

# Giorgio F. Gilestro

Senior Lecturer (associate professor)  
Department of Life Sciences  
Imperial College London, UK

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## Previous and current research positions

since 2019 Senior *Lecturer* and *Lab head* at Imperial College London, Department of Life Sciences  
2012 – 2018 *Lecturer* and *Lab head* at Imperial College London, Department of Life Sciences  
2010 – 2012 *Junior Research Fellow* at Imperial College London, London, UK  
2009 – 2010 Paternity leave/career sabbatical  
2006 – 2009 *Postdoc* at University of Wisconsin Madison, Madison, WI, USA  
2002 – 2006 *PhD Student* at Research Institute of Molecular Pathology (IMP), Vienna, Austria  
1998 – 2002 Undergraduate student at the Institute for Cancer Research IRCC, Candiolo, Italy

## Qualifications

2006 PhD in Molecular Biology, University of Vienna, Austria - "Regulation of Robo receptors in *Drosophila*" Grade achieved: *mit Auszeichnung bestanden (magna cum laude / passed with Distinction)*  
2001 Laurea (BSc + MRes) in Medical Biotechnology, University of Torino, Italy  
"Semaphorin signalling via Plexin receptors" Grade achieved: *110/110 Honours*

## Fellowships & grants

### Large grants as PI (£2.5M+)

2024 \$200k Collaborative Pairs Pilot Project Award from the Chan Zuckerberg Initiative (18 months)  
2022 £509k BBSRC RM Research Grant (36 months - BB/W016176/1)  
2019 £120k Imperial President's PhD Scholarship to A. Falconio (42 months)  
2018 £120k BBSRC PhD fellowship (jointly with N. Windblicher and Betabugs - 36 months)  
2018 £120k EPSRC PhD fellowship (36 months)  
2018 £414k BBSRC RM Research Grant (36 months - BB/R018839/1)  
2017 £160k BBSRC iCASE DTP with Syngenta (42 months)  
2015 £240k ERC Marie Curie IF to E. Beckwith (24 months)  
2015 £120k BBSRC PhD fellowship (jointly with N. Windblicher)  
2014 £120k EMBO LTF to E. Beckwith (24 months)  
2014 £375k BBSRC RM Research Grant (36 months - BB/M003930/1)  
2013 £120k Edmond J. Safra foundation (36 months)  
2012 £120k BBSRC PhD fellowship (jointly with S. Zafeiriou) (36 months)  
2012 £120k BBSRC PhD fellowship (jointly with A. Faisal) (36 months)  
2009 £270k Junior Research Fellowship at Imperial College London (36 months)

### Large grants as co-PI

2023 £200k BBSRC Pioneer Award (co-PI, with Eamonn Mallon, 18months)  
2019 £196k CRUK Pioneer Award (co-PI, with Julia Cordero, 24 months)  
2016 £190k The Gas Trust Grant (co-PI, with R. Dickinson, 12 months)

### Small grants as PI

2019 £10k SPARK KTN Award (PI, 6 months)  
2018 £20k Faculty Strategic Research Funding – SME Engagement (PI, 12 months)  
2017 £15k Ad hoc philanthropic donation  
2017 £15k EMBO STF to D. Ricolo (co-PI, 3 months)  
2016 £15k BBSRC Impact Acceleration Award (PI, 6 months)  
2012 £20k EPSRC Kick-start Scheme (co-PI, with Aldo Faisal, 12 months)  
2011 £15k Royal Society Research Grant (PI, 12 months)

## Teaching experience and recognitions

- 2018 Awarded an "Excellence in Teaching award" from the Faculty of Natural Sciences
- since 2017 Director of the MSc in Applied Biosciences and Biotechnology. I am responsible for the entire course, from admissions and interviews to organisation of the curriculum, the 2 full-time taught terms, exams, practicals, and the lab and literature based terms, for a total of 12 months. The course has an intake of 65 international students a year and generates an income of £1.5 million a year
- 2014 - 2017 co-Director of the MSc in Applied Biosciences and Biotechnology
- since 2013 Systems Neuroscience (3<sup>rd</sup> year UG), Principles of Neuroscience (3<sup>rd</sup> year UG), Genes and Genomics (2<sup>nd</sup> year UG), Behavioural Ecology (2<sup>nd</sup> year UG), Pharmacology (Bsc Med.)

## External teaching

- 2018 Lecturer at the ICGEB "*Drosophila* course for neurodegeneration research" - Trieste, Italy
- 2012 Lecturer at the "Biology & Informatics Summer School for graduate students", Tokyotech, Tokyo, Japan
- 2018, 22 Lecturer at the Cajal school "Behaviour of Neuronal Systems", Lisbon, Portugal
- 2009,12,13,14 Lecturer at the Neuroscience Training programme, Champalimaud, Lisbon, Portugal

## PhD examinations

- 2023 University of Southampton, UK (Jonathan Anns)
- 2023 University of Sussex, UK (Jonathan Menzies)
- 2022 Manchester University, UK (Anna Munro)
- 2021 Imperial College London, Internal (Adam McDermott)
- 2020 Imperial College London, Internal (Antonios Kriezis)
- 2019 Open University c/o ICGEB Trieste, Italy (Nina Strah)
- 2019 University of Padova, Italy (Giovanni Frighetto)
- 2019 University of Geneva, Switzerland (Pedro Machado Almeida)
- 2019 University of East London, UK (Benjamin Aleyakpo)
- 2018 Leuven, Belgium (Jorge De Sousa Valadas)
- 2018 University of Melbourne, Australia (Hang Ngoc Bao Luong)
- 2016 University of Lisbon, Portugal (Verónica María Corrales)
- 2016 University of Cambridge, UK (Eleonora Khabirova)

## Departmental administration

- 2014 – 2019 Member of the Departmental Equal Opportunities Committee, responsible, among the rest, for the Athena Swan submission for equal gender opportunities (the department currently holds a Bronze Award, renewal pending).
- 2013 – 2016 Member of the college 3Rs advisory group for animal welfare and reduction, reporting to the Provost
- 2012 Chair of the committee in charge of renovation of the departmental website

## Outreach activities

The list of outreach activities is too long to be detailed here but can be found on the dedicated lab webpage (<http://lab.gilestro.ro/outreach>). Every year we reach to the public by visiting schools, creating digital contents, participating to scientific festivals.

## Learned societies

- 2023-2028 Elected UK representative and member of the European *Drosophila* Board
- since 2012 Member of the British Genetics Society and British Biology Society
- since 2010 Co-Founder of the JEDI network (Junior European *Drosophila* Investigators) for which I still manage the IT aspects of the network (<http://www.fly-jedi.org>)

## Editorial Boards, Grants Panelling and Reviewing

since 2015 Panel for ERC Marie Curie RISE Grants and Marie Curie Individual Fellowships  
 since 2013 Reviewer for BBSRC, EPSRC, MRC Project Grants; the Italian Ministry of Research Project Grants, Alzheimer UK; The Research Foundation Flanders (FWO); National Science Foundation (NSF)  
 2011-2022 PLoS ONE, Academic Editor  
 Reviewer for about 30 academic journals (<https://lab.gilest.ro/wos>)

**Invited speaker - conferences (grey) and seminars (white) (past 5 years only)**

Nov 2023	Seminar	CUNY – New York, USA
Nov 2023	Seminar	Center for Brain Science, Harvard – Boston, MA, USA
Oct 2023	Seminar	University of Buenos Aires – CONICET, Buenos Aires, Argentina
Oct 2023	Talk	XXXVIII Argentinian Society for Neuroscience Meeting – San Luis, Argentina
Oct 2023	Seminar	University of Sheffield, UK – Sheffield, UK
Sep 2023	Seminar	Queen Mary University London, London, UK
Sep 2023	Keynote	BBSRC LIDO conference Staffordshire, UK
Sep 2023	Talk	MRC/DTP conference at UCL, London, UK
Aug 2023	Talk	Systems Biology of the Brain – Fribourg, CH
Aug 2023	Seminar	CIG – University of Lausanne – Lausanne, CH
Jun 2023	Talk	FENS Webinar on “Brains on Sleep” - online
Jun 2023	Seminar	Muenster University – Muenster, Germany
May 2023	Talk	Mushroom Body Meeting 2023, Göttingen, Germany
Feb 2023	Seminar	Max Planck Florida Institute for Neuroscience – Miami, FL, USA
Feb 2023	Talk	SRS meeting - Advances in Sleep and Circadian Science (ASCS 2023) – FL, USA
Nov 2022	Talk	Brno Drosophila meeting – Brno, Czech Republic
Nov 2022	Keynote	The Ivano-Frankivsk National Medical University - Ivano-Frankivsk, Ukraine
Jun 2022	Talk	Crete Meeting – EMBO Molecular and developmental biology of Drosophila, Crete, Greece
May 2022	Talk	11 minutes of Sleep – University of Pisa, Italy
Sep 2021	Seminar	Italian Society of Pharmacology – Myths and errors during the COVID pandemic
Sep 2021	Seminar	Italian Association of Epidemiology – Sars-CoV-2 Evolution
May 2021	Seminar	Coffee with EMBL – Coronavirus: global and local perspectives
Feb 2021	Seminar	University of New Mexico, USA
Jul 2020	Talk	Crete Meeting – EMBO Molecular and developmental biology of Drosophila, Crete, Greece
Nov 2019	Talk	Sleep in Drosophila, HHMI Janelia, USA
Jun 2019	Talk	Gordon Chronobiology 2019, Casteldelfells, Spain
Jun 2019	Seminar	Institut des Neurosciences Paris-Saclay, Gif-sur-Yvette, France
Mar 2019	Talk	American Drosophila Research Conference, Dallas, TX, USA
Mar 2019	Talk	Solden 2019 Winter Conference, Solden Austria
Feb 2019	Seminar	Max Plank Institute, Seewiesen, Germany
Feb 2019	Seminar	Technical University Munich, Munich, Germany
Feb 2019	Seminar	University of Birmingham
Dec 2018	Talk	Sleep and circadian rhythms from mechanisms to function, London, UK
Aug 2018	Seminar	VIB, Leuven, Belgium
Jul 2018	Seminar	Tokyo Institute of Technology and University of Tokyo
Jul 2018	Talk	Talk at the 41st Meeting of the Japanese Neuroscience Society, Kobe, Japan
Jun 2018	Keynote	XIX Italian Drosophila conference, Padua, Italy
Jun 2018	Talk	Crete Meeting – EMBO Molecular and developmental biology of Drosophila, Crete, Greece
May 2018	Seminar	NEUreka! Seminar series, King's College London – London, UK
Apr 2018	Seminar	University College London – London, UK
Mar 2018	Seminar	Cajal Institute – Madrid, Spain
Feb 2018	Seminar	Gordon Institute, Cambridge, UK
Feb 2018	Talk	Understanding Sleep – Wellcome Trust Center, London UK

**Active and past collaborators - academic**

Marc Dionne Dept of Life Sciences, Imperial College London, London, UK  
 Lucia Prieto-Godino The Crick Research Institute – London

**Active and past collaborators - industrial**

Lucy Firth                      Syngenta, Bracknell, UK (funded by iCASE BBSRC)

Thomas Farrugia            BetaBugs, Roslin, UK (funded by KTN/SPARK and BBSRC)

**Alumni**

Federica Falconio (PhD 2024)

Michaela Joyce (PhD 2023)

Hannah Jones (PhD 2022)

Alice French (postdoc 2021)

Esteban Beckwith (postdoc 2020)

Diana Biczán (PhD 2019)

Quentin Geissmann (PhD 2018)

Anne Petzold (PhD 2017)

**Current position**

Research assistant in the lab

Postdoc at the Crick Institute

Postdoc at the University of Cologne

Lecturer at the University of Bristol, UK

Assistant Professor at University of Buenos Aires, Argentina

Research scientist, Reevo, UK

Assistant Professor at Aarhus University, Denmark

Postdoc at the MPI, Germany

## Preprints / under review

Joyce M, Falconio AF#, Blackhurst L#, Prieto-Godino L, French AS\*, and [Gilestro GF\\*](#)  
Divergent evolution of sleep functions  
preprint – **bioRxiv**, 2023 May 27 / 541573

## Papers in press or published

Blackhurst L, and [Gilestro GF\\*](#)  
Ethoscopy & Ethoscope-lab: a framework for behavioural analysis to lower entrance barrier and aid reproducibility – **Bioinformatics Advances**, 2023 Sep 20; 3(1)

Jones H, Willis JA, Firth LC, Giachello CNG, and [Gilestro GF\\*](#)  
A reductionist paradigm for high-throughput behavioural fingerprinting in *Drosophila melanogaster*  
**eLife**, 2023 May 11; 866951

Vincent CM\$, Beckwith EJ\$, Simoes da Silva CJ, Pearson WH, Kierdorf K, [Gilestro GF](#) and Dionne M  
Infection increases activity via Toll dependent and independent mechanisms in *Drosophila melanogaster*  
**PLoS Pathogens**, 2022 Sep 21; 18(9): e1010826

French A, Geissmann Q, Beckwith EJ and [Gilestro GF\\*](#)  
Sensory processing during sleep in *Drosophila melanogaster*  
**Nature**, 2021 Oct 21; 598(3)

[Gilestro GF](#) - Sleep: Imaging the Fly Brain Reveals New Paradoxes  
**Curr Biol**, 2021 Feb 8;31(3)

Geissmann Q\$, Beckwith EJ\$, and [Gilestro GF](#)  
Most sleep does not serve a vital function: Evidence from *Drosophila melanogaster*  
**Science Advances**, 2019 Feb 20; 5(2); eaau9253

Geissmann Q, Garcia Rodriguez L, Beckwith EJ, and [Gilestro GF](#)  
Rethomics: an R framework to analyse high-throughput behavioural data  
**PLoS ONE**, 2019 Jan 16; 14(1); e0209331

Geissmann Q, Garcia Rodriguez L, Beckwith EJ, French AS, Jamasb AR, and [Gilestro GF](#)  
Ethoscopes: an open platform for high-throughput ethomics  
**PLoS Biology**, 2017 Oct 19; 15(10);e2003026

Beckwith EJ, Geissmann Q, French AS, and [Gilestro GF](#)  
Regulation of sleep homeostasis by sex pheromones  
**eLife**, 2017 Sep 12;6:e27445

[Gilestro GF](#) - Video tracking and analysis of sleep in *Drosophila melanogaster*  
**Nature Protocols**, 2012 Apr 26;7(5):995-1007

[Gilestro GF\\*](#) and Cirelli C - pySolo: a complete suite for sleep analysis in *Drosophila*  
**Bioinformatics**, 2009 Jun 1;25(11):1466-7.

Gilestro GF, Tononi G & Cirelli C - Widespread changes in synaptic markers as a function of sleep and wakefulness in *Drosophila*

**Science**, 2009 Apr 3;324(5923):109-12.

Gilestro GF\* - Redundant Mechanisms for Regulation of Midline Crossing in *Drosophila*

**PLoS ONE**, 2008 Nov 24;3(11):e3978.

Dickson BJ\* & Gilestro GF\* - Regulation of Commissural Axon Pathfinding by Slit and its Robo receptors

**Annu Rev Cell Dev Biol**, 2006;22:651-75.

Christensen C, Ambartsumian N, Gilestro GF, Thomsen B, Comoglio PM, Tamagnone L, Guldberg P, Lukanidin E - Proteolytic processing converts the repelling signal Sema3E into an inducer of invasive growth and lung metastasis

**Cancer Research**, 2005 Jul 15;65(14):6167-6177

Artigiani S, Conrotto P, Fazzari P, Gilestro GF, Barberis D, Giordano S, Comoglio PM and Tamagnone L - Plexin-B3 is a functional receptor for semaphorin 5A

**EMBO Reports**, 2004 Jul;5(7):710-4

Giordano S, Corso S, Conrotto P, Artigiani S, Gilestro GF, Barberis D, Tamagnone L, Comoglio PM - Semaphorin 4D Receptor controls invasive growth by coupling with Met tyrosine kinase

**Nature Cell Biology**, 2002 Sep;4(9):720-4

Petrelli A, Gilestro GF, Lanzardo S, Comoglio PM, Migone N and Giordano S - The Endophilin-CIN85-Cbl complex mediates ligand-dependent downregulation of c-Met

**Nature**, 2002 Mar 14;416(6877):187-90

(\*) *corresponding author*; (†) *equal contribution*

**Software** - A list of software created by the laboratory is available at <https://lab.gilestro.ro/software/> All software is released as Open Source.