

## Curriculum Vitae

### Personal details

<b>Name</b>	Vincent Magloire	<b>Date of birth</b>	08 December 1982
<b>Current position</b>	Senior Research Fellow / Principal Investigator		
<b>Source of funding</b>	Wellcome / Epilepsy Research UK		
<b>Department</b>	Clinical and Experimental Epilepsy		
<b>Institution</b>	UCL Institute of Neurology		
<b>Postal Address</b>	Queen Square, London, WC1N 3BG, UK		
<b>E-mail</b>	<a href="mailto:v.magloire@ucl.ac.uk">v.magloire@ucl.ac.uk</a>		
<b>Telephone</b>	+44 20 76923076		
<b>Mobile</b>	+44 77 49714963		
<b>Site</b>	<a href="https://www.ucl.ac.uk/ion/people/dr-vincent-magloire">https://www.ucl.ac.uk/ion/people/dr-vincent-magloire</a>		
<b>Nationality</b>	French		
<b>Languages</b>	French and English		

### Positions

<b>Institution</b>	<b>Position Held</b>	<b>Dates</b>
UCL Institute of Neurology, UK	PI / Wellcome Research Fellow	09/2023 -- present
UCL Institute of Neurology, UK	PI / ERUK Research Fellow	09/2019 – 09/2023
UCL Institute of Neurology, UK	ERUK / MRC Research Associate	09/2013 – 09/2019
University of Cambridge, UK	SNSF Research Fellow	08/2011– 08/2013
University of Bern, Switzerland	Postdoctoral Fellow	08/2010 – 05/2011

### Education

<b>Type</b>	<b>Class</b>	<b>Subject</b>	<b>Awarding body</b>	<b>Year</b>
PhD	<i>distinction</i>	Neuroscience	University of Bern, Switzerland	2010
MSc	<i>distinction</i>	Neuroscience	University of Lyon, France	2006
BSc	<i>distinction</i>	Biochemistry	University of Lyon, France	2004

### Awards and grants

2023-2031 Wellcome CDA award (**PI**: £2,451,576)  
2022-2023 Rosetree Trust seedcorn award (**PI**: £10,000)  
2022-2023 Wellcome Trust - UCL TIN fund (**PI**: £10,000)  
2021-2022 WTISSF flexible Wellcome Trust award (**PI**: £18,848)  
2021-2024 Medical Research Council project grant (**Co-I**: £507,981)  
2020-2021 Wellcome Trust - UCL TIN fund (**PI**: £13,418)  
2020-2021 Royal Society research grant (**PI**: £19,815.33)  
2019-2021 WTISSF flexible Wellcome Trust award (**PI**: £37,796)  
2019-2022 Epilepsy Research UK fellowship award (**PI**: £276,892)  
2019-2020 UCL Therapeutic Acceleration Support award (**Co-I**: £72,893)  
2019-2020 Royal Society research grant (**Co-I**: £19,283)  
2019-2021 Sparks and GOSH Charity project (**Co-I**: £190,400)  
2018-2019 UCL Therapeutic Acceleration Support award (**Co-I**: £75,000)  
2017-2019 Epilepsy Research UK project (**Co-I**: £149,947)  
2015 Epilepsy Research UK young scientist award (£500)  
2013 Fellowship (Travel) from the Swiss Society for Neuroscience (CHF 1,500)  
2011- 2013 Fellowship (Research) from the Swiss National Science Foundation (CHF 90,000)

### Invited/selected presentations at national and international conferences

2023 13<sup>th</sup> WONOEP, Kilkea Castle, Ireland  
2022 Seminar series, Neurocampus, University Lyon 1, France  
2021 ILAE British chapter meeting, Virtual, UK  
2021 British Neuroscience Association annual conference, UK

2020 ILAE British chapter meeting, Virtual, UK  
2020 Seminar series, Institute Fer a Moulin, Paris, France  
2018 Gordon Research Conference, Mount Snow, USA.  
2017 ILAE British chapter meeting, Leeds, UK.  
2015 ILAE British chapter meeting, UCL, UK.  
2013 PDN postdoc symposium, University of Cambridge, UK.  
2013 Cambridge Memory Meeting, University of Cambridge, UK.  
2009 Annual Meeting of the Swiss Physiological Society, University of Fribourg, Switzerland.  
2008 The 2nd graduate school students' symposium, University of Bern, Switzerland.

## Teaching activity

2023 – present Co-Lead teaching module “Basic Neuroscience” for MSc IoN Neuroscience course.  
2020-present Design and Lead teaching module “Experimental approaches to studying neuronal circuits in health and disease: hands on techniques” for UCL MSc Clinical Neuroscience course.  
2019-present Lecture on optogenetic methods and neural networks for UCL MSc Clinical Neuroscience course.  
2017 Lecture PhD program Benefri (seizure mechanism and gene therapy for epilepsy), University of Bern, Switzerland.  
2016 Workshop: Introduction to research on spinal cord circuits, Lycée Français, London.  
2011 Lecture PhD program Benefri (techniques to study spinal networks), University of Bern, Switzerland.  
2008 - 2010 Lectures in Neurophysiology/Neuroanatomy, University of Savoie, France  
2006 - 2010 Practical course on the respiratory system, University of Bern, Switzerland

## Research supervision

2019-present Examiner for PhD upgrades (2 at UCL) and PhD thesis (1 in Australia, 1 in France).  
2019-present PhD thesis advisor on the IoN PhD program for several PhD students  
2019-present Co-supervisor of research associates (2019: Dr Amanda Almacellas Barbanoj, 2021: Dr Rob Graham)  
2019-present Secondary supervisor of IoN graduate students (Tom Turner, Benito Maffei, Olivia Goff, Prem Jareonsettasin).  
2013-2016 Co-supervisor of graduate student with Prof Ole Paulsen, Cambridge University, (Richard Digby).  
2011-present Laboratory supervision of several BSc, MSc and MRC and Wellcome Trust rotation students at Cambridge University and UCL (12 students).

## Institutional citizenships

2022 Member of NC3Rs UCL Neuroscience  
2022 Member of ethical committee for animal welfare UCL (AWERB)  
2022 Member of animal committee at the Institute of Neurology  
2021-present: Reviewer for national and international funding agencies (MRC, Epilepsy Research UK, Epilepsy Ireland, French ANR, Hong-Kong ITC).  
2020-present Member of UCL Institute of Neurology (IoN) MSc Education Committee  
2020-present Tutor for UCL IoN MSc students  
2019-present Review editor for Frontiers in Cellular Neurosciences  
2016-present Reviewer for international journals in the field of Biology, Neuroscience and Neurology (e.g. Nat Comm, Brain, Cell reports, J Neuroscience, J Physiology).  
2016-present Animal project licence trainer / supervisor for numerous students and postdocs at IoN.  
2014-2015 Committee member of IoN post-doc seminar series, UCL, UK.  
2012-2013 Committee member of PDN post-doc symposium, University of Cambridge, UK.

## Open Science and Public engagement

2021-present Editor at Peer Community Journal  
2021-present In2scienceUK mentoring program promoting inclusivity and diversity in science

2019-present Co-founder of Peer Community In Neuroscience: preprint peer-review initiative (<https://neuro.peercommunityin.org/>) and member of the managing board.

2018-2020 ASAPBio ambassador (Accelerating Science and Publication in Biology)

2017-present speak at/write for various public engagement initiatives on epilepsy (Pint of Science, Hindawi, ERUK Blog).

## Membership of scientific society

2019-2020 member of the British Neuroscience Association

2013-2016 member of Society for Neuroscience

2007-2011 member of the Swiss Society for Neuroscience

## Technical skills

*Electrophysiology*: whole-cell patch clamp recordings (*ex vivo*), local field potential (LFP) recordings *ex vivo* and *in vivo*. *Viral transfection*: *In vitro* and *in vivo* using AAV and lentivirus vectors. *Optogenetics*: Closed-loop activation/inhibition of specific neuronal classes such as interneurons *ex vivo* and *in vivo*. *Cellular biology*: Acute and organotypic human and mouse cortical slice preparation, immunofluorescence staining, *in utero* electroporation. *Microscopy*: Light and two-photon microscopy, calcium and GENis imaging *in vivo*. *IT*: Microsoft office, Origin, SPSS, Python, FIJI, Adobe Illustrator and specialised software for the acquisition of electrophysiological and imaging data.

## Peer-reviewed Publications and Preprints

C: corresponding author; \* equal contribution.

### *Senior author.*

Yoshiteru Shimoda, Marco Leite, Robert T Graham, Jonathan S Marvin, Loren L Looger, **Vincent Magloire**<sup>\*, C</sup>, Dimitri M Kullmann<sup>\*, C</sup>. Extracellular glutamate and GABA transients at the transition from interictal spiking to seizures. *Brain* accepted, 2023.

Amanda Almacellas Barbanoj, Robert T. Graham, Benito Maffei, Jenna C. Carpenter, Marco Leite, Justin Hoke, Felisia Hardjo, James Scott-Solache, Christos Chimonides, Stephanie Schorge, Dimitri M. Kullmann<sup>C</sup>, **Vincent Magloire**<sup>C</sup>, Gabriele Lignani<sup>C</sup>. Anti-seizure Gene Therapy for Focal Cortical Dysplasia. *bioRxiv* 523292, 2023.

Y Audrey Hay, Przemyslaw Jarzebowski, Yu Zhang, Richard Digby, Viktoria Brendel, Ole Paulsen, **Vincent Magloire**<sup>C</sup>. Cholinergic modulation of Up-Down states in the mouse medial entorhinal cortex *in vitro*. *Eur J Neurosci*. Nov 1. doi: 10.1111/ejn.15032, 2020.

Richard Digby, Diego Bravo, Ole Paulsen, **Vincent Magloire**<sup>C</sup>. Distinct mechanisms of Up state maintenance in the medial entorhinal cortex and neocortex. *Neuropharmacology*, 113 Part A 543-555, 2017.

### *First and co-first author.*

**Vincent Magloire**<sup>\*, C</sup>, Leonid P. Savtchenko<sup>\*</sup>, Thomas P. Jensen<sup>\*</sup>, Sergyi Sylantyev, Olga Kopach, Nicholas Cole, Olga Tyurikova, Dimitri M. Kullmann, Matthew C. Walker, Jonathan S. Marvin, Loren L. Looger, Jeremy P. Hasseman, Ilya Kolb, Ivan Pavlov, Dmitri A. Rusakov. Volume-transmitted GABA waves pace epileptiform rhythms in the hippocampal network. *Current Biology* 33;1249-64, 2023.

**Vincent Magloire**<sup>C</sup>, Jonathan Cornford, Andreas Lieb, Dimitri M. Kullmann, Ivan Pavlov. KCC2 overexpression prevents the paradoxical seizure-promoting action of somatic inhibition. *Nature Communications* 10;1225, 2019.

**Vincent Magloire**<sup>c</sup>, Antonny Czarnecki, Helen Anwander and Jürg Streit.  $\beta$ -Pompilidotoxin modulates the persistent sodium currents and spontaneous activity in spinal networks. *Neuroscience* 172:129–138, 2011.

**Vincent Magloire**<sup>c</sup> and Jürg Streit. Intrinsic activity and positive feedback in motor circuits in organotypic spinal cord slice cultures. *European. J. Neuroscience*. 30:1487–1497, 2009.

**Vincent Magloire** and Martine Cattarelli. Sleep modifications after olfactory discrimination learning in the rat. *Behavioral Brain Research* 205:568-571, 2009.

Antonny Czarnecki\*, **Vincent Magloire**\* and Jürg Streit. Local oscillations of spiking activity in organotypic spinal cord slice cultures. *European. J. Neuroscience* 27:2076-2088, 2008.

### Co-author:

Yichen Qiu, Nathanael O'Neill, Benito Maffei, Clara Zourray, Amanda Almacellas Barbanoj, Jenna C. Carpenter, Steffan Jones, Marco Leite, Thomas Turner, Albert Snowball, Tawfeeq Shekh-Ahmad, **Vincent Magloire**, Serena Barral, Manju Kurian, Matthew C. Walker, Stephanie Schorge, Dimitri M. Kullmann, Gabriele Lignani. On-demand cell-autonomous gene therapy for brain circuit disorders. *Science*, 378 ; 6619 ; 523-532, 2022.

Marion S Mercier, **Vincent Magloire**, Jonathan Cornford, Dimitri M Kullmann Long-term potentiation in neurogliaform interneurons modulates excitation-inhibition balance in the temporoammonic pathway. *J Physiol.*, 25. doi: 10.1113/JP282753. 2022.

Jonathan S. Marvin, Yoshiteru Shimoda, **Vincent Magloire**, et al., A genetically encoded fluorescent sensor for in vivo imaging of GABA. *Nature Methods* 16, 763–770. 2019.

Jonathan H Cornford, Marion S. Mercier, Marco Leite, **Vincent Magloire**, Michael Häusser, Dimitri M Kullmann Dendritic NMDA receptors in parvalbumin neurons enable strong and stable neuronal assemblies. *Elife* 8, e49872. doi: 10.7554/eLife.49872, 2019.

Kim Boddum, Thomas Jensen, **Vincent Magloire**, Uffe Kristiansen, Dmitri Rusakov, Ivan Pavlov, and Matthew Walker. Astrocytic GABA transporter activity modulates excitatory neurotransmission. *Nature Communications* 7;13572, 2016.

Sandra Hofer, **Vincent Magloire**, Jürg Streit and Stephen Leib. Grafted neuronal precursor cells differentiate and integrate in injured hippocampus in experimental pneumococcal meningitis. *Stem Cells* 30(6):1206-1215, 2012.

Antonny Czarnecki, **Vincent Magloire** and Jürg Streit. Modulation of Intrinsic Spiking in Spinal Cord Neurons. *J. Neurophysiology* 102:2441–2452, 2009.

### Review, commentary, Chapter:

**Vincent Magloire**<sup>c</sup>, Gabriele Lignani. DBS for refractory epilepsy: is closed-loop stimulation of the medial septum the way forward? *Brain*;144(3):702-705. 2021.

**Vincent Magloire**<sup>c</sup>, Marion S. Mercier, Dimitri M. Kullmann, Ivan Pavlov. GABAergic interneurons in seizures: investigating causality with optogenetics. *Neuroscientist*, doi: 10.1177/1073858418805002, 2018.

Rob Wykes, Dimitri M. Kullmann, Ivan Pavlov and **Vincent Magloire**. Optogenetic approaches to treat epilepsy. *J Neuroscience Methods* 15; 260:215-20, 2016.

### Open Science:

Marion S. Mercier, **Vincent Magloire**, Mahesh Karnani. Enhancing scientific dissemination in neuroscience via preprint peer-review: "Peer Community In Circuit Neuroscience". *Neuroanatomy and Behaviour*, 2020, 2(1), e9.