Curriculum Vitae
ANTHONY PAUL BRETSCHER

Personal:

Address: Department of Molecular Biology and Genetics
Weill Institute for Cell and Molecular Biology
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Date of Birth: September 8, 1950
Place of Birth: Harwell, Berkshire, England
Citizenship: USA, United Kingdom and Switzerland
Marital Status: Married Janice Sperbeck, 5.21.1983
Children: Heidi (b. Nov. 1, 1986), Erika (b. April 24, 1991)
Home Address: 293 Ellis Hollow Creek Road, Ithaca, NY 14850

Education:

1971	BA University of Cambridge, UK. Experimental Physics
1974	MA University of Cambridge, UK
1974	PhD University of Leeds. Bacterial Genetics. Advisor: Dr. Simon Baumberg
1974-1977	EMBO Postdoctoral Fellow, Stanford University, CA Advisor: Dr. A. Dale Kaiser
1977-1980	Max Planck Society Fellow, Max Planck Institute for Biophysical Chemistry. Goettingen, Germany. Advisor: Dr. Klaus Weber.

Academic Appointments:

1980-1981	Assistant Professor, Department of Cell Biology, Southwestern Medical School, Dallas, TX
1981-1999	Assistant (1981-1987), Associate (1987-1993), Professor (1993-1999) Section of Biochemistry, Molecular and Cell Biology, Cornell University
1999-present	Professor of Cell Biology, Department of Molecular Biology and Genetics, Cornell University, NY
2007-present	Member, Weill Institute for Cell and Molecular Biology

Administrative Appointments:

2007-2011	Associate Director, Weill Institute for Cell and Molecular Biology

Sabbaticals:

Jan-Jun 97	Fogarty Fellow, MRC Laboratory of Molecular Biology, Cambridge UK with Dr. Hugh Pelham
Jan-Jun 02	Mammalian Genomics, Cornell University

Society Membership and Honors:

1980- present	American Society for Cell Biology
1982-present	American Association for the Advancement of Science (AAAS)
2009	Elected Fellow, AAAS
2010	Elected Fellow, American Academy of Microbiology

National Committee Service:

Vice-Chair, Jacques Monod/EMBO/NATO Conference, Microfilament function and regulation in cell polarity, Presqu'ile de Giens, France 2001
Chair, Special Symposium Committee, ASCB 2002
Co-Chair 2004, Chair 2006 Plant and Fungal Cytoskeleton Gordon Conference
Chair, Search Committee for Editor-in-chief of *Molecular Biology of the Cell* 2004
ASCB Council Member 2003-2005
Member, ASCB Image Library 2004-2006
Chair, Program Committee ASCB Annual Meeting 2006
Member, Program Committee ASCB Annual Meeting 2007
Chair, ASCB Bernfield/Gilula joint selection committee 2007
Member, ASCB Finance Committee 2011-2015

Study Sections:

American Cancer Society, Cell and Developmental Biology Advisory Board 1987-1991
NIH Molecular Cytology Study Section, Ad Hoc Member 1991, 1993
NIH Physiological Chemistry, Ad Hoc Member 1992
NIH Cell Biology and Physiology I, Ad Hoc Member 1992
National Neurofibromatosis Foundation (now Children's Tumor Foundation) Research Advisory Board, 2000-2006
NIH CDF-4 Study Section, Member 2002-2004

Editorial Boards:

The Journal of Cell Science, 1988-present
Cell Motility and the Cytoskeleton, 1994-2001
The Journal of Biological Chemistry, 1998-1999 (resigned)
Molecular Biology of the Cell, 1998-2005 (resigned)
The Journal of Cell Biology, 2001-present

Teaching:

BioBM 432: Survey of Cell Biology 1983, 1984
BioBM 636: Advanced Cell Biology/Functional Organization of Eucaryotic Cells 1985, 1986, 1987,1988, 1989 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1998, 1999, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2009
BioGD: Current Topics in Genetics 2003, 2015

BioBM733: Current Topics Minicourse: Cell Polarity 2000, 2008

BioMG 1350: Principles of Cell and Developmental Biology 2010, 2011, 2012, 2013, 2014, 2015, 2016

BioMG8370: NSF Grant Writing Course, with Scott Emr and Bill Brown, 2013

Postdoctoral Fellows/Research Associates with current positions (where known):

Charles McOsker, 1981-1984 CEO Airway Therapeutics (November 2008 - July 2010), Cincinnati, OH, currently Manager at BioMotiv LLC.
Lynne Coluccio 1986-1989 Faculty, Boston University
Zsofia Franck, 1989-1993, Nurse
Tongtong Wang, 1995-1997 Director, Molecular Biology, Fermentation, and Cell Culture Eli Lilly & Company
Mark Berryman, 1992-1999 Associate Professor, University of Ohio, Athens, OH
David Reczek, 1998-2001 Associate Director, Genzyme
David Pruyne, 1999-2008 Assistant Professor, SUNY Upstate Medical University
Casey Finnerty, 1999-2003 Assistant Professor Saint Mary's University, Winona, MN
Yuqing Dong, 1999-2004 Assistant Professor, Clemson University
Daniel Schott, 2000-2003 Research Associate, Harvard University
Julie Thoms, 2003-2006 Postdoc, University of Sydney, Australia
Aster Legesse-Miller, 2002-2006 Research Associate, Princeton University
Tal Ilani, 2003-2008 Research Associate, Weizmann Institute, Israel
David Lalonde, 2006-2013. Senior Microbiologist, Engility Corp.
David Hokanson, 2008-2012 Research Scientist, Xtal BioStructures, Boston
Ifat Sher, 2008-2011. Goldschleger Eye Research Institute, Sheba Medical Center, Tel Hashomer, Israel
Irina Chernyakov, 2009-2012. Instructor, Ithaca College
Felipe Santiago-Tirado, 2011-2012. Postdoc with Tamara Doering at Washington University
Garbett, Damien, 2006-2014. Currently postdoc with Tobias Meyer at Stanford University
Cecile Sauvanet 2012-present
Li Xu 2012-present
Viswanatha, Raghuvir 2012-2014. Postdoc with Norbert Perrimon, HMS, Boston
Thaher Pelaseyed 2014- present
Kirk Donovan 2014-2015. Postdoc with Mike Ehlers at Pfizer Neuroscience, Boston
Matthew Miller 2015-present

Graduate Students with current positions (where known):

Verner, Keith, PhD 1985 President, Cognitive Learning Systems, Hershey, PA
Riseman, Victoria, PhD 1988 Deceased
Lynch, William, PhD 1988 Associate Professor, Ohio State University
Nefsky, Bradley, PhD 1990 Assistant Professor, Drexel University
Burlak, Linda, MS 1987
Liu, Haoping, PhD 1990 Associate Professor, UC Irvine
Chen-Dobson, Elizabeth, PhD 1993 Merck Research Laboratories
Ye, Ruby, PhD 1993, Mother
Gary, Ron, PhD 1995 Associate Professor of Biochemistry, Dept. of Chemistry, University of Nevada, Las Vegas

Drees, Beth, PhD 1995. Licensing Manager at University of Utah Technology Commercialization Office
Harsay, Edina, PhD 1996 Assistant Professor, University of Kansas
Reczek, David, PhD 1998 Research Scientist, Genzyme
David Pruyne, PhD 1998 Assistant Professor, SUNY Upstate Medical University
Schott, Daniel, PhD 1999 Postdoc, Harvard University
Rachel Nuygen, PhD 2001
Jackson Ho, PhD 2001. Attorney
Young, James, Left without graduating
Chambers, David, PhD 2004 Assistant Professor Concord University
Hanono, Abraham, PhD 2005 High School Teacher, San Diego
Gao, Lina, PhD 2008 Postdoc, Portland Medical Center
Santiago-Tirado, Felipe, PhD 2011, Postdoc in the lab of Tamar Doering, Wash. U.
Liu, Wenyu, 2005-2011. Postdoc, Cancer Institute of New Jersey
Viswanatha, Raghuvir, 2005-2012. Postdoc with Norbert Perrimon Harvard Med. School
Garbett, Damien, 2006-2012. Postdoc with Tobias Meyer at Stanford
Jessica Wayt, 2009-2015. Postdoc with Julie Donaldson at NIH
Kirk Donovan, 2009-2014 Current Student
Donghao Li, 2010-2012. Sales Rep for biotech company
Kyaw Myo Lwin 2012-present Current Student
Myungjoo Shin 2012-present Current Student
Robert Gingras 2015-present Current student

Invited speaker at following meetings (2001-present):

2001

Experimental Biology, Orlando
Gordon Research Conference Cell Motility, New Hampshire
Ludwig Conference on Cancer, NYC
Chair, Monod/EMBO Conference, France (could not attend due to 9/11)
Yeast International Conference, Prague
Special Symposium in Biochemistry, Ghent, Belgium (could not attend due to 9/11)
Porter Symposium on Cell Structure, Airlie House

2002

Cell Polarity Meeting/Madrid, Spain
Gordon Conference, Fungal and Plant Systems, New Hampshire
NF2 Symposium, Aspen, CO
ASCB Annual Meeting, Plenary Speaker, San Francisco

2003

Gordon Research Conference on G-proteins/ Hong Kong relocated to California due to SAR outbreak.
International Genetics Conference/Melbourne/Australia
Gordon Research Conference/ Molecular Membrane Biology (declined)
Gordon Research Conference/Motile and Contractile systems (declined)
FEBS Meeting: Motile Systems/Austria
ELSO Annual meeting/Dresden/Germany

2004
Timberline Symposium on Epithelial cell Polarity, Mt Hood, Oregon
Special Symposium MPI for Biophysical Chemistry, Goettingen, Germany
2nd Annual Chicago Cytoskeleton Conference
Gordon Conference, Fungal and Plant Cytoskeleton, New Hampshire

2005
Molecular Cell Dynamics: From cytoskeleton to Development, Muenster, Germany
(This and all others declined).

2006
University of Pennsylvania Symposium in honor of Sally Zigmond

2007
Gordon Research Conference: Motile and Contractile Systems

2008
Keystone Conference, Molecular Basis for Biological Membrane Organization, Montana
Gordon Research Conference: Plant and Fungal Cytoskeleton, Italy.

2009
Swiss/German Societies for Cell Biology Joint Meeting, Konstanz, Germany
Session Chair, Yeast Cell Biology, Cold Spring Harbor, NY.

2010
Children's Tumor Foundation Neurofibromatosis Conference
Gordon Research Conference: Plant and Microbial Cytoskeleton
Advances in Renal research: The Actin Cytoskeleton and Cell Motility

2011

Keck Symposium

2012

GRC Plant and Microbial Cytoskeletons
Neurofibromatosis Meeting, New Orleans

2013

Society for Experimental Biology and the Biochemical Society: Cell Polarity: Mechanisms and Modeling. Valencia, Spain

2015
Keck Symposium, Keynote Speaker, Cornell University

Session Chair, CSH Yeast Cell Biology Meeting

2016
Vanderbilt University, Symposium speaker (June 2/3)
ETH, Zurich Switzerland (Sept. 9)

2017
JCS Meeting: Cellular Dynamics: Cytoskeleton Interface, Boston (May 22-24)

Departmental Seminars (2001-present):

2001
Stanford University
Washington University
University of Pennsylvania
University of Cincinnati
Ithaca High School
Columbia University, NYC

2002
Duke University
UC San Diego
Yale University
University of Pittsburgh
Johns Hopkins Medical School
UT Austin
Harvard Medical School

2003
UC Berkeley
Lawrence Livermore National Lab
Cytokinetics
University of Virginia
Vanderbilt University
University of Toronto

2004
(Almost all requests for departmental seminars were declined.)
University of Miami
Oregon State University, Corvallis

2005
MPI Dresden, Germany (cancelled)
(All other invitations declined)

2006

University of Pennsylvania
University of Virginia
Ohio University

2007
University of Vermont, Burlington
Case Western Reserve University
European School of Molecular Medicine, Milan, Italy
University of Ghent, Belgium
Weill Medical College, Department of Biochemistry

2008
SUNY Upstate University, Syracuse
Boyce Thompson Research Institute
Rensaelear Polytechnic Institute
University of Massachussetts, Amherst
University of Toronto

2009
Haverford College

2010
Ohio State University
University of Montreal
VIB Ghent, Belgium

2011
Oklahoma State University, Stillwater
Duke University
Oregon State University, Corvallis

2012
Yale University
University of Pittsburgh

2013
Upstate Medical University, Syracuse
Brandeis University, Boston

2014
Dept of Cell Biology, UNC Chapel Hill
Dept. of Biochemistry Annual Retreat, Keynote Speaker, Dartmouth College

2015
Program in Genetics and Genomics, Duke University

2016
Skidmore College, Student invited speaker (April 18)

Current Research Support:

2 R01 GM39066-25 Bretscher (PI) **02/01/1988 – 08/31/19**
NIH, NIGMS
"Microfilaments in Budding Yeast" Current year Direct Costs: $266,642
Investigates the role of microfilaments in polarized secretion and organelle segregation in yeast.

5 R01 GM036652-27 Bretscher (PI) **04/01/1986 – 03/31/20**
NIH, NIGMS
"Microfilament Organization and Regulation" Current year Direct Costs: $327,751.
Investigates the roles of ERM and associated proteins in polarized epithelial cells.

5 T32 GM007273-40. Bretscher, A. (PD) **07/01/1975-06/30/2020**
NIH, NIGMS
Predoctoral Training Grant in Cellular and Molecular Biology. Direct costs: $558,600

Books: Lodish, H., Berk, A., Kaiser, C., Krieger, M., Scott, M., Bretscher, A., Ploegh, H. & Matsudaira, P. (2008). Molecular Biology of the Cell, 6th. edition.

Lodish H., Berk, A., Kaiser, C., Krieger, M., Bretscher, A., Ploegh, H., Amon, A., Scott, M. (2013) Molecular Biology of the Cell, 7th edition.

Lodish, H., Berk, A., Kaiser, C., Krieger, M, Bretscher, A., Ploegh, H., Amon, A. Martin, K. (2016) Molecular Biology of the Cell, 8th edition.

Publications (abstracts not included):

1974

1. Bretscher, A.P. (1974). Control mutations in the arginine cluster of Escherichia coli K12. Ph.D. Thesis, University of Leeds, England.

1976

2. Bretscher, A. P. and Baumberg, S. (1976). Divergent transcription of the *argECBH* cluster of *Escherichia coli* K-12. Mutations which alter the control of enzyme synthesis. *J. Mol. Biol*. 102, 205-220. PMID: 775103

1978

3. Bretscher, A. P. and Kaiser, A. D. (1978). Nutrition of *Myxococcus xanthus*, a fruiting Myxobacterium. *J. Bacteriol*. 133, 763-768. PMID: 415048

4. Hagen, D. Bretscher, A. P. and Kaiser, A. D. (1978). Synergism between morphogenetic mutants of *Myxococcus xanthus*. *Development*. Biol. 64, 284-296. PMID: 98366

5. Bretscher, A. and Weber, K. (1978). Tropomyosin from bovine brain contains two polypeptides of slightly different molecular weights. *FEBS Lett*. 85, 145-148. PMID: 620785

6. Bretscher, A. and Weber, K. (1978). Purification of microvilli and analysis of the protein components of the microfilament core bundle. *Exp. Cell Res*. 116, 397-407. PMID: 568557

7. Bretscher, A. and Weber, K. (1978). Localization of actin and microfilament-associated proteins in the microvilli and terminal web of the intestinal brush border by immunofluorescence microscopy. *J. Cell Biol.* 79, 839-845. PMID: 365871

1979

8. Bretscher, A. and Weber, K. (1979). Villin: the major microfilament-associated protein of the intestinal microvillus. *Proc. Natl. Acad. Sci. USA* 76, 2321-2325. PMID: 287075

9. Bretscher, A., Vandekerckhove, J. and Weber, K. (1979). Alpha-actinins from chicken skeletal muscle and smooth muscle show considerable chemical and immunological differences. *Europ. J. Biochem. 100*, 237-243. PMID: 90613

1980

10. Bretscher, A. and Weber, K. (1980). Villin is a major protein of the microvillus cytoskeleton which binds both G- and F-actin in a calcium dependent manner. *Cell* 20, 839-847. PMID: 6893424

11. Bretscher, A. and Weber, K. (1980). Fimbrin: a new microfilament-associated protein present in microvilli and other cell surface structures. *J. Cell Biol.* 86, 335-340. PMID: 6998986

12. Bruder, G., Bretscher, A., Franke, W. W. and Jarasch, E.-D. (1980). Plasma membranes from intestinal microvilli and erythrocytes contain cytochromes b_5 and P-420. *Biochim. Biophys. Acta* 600, 739-755. PMID: 7407143

13. Glenney, J. R., Bretscher, A. and Weber, K. (1980). Calcium control of the intestinal microvillus cytoskeleton: its implications for the regulation of microfilament organizations. *Proc. Natl. Acad. Sci. USA* 77, 6458-6482. PMID: 6935660

1981

14. Bretscher, A., Osborn, M., Wehland, J. and Weber, K. (1981). Villin associates with specific microfilamentous structures as seen by immunofluorescence microscopy on tissue sections and cells microinjected with villin. *Exp. Cell Res*. 135, 213-219. PMID: 7026267

15. Bretscher, A. (1981). Fimbrin is a cytoskeletal protein that cross-links F-actin in vitro. *Proc. Natl. Acad. Sci. USA* 78, 6849-6853. PMID: 6947259

1982

16. Bretscher, A. (1982). Characterization and ultrastructural role of the major components of the intestinal microvillus cytoskeleton. *Cold Spring Harbor. Symp. Quant. Biol.* 46, 871-879. PMID: 7049538

17. Flock, A., Bretscher, A. and Weber, K. (1982). Immunohistochemical localization of several cytoskeletal proteins in inner ear sensory and supporting cells. *Hearing Res.* 6, 75-89.

1983

18. Verner, K. and Bretscher, A. (1983). Induced morphological changes in isolated microvilli: regulation of membrane topology in vitro by submembranous microfilaments. *Europ. J. Cell Bio. 29, 187-192.* PMID: 6682042

19. Bretscher, A. (1983) The molecular architecture of the microvillus cytoskeleton. *Ciba Foundation Symp.* No. 95 'Brush Border Membranes', pp. 164-179. PMID: 6342995

20. Bretscher, A. (1983) Microfilament organization in the cytoskeleton of the intestinal brush border. In *Cell and Muscle Motility* (Dowben, R. M. and Shay, J. W. Eds) Vol IV, 239-268. PMID: 6367959

21. Bretscher, A. (1983). Purification of an 80,000 dalton protein that is a component of the isolated microvillus cytoskeleton, and its localization in non-muscle cells. *J. Cell Biol.* 97, 425-432. PMID: 6885906

1984

22. Bretscher, A. (1984). Smooth muscle caldesmon: rapid purification and F-actin cross-linking properties. *J. Biol. Chem.* 259, 12873-12880. PMID: 6092349

1985

23. Verner, K. and Bretscher, A. (1985). Microvillus 110K-calmodulin: effects of nucleotides on isolated cytoskeletons and the interaction of the purified complex with F-actin. *J. Cell Biol.* 100, 1455-1465. PMID: 3157690

24. Bretscher, A. and Lynch, W. (1985). Identification and localization of immunoreactive forms of caldesmon in smooth and non-muscle cells: a comparison with the distributions of tropomyosin and α-actinin. *J. Cell Biol.* 100, 1656-1663. PMID: 2985624

25. Bretscher, A. (1985). Surveying the Cytoskeleton. Review of Cell and Muscle Motility vol. 6. *Cell* 43, 563-564.

1986

26. McOsker, C. and Bretscher, A. (1986). Fodrin is part of the detergent resistant cytoskeleton before and after cytochalasin treatment. *European J. Cell Biol.* 39, 321-327. PMID: 3514218

27. Carley, W., Bretscher, A. and Webb, W. W. (1986). F-actin aggregates in transformed cells contain fimbrin and α-actinin but apparently lack tropomyosin. *Europ. J. Cell Biol.* 39, 313-320. PMID: 3007147

28. Gould, K. L., Cooper, J. A., Bretscher, A. and Hunter, T. (1986). The protein-tyrosine kinase substrate, p81, is homologous to a chicken microvillar core protein. *J. Cell Biol.* 102, 660-669. PMID: 2418035

29. Bretscher, A. (1986) Thin filament regulatory proteins of smooth- and non-muscle cells. *Nature* (Lond.) 321, 726-727. PMID: 3713859

30. Bretscher, A. (1986) The molecular structure of the microvillar cytoskeleton. In "Ion gradient-coupled transport" (Alvarado, F & Van Os, C. Eds.) *Inserm Symposium Series*, Vol 26, 13-21.

31. Bretscher, A. (1986). Purification of the intestinal microvillus cytoskeletal proteins villin, fimbrin and ezrin. In Structural and Contractile Proteins, Part D (R. Vallee, Ed.) *Methods in Enzymology*, 134, 24-37. PMID: 3821564

32. Lynch, W. and Bretscher, A. (1986). Purification of caldesmon. In Structural and Contractile Proteins, Part D (R. Vallee, Ed.). *Methods in Enzymology* 134, 37-42. PMID: 3821568

1987

33. Lynch, W., Riseman, V. & Bretscher, A. (1987). Smooth muscle caldesmon is an extended flexible monomeric protein in solution that can readily undergo reversible intra- and inter-molecular sulfhydryl cross-linking: A mechanism for caldesmon's F-actin bundling activity. *J. Biol. Chem.* 262, 7429-7437. PMID: 3584120

34. Coluccio, L. M. & Bretscher, A. (1987). Calcium-regulated cooperative binding of the microvillar 110K-calmodulin complex to F-actin: Formation of decorated filaments. *J. Cell Biol.* 105, 325-333. PMID: 2956267

35. Krizek, J., Coluccio, L. M. & Bretscher, A. (1987). ATPase activity of the microvillar 110K-calmodulin complex is activated in Mg^{2+} and inhibited in K^{+}EDTA by F-actin. *FEBS Lett.* 225, 269-272. PMID: 2961614

1988

36. Coluccio, L. M. & Bretscher, A. (1988). Mapping of the microvillar 110K-calmodulin complex: Calmodulin-associated or -free fragments of the 110 kd polypeptide bind F-actin and retain ATPase activity. *J. Cell Biol.* 106, 367-373. PMID: 2963011

1989

37. Colucccio, L. M. & Bretscher, A. (1989). Reassociation of microvillar core proteins: making a microvillar core in vitro. *J. Cell Biol*. 108, 495-502. PMID: 2918023

38. Liu, H. & Bretscher, A. (1989). Purification of tropomyosin from *Saccharomyces cerevisiae* and identification of related proteins in *Schizosaccharomyces* and *Physarum*. *Proc. Natl. Acad. Sci. U.S.A.* 86, 90-93. PMID: 2643110

39. Liu, H. & Bretscher, A. (1989). Disruption of the single tropomyosin gene in yeast leads to a disappearance of actin cables from the cytoskeleton. *Cell* 57, 233-242. PMID: 2649250

40. Riseman, V. M., Lynch, W. P., Nefsky, B. & Bretscher, A. (1989). The calmodulin and F-actin binding domain of caldesmon lies in the carboxyl terminal domain whereas the molecular weight heterogeneity lies in the middle of the molecule. *J. Biol. Chem.* 264, 2869-2875. PMID: 2914935

41. Nefsky, B. and Bretscher, A. (1989). Preparation of immobilized monomeric actin and its use in the isolation of protease- and ribonuclease-free pancreatic deoxyribonuclease I. *Europ. J. Biochem.* 179, 215-219. PMID: 2645136

42. Bretscher, A. (1989). Rapid phosphorylation and reorganization of ezrin and spectrin accompany morphological changes in A-431 cells induced by EGF. *J. Cell Biol*.108, 921-930. PMID: 2646308

43. Nefsky, B. & Bretscher, A. (1989). Landmark mapping: a general method for localizing cysteine residues in a protein. *Proc. Natl. Acad. Sci. U. S. A.* 86, 3549-3553. PMID: 2726736

44. Gould, K.L., Bretscher, A., Esch, F. S. and Hunter, T. (1989). cDNA cloning and sequencing of the protein-tyrosine kinase substrate, ezrin, reveals homology to band 4.1. *EMBO J.* 8, 4133-4142. PMID: 2591371

45. Tilney, M.S., Tilney, L. G., Stephens, R. E., Merte, C., Drenckhahn, D., Cotanche, D. A. & Bretscher, A. (1989). Preliminary biochemical characterization of the stereocilia and cuticular plate of hair cells of the chick cochlea. *J. Cell Biol.* 109, 1711-1724. PMID: 2677026

1990

46. Franck, Z., Footer, M. & Bretscher, A. (1990). Microinjection of villin into cultured cells results in rapid and long-lasting changes in cell morphology, but does not interfere with cytokinesis, cell motility or membrane ruffling. *J. Cell Biol.* 111, 2475-2485. PMID: 2277069

47. Coluccio, L.M. & Bretscher, A. (1990). Mapping of the microvillar 110K-calmodulin complex (brush border myosin I). Identification of fragments containing the catalytic and F-actin binding sites and demonstration of a calcium-ion-dependent conformational change. *Biochemistry* 29, 11089-11094. PMID: 2271696

1991

48. Huffaker, T. C. & Bretscher, A. P. (1991). Strategies for cloning and analyzing genes encoding cytoskeletal proteins in the yeast Saccharomyces cerevisiae. In Molecular Motors and the Cytoskeleton (R. Vallee, Ed.) *Methods in Enzymology*. 196, 355-368. PMID: 2034130

49. Hanzel, D., Reggio, H., Bretscher, A., Forte, J.G. & Mangeat, P. (1991). The secretion-stimulated 80K phosphoprotein of parietal cells is ezrin, and has the properties of a membrane cytoskeletal linker in the induced apical microvilli. *EMBO J.* 10, 2363-2373. PMID: 1831124

50. Bretscher, A. (1991). Molecular aspects of microfilament structure and assembly. *Current Opinion in Structural Biology*. 1, 281-287. PMID:

51. Bretscher, A. (1991). Microfilament structure and function in the cortical cytoskeleton. *Ann. Rev. Cell Biol.* 7, 337-374. PMID: 1839710

1992

52. Ye, R. R. & Bretscher, A. (1992). Identification and molecular characterization of a calmodulin-binding subunit gene (CMP1) of protein phosphatase 2B from *Saccharomyces cerevisiae;* an α-factor inducible gene. *Europ. J. Biochem.*, 204: 713-723. PMID: 1311678

53. Nefsky, B. & Bretscher, A. (1992). Yeast actin is relatively well behaved. *Europ. J. Biochem.* 206: 949-955. PMID: 1606973

54. Liu, H. & Bretscher, A. (1992) Characterization of *TPM1* disrupted yeast cells indicates an involvement of tropomyosin in directed vesicular transport *J. Cell Biol.* 118: 285-299. PMID: 1629236

55. Liu, H., Krizek J. & Bretscher, A. (1992). Construction of a *GAL1* -regulated yeast cDNA expression library and its application to the identification of genes whose overexpression causes lethality in yeast. *Genetics* 132: 665-673. PMID: 1468625

56. Egerton, M., Burgess, W. H., Chen, D., Druker, B. J., Bretscher, A. & Samelson, L. E. (1992). Identification of ezrin as an 81kDa tyrosine phosphorylated protein in T cells. *J. Immunology*. 149: 1847-1852. PMID: 1381389

1993

57. Franck, Z., Gary, R. & Bretscher, A. (1993). Moesin, like ezrin, colocalizes with actin in the cortical cytoskeleton, but its expression is more variable. *J. Cell Sci*. 105: 219-232. PMID: 8360275

58. Berryman, M., Franck, Z. & Bretscher, A. (1993). Ezrin is concentrated in the apical microvilli of a wide variety of epithelial cells, whereas moesin is found primarily in endothelial cells. *J. Cell Sci*. 105: 1025-1043. PMID: 8227193

59. Gary, R and Bretscher, A. (1993). Heterotypic and homotypic associations between ezrin and moesin, two putative membrane-cytoskeletal linking proteins. *Proc. Natl. Acad. Sci. U. S. A.* 90: 10846-10850. PMID: 8248180

60. Bretscher, A. (1993) Microfilaments and Membranes. *Curr. Opin. Cell Biol.* 5: 653-660. PMID: 8257607

1994

61. Footer, M. and Bretscher, A. (1994). Brush border myosin-I microinjected into cultured cells is targeted to actin-containing surface structures. *J. Cell Sci.* 107: 1623-1631. PMID: 7962202

62. Bretscher, A., Drees, B., Harsay, E., Schott, D. and Wang, T. (1994). What are the basic functions of microfilaments? Insights from studies in budding yeast. *J. Cell Biol*. 126: 821-826. PMID: 8051208

1995

63. Drees, B., Brown, S., Barrell, B. and Bretscher, A. (1995). Tropomyosin is essential in yeast, yet the *TPM1* and *TPM2* products perform distinct functions. *J. Cell Biol.* 128, 383-392. PMID: 7844152

64. Wang, T. & Bretscher, A. (1995). A rho-GAP, encoded by *BEM2*, regulates microfilaments in yeast. *Mol. Biol. Cell* 6, 1011-1024. PMID: 7579704

65. Harsay, E. & Bretscher, A. (1995) Parallel secretory pathways to the cell surface in yeast. *J. Cell Biol.* 131, 297-310. PMID: 7593160

66. Gary, R. & Bretscher, A. (1995). Ezrin self-association involves binding of an N-terminal domain to a normally masked C-terminal domain that includes the F-actin binding site. *Mol. Biol. Cell* 6, 1061-1075. PMID: 7579708

67. Berryman, M., Gary, R. & Bretscher, A. (1995) Ezrin oligomers are major cytoskeletal components of placental microvilli: their possible involvement in cortical morphogenesis. *J. Cell Biol.* 131 1231-1242. PMID: 8522586

68. Bretscher, A., Gary. R. & Berryman, M. (1995). Ezrin from placenta exists as stable monomers and elongated dimers. *Biochemistry* 34, 16830-16837. PMID: 8527459

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