MELANIE D. WHITE

Institute for Molecular Bioscience
University of Queensland

melanie.white@uq.edu.au
+61 480250728

EDUCATION

- 2007 PhD in Neurological Studies, Institute of Neurology, University College London
- 2000 BA Psychology, Physiology, Victoria University of Wellington, New Zealand
- 1999 BSc, 1st Class Honours, Cell & Developmental Biology, Victoria University of Wellington, New Zealand

APPOINTMENTS

- 2020 – current: Group Leader, IMB, University of Queensland
- 2016 – 2020: Senior Research Fellow, IMCB, A*STAR, Singapore
- 2012 – 2016: Research Fellow, EMBL Australia, Monash University
- 2011 – 2012: Senior Research Officer, Melbourne Brain Centre, University of Melbourne
- 2007 – 2011: Marie Curie Post-doctoral Researcher (Nolan Lab), University of Edinburgh
- 2003 – 2007: PhD Researcher (Mallucci Lab), Institute of Neurology, University College London
- 2001 – 2003: Research Assistant, NDCLS, University of Oxford
- 2000 – 2001: Research Assistant, WTCHG, University of Oxford

AWARDS

2018 ASCB Porter Prize for Research Excellence
2016 Best Poster Prize, Stem Cell Society of Singapore Annual Symposium
2015 Dean's Award for Excellence in Research (Early Career), Monash University
2014 Early Career Researcher Publication Prize, Monash University
2012 Florey Postdoctoral Association Oral Presentation Prize, Florey Neuroscience Institute
2012 International Travel Grant, International Brain Research Organisation
2010 Edinburgh Neuroscience Poster Prize, University of Edinburgh
2009 ENINET International Travel Award, Network of European Neuroscience Institutes
2006 Tony Ball Memorial Prize, University College London
2004 International Networking for Young Scientists Travel Award, British Council
2000 Summer Research Award, Victoria University of Wellington

FELLOWSHIPS / GRANTS

- 2016 Strategic Grant, Monash University, SGS16-0452 ($100,000)
- 2010 Small Project grant from The University of Edinburgh Campaign ($10,000)
- 2008 Marie Curie Postdoctoral Fellowship, European Commission
- 2003 Gordon Piller studentship, Leukemia Research Fund

PUBLICATIONS

Altmetrics

1. Expanding Actin Rings Zipper the Mouse Embryo for Blastocyst Formation.


J. Zenker*, M. White*, M. Gasnier*, Y. Alvarez*, H. Lim, S. Bissiere, M. Biro, and N Plachta
Cell (2018) *equal contribution
Two recommendations by Faculty of 1000

2. A Microtubule-organizing Center Directing Intracellular Transport in the Early Mouse Embryo.


J. Zenker, M. White, R. Templin, R. Parton, O. Thorn-Seshold, S. Bissiere, and N Plachta
Science (2017)
Recommended by Faculty of 1000

3. Long-Lived Sox2–DNA Binding Identifies Distinct Cell Fates in Four-Cell Mouse Embryos.


M. White*, J. F. Angiolini*, Y. Alvarez*, G. Kaur*, E. Mocskos, Z.Zhao, L. Bruno, S. Bissiere, V. Levi, and N. Plachta
Cell (2016)
Cover + Video Abstract + Cell Commentary

4. Cortical Tension Allocates the First Inner Cells of the Mammalian Embryo.


C. R. Samarage*, M. White*, Y. Álvarez*, J. C. Fierro-González, Y. Henon, E. Jesudason, S. Bissiere, A. Fouras, and N. Plachta
Developmental Cell (2015)
Commentary in Developmental Cell

5. Cadherin-dependent filopodia control preimplantation embryo compaction.


J. C. Fierro-González*, M. White*, J. C. Silva, and N. Plachta
Nature Cell Biology (2013)
Two recommendations by Faculty of 1000

6. A molecular toolbox for rapid generation of viral vectors to up- or down-regulate in vivo neuronal gene expression.
M. White, R. Milne and M. Nolan
Frontiers in Molecular Neuroscience (2011)

7. Tuning of synaptic integration in the medial entorhinal cortex to the organization of grid cell firing fields.
D. Garden, P. Dodson, C. O'Donnell, M. White, and M. Nolan
Neuron (2008)
Recommended by Faculty of 1000

8. Single treatment with RNAi against prion protein rescues early neuronal dysfunction and prolongs survival in mice with prion disease.
M. White, M. Farmer, I. Mirabile, S. Brandner, J. Collinge and G. Mallucci
PNAS (2008)
Highlighted in Nature Reviews Neuroscience

9. Targeting cellular prion protein reverses early cognitive deficits and neurophysiological dysfunction in prion-infected mice.
G. Mallucci, M. White, A. Dickinson, S. Brandner, H. Khatun, A. Powell, J. Jeffreys and J. Collinge
Neuron (2007)
Highlighted in Neuron, Nature Reviews Neurology, The Lancet

10. Positional cloning of a quantitative trait locus on chromosome 13q14 that influences immunoglobulin E levels and asthma.
Y. Zhang, N. Leaves, G. Anderson, C. Ponting, J. Broxholme, R. Holt, P. Edser, S. Bhattacharyya, A. Dunham, I. Adcock, L. Pulleyn, P. Barnes, J. Harper, G. Abecasis, L. Cardon, M. White, J. Burton, L. Matthews, R. Mott, M. Ross, R. Cox, M. Moffatt and W. Cookson
Nature Genetics (2003)
Recommended by Faculty of 1000

REVIEWS / PROTOCOLS / BOOK CHAPTERS

1. Specification of the First Mammalian Cell Lineages In Vivo and In Vitro.
   M.White and N. Plachta,
   Cold Spring Harbor Perspectives in Biology (2020)

2. Instructions for Assembling the Early Mammalian Embryo.
   M.White, J.Zenker, S.Bissiere and N. Plachta,
   Developmental Cell (2018)

3. In vivo Imaging of Single Mammalian Cells in Development and Disease.
   M.White*, Z.Zhao* and N. Plachta,
   Trends in Molecular Medicine (2018)

4. Quantifying transcription factor-DNA binding in single cells in vivo with photoactivatable fluorescence correlation spectroscopy.
   Z.Zhao*, M.White*, Y. Alvarez*, J.Zenker*, S.Bissiere and N. Plachta,
   Nature Protocols (2017)

5. How cells change shape and position in the early mammalian embryo.
   M.White, J.Zenker, S.Bissiere and N. Plachta,
   Current Opinion in Cell Biology (2016)

6. Quantitative imaging of mammalian transcriptional dynamics: From single cells to whole embryos.
   Z.Zhao, M.White, S.Bissiere, V. Levi and N. Plachta,
   BMC Biology (2016)

7. Mouse embryo compaction.
   M.White, S.Bissiere, Y. Alvarez and N. Plachta,
   Current Topics in Developmental Biology (2016)

8. The first cell fate decision during mammalian development.
   M.White and N. Plachta,
   Stem Cells, Tissue Engineering & Regenerative Medicine, Imperial College Press (2015)

9. How adhesion forms the early embryo.
   M.White and N. Plachta,
   Current Topics in Developmental Biology (2015)

10. Preparation of Parasagittal Slices for Investigation of Dorsal-ventral Organization of the Rodent Medial Entorhinal Cortex.
    H. Pastoll, M. White and M. Nolan,
    JOVE (2012)

11. RNAi for the treatment of prion disease: a window for intervention in neurodegeneration?
    M. White and G. Mallucci,
    CNS & Neurological Disorders – Drugs Targets (2009)

12. Therapy for prion diseases: insights from the use of RNA interference.
    M. White and G. Mallucci,
    Prion (2009)

TEACHING

- Student supervision
  - 2012-2016: Co-supervised 1 international PhD student at the University of Melbourne
  - 2008-2011: Supervised 6 Honours and 1 PhD student at the University of Edinburgh

- Tutor, Peer-Assisted-Learning Scheme, Biology Department,
  University College London
  2005 – 2006
  Individual and group tutoring for undergraduates in Biology, Genetics and Molecular Biology

- Postgraduate Teaching Assistant,
  University College London and Victoria University of Wellington, NZ
  1999 – 2005
  Molecular Biology, Microbiology, Genetics, Cell & Developmental Biology, Immunology, Biochemistry

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INVITED LECTURES

- Morphogenesis revealed: Imaging how cells organize to form an embryo
  Brisbane Cell and Developmental Biology Meeting 2019, Australia

- Imaging how the pluripotent inner mass forms in the living mouse embryo
  ASCB|EMBO Meeting 2018, San Diego, USA

- Imaging how cells first change their shape and position in the living mouse embryo
  Society for Developmental Biology 75th Annual Meeting 2016, Boston, USA

- Imaging how transcription factors bind DNA to control cell fate in the living mouse embryo
  Society for Developmental Biology 75th Annual Meeting 2016, Boston, USA

- Revealing how the first tissue-like structure forms in the mammalian embryo
  ComBio2014, Canberra, Australia

- Lentivirally-mediated RNAi as a therapeutic approach in prion disease
  Virus-based techniques for investigating function and pathology of the nervous system, Italy, 2009

- Lentiviral vectors for manipulation of neuronal gene expression in vivo
  University of Leicester, UK, 2009

- Alteration of neuronal ion channel expression in vivo using lentiviruses
  CSHL: Molecular Neurology and Neuropathology, USA, 2009

- RNAi as a therapeutic approach in prion disease
  Keystone Symposium: Molecular mechanisms in neurodegeneration, USA, 2006

- Recovery of early cognitive deficits and synaptic function in prion-infected mice
  International Winter Meeting of the Swiss Society of Neuropathology, Switzerland, 2006