal protein of Miller-Dieker lissencephaly. *Structure* **15**, 1467-81 (*corresponding authors)
69. Maiolica A, Cittaro D, Borsotti D, Sennels L, Ciferri C, Tarricone C, **Musacchio A** & Rappsilber J. (2007) Structural analysis of multi-protein complexes by cross-linking, mass spectrometry and database searching. *Mol Cell Proteomics* **6**, 2200-11
70. Mapelli M & **Musacchio A** (2007) MAD contortions: conformational dimerization boosts spindle checkpoint signaling. *Curr Op Struct Biol* **17**, 716-725
71. Taylor SS, Hardwick KG, Sawin KE, Biggins S, Piatti S, Khodjakov A, Rieder CL, Salmon ED & **Musacchio A** (2007) Comment on "A centrosome-independent role for gamma-TuRC proteins in the spindle assembly checkpoint". *Science* **316**, 982
72. Ciferri C, **Musacchio A** & Petrovic A (2007) The Ndc80 complex: Hub of

- kinetochore activity, *FEBS Lett.* **581**, 2862-9.
73. Plyte S & **Musacchio A** (2007) PLK1 Inhibitors: Setting the Mitotic Death Trap. *Curr Biol* **17**, R280-3.
 74. **Musacchio A** & Salmon ED (2007) The spindle assembly checkpoint in space and time. *Nature Rev Mol Cell Biol* **8**, 379-93
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 76. Nezi L, Rancati G, De Antoni A, Pasqualato S, Piatti S & **Musacchio A** (2006) Accumulation of Mad2-Cdc20 complex during spindle checkpoint activation requires binding of open and closed conformers of Mad2 in *Saccharomyces cerevisiae*. *J Cell Biol* **174**, 39-51
 77. Vink M, Simonetta M, Transidico P, Ferrari K, Mapelli M, De Antoni A, Massimiliano L, Ciliberto A, Faretta M, Salmon ED & **Musacchio A** (2006) In vitro FRAP identifies the minimal requirements for Mad2 kinetochore dynamics. *Curr Biol* **16**, 755-66
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 79. Penengo L, Mapelli M, Murachelli AG, Confalonieri S, Magri L, **Musacchio A**, Di Fiore PP, Polo S & Schneider TR (2006) Crystal Structure of the Ubiquitin Binding Domains of Rabex-5 Reveals Two Modes of Interaction with Ubiquitin *Cell* **124**, 1183-1195
 80. Mesngon MT, Tarricone C, Hebbar S, Guillotte AM, Lanier L, **Musacchio A**, King SJ & Smith DS (2006) Limited activation of cytoplasmic dynein ATPase by Lis1 – localized stimulation? *J Neurosci* **15**, 2132-2139
 81. Ahn JS, Radhakrishnan ML, Mapelli M, Choi S, Tidor B, Cuny GD, **Musacchio A**, Yeh LA & Kosik KS. (2005) Defining Cdk5 Ligand Chemical Space with Small Molecule Inhibitors of Tau Phosphorylation. *Chem Biol* **12**, 811-823
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 83. De Antoni A, Sala V & **Musacchio A** (2005) Explaining the oligomerization properties of the spindle assembly checkpoint protein Mad2, *Philos Trans R Soc Lond B Biol Sci* **360**, 637-48
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87. Mapelli M, Massimiliano L, Crovace C, Seeliger MA, Tsai LH, Meijer L & **Musacchio A** (2005) Mechanism of CDK5/p25 Binding by CDK Inhibitors. *J Med. Chem.* **48**, 671-679
88. Tarricone C, Perrina F, Monzani F, Massimiliano L, Kim M-H, Derewenda ZS, Knapp S, Tsai L-H & **Musacchio A** (2004) Coupling PAF signaling to dynein regulation: structure of LIS1 in complex with PAF-acetylhydrolase, *Neuron* **44**, 809-821
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