ALL. B
Decreto Rettore Università di Roma "La Sapienza" n **2173/2020** del **27/08/2020**

MASSIMILIANO RENZI
Curriculum Vitae

ROMA, 4th September 2020

Part I – General Information

Full Name	MASSIMILIANO RENZI
Date of Birth	
Place of Birth	
Citizenship	
Permanent Address	
Mobile Phone Number	
E-mail	
Spoken Languages	Italian, English

Part II – Education

Type	Year	Institution	Notes (Degree, Experience,..)
B.S. in Biological Sc.	1998	University of Rome 'La Sapienza' - Rome, I	110/110 with Honours Thesis project published on *Journal of Physiology* (1999) 519 (3):723–736 *Two different ionotropic receptors are activated by ATP in rat microglia* Cit. 77 - Scopus
Post-graduate training	1998-1999	Laboratorio di Fisiopatologia di Organo e Sistema Ist. Superiore di Sanità Rome, I	Supervisor Prof. Giulio Levi Research published on *Glia* (2001), 33 (3):181-190 *Altered outward-rectifying K^+ current reveals microglial activation induced by HIV-1 Tat protein* Cit. 23 - Scopus
PhD student in Neurophysiology	1999-2003	Dept. of Human Physiology University of Rome 'La Sapienza' - Rome, I	Supervisor Prof. Fabrizio Eusebi 6 papers published during the PhD Cit. Tot. 206 - Scopus
Chartered Biologist	2000	"Esame di stato per l'abilitazione all'esercizio della professione di Biologo"	150/150
PhD in	2004	Dept. of Human Physiology	Thesis project published on

Neurophysiology		University of Rome 'La Sapienza' (I)	*Neuropharmacology* (2004), 6 (5):727–733 *Unliganded human mutant α7 nicotinic receptors are modulated by Ca^{2+} and trace levels of Zn^{2+}*
Participation to the UCL Graduate School Course *Understanding ion channel currents in terms of mechanisms*	2004	University College London Graduate School London, UK	International course on analysis and interpretation of single ion channel records and macroscopic currents using matrix methods (held by Prof. D Colquhoun and coll.)
Personal Licence UK, Animals (Scientific Procedures) Act 1986	2004	Institute of Biology Biological Services University College London (UCL) - London, UK	Module 1-3

Part III – Appointments

IIIA – Academic Appointments

Start	End	Institution	Position
Dec 2011	Present	Dept. of Physiology and Pharmacology Sapienza University of Rome	Lecturer in Physiology (Confirmation: 2014)
Jan 31st 2014	Jan 31st 2023	National Scientific Qualification as Associate Professor in Physiology BIO/09 (SC 05/D1)	

IIIB – Other Appointments

Start	End	Institution	Position
Nov 2003	Nov 2011	Lab. directed by Prof. SG Cull-Candy Dept. of Pharmacology & Dept. of Neuroscience, Physiology and Pharmacology University College London (UK)	Postdoctoral Research Fellow
Dec 2011	Feb 2012	UCL Graduate School	Research Staff Bridging Fund (declined when recipient of permanent position at Sapienza Univ.)
2008	2010	Pasteur Inst. – Fondazione Cenci-Bolognetti	Postdoctoral fellowship
2004	2006	Pasteur Inst. – Fondazione Cenci-Bolognetti	Postdoctoral fellowship
1999	1999	Lab di Fisiopatologia di Organo e Sistema Ist. Superiore di Sanità - Rome, I	Research Assistant (co.co.pro) Funding scheme: Patologia clinica e terapia AIDS
1998	1998	Lab di Fisiopatologia di Organo e Sistema Ist. Superiore di Sanità - Rome, I	Research Assistant (co.co.pro)

			Funding scheme: X Progetto AIDS

Part IV – Teaching experience

Teaching held in Italy

Start (A.Y.)	End (A.Y.)	Institution	Lecture/Course
2012/13	present	Sapienza University	**Head of the Course** ("**Docente verbalizzante**") **& Lecturer** of Physiology Course: Anatomia e Fisiologia Degree: LM Biotecnologie Farmaceutiche (Italian)
2014/15	present	Sapienza University	**Head of the Course** ("**Docente verbalizzante**") Course: Laboratorio e attività farmaco-biologiche Degree: LM Biotecnologie Farmaceutiche (Italian)
2017/18	present	Sapienza University	**Lecturer** of Physiology Course: Fundamentals of organs morphology and function Degree: Nursing (English)
2012/13	2016/17	Sapienza University (Cassino)	**Head of the Course** ("**Docente verbalizzante**") **& Lecturer** of Physiology Course: Basi anatomo-fisiologiche del corpo umano Degree: Infermieristica (Italian)
2012/13	2013/14	Sapienza University (Cassino)	**Head of the Course** ("**Docente verbalizzante**") **& Lecturer** of Physiology Course: Basi anatomo-fisiologiche del corpo umano Degree: Fisioterapia (Italian)
2012/13	present	Sapienza University	Teaching for the PhD Course in Neuroscienze Clinico-Sperimentali e Psichiatria - Curriculum Neurofisiologia

Teaching held abroad: United Kingdom

Start	End	Institution	Lecture/Course
2008	2011	Univ. College London	Neuropharmacology (tutor)
2008	2010	Univ. College London	Synaptic pharmacology (tutor)
2005	2005	Univ. College London	Master in Neuroscience (tutor)
2006	2010	Marine Biological Association (Plymouth, UK)	Microelectrode Techniques for Cell Physiology Workshop - International Course (tutor)

Supervision of undergrad students

Research Projects for Experimental Theses - Master Degrees at Sapienza University

Start	End	Student/Course	Project
2018	2019	E Spoleti LM Biotecnologie Farmaceutiche	"Early derailment of firing properties in CA1 pyramidal cells of the ventral hippocampus in 'pre-plaque' Tg2576 mice" – *manuscript*

			under submission for publication
2014	2016	F Logiacco LM Biotecnologie Farmaceutiche	"Quantitative analysis of CorticoSpinal Tract neurons in a novel tardbp/TDP-43 compound mutant" – *UCL Neuroscience Symposium 2014 (poster session, #122)*
2013	2015	A Iannella LM Neurobiologia	"Biophysical properties of alpha3-edited isoforms of $GABA_ARs$"

Co-Supervision of undergrad students ('relatore interno')

Start	End	Student/Course	Project
2019	2020	G Mele LM Biotecnologie Farmaceutiche	"Possible mechanisms of remyelination mediated by edaravone"

Part V - Society memberberships, Awards and Honors: –

Part VI - Funding Information [grants as PI-principal investigator or I-investigator]

Year	Project Title	Funding Program / Grantee role	Grant value
2012	Project Title: "Excitatory and Inhibitory signalling in CorticoSpinalMotorNeurons of animal models of ALS"	AriSLA Pilot Grant 2012 PI : Massimiliano Renzi	€ 58000
Team Investigator in research projects funded by Sapienza University of Rome in the following years: 2017; 2015; 2014; 2013; 2012			

Part VII – Research Activities

Brief Description

My research interest concerns the neuron-neuron and neuron-glia signalling and its regulation in physiological and pathological conditions.

My research focuses on the role of ion channels, from the single-channel level to synaptic plasticity and network activity.

During my post-doctoral work, I have investigated:

- The synaptic plasticity at the cerebellar synapse between climbing-fibres and oligodendrocyte progenitors (*Nature Neuroscience* 2011 Cit. 68 - Scopus)
- The role of GABAergic inhibition in cerebellar synaptic plasticity and motor learning (*Nature Neuroscience* 2007 Cit. 88 and *Nature Neuroscience* 2009 Cit. 174)
- The impact of LGICs ($GABA_ARs$; AMPARs; NMDARs) and relevant regulatory proteins on synaptic activity (*Journal of Neuroscience* 2011 Cit. 73; *Journal of Neuroscience* 2012 a,b Cit. 51,58; *Nature Neuroscience* 2009 Cit. 74; *Journal of*

Physiology 2007 Cit. 57)

Currently, I am focussing on:

- The alteration of neuronal excitability and excitatory-inhibitory balance associated with the development of Alzheimer Disease in the Tg2576 mouse model
  (*Manuscript under submission for publication*)
- The biocompatibility of engineered silicon- or carbon- derived nano-structures
  (*Mater. Res. Express* 2019; *IEEE* 2019*; AIP Congress Proceeding* 2019; *LNEE* 2020)
- The role and alteration of the VTA and its dopaminergic projections in animal models of depression-like behaviours
  (*2 Manuscripts in preparation)*

ORCID: **https://orcid.org/0000-0001-6973-3569**
Scopus Author ID: **7004065412**

Keywords of my research activity
Synaptic transmission and plasticity — Neuron-glia interaction
Neurodegeneration — Brain slice patch-clamp

Scientific collaborators (listed below only collaborators outside of the Physio-Pharm Dept.)
Present
Prof M D'Amelio
Campus Bio-medico University & IRCCS Santa Lucia (Rome, I)
Cortical and sub-cortical alterations in the Tg2576 mouse model of Alzheimer Disease

Prof F Palma
SBAI Sapienza University (Rome, I)
Biocompatibility of engineered nano-structure

Prof R Ventura
Dept. of Psychology Sapienza University (Rome, I)
Cortical and sub-cortical alterations associated with depression-like behaviours

Formerly
Prof SG Cull-Candy – UCL (UK)
Prof M Farrant – UCL (UK)
Prof P Anderson – UCL (UK)
Dr A Acevedo-Arozena – MRC Harwell (UK)

'Ad hoc' Peer Reviewing *(alone or with others)*

Scientific journals

Nature Neuroscience	Nature	Human Molecular Genetics
Journal of Neuroscience	Journal of Physiology	Cerebellum

Eur J of Neuroscience Neuroscience Journal of Int. Neuroscience

Funding bodies
Research Foundation Flanders (FWO)

Part VIII – Summary of Scientific Achievements

Product type	Number	Data Base	Start	End
Papers [international]	18	Scopus	1999	2019
Conference papers [internat.]	4	Scopus	2007	2020

Total Impact factor	126.3
Average Impact factor	7.0 (126.3/18)
Impact factor relevant to last 10 years	41.2 (yrs: 2010-2019 incl.)
Total Citations	963
Average Citations per Product	53.5 (963/18)
Hirsch (H) index	15
Normalized H index*	0.68 (15/22 yrs since BS degree)

*H index divided by the academic seniority

IF source: WOS-InCites, except for *Mat. Res. Express: https://iopscience.iop.org/journal/2053-1591*
Citations and Hirsch (H) index source: Scopus

Part VII – Selected Publications

List of the publications selected for the evaluation. For each publication report title, authors, reference data, journal IF (if applicable), citations, press/media release (if any).

IF source: WOS-InCites, except for *Mat. Res. Express: https://iopscience.iop.org/journal/2053-1591*
Citations source: Scopus

Selected Publications (max 12)

1. Piedimonte P, Mazzetta I, Fucile S, Limatola C, Cattaruzza E, Riello P, **Renzi M*** & Palma F*
   Silicon nanowires to detect electric signals from living cells
   Mater. Res. Express (2019), 6 084005 * Joint corresponding author
   DOI: 10.1088/2053-1591/ab20f8
   IF 1.929
   Cit. 2

2. Onorato I, D'Alessandro G, Di Castro MA, **Renzi M**, Dobrowolny G, Musarò A, Salvetti M, Limatola C, Crisanti A & Grassi F
   Noise Enhances Action Potential Generation in Mouse Sensory Neurons via Stochastic Resonance
   PLOS ONE (2016), 11(8)e0160950
   DOI**:** https://doi.org/10.1371/journal.pone.0160950
   IF 2.806
   Cit. 9

3. Coombs ID, Soto D, Zonouzi M, **Renzi M**, Shelley C, Farrant M & Cull-Candy SG
   Cornichons modify channel properties of recombinant and glial AMPA receptors.
   Journal of Neuroscience (2012), 32 (29): *pp.* 9796–9804
   DOI: http://dx.doi.org/10.1523/jneurosci.0345-12.2012
   IF 6.908
   Cit. 51

4. Eyre MD, **Renzi M**, Farrant M & Nusser Z
   Setting the time course of inhibitory synaptic currents by mixing multiple GABA(A) receptor alpha-subunit isoforms
   Journal of Neuroscience (2012), 32 (17):5853–5867
   DOI: http://dx.doi.org/10.1523/jneurosci.6495-11.2012
   IF 6.908
   Cit. 58

5. Zonouzi M, **Renzi M**, Farrant M & Cull-Candy SG
   Bidirectional regulation of calcium-permeable AMPA receptors in oligodendrocytes lineage cells
   Nature Neuroscience (2011), 14 (11):1430–1438
   DOI: http://dx.doi.org/10.1038/nn.2942
   IF 15.531
   Cit. 68

6. Bright D*, **Renzi M***, Bartram J, McGee T, MacKenzie G, Hosie A, Farrant M, Brickley S
   Profound desensitization by ambient GABA limits activation of delta-containing GABA(A) receptors during spillover
   Journal of Neuroscience (2011), 31 (2):753–763 * Joint first author
   DOI: http://dx.doi.org/10.1523/jneurosci.2996-10.2011
   IF 7.115
   Cit. 73

7. Wulff P, Schonewille M, **Renzi M**, Viltono L, Sassoè-Pognetto M, Badura A, Gao Z, Hoebeek FE, van Dorp S, Wisden W, Farrant M & De Zeeuw C
   Synaptic inhibition of Purkinje cells mediates consolidation of vestibulo-cerebellar motor learning
   Nature Neuroscience (2009), 12 (8):1042–1049
   DOI: http://dx.doi.org/10.1038/nn.2348
   IF 14.345
   Cit. 174

8. Soto D, Coombs ID, **Renzi M**, Zonouzi M, Farrant M & Cull-Candy SG
   Selective regulation of long-form calcium-permeable AMPA receptors by an atypical TARP, gamma-5
   Nature Neuroscience (2009), 12 (3):277–285
   DOI: http://dx.doi.org/10.1038/nn.2266
   IF 14.345
   Cit. 74

9. **Renzi M**, Farrant M & Cull-Candy SG
   Climbing-fibre activation of NMDA receptors in Purkinje cells of adult mice
   Journal of Physiology (2007), 585 (1):91–101
   DOI: http://dx.doi.org/10.1113/jphysiol.2007.141531

IF 4.58
Cit. 57

10. Wulff P, Goetz T, Leppa E, Linden AM, **Renzi M**, Swinny JD, Vekovischeva OY, Sieghart W, Somogyi P, Korpi ER, Farrant M & Wisden W
From synapse to behavior: rapid modulation of defined neuronal types with engineered GABAA receptors
Nature Neuroscience (2007), 10 (7):923–929
DOI: http://dx.doi.org/10.1038/nn1927
IF 15.664
Cit. 88

11. Palma E, Trettel F, Fucile S, **Renzi M**, Miledi R & Eusebi F
Microtransplantation of membranes from cultured cells to Xenopus oocytes: a method to study neurotransmitter receptors embedded in native lipids
P.N.A.S. (2003), 100 (5):2896–2900
DOI: http://dx.doi.org/10.1073/pnas.0438006100
IF 10.272
Cit. 35

12. Visentin S, **Renzi M**, Frank C, Greco A & Levi G
Two different ionotropic receptors are activated by ATP in rat microglia
Journal of Physiology (1999), 519 (3):723–736
DOI: http://dx.doi.org/10.1111/j.1469-7793.1999.0723n.x
IF 4.552
Cit. 77

All other Publications

Papers

Bolchi C, Pallavicini M, Appiani R, Bavo F, Gotti C, Colombo S, Pucci S, Viani P, Moretti M, Fucile S, **Renzi M**, Budriesi R
Modifications at C(5) of 2-(2-pyrrolidinyl)-substituted 1,4-benzodioxane elicit potent α4β2 nAChR partial agonism with high selectivity over the α3β4 subtype
Journal of Medicinal Chemistry – submitted; under revision

Fucile S, **Renzi M**, Lauro C, Limatola C, Ciotti T & Eusebi F
Nicotinic cholinergic stimulation promotes survival and reduces motility of cultured

rat cerebellar granule cells
Neuroscience (2004), 127 (1):53–61
DOI: http://dx.doi.org/10.1016/j.neuroscience.2004.04.017
IF 3.456
Cit. 32

Tonini R*, **Renzi M***# & Eusebi F
Unliganded human mutant α7 nicotinic receptors are modulated by Ca^{2+} and trace levels of Zn^{2+}
Neuropharmacology (2004), 6 (5):727–733
DOI: http://dx.doi.org/10.1016/j.neuropharm.2003.11.001 * Joint first author
IF 3.734 # Corresp. author
Cit. 1

Fucile S, **Renzi M**, Lax P & Eusebi F
Fractional Ca^{2+} current through human neuronal a7 nicotinic acetylcholine receptors
Cell Calcium (2003), 34 (2):205–209
DOI: http://dx.doi.org/10.1016/S0143-4160(03)00071-X
IF 2.781
Cit. 47

Lax P, Limatola C, Fucile S, Trettel F, Di Bartolomeo S, **Renzi M**, Ragozzino D & Eusebi F
Chemokine receptor CXCR2 regulates the functional properties of AMPA-type glutamate receptor GluR1 in HEK cells
Journal of Neuroimmunology (2002), 129 (1-2):66–73
DOI: http://dx.doi.org/10.1016/S0165-5728(02)00178-9
IF 3.577
Cit. 42

Ragozzino D, **Renzi M**, Giovannelli A & Eusebi F
Stimulation of chemokine CXC receptor 4 induces synaptic depression of evoked parallel fibers inputs onto Purkinje neurons in mouse cerebellum
Journal of Neuroimmunology (2002), 127 (1-2):30–36
DOI: http://dx.doi.org/10.1016/S0165-5728(02)00093-0
IF 3.577
Cit. 52

Visentin S, **Renzi M** & Levi G
Altered outward-rectifying K^+ current reveals microglial activation induced by HIV-1 Tat protein
Glia 33 (2001), (3):181-190
DOI: http://dx.doi.org/10.1002/1098-1136(200103)33:3<181::AID-GLIA1017>3.0.CO;2-Q

IF 4.193
Cit. 23

Conference papers / Book chapters

Piedimonte P, Feyen DAM, Mercola M, Messina E, **Renzi M** & Palma F
Silicon Nanowires as Contact Between the Cell Membrane and CMOS Circuits
In: Saponara S., De Gloria A. (eds) Applications in Electronics Pervading Industry, Environment and Society. ApplePies 2019. Lecture Notes in Electrical Engineering, vol 627. Springer, Cham.
DOI: 10.1007/978-3-030-37277-4_28
Cit. 0

Piedimonte P, Fucile S, Limatola C, **Renzi M*** & Palma F*
Biocompatibility of Silicon NanoWires: a Step Towards IC Detectors
AIP Congress Proceeding (2019), 2145(1):020011 * Joint corresponding author
DOI: 10.1063/1.5123572
Cit. 1

Piedimonte P, Fucile S, Limatola C, **Renzi M** & Palma F
Silicon nanowires as biocompatible electronics-biology interface
IEEE - 20th International Conference on Solid-State Sensors, Actuators and Microsystems & Eurosensors XXXIII (TRANSDUCERS & EUROSENSORS XXXIII) (2019)*: 1052-1055*
DOI: 10.1109/TRANSDUCERS.2019.8808824
Cit. 1

Wulff P, Goetz T, Leppa E, Linden AM, **Renzi M**, Swinny JD, Vekovischeva OY, Sieghart W, Somogyi P, Korpi ER, Farrant M & Wisden W
From synapse to behavior: Rapid modulation of defined neuronal types with engineered $GABA_A$ receptors
Neuroforum (2007), 13(4):53-61
Cit. 0

ROMA, 4 settembre 2020

In fede,
Massimiliano Renzi