

Lucy Collinson PhD

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CURRENT EMPLOYMENT

Head of Electron Microscopy The Francis Crick Institute	2015 - present
Head of Electron Microscopy Cancer Research UK London Research Institute	2006 - 2015

Summary: Provision of a world-leading electron microscopy facility for the scientists at the CRUK London Research Institute and the new Francis Crick Institute. With a team of fourteen electron microscopists and laser physicists, we collaborate on >120 projects with more than 60 research groups per annum, across disciplines as diverse as genomic integrity, cell cycle, cell biology, neurobiology, cancer biology, vascular biology, developmental biology, and infection and immunity.

Biological systems: Proteins, DNA, protein:DNA complexes, viruses, bacteria, parasites, standard cell lines, primary cell lines, pathogen-infected cells, fungi, yeast, *Drosophila melanogaster*, *Caenorhabditis elegans*, zebrafish, 3D model systems, tissues and biomaterials.

Techniques: Negative stain, low-angle rotary shadowing, resin embedding, microwave processing, ultrathin sectioning, serial sectioning, cryosectioning, immunolabelling, plunge freezing, high pressure freezing, freeze substitution, in-resin fluorescence, correlative imaging. Development of cutting-edge sample preparation protocols.

Technology: Confocal microscopy, super-resolution light microscopy, cryo-fluorescence, SEM, TEM, electron tomography, micro CT, nano CT, soft X-ray tomography, Serial Block Face SEM, Focused Ion Beam SEM, Integrated Light and EM. Instrument alpha and beta testing. Microscope design and prototyping.

Facility: Team leader and staff management, design of the Francis Crick Institute Imaging Suite including nine EM rooms and all ancillary areas, procurement and installation of twelve electron microscopes and a wide range of sample preparation equipment, negotiation of best prices and loan equipment, introduction of cutting-edge administration practices, staff and student training.

Research focus: Multi-scale correlative imaging and near-native state imaging. Correlative light and electron microscopy (CLEM) as a standard technique. Development of automated serial imaging techniques including Serial Block Face SEM (3View) and Focused Ion Beam SEM (Stenzel, 2011; Thauat, 2012; Peddie, 2014a). Development of correlative light and volume EM (Armer, 2009; Russell, 2016). Development of In-Resin Fluorescence sample processing and integration of light microscopes with electron microscopes for dual imaging of IRF samples (Peddie, 2014b; Peddie, 2014c; Brama, 2015; Brama, 2017). Development of whole cell imaging using correlative cryo-fluorescence and cryo-soft X-ray tomography with synchrotron radiation (Duke, 2013; Carzaniga, 2013; Carzaniga, 2014; Duke, 2014).

Image analysis: Expertise in alignment, reconstruction, rendering and analysis of big 3D data. Collaboration with Computer Vision scientists to develop algorithms for semi-automatic segmentation of light and electron microscopy images (Karabag, 2019). Citizen science (<https://etchacell.crick.ac.uk/>) and deep machine learning for automated segmentation. Development of concepts for data repositories for volume EM (Patwardhan, 2014).

Translation: UltraLM (commercialised as the PTFM by RMC Boeckler, <https://scienceservices.de/en/ptfl-ultramicrotome-mounted-fluorescence-location-system.html>) and miniLM (Brama, 2017).

Further Training: MiniMD in Medical Imaging.

PREVIOUS EMPLOYMENT

Head of Electron Microscopy MRC Laboratory for Molecular Cell Biology, University College London	2004 - 2006
Postdoctoral Research Associate Imperial College London and University College London	1998 - 2004

EDUCATION

PhD in Molecular Microbiology St. Barts and the Royal London Schools Of Medicine and Dentistry	1995 - 1998
BSc (Hons) 2:1 in Microbiology Imperial College London	1992 - 1995

SELECTED INVITED, KEYNOTE AND PLENARY TALKS (*Chair/ Organising Committee)

2019

OrbiSIMS Launch, Nottingham, UK
VIZBI 2019, EMBL, Germany
Seminar, NPL, UK
Zooniverse NSF grant meeting, Chicago, US
EMBO Advanced Optical Microscopy Course, Plymouth, UK
*Hard X-ray Imaging of Soft Biological Tissues
Frontiers of Microscopy 2019, London, UK
Seminar, MRC LMB, Cambridge
Frontiers In Imaging Science II, Janelia, US
*Crick EM Symposium and UK CLEM Course
M&M 2019, Portland, US
Seminar, OHSU, Portland, US
Seeing Is Believing, EMBL, Germany
Volume EM Course, EMBL, Germany
VIB Nikon Centre of Excellence Opening, Belgium
NEMI kick-off meeting, Utrecht, The Netherlands
COMULIS COST network, Vienna, Austria

2018

Seminar, Leicester University, UK
Seminar, Stellenbosch University, South Africa
Seminar, Glasgow University, UK
Seminar, York University, UK
Seminar, Helsinki University, Finland
EMBO Advanced Optical Microscopy Course, Plymouth, UK
Wired Health, Francis Crick Institute, UK
Zeiss 3D LM EM Meeting, VIB Ghent, Belgium
Seminar, Imperial College, UK
Path Soc 2018, Maastricht, The Netherlands
SCANDEM 2018, Copenhagen, Denmark
EMBO CLEM Course, Bristol, UK
Seminar, Gothenburg University, Sweden
Seminar, Vienna University, Austria

2017

IMAGINE: Imaging Life Launch Symposium, Sheffield, UK
NEUBIAS 2017, Lisbon, Portugal
*UK Correlative Light and Electron Microscopy Course, Research Complex at Harwell, UK
Seminar, Birmingham University, UK
Correlative Light and Electron Microscopy Workshop, Pasteur Institut, Paris, France
Summer School in Advanced BioImaging, Ghent, Belgium
*Microscience Microscopy Congress 2017, Manchester, UK
*Crick EM Opening Symposium, Francis Crick Institute, London, UK
Int. Union of Pure & Applied Biophysics/ European Biophysical Societies' Association, Edinburgh, UK
Microscopy & Microanalysis 2017, St Louis, USA
New Scientist Live, London, UK
Seeing is Believing, EMBL, Germany
EMBO Volume EM Course, EMBL, Germany

2016

Trends in Microscopy, Dresden, Germany
*High Pressure Freezing 50th Anniversary Meeting, Zurich, Switzerland
Seminar, Dundee University, Scotland
From 3D Light to 3D Electron Microscopy, EMBL, Germany
Microscopy Valley 2016, Utrecht, The Netherlands
Correlative Light and Electron Microscopy Workshop, University of Maryland, USA
Seminars, Janelia Farm and NIH National Cancer Institute, USA
*EMBO Correlative Light and Electron Microscopy Course, Bristol, UK
SCANDEM 2016, Trondheim, Norway
Frontiers in BioImaging Meeting, London, UK
* X-Ray Microscopy 2016, Diamond Light Source, Oxford, UK
European Microscopy Congress 2016, Lyon, France
EMBO Meeting 2016, Mannheim, Germany
*Swiss Society for Optics & Microscopy 2016, Les Diablerets, Switzerland
*Society of Electron Microscope Technology Winter Meeting, London, UK

2015

UMCG Seminar and Cellular Imaging Course, Groningen, The Netherlands
*3View Users Meeting, Southampton, UK
European Light Microscopy Initiative 2015, Sitges, Spain
Summer School Advanced Light Microscopy, Ghent, Belgium
* Microscience Microscopy Congress 2015, Manchester, UK
Microscopy & Microanalysis 2015, Portland, USA
Microscopy Congress 2015, Gottingen, Germany
*UK Correlative Light and Electron Microscopy Course @ Crick, London, UK

2014

Boris Balinsky Plenary Address, Microscopy Society of South Africa, Cape Town, South Africa
International Microscopy Congress 2014, Prague, Czech Republic
*Microscopy and Microscience Congress 2014, Manchester, UK
*EMBO Correlative Light and Electron Microscopy Course, Bristol, UK
*Core Technologies for Life Sciences, Paris, France
Membrane, Morphology and Function, Abruzzo, Italy
*3D Correlative Light and EM Meeting, Ghent, Belgium
York University Biochemistry Seminar Series, York, UK

REVIEWS AND AWARDS PANELS

Journals: Reviewer for PLoS ONE, Scientific Reports, Micron, Ultramicroscopy, Nature Methods, Journal of Structural Biology.

Grants Reviews and Awards Panels: BBSRC, Wellcome Trust, Newton Trust, ZonMW (Netherlands), FWO (Belgium), EuroBioImaging, Corbel, Flanders BioImaging, ERC Consolidator Awards, WWTF (Vienna, Austria).

Doctoral thesis examinations: Dr John Kuortesis (Bristol University), Dr Basmah Othman (Imperial College), Dr Marjon Mourik (Leiden University Medical School).

ADVISORY PANELS, EDITORIAL BOARDS, AWARDS

2019 – 2021	Journal of Cell Science Website Advisory Board
2019 – 2023	Ernst Ruska Prize Committee
2019	EMBL-EBI Workshop on Minimum Metadata
2019	EMBL Advanced Imaging Centre Recruitment Committee
2019	Wellcome Trust Volume EM Community Meeting (Organiser)
2019	BBSRC Data Intensive BioScience Review
2019	WWTF Vienna Science and Technology Fund Life Sciences Funding Panel
2018 onwards	COMULIS COST Network, UK Management Committee Member
2018	MDC for Molecular Medicine Technology Platforms Review, Berlin, Germany
2018	Scientific Advisory Committee, VIB BioImaging Core, Belgium
2018	EMBL Core Facilities Review, Heidleberg, Germany
2017 onwards	Diamond Light Source Peer Review Panel 12
2017 onwards	Research Complex at Harwell Scientific Advisory Board (co-chair 2018, chair 2019)
2017 onwards	EMBL-EBI Molecular and Cellular Structure Scientific Advisory Board
2017 – 2019	BBSRC LoLa Scientific Advisory Board (PI Prof Martin Warren)
2017	Sir David Cooksey Prize in Translation
2017	EMBL-EBI BioImaging Workshop on Data Repositories
2015 – 2019	ALBA Synchrotron Scientific Evaluation Panel MISTRAL
2015 – 2019	NEUBIAS COST Network, UK Management Committee Member
2015	PDBe Expert Workshop on 3D Segmentations and Transformations
2015	Biotechnology and Biological Sciences Research Council Review of BioImaging
2015	Science and Technology Facilities Council Large Facilities Sub-Group to Science Board
2015	VIB Ghent Scientific Advisory Panel
2014 onwards	Royal Microscopical Society EM Section (Member/ Chair) and Council Member
2014 – 2019	BioImagingUK organising committee
2014 – 2017	Society for Electron Microscope Technology committee
2014 – 2017	Editorial Board Member 'Journal of Chemical Biology'
2014 – 2016	Science and Technology Facilities Council Life Sciences & Soft Materials Advisory Panel
2014 – 2015	Editorial Board Member 'Protoplasma'
2014	University of Gothenburg Centre for Cellular Imaging Advisory Board
2014	Engineering and Physical Sciences Research Council EM Working Group

PUBLIC ENGAGEMENT

Press interviews: Nature, The Lancet, The Guardian, The Telegraph, Biomedical Scientist, BBC Radio 4 'Today' & 'The Material World', BBC World Service, International Labmate, Microscopy & Analysis

Public talks: Crick Chat on Electron Microscopy ‘Seeing the Invisible’, New Scientist Live.

GRANT AWARDS

- Co-applicant on MRC award, ‘Next Generation correlative high pressure freezing’. £760k. 2019.
 - Co-applicant on BBSRC 18ALERT award, ‘Transmission EM for biomedical research’. £390k. 2019.
 - Co-applicant on MRC Idea to Innovation award, ‘TomoSTORM’. £75k. 2019.
 - Lead applicant on MRC Idea to Innovation award, ‘Automated ultramicrotomy’. £75k. 2018-9.
 - Lead applicant on MRC Connect2Crick award, ‘Sample prep for integrated microscopy’. £25k. 2018.
 - Collaborator on H2020 SME Instrument Award, entitled ‘Synchrotron Miniaturisation enabling Innovative Laboratory Equipment in Soft X-ray Microscopy’ with SiriusXT (Dublin). €3M. 2016-20.
 - Lead applicant on Francis Crick Institute Idea to Innovation Award, entitled ‘MiniLM: A new tool for locating cells expressing fluorescent proteins for ultrastructural analysis by Correlative Light and Electron Microscopy’. £15k. 2016-17.
 - Co-applicant on BBSRC/ MRC/ Wellcome/ EPSRC Community Research Network entitled ‘A BiolmagingUK Network: A Scientific Community Defining Strategic Initiatives for UK Biolmaging’ with Prof. Jason Swedlow (Dundee University) and others. £100k. 2014-2017.
 - Co-applicant on MRC/BBSRC/EPSC Next Generation Optical Microscopy award. ‘Bio-Continuum Imaging: Seamless imaging from the micro- to the nano-scale’ with Dr Peter O’Toole (York University). £2M. 2013-17.
 - Co-applicant on BioStruct-X Synchrotron Imaging award entitled ‘Correlative cryo-fluorescence and cryo-soft X-ray tomography of whole mammalian cells’ with Dr Liz Duke (Diamond Light Source). Supporting all beamtime, travel and accommodation. 2010-2014.
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SELECTED PUBLICATIONS

Budzinska MI, Villarroel-Campos D, Golding M, Snijders AP, Weston A, **Collinson L**, Schiavo G (2020). PTPN23 is required for endocytic sorting of neurotrophin receptors via a BICD1- dependent mechanism. *JCS*. In Press.

Cheng X, Prange-Barczynska M, Fielding JW, Zhang M, AL Burrell, Lima JDCC, Eckardt L, Argles ILA, Hodson EJ, Pugh C, Buckler K, Robbins P, Bruick R, **Collinson L**, Rastinejad F, Bishop T, Ratcliffe P (2020). Marked effects of pharmacological HIF-2 α antagonism on hypoxic ventilatory control. *J. Clin. Invest.* doi: 10.1172/JCI133194.

Fisch D, Clough B, Domart MC, Bando H, Masanou T, **Collinson L**, Yamamoto M, Shenoy A, Frickel E. Differential spatiotemporal targeting of Toxoplasma and Salmonella by GBP1 assembles divergent caspase activation platforms. *BioRxiv*. 792804; doi: <https://doi.org/10.1101/792804>.

Ulloa G, Hamati F, Dick A, Fitzgerald J, Mantell J, Verkade P, **Collinson L**, Arkill K, Larijani B, Poccia D (2019). Lipid species affect morphology of endoplasmic reticulum: a sea urchin oocyte model of reversible manipulation. *J. Lipid Research*. doi: 10.1194/jlr.RA119000210.

Sherling ES, Perrin AJ, Knuepfer E, Russell MRG, **Collinson LM**, Miller LH, Blackman MJ (2019). The Plasmodium falciparum rhopty bulb protein RAMA plays an essential role in rhopty neck morphogenesis and host red blood cell invasion. *PLoS Pathogens*. 15(9): e1008049.

Ombrato L, Nolan E, Kurelac I, Mavousian A, Bridgeman V, Chakravarty P, Horswell S, Heinze I, Gonzalez-Gualda E, Matakchione G, Weston A, Kirkpatrick J, Husain E, Speirs V, **Collinson L**, Ori A, Lee JH, Malanchi I (2019). Metastatic niche labelling reveals tissue parenchyma stem cell features. *Nature*. 572: 603-608.

Melia CE, Peddie CJ, de Jong AWM, Snijder EJ, **Collinson LM**, Koster AJ, van er Schaar HM, van Kuppeveld FJM, Barcena M (2019). The emergence of enterovirus replication organelles captured by whole-cell electron microscopy. *MBio*. 10: e00951-19.

- Greenwood D, Huang S, Russell M, **Collinson L**, West A, Jiang H, Gutierrez MG (2019). Subcellular antibiotic visualization reveals a dynamic drug reservoir in Mycobacterium tuberculosis-infected macrophages. *Science*. 364:1279-1282.
- Lerner TR, Queval CJ, Lai RP, Russell M, Fearn A, Greenwood DJ, **Collinson L**, Wilkinson RJ, Gutierrez MG (2019). *Mycobacterium tuberculosis* cording in the cytosol of live lymphatic endothelial cells. *BioRxiv*. doi: <https://doi.org/10.1101/59517>.
- Hunt A, Wagener J, Kent R, Carneille R, Russell M, Peddie C, **Collinson L**, Heaslip A, Ward GE, Treeck M (2019). Differential requirements of cyclase associated protein (CAP) for actin turnover during the lytic cycle of Toxoplasma gondii. *ELife*. doi: 10.7554/eLife.50598.
- Karabag C, Jones ML, Peddie C, Weston A, **Collinson LM**, Reyes-Aldasoro CC (2019). Modelling the nuclear envelope of HeLa cells. Preprint. *BioRxiv*. doi: <https://doi.org/10.1101/344986>.
- Lee Y, Hamann J, Pellegrino M, Domart MC, **Collinson L**, Haynes CM, Florey O, Overholtzer M (2019). Entosis controls a developmental cell clearance in C.elegans. *Cell Rep*. 26:3212-3220.
- Reznikov N, Boughton OR, Ghouse S, Weston AE, **Collinson L**, Blunn GW, Jeffers J, Cobb JP, Stevens MM (2019). Individual response variations in scaffold-guided bone regeneration are determined by independent strain- and injury-induced mechanisms. *Biomaterials*. 194: 183-194.
- Ando T, Bhamidimarri SP, Brending N, Colin-York H, **Collinson L**, De Jonge N, de Pablo PJ, Debroye E, Eggeling C, Franck C, Fritzsche M, Gerritsen H, Giepmans BNG, Grunewald K, Hofkens J, Hoogenboom JP, Janssen KPF, Kaufman R, Klumpermann J, Kurniawan N, Kusch J, Liv N, Parekh V, Peckys DB, Rehfeldt F, Reutens DC, Roeffaers MJB, Salditt T, Schaap IAT, Schwarz US, Verkade P, Vogel MW, Wagner R, Winterhalter M, Yuan H, Zifarelli G (2018). The 2018 correlative microscopy techniques roadmap. *J Phys D Appl Phys*. 51: 443001.
- Verkade P & **Collinson L** (2018). CLEM Probes. In The 2018 Correlative Techniques Roadmap. *J. Phys. D: Appl. Phys*. 51: 443001.
- Collinson LM**, Carroll EC, Hoogenboom JP (2018). Correlating 3D light to 3D electron microscopy for systems biology. *Current Opinion in Biomedical Engineering*. In Press.
- Perrin AJ, Collins CR, Russell MRG, **Collinson LM**, Baker DA, Blackman MJ (2018). The actinomysin motor drives malaria parasite red blood cell invasion but not egress. *MBio*. DOI: 10.1128/mBio.00905-18
- Chung G, Domart MCD, Peddie C, Arkill K, **Collinson LM**, Larijani B, (2018). Acute Depletion of Diacylglycerol from the Cis-Golgi Affects Localised Nuclear Envelope Morphology During Mitosis. *J. Lipid Research*. doi: 10.1194/jlr.M083899.
- Staszowska AD, Fox-Roberts P, Hirvonen L, Peddie CJ, **Collinson LM**, Cox S (2018). The Renyi divergence enables accurate and precise cluster analysis for localisation microscopy. *Bioinformatics*. doi: 10.1093/bioinformatics/bty403.
- Delpiano J, Pizarro L, Peddie CJ, Jones ML, Griffin LD, **Collinson LM** (2018). Automated detection of fluorescent cells in in-resin fluorescence sections for integrated light and electron microscopy. *J Microsc*. doi: 10.1111/jmi.12700.
- Bilanges B, Alliouachene S, Pearce W, Morelli D, Szabadkai G, Chung Y, Chicanne G, Valet C, Hill J, Voshol PJ, **Collinson L**, Peddie C, Ali K, Ghazaly E, Rajeeve V, Trichas G, Srinivas S, Chaussade C, Salamon R, Backer JM, Scudamore C, Whitehead MA, Keaney E, Murphy L, Semple R, Payrastra B, Tooze S, Vanhaesebroeck B (2017). Vps34 PI3-Kinase inactivation enhances insulin sensitivity through reprogramming of mitochondrial metabolism. *Nat Commun*. In Press.
- Entwistle LJ, Pelly VS, Coomes SM, Kannan Y, Perez-Lloret J, Czieso S, Silva dos Santos M, MacRae JI, **Collinson L**, Sesay A, Nikolov N, Metidji A, Helmy H, Hui DY, Wilson MS (2017). Epithelial-cell-derived phospholipase A2 Group 1B is an endogenous antihelminthic. *Cell Host and Microbe*. 22:484-93.
- Takaki T, Montagner M, Serres MP, La Berre M, Russell M, **Collinson L**, Szuhai K, Piel M, Howell M, Boulton S, Sahai E, Petronczki M (2017). Actomyosin drives cancer cell nuclear dysmorphia and threatens genome stability. *Nat. Commun*. 8:16013.

Patwardhan A, Brandt R, Butcher SJ, **Collinson L**, Gault D, Grunewald K, Hecksel C, Huiskonen J, Iudin A, Jones M, Korir PK, Koster A, Lagerstedt I, Lawson CL, Mastronarde D, McCormick M, Parkinson H, Rosenthal P, Saalfeld S, Saibil H, Sarntivijal S, Solanes Valero I, Subramaniam S, Swedlow JR, Tudose I, Winn M, Kleywegt GJ (2017). 3D segmentations and transformations – building bridges between cellular and molecular structural biology. *eLife*. e25835.

Durgan J, Tseng Y-Y, Hamman J, Domart MC, **Collinson L**, Hall A, Overholtzer M, Florey O (2017). Mitosis can drive cell cannibalism through entosis. *eLife*. e27134.

Peddie CJ, Domart MC, Snetkov X, O’Toole P, Larijani B, Way M, Cox S, **Collinson LM** (2017). Correlative super-resolution fluorescence and electron microscopy using standard fluorescent proteins in an integrated microscope. *J Struct. Biol.* 199:120-31.

Lees RM, Peddie CJ, **Collinson LM**, Ashby MC, Verkade P (2017). Correlative two-photon and serial block face scanning electron microscopy in neuronal tissue using 3D near-infrared branding maps. *Methods Cell Biol.* 140:245-276.

Lerner TR, Borel S, Greenwood DJ, Repnik U, Russell MRG, Jones ML, **Collinson LM**, Griffiths G, Gutierrez MG (2017). *Mycobacterium tuberculosis* replicates within necrotic human macrophages. *JCB.* 216:583-94.

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Paul-Gilloteaux P, Heiligenstein X, Belle M, Domart MC, Larijani B, **Collinson LM**, Raposo G, Salamero J (2017). ec-CLEM: flexible multidimensional registration software for correlative microscopies. *Nat Methods.* 14:102-3.

Brama E, Peddie CJ, Wilkes G, Gu Y, **Collinson LM**, Jones ML (2017). ultraLM and miniLM: Locator tools for smart tracking of fluorescent cells for correlative light and electron microscopy. *Wellcome Open Research.* 1:26.

Russell MRG, Lerner TR, Burden JJ, Nkwe DO, Pelchen-Matthews A, Domart MC, Durgan J, Weston A, Jones ML, Peddie CJ, Carzaniga R, Florey O, Marsh M, Gutierrez MG, **Collinson LM** (2016). 3D correlative light and electron microscopy of cultured cells using serial block face scanning electron microscopy. *JCS.* DOI: 10.1242/jcs.188433.

Taylor MRG, Spirek M, Ma F, Carzaniga R, **Collinson LM**, Greene EC, Krejci L, Boulton SJ (2016). A polar and nucleotide-dependent mechanism of action for RAD51 paralogs in RAD51 filament remodelling. *Mol Cell.* 64:929-939.

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Lerner TR, de Souza Carvalho C, Repnik U, Russell M, Borel S, Diedrich C, Rohde M, Wainwright H, **Collinson LM**, Wilkinson R, Griffiths G, Gutierrez MG (2016). Lymphatic endothelial cells are a replicative niche for *Mycobacterium tuberculosis*. *JCI.* 126:1093-108.

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Brama E, Peddie CJ, Jones M, Domart MC, Snetkov X, Way M, Larijani B, **Collinson LM** (2015). Standard fluorescent proteins as dual-modality probes for correlative experiments in and integrated light and electron microscope. *JoCB*. DOI:10.1007/s12154-015-0147-3

Collinson LM & Verkade P (2015). Probing the future of correlative microscopy. Introduction to Special Issue on Probes for Correlative Microscopy, Special Issue Editors Collinson & Verkade. *JoCB*. In Press. DOI:10.1007/s12154-015-0147-z

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Duke E, Dent K, Razi M, **Collinson LM** (2014). Biological applications of cryo-soft X-ray microscopy. *J Microscopy*. Invited review. 255:65-70

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Duke E, Razi M, Weston AE, Guttman P, Werner S, Henzler K, Schneider G, Tooze S, **Collinson LM** (2013). Imaging endosomes and autophagosomes in whole mammalian cells using correlative cryo-fluorescence and cryo-soft X-ray microscopy (cryo-CLXM). *Ultramicroscopy*. 143:77-87

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