

Irene Miguel-Aliaga

Curriculum vitae

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Education

- 09/1997 - 03/2001 DPhil in Genetics. Supervisor: Prof. Kay Davies, Department of Human Anatomy and Genetics, University of Oxford, UK.
- 09/1991 - 06/1997 First-class honours in Biochemistry. Universitat Autònoma de Barcelona, UAB, Spain.

Appointments

- 07/2017 - present Chair of the Genes & Metabolism Section, MRC London Institute of Medical Sciences (LMS).
- 09/2016 - present Professor of Genetics and Physiology, Imperial College London.
- 07/2015 - present Programme Leader, MRC LMS.
- 08/2014 - 08/2016 Reader in Genetics and Physiology, Imperial College London.
- 10/2012 - 06/2015 Programme Leader Track, MRC LMS.
- 06/2008 - 10/2012 Wellcome Trust Research Career Development Fellow, Department of Zoology, University of Cambridge.
- 01/2005 - 05/2008 Marie Curie and MRC Postdoctoral Fellow in the lab of Dr. Alex P. Gould, Division of Mammalian Development, MRC National Institute for Medical Research, London.
- 03/2001 - 12/2004 Postdoctoral Research Fellow in the lab of Prof. Stefan Thor. Department of Neurobiology, Harvard Medical School, USA and Linköping University, Sweden.

Awards and Honours

- 2020 Featured in *Development* journal.
- 2019 Elected to the Academy of Medical Sciences as a Fellow (FMedSci).
- 2018 Suffrage Science Women in Science Award.
- 2017 Elected to EMBO.
- 2015 Featured by the *Journal of Cell Science* as a “cell scientist to watch”.
- 2015 Featured in the Physiological Society’s “Women Physiologists” book.
- 2012 - 2014 Elected to EMBO Young Investigator Programme (EMBO YIP).
- 2008 - 2014 Wellcome Trust Research Career Development Fellowship.
- 2008 Royal Society University Research Fellowship (declined in favour of RCDF).
- 2005 - 2007 EU Marie Curie Intra-European Fellowship.
- 1998 University of Oxford Goodger Scholarship.
- 1997 - 1998 “La Caixa”-British Council award.
- 1997 Spanish Ministry of Education and Science prize: Best National Academic Record.
- 1997 UAB Prize for the best academic record.
- 1996 Spanish Ministry of Education and Science Studentship.

Current Funding

- 2018 - 2023 ERC Advanced Grant: “IntraGutSex”.
- 2016 - 2021 MRC core grant “Gut Signalling and Metabolism” (renewable).
- 2020 - 2021 Uehara Memorial Foundation overseas postdoctoral fellowships to T. Ameku (postdoc).
- 2018 - 2020 JSPS Postdoctoral Fellowship to T. Ameku (postdoc).

Committee Membership and Reviewer Activities

2020 - present Associate Editor of *Development* journal.
2020 - 2022 Board Director, Genetics Society of America.
2019 - present Member of MRC Neurosciences & Mental Health Board.
2019 - present Member of Scientific Advisory Committee, Centre for Integrative Genomics (CIG), University of Lausanne, Switzerland.
2019 - present Member of Scientific Advisory Board, Instituto de Investigación Sanitaria del Principado de Asturias (ISPA), Spain.
2019 - present Member of the *Drosophila* Image Award Committee.
2017 - 2019 Chair of Scientific Advisory Board, Institute of Functional Genomics of Lyon (IGFL), France.
2018 Member of promotion panel, University of Cyprus, Cyprus.
2017 - present Member of Imperial College European Advisory Group.
2017 Member of promotion panel, Institut Curie, Paris, France.
2016 - present Member of Faculty of Medicine Imperial College Research Fellowships Panel.
2016 - present Wellcome Trust Pool of Prospective Committee Members.
2016 - present Member of LMS Facilities Review Committee.
2015 - 2019 BBSRC Pool of Experts (frequent reviewer and occasional committee member).
2015 - present Member of MRC LMS Institute Planning and Operations Group.
2015 - present Member of MRC LMS Space Committee.
2015 - present Academic advisor to the LMS Bioinformatics Facility.
2010 Committee member for "Ramon y Cajal" awards 2010 (Spanish government)
Ad-hoc reviewer for ERC, Wellcome Trust, MRC, BBSRC, Leverhulme Trust, NC3Rs, ANR (France), DFG (Germany), ANEP (Spain), ISF (Israel), Novo Nordisk (Denmark), Research Foundation Flanders – FWO (Belgium), Research Promotion Foundation (Cyprus) and the Nutrition Obesity Research Center (University of Michigan).
Ad-hoc reviewer for *Science*, *Nature*, *Elife*, *Cell Metab*, *Nat Genet*, *Nat Cell Biol*, *Dev Cell*, *Genes Dev*, *Nat Methods*, *PLoS Biol*, *Proc Natl Acad Sci U S A*, *EMBO J*, *Curr Biol*, *PLoS Genetics*, *Nat Commun*, *Aging Cell*, *Trends Endoc Metab*, *Development*, *Dis Model Mech*, *Cell Rep*, *J Insect Physiol*, *J Exp Biol*, *Cell Res*, *BMC Genomics*, *Biol Sex Differ*, *PLoS One*.
Guest Editor for *PLoS Genetics*.
Interviewer for EMBO Long-Term Fellowships.

Mentoring and Teaching

2020 - present Mentor for the Academy of Medical Sciences SUSTAIN mentoring programme. Currently mentor to Drs Tiffany Taylor (University of Bath) and Leeanne McGurk (University of Dundee).
2019 - present Member of Imperial College's mentoring scheme.
2016 - present External mentor to Dr Sveta Chakrabarti (Wellcome Trust/DBT India Alliance Fellow, Bangalore, India).
2016 - 2017 Deputy Chair of Athena Swan Opportunities Committee.
2015 - present External mentor to Dr Julia Cordero (Wellcome Trust Henry Dale Fellow, University of Glasgow).
2016 - present Internal mentor to Drs Santiago Vernia, Saravana Ramasamy and Louise Fets (LMS junior Group Heads).
2015 - present In-house postdoctoral mentor at the MRC London Institute of Medical Sciences.
2014 - 2019 Member of the Athena Swan Self-Assessment Team and Opportunities Committee.
2017 - present Lecturer, MSc Applied Genomics (Imperial College London).
2017 - present Lecturer, MRC LMS PhD Programme.
2015 - present Lecturer, MRes Biomedical Research, MHD stream (Imperial College London).
2016 - 2017 Lecturer/Tutor, "Human Culture: the human experience of materials applied to eating food" post-graduate student project, Design Products (Royal College of Art).
2009 - 2012 Lecturer, Neurogenesis sessions of Core Course in Developmental Biology (Wellcome PhD Programme, University of Cambridge).
1998 - 2000 *Drosophila* Genetics Practicals Demonstrator (University of Oxford).
1999 - 2000 Microbial Genetics Practicals Demonstrator (University of Oxford).
Supervision of 6 PhD students and 4 Erasmus/Masters students.
Second advisor to 11 PhD students.
Examiner for 8 PhD and 1 MSc vivas.

Meetings Organised

03/2022	EMBO Symposium “Inter-organ Communication in Development and Disease”, EMBL Heidelberg, Germany. Co-organiser.
09/2021	27 th European <i>Drosophila</i> Research Conference, IGFL, Lyon. Workshop co-organiser and chair.
05/2021	“Gastronauts 2020: A Symposium for Gut-Brain Matters”, Nantes, France. Co-organiser.
03/2021	Keystone Virtual Symposium “Metabolic Decisions in Development and Disease”, Santa Fe, New Mexico, USA. Co-organiser.
2020 - 2021	ASCB/EMBO Meeting Program Committee member and Symposium Chair (virtual).
2020 - present	Insect Hormone Workshop. International Advisory Committee member.
11/2020	Inter-organ Communication in Health and Disease Virtual Symposium. Co-organiser.
08/2020 - 07/2026	EMBO Conference “Molecular and Developmental Biology of <i>Drosophila</i> ”. Organising committee co-chair.
02/2020	1 st LMS/Helmholtz Munich Symposium on Metabolism, London, UK. Co-organiser.
2019 - present	International Insect Hormone Meeting. Member of the International Organising Committee.
07/2014 - 07/2020	EMBO Conference “Molecular and Developmental Biology of <i>Drosophila</i> ”, Crete, Greece. Organising committee member.
09/2017	25 th European <i>Drosophila</i> Research Conference, London, UK. Workshop co-organiser and chair.
10/2016	Brainy Tongue: The Sensory Logic of the Gastronomic Brain, San Sebastian, Spain. Co-organiser.
09/2015	24 th European <i>Drosophila</i> Research Conference, Heidelberg, Germany. Workshop co-organiser and chair.
10/2013	23 rd European <i>Drosophila</i> Research Conference, Barcelona, Spain. Workshop co-organiser and chair.
09/2011	22 nd European <i>Drosophila</i> Research Conference, Lisbon, Portugal. Workshop co-organiser and chair.
2016 - present	LMS external seminar series coordinator.
2014 - 2015	LMS external seminar series organiser.
2010 - 2012	Department of Zoology Tea Talks organiser (University of Cambridge).
2010 - present	London Gut Club (formerly Cambridge Gut Club) organiser: a biannual series of presentations by members of labs working on the mammalian or invertebrate intestine.

Invited Research Presentations

Conference speaker

02/2022	2 nd Crick-Bedington Developmental Biology Symposium, Crick Institute, London, UK.
11/2021	EMBO EMBL Symposium: Metabolism Meets Epigenetics, EMBL Heidelberg, Germany.
10/2021	International Society of Developmental Biology (ISDB) Congress, Algarve, Portugal.
10/2021	6 th Biennial Symposium on Growth and Regeneration, Begur, Spain.
08/2021	EMBO Workshop “Cell and Developmental Systems”, Arolla, Switzerland.
05/2021	Rank Prize Funds Symposium “Exploring the Impact of Nutrition on the Ageing Process”, Grasmere, UK.
01/2021	The Australian Developmental Neuroscience Forum (virtual).
11/2020	ERC conference “Gender Dimension in Research”, Brussels, Belgium (virtual).
09/2020	2020 Oxford Autumn School in Neuroscience (virtual).
10/2019	10 th Meeting of the Latin American Society for Developmental Biology, Buenos Aires, Argentina.
09/2019	26 th European <i>Drosophila</i> Research Conference, Lausanne, Switzerland. EMBO Keynote Lecture.
07/2019	8 th International Symposium on Molecular Insect Science, Sitges, Spain.
07/2019	4 th Insect Hormone Meeting, Kolybari, Crete, Greece.
05/2019	Mechanisms of Insect Nutritional Homeostasis workshop, Bonn, Germany
01/2019	Keystone Symposia on Cellular Plasticity/ Developmental Signaling, Keystone, Colorado, USA.
09/2018	EU-LIBRA Workshop “Sex and Gender in Research and Experimental Design”, Babraham Institute, Cambridge, UK.

09/2018 “Developing Brains” Conference, Stockholm, Sweden.

08/2018 EMBO Workshop “Cell and Developmental Systems”, Arolla, Switzerland.

07/2018 Gordon Research Conference on Neural Development, Newport, USA.

07/2018 “1st International Helmholtz Conference on Engineering Biomedical and Metabolic Breakthroughs”, Venice, Italy.

05/2018 “Gastronauts: A Symposium on Gut-brain Matters”, Duke-NUS Singapore.

05/2018 6th UK Workshop on Developmental Cell Biology of *Drosophila*, The Burn, Scotland, UK.

03/2018 Annual Postdoc Symposium, Sir William Dunn School of Pathology, University of Oxford, UK. Keynote speaker.

02/2018 Keystone Symposium on Endoderm Development and Disease: Cross-Organ Comparison and Interplay, Taos, New Mexico.

12/2017 “Hot Topics in Biology” workshop. Max Planck Institute for Biophysical Chemistry, Goettingen, Germany.

10/2017 SEG- SEBC- SEBD Joint Congress, Gijon, Spain.

10/2017 MDC Careers Day, Berlin, Germany.

09/2017 Portuguese *Drosophila* Meeting, Tomar, Portugal. Keynote speaker.

06/2017 ISDB 18th International Congress of Developmental Biology, Singapore.

05/2017 EMBO Conference “Stem Cells in Cancer and Regenerative Medicine”, EMBL Heidelberg, Germany.

05/2017 4th Asia-Pacific *Drosophila* Research Conference, Osaka, Japan.

05/2017 EMBO | EMBL Symposium “Metabolism in time and space”, Heidelberg, Germany.

03/2017 58th Annual *Drosophila* Research Conference, San Diego, USA. Plenary talk.

11/2016 18th EMBL PhD Symposium “Life by Numbers: Towards Quantitative Biology”. EMBL Heidelberg, Germany.

10/2016 Cell Press/Fondation IPSEN Exciting Biologies meeting “Biology of Commitment”. Phoenix, Arizona, USA.

09/2016 German *Drosophila* Meeting. Cologne, Germany. Keynote speaker.

07/2016 Rank Prize Funds mini-symposium on Dietary Restriction and Ageing, Cumbria, UK.

07/2016 10th FENS Forum of Neuroscience, Copenhagen, Denmark. Symposium speaker.

06/2016 20th EMBO Conference Development of *Drosophila*, Crete, Greece.

05/2016 Shaping Life, Marseille, France.

05/2016 EMBO Workshop “Neural control of metabolism and eating behaviour”, Cascais, Portugal.

04/2016 Fondation des Treilles “Integrative Physiology” meeting, France.

07/2015 Society for Developmental Biology 74th Annual Meeting. Snowbird, Utah, USA.

04/2015 Enteric Nervous System 2015, Rotterdam, the Netherlands.

04/2015 British Societies of Developmental Biology and Cell Biology Meeting, Warwick, UK.

09/2014 5th ASM Conference on Beneficial Microbes, Washington, USA.

06/2014 Gordon Research Conference on Molecular and Cellular Neurobiology, Hong Kong, China (declined because of conflicting dates).

06/2014 19th EMBO Conference Development of *Drosophila*, Crete, Greece.

04/2014 “Visions in Cell Biology” Symposium, Max Planck Institute, Dresden, Germany.

06/2012 18th EMBO Conference “Development of *Drosophila*”, Crete, Greece. I was also invited to write the meeting report.

01/2012 Temasek Life Sciences Laboratory Annual Symposium, Singapore (declined because of maternity leave).

10/2011 25th Annual French *Drosophila* Conference, Lyon, France.

09/2011 1st Junior European *Drosophila* Investigator Meeting, Leysin, Switzerland.

06/2010 17th EMBO Conference “Development of *Drosophila*”, Crete, Greece. Talk highlighted in an EMBO reports article: *EMBO reports* 11, 724 - 726.

03/2009 21st Cambridge Neuroscience Meeting “New Approaches in Neuroscience”, UK.

Invited talks

04/2021 IST Vienna, Austria.

04/2021 DanStem, Copenhagen, Denmark.

02/2021 Instituto de Neurociencias, Alicante, Spain.

02/2021 Institut de Recerca Biomèdica, Barcelona, Spain.

01/2021 Beatson Institute, Glasgow, UK. Distinguished seminar.

10/2020 Stowers Institute for Medical Research, Kansas City, USA (virtual).

09/2020 WorldWideNeuro – Brain-body Interactions virtual seminar series.

09/2020	Centre for Stem Cells and Regenerative Medicine, King's College London (virtual).
02/2020	University of Sheffield, Sheffield, UK.
01/2020	Molecular and Cellular Biology Department, Harvard University, USA.
01/2020	NIH/NIDDK, Bethesda, USA.
11/2019	University of Münster, Münster, Germany.
11/2019	Dundee School of Life Sciences, UK.
08/2019	The Biosciences Patricia Clarke Lecture 2019, UCL London, UK.
05/2019	Molecular and Cellular Biology Department, Harvard University, USA.
03/2019	Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany.
12/2018	MRC Harwell Institute, Harwell, UK.
09/2018	UCL Metabolism Club, London, UK.
05/2018	CIG Lausanne, Switzerland.
04/2018	Centre for Developmental Neurobiology, King's College London, UK.
01/2018	Berlin Life Science Colloquium, Germany.
01/2018	Centre for Molecular Neurobiology, Hamburg, Germany.
11/2017	ESPCI-CNRS Paris, France.
07/2017	Helmholtz Center and Helmholtz Pioneer Campus, Munich, Germany.
04/2017	Linda Partridge's lab retreat, Ringberg Castle, Germany.
04/2017	Stanford University School of Medicine, Stanford, USA.
03/2017	University of California Los Angeles (UCLA), USA.
02/2017	Gurdon Institute, University of Cambridge, UK.
12/2016	Institute of Metabolic Science, University of Cambridge, UK.
12/2016	Max Delbrück Center for Molecular Medicine, Berlin, Germany.
02/2016	Max Planck Institute of Neurobiology, Martinsried, Germany.
01/2016	Manchester University, UK.
12/2015	Oxford University, UK.
10/2015	Université Nice Sophia Antipolis, France.
02/2015	Umea University, Sweden.
10/2014	Skirball Institute, New York, USA.
02/2014	École Polytechnique Fédérale de Lausanne, Switzerland.
01/2014	Randall Division of Cell & Molecular Biophysics, King's College London, UK.
12/2013	Institut Curie, Paris, France.
11/2013	MRC Laboratory for Molecular Cell Biology, UCL, London.
03/2013	Institute of Molecular Life Sciences, University of Zurich, Switzerland.
02/2013	MRC Centre for Developmental Neurobiology, King's College London.
02/2013	VIB and KU Leuven School of Medicine, Leuven, Belgium.
11/2012	Beatson Institute for Cancer Research, Glasgow, UK.
06/2012	Oxford University, UK.
02/2012	Trinity College Dublin, Ireland (declined because of maternity leave).
07/2011	Queen Mary University of London, UK.
06/2011	École Polytechnique Fédérale de Lausanne, Switzerland.
05/2011	IRB Barcelona, Spain.
02/2011	Institut de Biologie du Développement de Marseille Luminy, France.
10/2010	Centre de Biologie du Développement, Toulouse, France.
10/2010	UCL, London, UK.
09/2010	University of Helsinki, Finland.
10/2009	Wolfson Centre for Age-Related Diseases, London, UK.

Public Engagement

05/2019	Lab contribution to Pint of Science 2019 event: "Tomorrow's medicine, today!"
04/2018	Imperial Festival. We contributed an interactive installation to demonstrate the use of <i>Drosophila</i> to replace and reduce animal experimentation.
10/2016	"Brainy Tongue: The Sensory Logic of the Gastronomic Brain" workshop (San Sebastian, Spain), featuring world-renowned chefs and neurobiologists. Included open session featured by media worldwide (e.g. http://www.bbc.co.uk/news/business-37800097).
02/2016	BBC Radio 4 interview (http://www.bbc.co.uk/programmes/b0713p30).
02/2016	Hudry <i>et al.</i> featured by The Daily Mail, The Daily Telegraph, Medical News Today, i (the paper for today), Press and Journal (Scotland), Medical Xpress, Yahoo! News, BT.com, Irish Examiner, The Conversation.

02/2016	Lab stand at the “Imperial Fringe: Food of Tomorrow” public engagement event.
01/2016	My lab contributed a talk to the University of the Third Age visit.
10/2015	Hosted Minister for the Life Sciences George Freeman during his visit to the LMS. In the lab, we showed him how flies can be used to study obesity and cancer.
07/2015	Reiff <i>et al.</i> featured by New Scientist, Daily Mail, Daily Telegraph, Daily Mirror, Evening Standard, Metro, CBS News, Irish Independent, SBS and 9 News (amongst others).
03/2014	Contributed video to New York Imagine Science Films Festival (http://imaginesciencefilms.org/).
01/2014	Joint MRC / University of the Arts London workshop “Fabrics of Life” (http://csc.mrc.ac.uk/fabrics-of-life-2014-big-data/).
2013 - present	Microscopy demonstrations (<i>Drosophila</i> life cycle) to primary school children.
07/2012	Contributed images to “The Cell: An Image Library” (www.cellimagelibrary.org/).
03/2012	My lab contributed a video to the University of Cambridge “Under the microscope” series, accessible on YouTube (http://www.youtube.com/watch?v=CDg2Keu3HT8).
03/2011	BBC audio slideshow (http://www.bbc.co.uk/news/science-environment-12686745).
03/2011	Cambridge Science Festival. Organiser of the event “Playing with the entrails of fruit flies”.
01/2011	Cognigni <i>et al.</i> featured by New Scientist, Times Higher Education, CBS News, Le Point, Discover Magazine, Times of India (amongst others).
01/2010	Contributed images to the University of Cambridge’s 800 th anniversary light show. One of them was also the exclusive image used for the posters and flyers advertising the event.
01/2010	Interviewed by ITV Anglia (800 th anniversary feature).
2001/02	Freelance writer (press releases) for the scientific journal <i>Neuron</i> .

Additional Information

Holder of a Home Office Project Licence (for mouse work) 04/2018 – 04/2023.

Member of the Biochemical Society, Genetics Society, British Society for Developmental Biology, British Society for Cell Biology, Physiological Society, Society for Developmental Biology, Organization for the Study of Sex Differences and Genetics Society of America.

Invited by Springer to edit an academic book on the brain-gut axis (declined).

Publications

Book chapters

Miguel-Aliaga, I., Jasper, H., Lemaitre, B. (2018) Anatomy and Physiology of the Digestive Tract of *Drosophila melanogaster*. In Development & Growth section of *FlyBook*, edited by Cooley, L., Hawley, S., Markow, T., Spradling, A. In *Genetics* 210(2):357-396.

Peer-reviewed publications

Hadjieconomou, D., King, G., Gaspar, P., Mineo, A., Blackie, L., Ameku, T., Studd, C., de Mendoza, A., Diao, F., White, B.H., Brown, A.E.X., Plaçais, P.-Y., Preat, T., Miguel-Aliaga, I. Enteric neurons increase maternal food intake during reproduction. *Nature*, in press.

Messal, H.A., Almagro, J., Thin, M.Z., Tedeschi, A., Ciccarelli, A., Blackie, L., Anderson, K.I., Miguel-Aliaga, I., van Rheenen, J., Behrens, A. Antigen retrieval and clearing for whole organ immunofluorescence by FLASH. *Nat Protoc*, in press.

Redhai, S., Pilgrim, C., Riabinina, O., Lopes, T., Chanana, B., Dahalan, F., Yuan, M., Wilsch-Brauninger, M., Lin, W., Milona, A., Dennison, N., Capriotti, P., Lawniczak, M.K.N., Baines, R.A., Warnecke, T., Windbichler, N., Miguel-Aliaga, I. (2020) An intestinal zinc sensor regulates food intake and developmental growth. *Nature* 580(7802):263-268. *F1000Prime-recommended and highlighted by Nature News and Views and Allergy News and Views.*

Milona, A., Massafra, V., Vos, H., Naik, J., Artigas, N., Paterson, H.A.B., Bijsmans, I.T.G.W., Willemsen, E.C.L., Ramos Pittol, J.M., Miguel-Aliaga, I., Bosma, P., Burgering, B.M.T., Williamson, C., Vernia, S., Dhillo, W.S., van Mil, S.W.C.,

- Owen, B.M. (2019) Steroidogenic control of liver metabolism through a nuclear receptor-network. *Mol Metab* 30:221-229.
- Hudry, B., de Goeij, E., Mineo, A., Gaspar, P., Hadjieconomou, D., Studd, C., Mokochinski, J.B., Kramer, H.B., Plaçais, P.-Y., Preat, T., Miguel-Aliaga, I. (2019) Sex differences in intestinal carbohydrate metabolism promote food intake and sperm maturation. *Cell* 178(4):901-918.e16. *F1000Prime-recommended and highlighted by Dev Cell and Nat Rev Urol*.
- Grmai, L., Hudry, B., Miguel-Aliaga, I., Bach, E. A. (2018) Chinmo prevents transformer alternative splicing to maintain male sex identity. *PLOS Genet* 1;14(2):e1007203.
- Perea, D., Guiu, J., Hudry, B., Konstantinidou, C., Milona, A., Hadjieconomou, D., Carroll, T., Hoyer, N., Natarajan, D., Kallijärvi, J., Walker, J.A., Soba, P., Thapar, N., Burns, A.J., Jensen, K.B., Miguel-Aliaga, I. (2017) Ret receptor tyrosine kinase sustains proliferation and tissue maturation in intestinal epithelia. *EMBO J* 36(20):3029-3045. *F1000-recommended*.
- Hudry, B., Khadayate, S., Miguel-Aliaga, I. (2016) The sexual identity of adult intestinal stem cells controls organ size and plasticity. *Nature* 530:344-8. *F1000Prime-recommended and highlighted by Cell Stem Cell Preview, Curr Biol Dispatch and Nature News and Views*.
- Reiff, T., Jacobson, J., Cognigni, P., Antonello, Z.A., Ballesta, E., Tan, K.J., Yew, J.Y., Dominguez, M., Miguel-Aliaga, I. (2015) Endocrine remodelling of the adult intestine sustains reproduction in *Drosophila*. *Elife* 4:e06930. *F1000Prime-recommended and highlighted by Elife Insight and Curr Biol Dispatch*.
- Soba, P., Han, C., Zheng, Y., Perea, D., Miguel-Aliaga, I., Jan, L.Y., Jan, Y.N. (2015) The Ret receptor regulates sensory neuron dendrite growth and integrin mediated adhesion. *Elife* 4:05491.
- Wayland, M.T., Defaye, A., Rocha, J., Jayaram, S.A., Royet, J., Miguel-Aliaga, I., Leulier, F., Cognigni, P. (2014) Spotting the differences: Probing host/microbiota interactions with a dedicated software tool for the analysis of faecal outputs in *Drosophila*. *J Insect Physiol* 69:126.
- Martorell, O., Merlos-Suárez, A., Campbell, K., Barriga, F.M., Christov, C.P., Miguel-Aliaga, I., Batlle, E., Casanova, J., Casali, A. (2014) Conserved mechanisms of tumorigenesis in the *Drosophila* adult midgut. *PLoS One* 9(2):e88413.
- Linneweber, G.A., Jacobson, J., Busch, K.E., Hudry, B., Christov, C.P., Dormann, D., Yuan, M., Otani, T., Knust, E., de Bono, M., Miguel-Aliaga, I. (2014) Neuronal control of metabolism through nutrient-dependent modulation of tracheal branching. *Cell* 156(1-2):69. *F1000Prime-recommended and highlighted by EMBO J*.
- Sarraf-Zadeh, L., Christen, S., Sauer, U., Cognigni, P., Miguel-Aliaga, I., Stocker, H., Köhler, K., Hafen, E. (2013) Local requirement of the *Drosophila* insulin binding protein imp-L2 in coordinating developmental progression with nutritional conditions. *Dev Biol* 381(1):97.
- Talsma, A., Christov, C.P., Terriente-Felix, A., Linneweber, G., Shafer, O.T., Miguel-Aliaga, I. (2012) Remote control of renal function by an intestinal neuropeptide. *Proc Natl Acad Sci U S A* 109(30):12177.
- Oyallon, J., Apitz, H., Miguel-Aliaga, I., Timofeev, K., Ferreira, L., Salecker, I. (2012) Regulation of locomotion and motoneuron trajectory selection and targeting by the *Drosophila* homolog of Olig family transcription factors. *Dev Biol* 369(2):261.
- Pulver S, Cognigni P, Denholm B, Fabre C, Gu W, Linneweber G, Prieto-Godino L, Urbancic V, Zwaart, M. Miguel-Aliaga I. (2011) Why flies? Inexpensive public engagement exercises to explain the value of basic biomedical research on *Drosophila melanogaster*. *Adv Physiol Educ* 35(4):384.
- Cognigni, P., Bailey, A.P., Miguel-Aliaga, I. (2011) Enteric neurons and systemic signals couple nutritional and reproductive status with intestinal homeostasis. *Cell Metab* 13(1): 92.
- Suska, A., Miguel-Aliaga, I., Thor, S. (2011) Segment-specific generation of *Drosophila* capability neuropeptide neurons by multi-faceted Hox cues. *Dev Biol* 353(1): 72.
- Bardet, P.L., Kolahgar, G., Mynett, A., Miguel-Aliaga, I., Briscoe, J., Meier, P., Vincent, J.P. (2008). A fluorescent reporter of caspase activity for live imaging. *Proc Natl Acad Sci U S A* 105(37): 13901.

Miguel-Aliaga, I., Thor, S., Gould, A.P. (2008) Postmitotic specification of *Drosophila* insulinergic neurons from pioneer neurons. *PLoS Biol* 6(3): e58.

Baumgardt, M., Miguel-Aliaga, I., Karlsson, D., Ekman, H., Thor, S. (2007) Specification of neuronal identities by feedforward combinatorial coding. *PLoS Biol* 5, e37.

Sheldon, T.J., Miguel-Aliaga, I., Gould, A.P., Taylor, W.R., Conklin, D. (2007) A novel family of single VWC-domain proteins in invertebrates. *FEBS Lett* 581(27): 5268.

Miguel-Aliaga, I., Thor, S. (2004) Segment-specific prevention of pioneer neuron apoptosis by cell-autonomous, postmitotic Hox gene activity. *Development* 131(24): 6093.

Miguel-Aliaga, I., Allan, D.W., Thor, S. (2004) Independent roles of the *dachshund* and *eyes absent* genes in BMP signaling, axon pathfinding and neuronal specification. *Development* 131(23): 5837.

Allan, D.W., St Pierre, S.E., Miguel-Aliaga, I., Thor, S. (2003) Specification of neuropeptide cell identity by the integration of retrograde BMP signaling and a combinatorial transcription factor code. *Cell* 113(1): 73. [F1000Prime-recommended](#).

Chan, Y.B., Miguel-Aliaga, I., Franks, C., Thomas, N., Trulzsch, B., Sattelle, D.B., Davies, K.E., van den Heuvel, M. (2003) Neuromuscular defects in a *Drosophila* survival motor neuron gene mutant. *Hum Mol Genet* 12(12): 1367.

Vargas, J.D., Culetto, E., Ponting, C.P., Miguel-Aliaga, I., Davies, K.E., Sattelle, D.B. (2002) Cloning and developmental expression analysis of *ltd-1*, the *Caenorhabditis elegans* homologue of the mouse kyphoscoliosis (*ky*) gene. *Mech Dev* 117(1-2): 289.

Miguel-Aliaga, I., Chan, Y.B., Davies, K.E., van den Heuvel, M. (2000) Disruption of SMN function by ectopic expression of the human SMN gene in *Drosophila*. *FEBS Lett* 486(2): 99.

Miguel-Aliaga, I., Culetto, E., Walker, D.S., Baylis, H.A., Sattelle, D.B., Davies, K.E. (1999) The *Caenorhabditis elegans* orthologue of the human gene responsible for spinal muscular atrophy is a maternal product critical for germline maturation and embryonic viability. *Hum Mol Genet* 8(12): 2133.

Talbot, K., Miguel-Aliaga, I., Mohaghegh, P., Ponting, C.P., Davies, K.E. (1998) Characterization of a gene encoding survival motor neuron (SMN)-related protein, a constituent of the spliceosome complex. *Hum Mol Genet* 7(13): 2149.

Preprints

Imambocus, B.N., Wittich, A., Tenedini, F., Zhou, F., Hu, C., Sauter, K., Varela, E.M., Herédia, F., Casimiro, A.P., Macedo, A., Schlegel, P., Yang, C-H., Miguel-Aliaga, I., Pankratz, M.J., Gontijo, A.M., Cardona, A., Soba, P. (2020) Discrete escape responses are generated by neuropeptide-mediated circuit logic. *bioRxiv* 2020.09.22.307033.

Millington, J.W., Chao, C., Sun, Z., Basner-Collins, P.J., Brownrigg, G.P., Wat, L.W., Hudry, B., Miguel-Aliaga, I., Rideout, E.J. (2020) Female-specific upregulation of insulin pathway activity mediates the sex difference in *Drosophila* body size plasticity. *bioRxiv* 2020.04.22.054239.

Review articles

Ameku, T., Beckwith, H., Blackie, L., Miguel-Aliaga, I. (2020) Food, microbes, sex and old age: on the plasticity of gastrointestinal innervation. *Curr Opin Neurobiol* 62:83-91.

Lemaitre, B., Miguel-Aliaga, I. (2013) The digestive tract of *Drosophila melanogaster*. *Annu Rev Genet* 47:377.

Miguel-Aliaga, I. (2012) Nerveless and gutsy: intestinal nutrient sensing from invertebrates to humans. *Semin Cell Dev Biol* 23(6):614.

Miguel-Aliaga, I., Oliver, B., Teleman, A. A. (2012) The flies of Icarus: science with wings in Crete. *EMBO Rep* 13(11):945.

Miguel-Aliaga, I., Thor, S. (2009) Programmed cell death in the nervous system--a programmed cell fate? *Curr Opin Neurobiol* 19(2): 127.

Interviews

Brown, K. (2020) An interview with Irene Miguel-Aliaga. *Development* 147(11):dev191650.

Miguel-Aliaga, I. (2017) Q&A: Irene Miguel-Aliaga. *Curr Biol* 27: R286-R287.

Miguel-Aliaga, I. and Bobrowska, A. (2015) Cell scientist to watch--Irene Miguel-Aliaga. *J Cell Sci* 128: 3519-20.