Curriculum Vitae Gioacchino de Leo

## PERSONAL EXPERIENCES \_\_\_\_\_

from 23/11/2017 to 31/12/2017	POST LAUREAM SCHOLARSHIP SISSA (Scuola Internazionale Superiore di Studi Avanzati) scholarship under the supervision of Professor Giuseppe Antonio Legname, via Bonomea 265, 34136 Trieste, Italy in collaboration with Professor Giampiero Leanza.
from 27/03/2017 to 31/03/2018	POST LAUREAM INTERNSHIP Post lauream research internship in the Neurogenesis and Repair lab, Professor Giampiero Leanza, via Fleming 22, 34127 Trieste, Italy.

EDUCATION AND TRAINING				
from 20/04/2018 to 24/11/2021	Master in Molecular Neuroscience			
	Royal College of Surgeons in Ireland, Dublin (Ireland)			
	Course of study completed with a dissertation thesis on "The role of the P2X7 receptor on status epilepticus-induced neurogenesis", supervisors: Professor David Henshall and Doctor Tobias Enge.			
	Acquired skills during the internship			
	<ul> <li>tissue extraction and processing:</li> <li>hippocampal microdissection;</li> <li>tissue sectioning by means of vibrotome or cryostat;</li> <li>genotyping of transgenic mice;</li> </ul>			
	4. immunofluorescence of brain slices  use of optical and confocal microscope			
from 26/02/2015 to 24/03/2017	Master's Degree in Neuroscience			
	University of Trieste and SISSA, Trieste (Italy)			
	Course of study completed on schedule minimal time, with final evaluation of 110/110 cum Laude, with a dissertation thesis on "Behavioural, anatomical and histopathological consequences of selective denervating lesions in the rat", supervisor: Professor Giampiero Leanza.			
	Acquired skills during the internship in the Neurogenesis and Repair lab:  • animal handling			
	<ul> <li>behavioural testing:</li> <li>1. working and reference memory evaluation techniques;</li> <li>2. motor tests;</li> </ul>			
	3. freezing test;			
	4. objects recognition test;			
	<ul><li>5. open field;</li><li>stereotactic surgery;</li></ul>			
	data processing and interpretation;			
	<ul> <li>planning the experimental setup;</li> <li>tissue extraction and processing:</li> </ul>			
	tissue extraction and processing.     transcardial perfusion;			
	2. extraction of the brain;			
	3. extraction of the spinal cord;			
	<ul><li>4. collection of liquor;</li><li>5. tissue sectioning by means of microtome;</li></ul>			
	6. immunohistochemistry (TH, DBH, ChAT, α-Syn);			
	7. histochemistry (AChE);			
	morphological evaluation:     All I A			
	<ol> <li>densitometric analysis (NIH Image 1.61 software);</li> <li>stereological analysis (Cast Grid software);</li> </ol>			
	use of optical microscopes in bright field, dark field and fluorescence			
from 28/10/2014 to 22/01/2015	Degree in Single Course			
	University of Trieste			
	Acquisition of 9 CFU additional credits:  • Genetics and Bioinformatics = 9 CFU			
from 12/02/2014 to 23/09/2014	Degree in Single Course			
	University of Bari			
	<ul> <li>Acquisition of 30 CFU additional credits:</li> <li>Comparative anatomy and Embryology = 6 CFU</li> <li>Organic chemistry with lab = 8 CFU</li> <li>Integrated function and Human physiology = 6 CFU</li> <li>Biochemistry = 10 CFU</li> </ul>			
from 25/09/2010 to 21/11/2013	Bachelor's Degree in Neurophysiology Techniques			
	University of Bari, Bari (Italy)			
	Course of study completed on schedule minimal time, with final evaluation of 110/110 cum Laude, with a dissertation thesis on "The role of electromyography in the diagnosis of amyotrophic lateral sclerosis:			

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comparing Awaji and El Escorial criteria", supervisor: Professor Giancarlo Logroscino.

## Acquired skills during internship of 1500 hours at the Neurophysiology Laboratory at neurology department

- Electroencephalography;
- Transcranial Magnetic Stimulation (TMS);
- Transcranial Direct-Current Stimulation (tDCS);
- Polysomnography;
- Electroneurography (ENG);
- Evoked Potential (EP);
- Doppler Ultrasound of supra-aortic trunks;
- Transcranial Doppler ultrasound;
- Experimental methods:
  - 1. Laser Evoked Potential;
  - 2. Mismatch Negativity;
  - 3. Cognitive Evoked Potential (i.e. P300).

## **PERSONAL SKILLS**

PERSONAL SKILLS					
Mother tongue	Italian				
Other language	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	B2	B2	B2	B2
	IELTS certificate				
	Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user Common European Framework of Reference for Languages				
Digital skills	SELF-ASSESSEMENT				
	Information processing	Communication	Content creation	Safety	Problem solving
	Independent user	Independent user	Independent user	Independent user	Independent user
			user - Independent user ompetences – Self-asse		
	Excellent command of the suite office tools (Word, Excel, Power Point)				
	Good command of programs used for images digital elaboration (Adobe Photoshop Lightroom, PDF Creator) acquired during the master's degree internship for the thesis and papers writing				
Other skills	<ul> <li>Good manual skills acquired during job's period in butcher's shop and for agricultural work for my family.</li> <li>Good communicative abilities refined during job's period as waiter in touristic village.</li> </ul>				
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Driving licence	Category B				

ADDITIONAL INFORMATION	
Co-supervision	Title of thesis: "Analysis of pathological and functional alterations after administration of alpha-synuclein in the rat hippocampus"; graduand: Maddalena Rutilo, accademic year: 2016-2017.
Publications	<ul> <li>Morgan J, Alves M, Conte G, Menéndez-Méndez A, de Diego-Garcia L, de Leo G, Beamer E, Smith J, Nicke A, Engel T. Characterization of the Expression of the ATP-Gated P2X7 Receptor Following Status Epilepticus and during Epilepsy Using a P2X7-EGFP Reporter Mouse. Neurosci Bull. 2020 Sep 7. doi: 10.1007/s12264-020-00573-9. Epub ahead of print. PMID: 32895896.</li> <li>Kasongo DW*, de Leo G*, Vicario N, Leanza G, Legname G. Chronic α-Synuclein Accumulation in Rat Hippocampus Induces Lewy Bodies Formation and Specific Cognitive Impairments. eNeuro. 2020 Jun 15;7(3):ENEURO.0009-20.2020. doi: 10.1523/ENEURO.0009-20.2020. PMID: 32393581; PMCID: PMC7307628.</li> <li>Giusto E, Codrich M, de Leo G, Francardo V, Coradazzi M, Parenti R, Gulisano M, Vicario N, Gulino R, Leanza G. Compensatory changes in degenerating spinal motoneurons sustain functional sparing in the SOD1-G93A mouse model of amyotrophic lateral sclerosis. J Comp Neurol. 2020 Feb 1;528(2):231-243. doi: 10.1002/cne.24751. Epub 2019 Aug 7. PMID: 31364764.</li> <li>Alves M, Kenny A, de Leo G, Beamer EH, Engel T. Tau Phosphorylation in a Mouse Model of Temporal Lobe Epilepsy. Front Aging Neurosci. 2019 Nov 12;11:308. doi: 10.3389/fnagi.2019.00308. PMID: 31780921; PMCID: PMC6861366.</li> <li>Beamer EH, Jurado-Arjona J, Jimenez-Mateos EM, Morgan J, Reschke CR, Kenny A, de Leo G, Olivos-Oré LA, Arribas-Blázquez M, Madden SF, Merchán-Rubira J, Delanty N, Farrell MA, O'Brien DF, Avila J, Diaz-Hernandez M, Miras-Portugal MT, Artalejo AR, Hernandez F, Henshall DC, Engel T. MicroRNA-22 Controls Aberrant Neurogenesis and Changes in Neuronal Morphology After Status Epilepticus. Front Mol Neurosci. 2018 Dec 11;11:442. doi: 10.3389/fnmol.2018.00442. PMID: 30618601; PMCID: PMC6298134.</li> <li>Pintus R, Riggi M, Cannarozzo C, Valeri A, de Leo G, Romano M, Gulino R, Leanza G. Essential role of hippocampal noradrenaline in the regulation of spatial working memory and TDP-43 tissue pathology. J Comp Neurol. 2018 May 1;526(7):1131-1147. doi: 10.1002/cne.24397. Epub 201</li></ul>
Bookchapters	<ul> <li>Rosario Gulino, Anna Kostenko, Gioacchino de Leo, Serena Alexa Emmi, Domenico Nunziata, Giampiero Leanza. Hippocampal noradrenaline regulates spatial working memory in the rat. In Nina</li> </ul>

Vardjan and Robert Zorec, editors: Vardjan - NORADRENERGIC SIGNALING AND ASTROGLIA,

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	Oxford: Academic Press, 2017, pp. 201 - 220.
Projects	<ul> <li>Participation in different research projects during master's degree internship:</li> <li>Characterization of CCI model in mouse</li> <li>Hippocampus-dependent cognitive abilities after combined selective lesions of cholinergic and noradrenergic systems in the rat;</li> <li>Noradrenergic regulation of Hippocampus-dependent cognitive functions after selective lesion of noradrenergic system and grafting of progenitor cells to the rat hippocampus;</li> <li>Cognitive alterations following intracranial injection of pathological α-synuclein in the rat.</li> </ul>
Certifications	<ul> <li>British Neuroscience Association 2019 Festival Of Neuroscience (14-17 April, Dublin, Ireland)</li> <li>First European Purine Club Meeting 2019 (4-6 September, Santiago de Compostela, Spain)</li> <li>XVII International School of Pharmacology "Teòfilo Hernando". Frontier Therapies in Brain Disease: Focus on Purinergic Signalling (23-27/07/2018)</li> <li>Seminar course of "Ethics of biomedical experimentation" (2016)</li> <li>Certificate of attendance (support for reception, surveillance and jury) of Neuroscience Olympics Edition 2016 (regional phase) (2016)</li> <li>Certificate of attendance of "Basal course about animal experimentation: wellbeing of the laboratory animal" by passing the final exam (2016)</li> <li>Certificate of acquisition ECM credits by formative online event "Microsoft Office" (2014)</li> <li>IRC (Italian Resuscitation Council) Certification by passing course of BLSD (Basic Life Support Defibrillation) performer (2012)</li> </ul>