

# J Richard McIntosh

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

92  
papers

7,875  
citations

45  
h-index

88  
g-index

98  
ext. papers

8,860  
ext. citations

10.7  
avg, IF

5.86  
L-index

| #  | Paper  | IF   | Citations |
|----|--|------|-----------|
| 92 | Brownian dynamics simulation of protofilament relaxation during rapid freezing. <i>PLoS ONE</i> , <b>2021</b> , 16, e0247022   | 3.7  | 0         |
| 91 | Regulation of microtubule dynamics, mechanics and function through the growing tip. <i>Nature Reviews Molecular Cell Biology</i> , <b>2021</b> , 22, 777-795                         | 48.7 | 22        |
| 90 | Anaphase A. <i>Seminars in Cell and Developmental Biology</i> , <b>2021</b> , 117, 118-126   | 7.5  | 3         |
| 89 | Mechanisms of chromosome biorientation and bipolar spindle assembly analyzed by computational modeling. <i>ELife</i> , <b>2020</b> , 9,  | 8.9  | 15        |
| 88 | Electron tomography reveals aspects of spindle structure important for mechanical stability at metaphase. <i>Molecular Biology of the Cell</i> , <b>2020</b> , 31, 184-195           | 3.5  | 25        |
| 87 | Mechanisms of microtubule dynamics and force generation examined with computational modeling and electron cryotomography. <i>Nature Communications</i> , <b>2020</b> , 11, 3765      | 17.4 | 21        |
| 86 | Ultrastructural Analysis of Microtubule Ends. <i>Methods in Molecular Biology</i> , <b>2020</b> , 2101, 191-209  | 1.4  | 3         |
| 85 | Richard McIntosh. <i>Current Biology</i> , <b>2019</b> , 29, R777-R779   | 6.3  |           |
| 84 | Large-Scale Electron Tomography of Cells Using SerialEM and IMOD <b>2018</b> , 95-116  |      | 4         |
| 83 | Microtubules grow by the addition of bent guanosine triphosphate tubulin to the tips of curved protofilaments. <i>Journal of Cell Biology</i> , <b>2018</b> , 217, 2691-2708         | 7.3  | 80        |
| 82 | Preparing Fission Yeast for Electron Microscopy. <i>Cold Spring Harbor Protocols</i> , <b>2017</b> , 2017,   | 1.2  | 6         |
| 81 | Physical determinants of bipolar mitotic spindle assembly and stability in fission yeast. <i>Science Advances</i> , <b>2017</b> , 3, e1601603  | 14.3 | 32        |
| 80 | Electron Microscopy of Fission Yeast. <i>Cold Spring Harbor Protocols</i> , <b>2017</b> , 2017,  | 1.2  | 2         |
| 79 | Assessing the Contributions of Motor Enzymes and Microtubule Dynamics to Mitotic Chromosome Motions. <i>Annual Review of Cell and Developmental Biology</i> , <b>2017</b> , 33, 1-22 | 12.6 | 14        |
| 78 | Three-Dimensional Structure of the Ultraoligotrophic Marine Bacterium "Candidatus Pelagibacter ubique". <i>Applied and Environmental Microbiology</i> , <b>2017</b> , 83,            | 4.8  | 28        |
| 77 | Contributions of Microtubule Dynamic Instability and Rotational Diffusion to Kinetochore Capture. <i>Biophysical Journal</i> , <b>2017</b> , 112, 552-563                            | 2.9  | 26        |
| 76 | Regulation of Mitotic Microtubule Dynamic Instability in Monopolar Spindles by Bundling and Kinetochore Attachment. <i>FASEB Journal</i> , <b>2017</b> , 31, 932.6                   | 0.9  |           |

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|----|---|------|----|
| 75 | Mitosis. <i>Cold Spring Harbor Perspectives in Biology</i> , <b>2016</b> , 8,   | 10.2 | 60 |
| 74 | A Brief History of Research on Mitotic Mechanisms. <i>Biology</i> , <b>2016</b> , 5,  | 4.9  | 22 |
| 73 | Kinesin-8 effects on mitotic microtubule dynamics contribute to spindle function in fission yeast. <i>Molecular Biology of the Cell</i> , <b>2016</b> , 27, 3490-3514                                     | 3.5  | 25 |
| 72 | Centromere protein F includes two sites that couple efficiently to depolymerizing microtubules. <i>Journal of Cell Biology</i> , <b>2015</b> , 209, 813-28  | 7.3  | 36 |
| 71 | Regulation of chromosome speeds in mitosis. <i>Cellular and Molecular Bioengineering</i> , <b>2013</b> , 6, 418-430   | 3.9  | 6  |
| 70 | A brief scientific biography of Prof. Alan J. Hunt. <i>Cellular and Molecular Bioengineering</i> , <b>2013</b> , 6, 356-360   | 3.9  |    |
| 69 | Conserved and divergent features of kinetochores and spindle microtubule ends from five species. <i>Journal of Cell Biology</i> , <b>2013</b> , 200, 459-74   | 7.3  | 64 |
| 68 | Augmin-dependent microtubule nucleation at microtubule walls in the spindle. <i>Journal of Cell Biology</i> , <b>2013</b> , 202, 25-33  | 7.3  | 81 |
| 67 | Long tethers provide high-force coupling of the Dam1 ring to shortening microtubules. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2013</b> , 110, 7708-13 | 11.5 | 52 |
| 66 | Motors or dynamics: what really moves chromosomes?. <i>Nature Cell Biology</i> , <b>2012</b> , 14, 1234   | 23.4 | 3  |
| 65 | Biophysics of mitosis. <i>Quarterly Reviews of Biophysics</i> , <b>2012</b> , 45, 147-207   | 7    | 90 |
| 64 | Cryo-electron tomography and 3-D analysis of the intact flagellum in <i>Trypanosoma brucei</i> . <i>Journal of Structural Biology</i> , <b>2012</b> , 178, 189-98   | 3.4  | 47 |
| 63 | Electron tomography reveals a flared morphology on growing microtubule ends. <i>Journal of Cell Science</i> , <b>2011</b> , 124, 693-8  | 5.3  | 36 |
| 62 | Mitosis futures: the past is prologue. <i>Molecular Biology of the Cell</i> , <b>2011</b> , 22, 3933-5  | 3.5  | 1  |
| 61 | Tubulin depolymerization may be an ancient biological motor. <i>Journal of Cell Science</i> , <b>2010</b> , 123, 3425-345.3   | 5.3  | 66 |
| 60 | Kinesin-8 from fission yeast: a heterodimeric, plus-end-directed motor that can couple microtubule depolymerization to cargo movement. <i>Molecular Biology of the Cell</i> , <b>2009</b> , 20, 963-72    | 3.5  | 67 |
| 59 | Probing the macromolecular organization of cells by electron tomography. <i>Current Opinion in Cell Biology</i> , <b>2009</b> , 21, 89-96   | 9    | 70 |
| 58 | Lattice structure of cytoplasmic microtubules in a cultured Mammalian cell. <i>Journal of Molecular Biology</i> , <b>2009</b> , 394, 177-82   | 6.5  | 41 |

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|----|--|------|-----|
| 57 | FcRn-mediated antibody transport across epithelial cells revealed by electron tomography. <i>Nature</i> , <b>2008</b> , 455, 542-6   | 50.4 | 131 |
| 56 | Silver enhancement of Nanogold particles during freeze substitution for electron microscopy. <i>Journal of Microscopy</i> , <b>2008</b> , 230, 263-7   | 1.9  | 15  |
| 55 | Fibrils connect microtubule tips with kinetochores: a mechanism to couple tubulin dynamics to chromosome motion. <i>Cell</i> , <b>2008</b> , 135, 322-33   | 56.2 | 160 |
| 54 | The Dam1 ring binds microtubules strongly enough to be a processive as well as energy-efficient coupler for chromosome motion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2008</b> , 105, 15423-8 | 11.5 | 78  |
| 53 | Novel interactions of fission yeast kinesin 8 revealed through in vivo expression of truncation alleles. <i>Cytoskeleton</i> , <b>2008</b> , 65, 626-40  |      | 6   |
| 52 | Cryo-fluorescence microscopy facilitates correlations between light and cryo-electron microscopy and reduces the rate of photobleaching. <i>Journal of Microscopy</i> , <b>2007</b> , 227, 98-109  | 1.9  | 172 |
| 51 | In search of an optimal ring to couple microtubule depolymerization to processive chromosome motions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2007</b> , 104, 19017-22                         | 11.5 | 68  |
| 50 | Mitotic chromosome biorientation in fission yeast is enhanced by dynein and a minus-end-directed, kinesin-like protein. <i>Molecular Biology of the Cell</i> , <b>2007</b> , 18, 2216-25   | 3.5  | 35  |
| 49 | Organization of interphase microtubules in fission yeast analyzed by electron tomography. <i>Developmental Cell</i> , <b>2007</b> , 12, 349-61   | 10.2 | 145 |
| 48 | A freeze substitution fixation-based gold enlarging technique for EM studies of endocytosed Nanogold-labeled molecules. <i>Journal of Structural Biology</i> , <b>2007</b> , 160, 103-13   | 3.4  | 25  |
| 47 | Chromosome segregation in fission yeast with mutations in the tubulin folding cofactor D. <i>Current Genetics</i> , <b>2006</b> , 50, 281-94   | 2.9  | 11  |
| 46 | The molecular architecture of axonemes revealed by cryoelectron tomography. <i>Science</i> , <b>2006</b> , 313, 944-8  | 33.3 | 649 |
| 45 | Vitreous cryo-sectioning of cells facilitated by a micromanipulator. <i>Journal of Microscopy</i> , <b>2006</b> , 224, 129-34  | 1.9  | 39  |
| 44 | Microtubule depolymerization can drive poleward chromosome motion in fission yeast. <i>EMBO Journal</i> , <b>2006</b> , 25, 4888-96  | 13   | 98  |
| 43 | A molecular-mechanical model of the microtubule. <i>Biophysical Journal</i> , <b>2005</b> , 88, 3167-79  | 2.9  | 93  |
| 42 | Force production by disassembling microtubules. <i>Nature</i> , <b>2005</b> , 438, 384-8   | 50.4 | 228 |
| 41 | New views of cells in 3D: an introduction to electron tomography. <i>Trends in Cell Biology</i> , <b>2005</b> , 15, 43-51  | 18.3 | 338 |
| 40 | A standardized kinesin nomenclature. <i>Journal of Cell Biology</i> , <b>2004</b> , 167, 19-22   | 7.3  | 570 |

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|----|---|------|-----|
| 39 | Morphologically distinct microtubule ends in the mitotic centrosome of <i>Caenorhabditis elegans</i> . <i>Journal of Cell Biology</i> , <b>2003</b> , 163, 451-6  | 7.3  | 126 |
| 38 | Three-dimensional organization of basal bodies from wild-type and delta-tubulin deletion strains of <i>Chlamydomonas reinhardtii</i> . <i>Molecular Biology of the Cell</i> , <b>2003</b> , 14, 2999-3012           | 3.5  | 130 |
| 37 | Single-strand DNA aptamers as probes for protein localization in cells. <i>Journal of Histochemistry and Cytochemistry</i> , <b>2003</b> , 51, 797-808  | 3.4  | 32  |
| 36 | Structure of the Golgi and distribution of reporter molecules at 20 degrees C reveals the complexity of the exit compartments. <i>Molecular Biology of the Cell</i> , <b>2002</b> , 13, 2810-25                     | 3.5  | 108 |
| 35 | Letter. Crystal morphology of MV-1 magnetite. <i>American Mineralogist</i> , <b>2002</b> , 87, 1727-1730  | 2.9  | 28  |
| 34 | Electron tomography of yeast cells. <i>Methods in Enzymology</i> , <b>2002</b> , 351, 81-95   | 1.7  | 39  |
| 33 | Chromosome-microtubule interactions during mitosis. <i>Annual Review of Cell and Developmental Biology</i> , <b>2002</b> , 18, 193-219  | 12.6 | 202 |
| 32 | Unstable kinetochore-microtubule capture and chromosomal instability following deletion of CENP-E. <i>Developmental Cell</i> , <b>2002</b> , 3, 351-65  | 10.2 | 257 |
| 31 | Kinesins klp5+ and klp6+ are required for normal chromosome movement in mitosis. <i>Journal of Cell Science</i> , <b>2002</b> , 115, 931-940  | 5.3  | 113 |
| 30 | Kinesins klp5(+) and klp6(+) are required for normal chromosome movement in mitosis. <i>Journal of Cell Science</i> , <b>2002</b> , 115, 931-40   | 5.3  | 104 |
| 29 | Two related kinesins, klp5+ and klp6+, foster microtubule disassembly and are required for meiosis in fission yeast. <i>Molecular Biology of the Cell</i> , <b>2001</b> , 12, 3919-32                               | 3.5  | 117 |
| 28 | klp1(+) and klp2(+): Two kinesins of the Kar3 subfamily in fission yeast perform different functions in both mitosis and meiosis. <i>Molecular Biology of the Cell</i> , <b>2001</b> , 12, 3476-88                  | 3.5  | 96  |
| 27 | Electron microscopy of cells: a new beginning for a new century. <i>Journal of Cell Biology</i> , <b>2001</b> , 153, F25-32   | 3.3  | 92  |
| 26 | CENP-meta, an Essential Kinetochore Kinesin Required for the Maintenance of Metaphase Chromosome Alignment in <i>Drosophila</i> . <i>Journal of Cell Biology</i> , <b>2000</b> , 150, 1-12                          | 7.3  | 24  |
| 25 | Golgi structure in three dimensions: functional insights from the normal rat kidney cell. <i>Journal of Cell Biology</i> , <b>1999</b> , 144, 1135-49   | 7.3  | 536 |
| 24 | A cytoplasmic dynein heavy chain is required for oscillatory nuclear movement of meiotic prophase and efficient meiotic recombination in fission yeast. <i>Journal of Cell Biology</i> , <b>1999</b> , 145, 1233-49 | 7.3  | 219 |
| 23 | High-voltage electron tomography of spindle pole bodies and early mitotic spindles in the yeast <i>Saccharomyces cerevisiae</i> . <i>Molecular Biology of the Cell</i> , <b>1999</b> , 10, 2017-31                  | 3.5  | 244 |
| 22 | Slk19p is a centromere protein that functions to stabilize mitotic spindles. <i>Journal of Cell Biology</i> , <b>1999</b> , 146, 415-25   | 7.3  | 122 |

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|----|--|------|-----|
| 21 | Life cycles of yeast spindle pole bodies: Getting microtubules into a closed nucleus. <i>Biology of the Cell</i> , <b>1999</b> , 91, 305-312   | 3.5  | 14  |
| 20 | Life cycles of yeast spindle pole bodies: Getting microtubules into a closed nucleus <b>1999</b> , 91, 305   |      | 1   |
| 19 | Activation of the MKK/ERK pathway during somatic cell mitosis: direct interactions of active ERK with kinetochores and regulation of the mitotic 3F3/2 phosphoantigen. <i>Journal of Cell Biology</i> , <b>1998</b> , 142, 1533-45         | 7.3  | 203 |
| 18 | cut11(+): A gene required for cell cycle-dependent spindle pole body anchoring in the nuclear envelope and bipolar spindle formation in <i>Schizosaccharomyces pombe</i> . <i>Molecular Biology of the Cell</i> , <b>1998</b> , 9, 2839-55 | 3.5  | 137 |
| 17 | The dynamic behavior of individual microtubules associated with chromosomes in vitro. <i>Molecular Biology of the Cell</i> , <b>1998</b> , 9, 2857-71  | 3.5  | 39  |
| 16 | A screen for genes involved in the anaphase proteolytic pathway identifies tsm1(+), a novel <i>Schizosaccharomyces pombe</i> gene important for microtubule integrity. <i>Genetics</i> , <b>1998</b> , 149, 1251-64                        | 4    | 9   |
| 15 | Resources for the Study of Cellular Structure by High Voltage Electron Tomography, Serial Thin Sectioning, Specific Labeling, and Image Analysis. <i>Microscopy and Microanalysis</i> , <b>1997</b> , 3, 273-274                           | 0.5  |     |
| 14 | Minus-end-directed motion of kinesin-coated microspheres driven by microtubule depolymerization. <i>Nature</i> , <b>1995</b> , 373, 161-4  | 50.4 | 160 |
| 13 | Molecular characterization of a cytoplasmic dynein from <i>Dictyostelium</i> . <i>Journal of Eukaryotic Microbiology</i> , <b>1994</b> , 41, 645-51  | 3.6  | 12  |
| 12 | Two distinct isoforms of sea urchin egg dynein. <i>Cytoskeleton</i> , <b>1992</b> , 21, 281-92   |      | 10  |
| 11 | Identification and immunolocalization of cytoplasmic dynein in <i>Dictyostelium</i> . <i>Cytoskeleton</i> , <b>1990</b> , 15, 51-62  |      | 63  |
| 10 | Dynamics of a fluorescent calmodulin analog in the mammalian mitotic spindle at metaphase. <i>Cytoskeleton</i> , <b>1988</b> , 9, 231-42   |      | 17  |
| 9  | Dynamics of tubulin and calmodulin in the mammalian mitotic spindle. <i>Annals of the New York Academy of Sciences</i> , <b>1986</b> , 466, 566-79   | 6.5  | 11  |
| 8  | A microtubule-associated protein in the mitotic spindle and the interphase nucleus. <i>Nature</i> , <b>1982</b> , 295, 248-50  | 50.4 | 57  |
| 7  | Visualization of the structural polarity of microtubules. <i>Nature</i> , <b>1980</b> , 286, 517-9   | 50.4 | 193 |
| 6  | Studies on the mechanism of mitosis. <i>Annals of the New York Academy of Sciences</i> , <b>1975</b> , 253, 407-27   | 6.5  | 71  |
| 5  | The ultrastructure of <i>Pyronympha</i> and its associated microorganisms. <i>Journal of Morphology</i> , <b>1974</b> , 143, 77-105  | 1.6  | 43  |
| 4  | An introduction to microtubules. <i>Journal of Supramolecular Structure</i> , <b>1974</b> , 2, 385-92  |      | 4   |

- 3 The distribution of spindle microtubules during mitosis in cultured human cells. *Journal of Cell Biology*, **1971**, 49, 468-97 73 164
- 2 Intermicrotubule bridges in mitotic spindle apparatus. *Journal of Cell Biology*, **1970**, 45, 438-44 73 112
- 1 Mechanisms of chromosome biorientation and bipolar spindle assembly analyzed by computational modeling 2