Robert A. Cross

Director, Centre for Mechanochemical Cell Biology
Warwick Medical School
Coventry CV4 7AL UK
r.a.cross@warwick.ac.uk
http://mechanochemistry.org

Born 16.04.57, Duffield, Derbyshire, UK

EDUCATION

1983	PhD in Protein Biophysics (University of Nottingham)
1979	BSc in Biochemistry (University of Nottingham)

POSITIONS

2015-	Wellcome ERG on Molecular Basis of Cell Function
2014-	Wellcome Senior Investigator, Warwick Medical School
2009-	Professor of Mechanochemical Cell Biology, Warwick Medical School
1991 - 2009	Leader, Molecular Motors Group, Marie Curie Research Institute, UK
1988 - 1991	Research Staff, MRC LMB, Cambridge, UK
1986 - 1988	MDA Fellow MRC LMB, Cambridge, UK
1984 - 1986	EMBO Fellow OAW IMB, 5020 Salzburg, Austria

FELLOWSHIPS

1986 - 1988	MDA Fellow MRC LMB, Hills Rd, Cambridge CB2 2QH
1984 - 1986	EMBO Fellow OAW IMB, 5020 Salzburg, Austria

CURRENT SUPPORT

2016 - 2020	**Leverhulme Trust** £256K – with Anne Straube & Marco Polin
2015 -	**BBSRC** *ALERT14* £0.74M – with Royle (PI), McAinsh/Smith/Cross/Frigerio
2014 - 2019	**Wellcome Trust** £1.2M *Senior Investigator award*
2013 - 2017	**WPHCT** £100K *Warwick Open Source Microscope (http://WOSMic.org)*
2013 - 2017	**BBSRC** £0.55M *Chemical Biology of Microtubules* (IPA with Syngenta)

CONFERENCE ORGANISATION

2017	**Wellcome** *Mechanobiology at the Shard* (with M. Gautel)
2013	**BSCB** Spring meeting *Mechanochemical Cell Biology*
2012	**JSPS** Japan-UK international symposium on *Mechanochemical Cell Biology*
2008	**MCRI** Spring Workshop Microtubule Dynamics
2005	**EMBO** workshop / Harden Conference *Molecular Motors* Cambridge
1993 - 2008	**Marie Curie** international workshops on *Molecular Motors*
1998	**FEBS** Advanced Course at MCRI, *Molecular Motors*
1993	**EMBO** workshop in Cambridge, UK *Molecular Motors*
1991	**Wellcome Trust** Frontiers in Science congress *Molecular Motors*
1990	**EMBO** workshop in Maria Alm, *Smooth Muscle Contraction*

RECENT INVITATIONS

2016	**Biophysical Society** Vancouver *Engineering Molecular Motors*
2016	**EMBO** microtubules meeting Heidelberg
2016	**JSPS** international workshop (Leicester) invited speaker
2016	**Alpbach** meeting *Myosins and other motors* Session chair

SCIENTIFIC INTERESTS & CURRENT RESEARCH

My lab studies the mechanisms by which kinesins and microtubules generate force. We also engineer new types of microscope and are currently developing the Warwick Open Source Microscope, a hardware platform for advanced optical microscopy, aiming to benefit the global open microscopy community (*www.wosmic.org*). I am the founding director of the Centre for Mechanochemical Cell Biology (CMCB) at Warwick (*www.mechanochemistry.org*), a small, focussed grouping of currently 14 PIs who are combining *in vivo* cell biological approaches to molecular motor-driven processes with physical sciences approaches, including *in vitro* reconstitution and mathematical modelling. Within the last 3 years, 4 of the PIs in our centre have won Wellcome Investigator awards.

SCIENTIFIC BIOSKETCH

I did my PhD at Nottingham University and then moved to Salzburg as an EMBO fellow, to work with Vic Small and Apolinary Sobieszek on the structure and mechanisms of smooth muscle. I discovered that a C-terminal sequence of myosin II is essential for its self-assembly and that the self-assembly of myosin II molecules is dynamically controlled via nucleotide trapping in their active sites. In 1986 I moved to MRC-LMB as an MDG fellow and, with John Kendrick Jones, Clive Bagshaw and Mike Geeves, worked out an explicit mechanism for myosin II self-assembly. In 1991 I moved to start my own lab at Marie Curie Cancer Research. With Linda Amos and Keiko Hirose at LMB, we obtained the first EM views of microtubule-bound kinesin (Nature, 1995). Subsequently, we discovered that at high load, kinesins can walk processively backwards (Nature, 2005), that ATP binding controls their walking action (Science, 2007), that their force generation mechanism generates torque (Nature Chemical Biology, 2005) and that kinesins can sort and parallelise microtubules (Nature Cell Biology, 2009). In 2010, I moved to Warwick University, to co-found the CMCB, a new interdisciplinary centre for mechanochemical cell biology. During the last 5 years, we have shown that kinesin motors are electrostatically steered (PLOS Biology, 2011), that microtubule seams are hotspots of instability (Nature Communications, 2014), that kinesin can be programmed using DNA (Nature Nanotechnology, 2015) and that kinesin-5 has a proximity sensing mechanism that reverses its stepping direction (PNAS, 2016). Most recently, we have shown that kinesin binding radically changes the conformation and mechanics of GDP-microtubules (https://t.co/BeHNbkQaVG). I am a Wellcome Senior Investigator and a member of the Wellcome Expert Review Group in the Molecular Basis of Cell Function.

PUBLICATIONS

Google scholar https://scholar.google.co.uk/citations?hl=en&user=_iaVZaQAAAAJ

(103) Huang, J., Chew, T. G., Gu, Y., Palani, S., Kamnev, A., Martin, D. S., et al. (2016))
Curvature-induced expulsion of actomyosin bundles during cytokinetic ring contraction
eLife, 5, 84. http://doi.org/10.7554/eLife.21383

(102) M. Britto, A. Goulet, S. Rizvi, O. von Loeffelholz, C. A. Moores, and R. A. Cross (2016)
Schizosaccharomyces pombe kinesin-5 switches direction using a steric blocking mechanism
PNAS DOI: 10.1073/pnas.1611581113

(101) Cross, R.A. (2016)
Review: Mechanochemistry of the kinesin-1 ATPase
Biopolymers **105**, 476-482

(100) Andrecka, J., Ortega-Arroyo, J., Lewis, K., Cross, R.A., Kukura, P. (2016)
Label-Free Imaging of Microtubules with Subnanometer Precision using Interferometric Scattering Microscopy
Biophysical Journal **110**, 214-217

(99) Hussmann, F., Drummond, D.R., Peet, D.R., Martin, D.S., Cross, R.A. (2016)
Alp7/TACC-Alp14/TOG generates long-lived, fast-growing MTs by an unconventional mechanism
Scientific Reports **6**, 1

(98) Cross, R.A. (2015)
Mechanisms of action of Eg5 inhibitors
in *Kinesins and Cancer* (ed. Kozieslski, F.) Springer, ISBN 978-94-017-9732-0

(97) Wollman A.J., Sanchez-Cano, C., Carstairs, H.M.J., Cross, R.A. & Turberfield A.J. (2015)
Transport and self-organization across different length scales powered by motor proteins and programmed by DNA
Nature Nanotechnology **9**, 44–47

(96) Cross, R.A. & McAinsh, A.D (2014)
Prime movers: mechanisms of mitotic kinesins
Nature Reviews Molecular Cell Biology **15**, 257–271 doi:10.1038/nrm3768

(95) Katsuki, M., Drummond, D.R. & Cross R.A. (2014)
Ectopic A-lattice seams destabilise microtubules
Nature Communications **5**, doi:10.1038/ncomms4094

(94) Klejnot,M., Falnikar,A., Ulaganathan, V., Cross, R.A., Baas,P.W., Kozielski,F. (2013)
Structural and biochemical differences between two motor proteins involved in bipolar spindle formation, Eg5 and Kif15
Acta Crystallographica Section D: Biological Crystallography **70** (1), 123-133

(93) Carter N.J., Cross R.A. (2012)
Kinesin backsteps.
Biochem Soc Trans. **40** 400-3.

(92) Erent M., Drummond D.R., Cross R.A. (2012)
S. pombe kinesins-8 promote both nucleation and catastrophe of microtubules
PLoS One. **7**(2): e30738

(91) Grant B.J., Gheorghe D.M., Zheng W., Alonso M., Huber G., Dlugosz M., McCammon J.A., Cross R.A. (2011)
Electrostatically biased binding of kinesin to microtubules.
PLoS Biology **9**(11): e1001207

(90) Drummond D.R., Kain S., Newcombe A., Hoey C., Katsuki M., Cross R.A. (2011)
Purification of Tubulin from the Fission Yeast Schizosaccharomyces pombe.
Methods in Molecular Biology, **777** 29-55

(89) Kaseda, K., McAinsh, A.D. & Cross, R.A.(2011)
Dual pathway spindle assembly increases both the speed and the fidelity of mitosis
Biology Open , Nov 2. doi: 10.1242/bio.2011012

(88) Cross, R.A., McAinsh, A.D. & Straube A. (2011)
Mechanochemical Cell Biology
Semin Cell Dev Biol. 2011 Dec 22(9):913-5

(87) Katsuki M., Muto E., Cross R.A. (2011)
Preparation of dual-color polarity-marked fluorescent microtubule seeds
Methods in Molecular Biology, **777** 117-26

(86) Cross, R.A. (2010)
Kinesin-14: the roots of reversal
BMC Biology **8** 107

(85) Katsuki,M., Drummond, D.R., Osei, M. & Cross, R.A. (2009)
Mal3 masks catastrophe events in Schizosacharomyces pombe microtubules by inhibiting shrinkage and promoting rescue
Journal of Biological Chemistry. **23** 29246-50

(84) Braun, M., Drummond,D.R., Cross, R.A. & McAinsh, A.D. (2009)
Klp2 organises microtubules into parallel bundles by an ATP-dependent sorting mechanism
Nature Cell Biol. **11** 724-30

(83) DesGeorges,A. Katsuki,M. Drummond,D. Osei,M. Cross,R.& Amos,L. (2008)
Mal3, the S. pombe homologue of EB1, changes the microtubule lattice
Nature Struc. Mol. Biol.**15** 1102-8

(82) Cross R.A. (2008)
Single molecule for the people (review of Single molecule techniques, a laboratory manual eds Selvin & Ha)
Nature Cell Biol. **10** 1014

(81) Dunn, S., Morrison, E., Liverpool,T., Molina-Paris, C., Cross, R., Alonso, M. & Peckham, M. (2008)
Differential trafficking of kinesin-1 (Kif5c) on tyrosinated and detyrosinated microtubules in live cells
J.Cell Sci **121** 1085-95

(80) Kaseda,K., Crevel, I., Hirose, K., Cross, R. (2008)
Single-headed mode of kinesin-5
EMBO Reports 9 761-76

(79) Alonso,M. Drummond,D. Kain,S. Hoeng,J. Amos,L. & Cross,R.A. (2007)
An ATP-gate controls tubulin binding by the tethered head of kinesin-1
Science **316** 120-123

(78) Grant, B., McCammon,A., Caves, L.S. & Cross, R.A. (2007)
Multivariate analysis of conserved sequence-structure relationships in kinesins: coupling of the active site and a tubulin-binding subdomain
J.Mol.Biol. **368** 1231-1248

(77) Moores, C.A., Perderiset,M., Kappeler,C., Kain,S., Drummond, D., Perkins,S.J., Chelly, J., Cross, R.A., Houdusse,A. & Francis,F. (2006)
Distinct roles of doublecortin in modulating the MT cytoskeleton
EMBO J **25** 4448-4457

(76) Cross R.A. (2006)
Myosin's mechanical ratchet
PNAS **103** 8911-8912

(75) Carter N.J. & Cross R.A. (2006)
Kinesin's moonwalk

(74) Yajima J. & Cross R.A. (2005)
A torque component in the kinesin-1 power stroke
Nature Chemical Biology **1** 338-341

(73) Carter N.J. & Cross R.A. (2005)
Mechanics of the kinesin step
Nature **435** 308-12

(72) Cross R.A. (2005)
Intracellular transport
Encyclopaedia of the Life Sciences http://www.els.net Wiley

(71) Carter N.J. & Cross R.A. (2005)
Microtubule Motility Assays
in Celis J (ed) Cell Biology a laboratory manual
Academic Press

(70) Cross R.A. (2004)
The kinetic mechanism of kinesin
Trends in Biochemical Sciences **89** 301-309

(69) Crevel I. M-T. C. Alonso M. & Cross R.A. (2004)
Monastrol stabilizes an attached low-friction state of Eg5
Current Biology **14** R411-R412

(68) Crevel, I, Nyitray M., Weiss, S., Geeves, MA, Cross, RA (2004)
What kinesin does at roadblocks: the coordination mechanism for molecular walking
EMBO J **23** 23-32

(67) Eickel V. Drummond D. Kendrick-Jones J. & Cross R.A. (2004)
Kinesin heads fused to hinge-free myosin tails drive efficient motility
FEBS letters **569** 54-58

(66) Cross R.A. (2004)
Dynein's gearbox (Dispatch)
Current Biology **14** R355-R356

(65) Cross R.A. (2004)
Kinesin's interesting limp (Dispatch)
Current Biology **14** R158-R159

(64) DeBonis S, Simorre JP, Crevel I, Lebeau L, Skoufias DA, Blangy A, Ebel C, Gans P, Cross R, Hackney DD, Wade RH, Kozielski F. (2003)
Interaction of the mitotic inhibitor monastrol with human kinesin Eg5
Biochemistry **42** 338-49

(63) Drummond D.R. & Cross R.A. (2002)
Multiphoton versus confocal high resolution z-sectioning of eGFP microtubules. Increased multiphoton photobleaching within the focal plane can be compensated using a Pockels cell and dual widefield detectors
J. Microscopy **206** 161-169

(62) Olga Krylyshkina, Irina Kaverina, Wolfgang Kranewitter, Walter Steffen, Maria C. Alonso, Robert A. Cross and J. Victor Small (2002)
Modulation of substrate adhesion dynamics via microtubule targeting requires kinesin-1
J. Cell Biol **156** 349-60

(61) Yajima J., Alonso M.C., Cross R.A. & Toyoshima Y.Y (2002)
Direct long-term observation of kinesin processivity at zero load
Current Biology **12** 301-6

(60) Kallipolitou A., Deluca D., Majdic,U., Laksemper S., Cross R.A., Meyhofer E, Moroder L., Schliwa,M., Woehlke G. (2001)
Unusual properties of the fungal conventional kinesin neck domain from Neurospora crassa
EMBO J. **20** 6226-6235

(59) Rogers K.R., Weiss S., Crevel, I., Brophy, P.J., Geeves, M.A. & Cross, R.A. (2001)
Kif1d is a fast nonprocessive kinesin that demonstrates novel K-loop-dependent mechanochemistry
EMBO J. **20** 5101-5113

(58) Cross R.A. (2001)
Kinesin's string variable (dispatch)
Current Biology **11** R147-R149

(57) Hirose K., Henningsen, U., Schliwa M., Toyoshima C., Shimizu T., Alonso M., Cross R.A. and Amos L.A. (2000)
Structural Comparison of Dimeric Eg5, Nkin and Ncd Head-Nkin Neck Chimaera with Conventional Kinesin
EMBO J. **19** 5308-5314

(56) Cross R.A. (2000)
Directing Direction (News & Views)
Nature **406** 839-840

(55) Drummond, D.R. & Cross R.A. (2000)
Dynamics of interphase microtubules in Schizosacharomyces pombe
Current Biology **10** 766-775

(54) Cross, R.A. & Carter,N.J. (2000)
Molecular Motors: a primer
Current Biology **10** R177-179

(53) Anderson K. & Cross R.A. (2000)
Contact dynamics in keratocyte motility
Current Biology **10** 253-260

(52) Cross R.A. (2000)
Molecular Motors: Kinesin's dynamically dockable neck
Current Biology **10** R124-R126

(51) Carter N. & Cross R.A. (2000)
An improved microscope for bead and surface based motility assays
Methods in Molecular Biology **164** 73-89

(50) Cross R.A., Crevel I., Carter,N..J., Alonso, M.C., Hirose, K., and Amos, L.A. (2000)
The conformational cycle of kinesin
Proc. Roy. Soc. Ser. B **355** 459-464

(49) Cross R.A. (2000)
The mechano-biochemistry of molecular motors
Introductory article to Molecular Motors Essays in Biochemistry **35**

(48) Cross, R.A. (1999)
Walking Talking heads (dispatch)
Current Biology **9** R854-R856

(47) Crevel, I., Carter, N., Schliwa, M. and Cross, R.A. (1999)
Coupled chemical and mechanical steps in a processive Neurospora kinesin
EMBO J **18** 5863-5872

(46) Cross R.A. and Scholey, J. (1999)
Kinesin: the tail unfolds (minireview)

Nature Cell Biology **1** E119-121

(45) Hirose K., Lowe,J., Alonso,M., Cross, R.A. and Amos,L.A. (1999)
Conguent docking of dimeric kinesin and ncd into 3D Cryo-electron microscopy maps of microtubule.motor.ADP complexes
Mol Biol Cell **10** 2063-2074

(44) Cross R.A. (1999)
Intracellular Transport
Encyclopaedia of the Life Sciences web article Link: ELS Gateway

(43) Mazumdar M. and Cross, R.A. (1998)
Engineering a lever into the kinesin neck
J Biol. Chem. **273** 29352-29359

(42) Hirose K., Cross R.A., and Amos L. A. (1998)
Nucleotide-dependent Structural Changes in Dimeric NCD Molecules complexed to microtubules
J.Mol.Biol. **278** 389-400

(41) Alonso M.C., van Damme, J., Vandekerckhove,J. and Cross R.A. (1998)
Proteolytic mapping of kinesin/ncd- microtubule interface: Nucleotide-dependent conformational changes in the loops L8 and L12
EMBO J **17** 945-951

(40) Cross R.A. (1998)
Microtubule Motility Assays
in Cell Biology a Laboratory Handbook ed Celis J E 2nd edition vol **2** pp317-326

(39) Crevel I-M T C., Lockhart, A. Cross, R.A. (1997)
Kinetic evidence for low processivity in Ncd and Eg5
J Mol Biol **273** 160-170

(38) Cross R.A. (1997)
The Natural Economy of Kinesin
Current Biology **7** R631-633

(37) Cross, R.A.(1997)
Kinesin's ratchet reversed: a diverting tail (News and Views)
Nature **389** 15-16

(36) Amos L.A. and Cross, R.A. (1997)
Structural dynamics of molecular motors
Current Opinion in Structural Biology **7** 239-246

(35) Hirose, K., Amos, W.B., Lockhart, A. Cross, R.A. and Amos,L.A. (1997)
Three dimensional cryoelectron microscopy of 16-protofilament microtubules: structure, polarity and interaction with motor proteins
J. Struc. Biol. **118** 140-148

(34) Cross, R.A. (1997)
A protein-making motor protein (News and Views)
Nature **385** 18-19

(33) Hirose, K., Lockhart, A. Cross, R.A. and Amos,L.A. (1996)
Three dimensional cryoelectron microscopy of dimeric kinesin and ncd motor domains on microtubules
PNAS **93** 9539-9544

(32) Fan,J. Griffiths, A., Lockhart, A., Cross, R.A. and Amos, L.A. (1996)
Microtubule minus ends can be labelled with a phage display antibody specific to alpha tubulin
J.Mol.Biol. **259** 325-330

(31) Crevel M-T. C., Lockhart,A. and Cross, R.A. (1996)
Weak and strong states of kinesin and ncd
J.Mol. Biol **257** 66-76

(30) Lockhart,A. and Cross, R.A. (1996)
Kinetics and Motility of the Eg5 Microtubule Motor
Biochemistry **35** 2365-2373

(29) Hirose, K., Lockhart, A., Cross, R.A. & Amos, L.A. (1995)
Nucleotide-dependent angular change in kinesin motor domain bound to tubulin
Nature **376** 277-279

(28) Cross R.A. (1995)
On the hand over hand footsteps of kinesin heads
J Mus Res Cell Mot **16** 91-94

(27) Lockhart, A., Cross, R.A. McKillop,D.F.A. (1995)
ADP release is the rate limiting step of the MT activated ATPase of non-claret disjunctional and kinesin
FEBS Lett. **368** 531-535

(26) Lockhart, A., Crevel, M-T. C. & Cross, R.A. (1995)
Kinesin and ncd bind through a single head to microtubules and compete for shared MT binding site
J.Mol.Biol. **249** 763-771

(25) Lockhart,A. and Cross, R.A. (1994)
Origins of reversed directionality in the ncd molecular motor
EMBO J. **13** 751-757

(24) Hodge, T.P., Cross, R.A. and Kendrick-Jones, J. (1992)
Role of a COOH-terminal nonhelical domain in the self-assembly of a vertebrate myosin rod
J. Cell Biol. **118** 1085-1095

(23) Cross R.A. & Kendrick-Jones J. (1992)
MgATP binding changes neither the shape nor the flexibility of the heads of single myosin molecules
J Struct. Biol. **109** 208-213

(22) Way, M., Pope, B., Cross, R.A., Kendrick-Jones, J. and Weeds, A.G. (1992)
Expression of the N-terminal domain of dystrophin in E. Coli and demonstration of binding to F-actin.
FEBS letters **301** 243-245

(21) Cross, R.A. and Kendrick-Jones, J. (1991) (eds.)
Molecular Motors
J. Cell Sci supplement **14**, The Company of Biologists, Cambridge UK.

(20) Cross, R.A. and Engel, A. (1991)
STEM mass determination of in vitro self-assembled smooth muscle myosin filaments
J. Mol. Biol. **222** 455-458

(19) Cross, R.A., Geeves, M.A. and Kendrick-Jones, J. (1991)
A nucleation-elongation mechanism for the self-assembly of side polar sheets of smooth muscle myosin
EMBO J. **10** 747-756

(18) Faruqi, A.R., Cross, R.A. and Kendrick-Jones, J. (1991)
Solution small-angle X-ray scattering studies on myosin with a multiwire area detector
J Appl Cryst **24** 852-856

(17) Ankrett, R.J., Rowe, A.J., Cross, R.A., Kendrick-Jones, J., and Bagshaw, C.R. (1991)
A folded 10S conformer of myosin from a striated muscle and its implications for regulation of ATPase activity
J. Mol. Biol. **217** 323-335

(16) Redwood C.R, Marston, S., Bryan, J., Cross, R.A.and Kendrick-Jones, J. (1990)
Functional properties of a full length and a mutant chicken gizzard caldesmon expressed in E. Coli.
FEBS Letters **270** 53-56

(15) Cross, R.A. , Stewart, M. and Kendrick-Jones, J. (1990)
Structural predictions for the central domain of dystrophin
FEBS Letters **262** 87-92

(14) Cross, R.A. (1989)
Smooth Operators: The molecular mechanics of smooth muscle contraction
Bioessays **11** 18-21

(13) Citi, S., Cross, R.A., Bagshaw,C.R. and Kendrick-Jones,J.(1989)
Parallel modulation of conformation and enzyme activity of brush border myosin by monoclonal antibodies
J.Cell Biol. **109** 549-556

(12) Cross, R.A. (1989)
The self-assembly mechanism of nonsarcomeric myosins in Structure, Interactions and assembly of cytoskeletal and extracellular proteins
Springer series in Biophysics Ed. P.M. Bayley) Eds. U Aebi, J. Engel, Springer-Verlag

(11) Cross, R.A., Jackson, A.P., Citi, S., Kendrick-Jones, J. and Bagshaw, C.R. (1988)
Active site trapping of nucleotide by smooth and nonmuscle myosins
J.Mol. Biol. **203** 173-181

(10) Bennett, J.P., Cross, R.A., Kendrick-Jones, J. and Weeds, A.G. (1988)
Spatial pattern of myosin phosphorylation in contracting smooth muscle cells: Evidence for contractile zones
J Cell Biol. **107** 2623-2629

(9) Cross R.A., Citi,S. and Kendrick Jones, J. (1988)
How phosphorylation controls the self-assembly of vertebrate smooth and non- muscle myosins
Biochem Soc Trans **16** 501-503

(8) Cross, R.A., Cross, K.E. and Small, J.V. (1987)
Salt dependent dimerisation of caldesmon
FEBS Letters **219** 306-310

(7) Cross, R.A. & Vandekerckhove (1986)
Solubility-determining domain of smooth muscle myosin rod
FEBS Lett. **200** 355-360

(6) Cross, R.A., Cross, K.E. and Sobieszek,A. (1986)
ATP-linked monomer-polymer equilibrium of smooth muscle myosin: the free folded monomer traps ADP.Pi
EMBO J **5** 2637-2641

(5) Furst,D.O., Cross, R.A. DeMey,J. and Small, J.V. (1986)
Caldesmon is an elongated, flexible molecule localised in the actomyosin domains of smooth muscle
EMBO J **5** 251-257

(4) Cross,R.A. and Sobieszek, A. (1985)

I**nfluence of smooth muscle myosin conformation on myosin light chain kinase binding and on phosphorylation**
FEBS Lett. **188** 367-374

(3) Cross,R.A. (1984)
Bending of smooth muscle myosin rod
FEBS Lett. **176** 197-201

(2) Cross,R.A., Bardsley,R.G, Ledward,D.A. Small, J.V. and Sobieszek,A. (1984)
Conformational stability of the myosin rod
Eur.J. Biochem. **145** 305-310

(1) Cross,R.A., Bardsley,R.G, Ledward,D.A. Small, J.V. and Sobieszek,A. (1983)
Reversible helix-coil transition of pig stomach myosin rod
FEBS lett. **162** 18