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Decreto Rettore Università di Roma "La Sapienza" n 3394/2019 del 07.11.2019

ANTONELLA DE JACO
Curriculum Vitae

Place Roma
Date 06/12/2019
Signature Antonella De Jaco

Part I – General Information

Full Name	Antonella De Jaco
Spoken Languages	Italian, English

Part II – Education

Type	Year	Institution	Notes (Degree, Experience,…)
University Graduation	1996	Sapienza University of Rome	Bachelor degree in Biological Sciences Score 110/110 *cum laude*
PhD	2001	Sapienza University of Rome	Ph.D. in Cell and Developmental Biology

Part III – Appointments

IIIA – Academic Appointments

Start	End	Institution	Position
11/1998	01/2001	Sapienza University of Rome	PhD student
09/2001	09/2007	University of California, San Diego	Post-doctoral fellow
10/2007	02/2008	University of California, San Diego	Assistant Project Scientist
03/2008	present	Sapienza University of Rome	Assistant Professor (Ricercatore a tempo indeterminato, SSD BIO/06) Dept. Biology and Biotechnologies 'C. Darwin' Italian 'Abilitazione Scientifica Nazionale per Professore di Seconda Fascia' Bando 2016 (D.D. 1532/2016) valid through 06/08/2024

IIIB – Other Appointments

Start	End	Institution	Position
09/09	01/10	Skaggs School of Pharmacy and Pharmaceutical Sciences, University of California	Visiting Scientist
11/2012	12/2012	Dept. Neuroscience and Cell Biology, Rutgers, New Brunswick, New Jersey	Visiting Scientist
11/2013	01/2014	Skaggs School of Pharmacy and Pharmaceutical Sciences, University of California, San Diego	Visiting Scientist

08/2015	09/2015	Dept. Neuroscience and Cell Biology, Rutgers, New Brunswick, New Jersey	Visiting Scientist

Part IV – Teaching experience

Year	Institution	Lecture/Course
2008/present	Sapienza University of Rome	Supportive teaching activities for the Cell Biology and Neurobiology areas: seminars and examination of students
2008-2011	Sapienza University of Rome	"Cell Biology" for the degree in Medical Biotechnology degree (4CFU)
2014-2017	Sapienza University of Rome	"Cellular Biotechnology and animal culture systems" Biological Sciences degree (2.5 CFU) Cell culture practise (0.5 CFU)
2018-2019	Sapienza University of Rome	Lecturer (titolare) "Cell Biology" for the degree Agro-industrial Biotechnologies (8 CFU) Histology practise (1 CFU)
2012-present	Sapienza University of Rome	Lecturer (titolare) for "Intracellular Trafficking" Master degree in Genetics and Molecular Biology (6CFU)
2008-present	Sapienza University of Rome	Supervisor of 8 Bachelor degree thesis, 8 Master degree theses and 2 PhD thesis
2008-present	Sapienza University of Rome	Board member of the PhD Course 'Cell and Developmental Biology'
2013	University of Turin	National commetee member for the final exam of the PhD course "Experimental Neuroscience"
2015	Sapienza University of Rome	National commetee member for the final exam of the PhD Course "Neuroscience and Behavior"

Students' evaluation of the teacher's performance for the "Intracellular Trafficking" course for the Master degree in Genetics and Molecular Biology (Opis) for the academic year 2017-2018. In a scale from 1 to 4 (where 1 at the indicates 'surely not', 2 indicates 'not rather than yes', 3 indicates 'yes rather than not' and 4 indicates 'surely yes') the indicators are all above level 3, coincident or above the average for the master degree in Genetics and Molecular Biology and for the Faculty of Sciences, as shown in the summary page attached at the end of this CV.

Part V - Society memberships, Awards and Honors

Year	Title
2004-2012	Society for Neuroscience membership
2011	Award Grant for Young Investigators as best oral communication at the ABCD International Annual Meeting (Ravenna 8-10/09/11)
2011-present	Italian ABCD (Associazione Biologia Cellulare e del Differenziamento) membership
2016-present	Italian GEI (Gruppo Embriologico Italiano) membership

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

Year	Title	Program	Grant value
2001	Azione dei neurotrasmettitori nella modulazione dell'espressione di geni neurospecifici	Finanziamento MURST "Progetto Giovani Ricercatori" Sapienza University of Rome-PI	10,000
2007-2009	Neurolighine e Neurexine come geni candidati per l'autismo: studio della loro associazione e della connettività sinaptica	Autism Speaks-I	60,000

2009	Influenza dello stress ossidativo nel differenziamento neuronale: regolazione del trafficking di proteine sintetiche in condizioni normali e patologiche	Sapienza University of Rome-PI	10,000
2009-2012	Processing of the Neuroligins proteins and autism-related mutations	Istituto Pasteur-Fondazione Cenci Bolognetti, Sapienza University of Rome-PI	60,000
2009-2012	Trafficking of the neuroligins: the influence of mutations associated with autism in relation to biosynthetic processing"	Compagnia San Paolo Programma Neuroscienze-PI	100,000
2010	Caratterizzazione comportamentale, biochimica e molecolare di un nuovo modello animale di iperfenilalaninemia: come la fenilalanina produce ritardo mentale	Sapienza University of Rome-I	30,000
2010	Influenza delle mutazioni associate all'autismo sul processamento delle Neurolighine e sulla segnalazione dello stress del Reticolo Endoplasmatico	Sapienza University of Rome-PI	15,000
2011	Controllo di qualità nel RE associato a proteine neuronali e a patologie da malripiegamento proteico, nel sistema nervoso centrale	Sapienza University of Rome-PI	12,000
2012	Analisi dello stress del reticolo endoplasmatico in un modello murino di autismo, il topo knock in NLGN3 R451C." Il finanziamento prevede il salario per 1 anno per un ricercatore post-dottorato.	Sapienza University of Rome-PI	40,000+ salary for a research contract
2013	Meccanismi molecolari alla base di forme monogeniche di autismo caratterizzate da ritenzione di proteine sinaptiche nel reticolo endoplasmatico	Sapienza University of Rome-PI	12,000
2014	REST come regolatore dell'espressione di Neurexina1 durante il differenziamento di progenitori neurali	Sapienza University of Rome-PI	5,000
2015	Effects of human FUS/TLS protein on the inflammatory responses of brain astrocytes	Sapienza University of Rome-I	8,000
2016	Characterization of the knock-in mouse Neuroligin3 R451C: effects on neural precursor differentiation and in axon myelination	Sapienza University of Rome-PI	8,500
2017	Axon-glia interaction modulating myelination processes in co-cultures neurons-Schwann cells or Schwann-like induced from adipose mesenchymal stem cells: effects mediated by acetylcholine mimetics and neuroligin proteins	Sapienza University of Rome-I	11,000
2018	"Cellular pathways involved in the toxicity of neuroserpin polymers that cause dementia FENIB"	Istituto Pasteur Fondazione Cenci Bolognetti-bando 2018-I	60,000
2018	FONDI FFABR-ricevuto dal Ministero dell'Istruzione, dell'Università e della Ricerca	Sapienza University of Rome-PI	3,000
2018	International agreement with Rutgers University "Pharmacological strategies to rescue the defective trafficking caused by the R4541C autism-linked mutation in Neuroligin3"	Sapienza University of Rome-PI	4,500

Part VII – Research Activities

Keywords		Brief Description
Neuronal differentiation, Acetylcholine, Neuroblastoma cells Acetylcholinesterase	Dpt. Biology and Biotechnologies Sapienza University of Rome (undergraduate, graduate and PhD student)	During my degree and PhD thesis (1994 to 2001) I focused on the role played by the production of the neurotransmitter (acetylcholine) on the differentiation of neuroblastoma cells
Synaptic Adhesion Molecules, Neuroligin Mutations associated to neurodevelopmental Disorders-ASD (Autism Spectrum Disorders) Protein misfolding Protein trafficking ER stress (Unfolded protein Response) Rescue strategies	Dpt. of Pharmacology and Skaggs School of Pharmacy and Pharmaceutical Sciences, University of California, San Diego. Dpt. Biology and Biotechnologies "C. Darwin" Sapienza University of Rome (Post-Doctoral Fellow, Assistant Professor)	Since 2001, first at the University of San Diego (UCSD) and from 2008 at Sapienza University of Rome, my research has focused on studying protein misfolding caused by the R451C mutation in Neuroligin3. We have shown that the mutation causes impaired protein trafficking and activation of ER stress both in vitro cell systems and in vivo.

Reviewer for international journals
Peer-review of manuscripts submitted to the following journals: Neuroscience, Neural Plasticity, Science Signaling for topics related to protein trafficking delle proteine, Autism Spectrum Disorders and Endoplasmic Reticulum Stress.

Part VIII – Summary of Scientific Achievements

Product type	Number	Data Base	Start	End
Papers [international]	32	Scopus	1997	2019
Books [scientific]	1	Scopus	1997	2019

Products total number (indexed)	32
Total Impact factor	120,78
Average Impact Factor	3,89
Total Citations	565
Average Citations per Product	17,65
Hirsch (H) index	13

Comparative criteria for the present evaluation (criteri comparativi ai fini della valutazione, bando art. 1)

Products total number	32
Hirsch (H) index	13
Hirsch (H) index (last 10 years)	8
Total Citations	565
Total Citations (last 10 years)	400
Average citations per Product	17,65
Total Impact factor (con riferimento anno pubblicazione)	120,78
Average Impact Factor	3,89
Teaching Experience	As detailed in part IV

Part IX-Institutional Activities
2014-2018 Researcher's representative in the Board of the Dept of Biology and Biotechnologies "Charles Darwin", Sapienza University of Rome.
2014-now appointed referent for the evaluation of the research quality (VQR) of the Dept of Biology and Biotechnologies "Charles Darwin, Sapienza University of Rome.

Part X– Full list of Publications*
*List of the publications selected for the evaluation (2014-2019).
For each publication report title, authors, reference data, journal IF (if applicable), citations, press/media release (if any).
Scopus ID: 6507560864
ORCID ID: 0000-0002-9394-0207

Salome Azoulay-Ginsburg S; Trobiani L; Setini A; Favaloro FL; Giorda E; Jacobs A; Hauschner H; Levy L; Cestra G; **De Jaco A***; Gruzman A. The lipophilic 4-phenylbutyric acid derivative prevents aggregation and retention of misfolded proteins.
ChemEur J. **2019** (*accepted, in press*).
*co-corresponding author
IF (2018):

1. *Ranaivoson FM, Turk LS, Ozgul S, Kakehi S, von Daake S, Lopez N, Trobiani L, **De Jaco A**, Denissova N, Demeler B, Özkan E, Montelione GT, Comoletti D. A Proteomic Screen of Neuronal Cell-Surface Molecules Reveals IgLONs as structurally Conserved Interaction Modules at the Synapse. *Structure*. **2019**; 27:893-906.
doi: 10.1016/j.str.2019.03.004
IF (2018): 4.576
Cit.: 3

2. *Trobiani L, Favaloro FL, Di Castro MA, Di Mattia M, Cariello M, Miranda E, Canterini S, De Stefano ME, Comoletti D, Limatola C, **De Jaco A**. UPR activation specifically modulates glutamate neurotransmission in the cerebellum of a mouse model of autism. *Neurobiol Dis.* **2018**; 120:139-150.
doi: 10.1016/j.nbd.2018.08.026
IF (2018): 5.16
Cit.: 2

3. *Di Bari M, Bevilacqua V, **De Jaco A**, Laneve P, Piovesana R, Trobiani L, Talora C, Caffarelli E, Tata AM. Mir-34a-5p Mediates Cross-Talk between M2 Muscarinic Receptors and Notch-1/EGFR Pathways in U87MG Glioblastoma Cells: Implication in Cell Proliferation. *Int J Mol Sci.* **2018**;19(6). pii: E1631.
doi: 10.3390/ijms19061631
IF (2018): 4.183
Cit.: 9

4. *Altieri F, Turco EM, Vinci E, Torres B, Ferrari D, **De Jaco A**, Mazzoccoli G, Lamorte G, Nardone A, Della Monica M, Bernardini L, Vescovi AL, Rosati J. Production and characterization of CSSI003 (2961) human induced pluripotent stem cells (IPSCS) carrying a novel puntiform mutation in RAI1 gene, causative of Smith-Magenis syndrome. *Stem Cell Research* **2018** Stem Cell Res. Feb 21; 28:153-156.
doi: 10.1016/j.scr.2018.02.016
IF (2018): 3.929
Cit.: 2

5. *Martella G, Meringolo M, Trobiani L, **De Jaco A**, Pisani A, Bonsi P. The neurobiological bases of autism spectrum disorders: the R451C-neuroligin 3 mutation hampers the expression of long-term synaptic depression in the dorsal striatum. *Eur J Neurosci.* **2018**; 47:701-708.
doi: 10.1111/ejn.13705
IF (2018): 2.784
Cit: 9

6. ***De Jaco A**, Mango D, De Angelis F, Favaloro FL, Andolina D, Nisticò R, Fiori E, Colamartino M, Pascucci T. Unbalance between Excitation and Inhibition in Phenylketonuria, a Genetic Metabolic Disease Associated with Autism. *Int J Mol Sci.* **2017**;18(5). pii: E941.
doi: 10.3390/ijms18050941
IF (2017): 3.687
Cit.: 3

7. *Guadagno NA, Moriconi C, Licursi V, D'Acunto E, Nisi PS, Carucci N, **De Jaco A**, Cacci E, Negri R, Lupo G, Miranda E. Neuroserpin polymers cause oxidative stress in a neuronal model of the dementia FENIB. *Neurobiol Dis.* **2017**; 103:32-44.
doi: 10.1016/j.nbd.2017.03.010
IF (2017): 5.227
Cit.: 4

8. ***De Jaco A**, Bernardini L, Rosati J, Tata AM. Alpha-7 nicotinic receptors in nervous system disorders: from function to therapeutic perspectives. *Cent Nerv Syst Agents Med Chem.* **2017**;17(2):100-108.
doi: 10.2174/1871524916666160729111446
IF (2017): nd
Cit.: 6

9. *Rubio-Marrero EN, Vincelli G, Jeffries CM, Shaikh TR, Pakos IS, Ranaivoson FM, von Daake S, Demeler B, **De Jaco A**, Perkins G, Ellisman MH, Trewhella J, Comoletti D. Structural Characterization of the Extracellular Domain of CASPR2 and Insights into Its Association with the Novel Ligand Contactin1. *J Biol Chem.* **2016**; 291(11):5788-802.
doi:10.1074/jbc.M115.705681
IF (2016): 4.125
Cit.: 16

10. *Ulbrich L, Favaloro FL, Marchetti V, Pascucci T, Comoletti D, Marciniak SJ, **De Jaco A**. Autism associated R451C mutation in Neuroligin3 leads to the activation of the unfolded protein response in a PC12 Tet-On inducible system. *Biochem. J.* **2016**;473(4):423-34. *selected cover
doi: 10.1042/BJ20150274
IF (2016): 3.797
Cit.: 16

11. *Romano E, De Angelis F, Ulbrich L, **De Jaco A**, Fuso A, Laviola G. Nicotine exposure during adolescence: cognitive performance and brain gene expression in adult heterozygous reeler mice. *Psychopharmacology* **2014**; 231(8):1775-87.
doi: 10.1007/s00213-013-3388-y
IF (2014): 3.875
Cit.: 6

12. *Ulbrich L, Cozzolino M, Marini ES, Amori I, **De Jaco A**, Carrì MT, Augusti-Tocco G. Cystatin B and SOD1: Protein-Protein Interaction and Possible Relation to Neurodegeneration. *Cell Mol Neurobiol.* **2014**, 34(2):205-13.
doi: 10.1007/s10571-013-0004-y
IF (2014): 2.506
Cit.: 8

13. Taylor P, **De Jaco A**, Comoletti D, Miller M, Camp S. Cholinesterase confabs and cousins: Approaching forty years. *Chem Biol Interact.* **2013**; 203(1): 10-3
doi: 10.1016/j.cbi.2012.10.004
IF (2013): 2.982
Cit.:4

14. **De Jaco A**, Dubi N, Camp S, Taylor P. Congenital hypothyroidism mutations affect common folding and trafficking in the α/β–hydrolase fold proteins. *FEBS J.* **2012**; 279(23):4293-305. *selected cover
doi: 10.1111/febs.12019
IF (2012): 4.250
Cit.:3

15. Falivelli G, **De Jaco A**, Favaloro FL, Kim H, Wilson J, Dubi N, Ellisman MH, Abrahams BS, Taylor P, Comoletti D. Inherited genetic variants in autism-related CNTNAP2 show perturbed trafficking and ATF6 activation. *Hum Mol Genet.* **2012**; 21(21):4761-73.
doi: 10.1093/hmg/dds320
IF (2012): 7.692
Cit.:26

16. **De Jaco A**, Comoletti D, Dubi N, Camp S and Taylor P. Processing of Cholinesterase-like α/β-Hydrolase fold proteins: Alterations Associated with Congenital Disorders". *Special thematic issue of Protein & Peptide Letters*. *Protein Pept Lett.* **2012**; 19(2):173-9.

doi:10.2174/092986612799080103
IF (2012): 1.994
Cit.:6

17. **De Jaco, A**; Lin, MZ; Dubi, N; Comoletti, D; Miller, M; Camp, S; Ellisman, M; Butko, MT; Tsien, RY; Taylor, P. Neuroligin trafficking deficiencies arising from mutations in the α/β-hydrolase fold protein family. *J Biol.Chem.* **2010**; 285(37):28674-82.
doi: 10.1074/jbc.M110.139519
IF (2010): 5.328
Cit.:25

18. **De Jaco A**, Dubi N, Comoletti D, Taylor P. Folding anomalies of neuroligin3 caused by a mutation in the alpha/beta-hydrolase fold domain. *Chem Biol Interact.* **2010**;187(1-3):56-8.
doi: 10.1016/j.cbi.2010.03.012
IF (2010): 2.832
Cit.:9

19. Camp S, Zhang L, Krejci E, Dobbertin A, Bernard V, Girard E, Duysen EG, Lockridge O, **De Jaco A**, Taylor P. Contributions of selective knockout studies to understanding cholinesterase disposition and function. *Chem Biol Interact.* **2010**;187(1-3):72-7.
doi: 10.1016/j.cbi.2010.02.008
IF (2010): 2.832
Cit.:15

20. **De Jaco A**, Comoletti D, King CC, Taylor P. Trafficking of cholinesterases and neuroligins mutant proteins. An association with autism. *Chem Biol Interact.* **2008**; 175(1-3):349-51.
doi: 10.1016/j.cbi.2008.04.023
IF (2008): 3.077
Cit.:10

21. Camp S, **De Jaco A**, Zhang L, Marquez M and Taylor P. Acetylcholinesterase expression in muscle is specifically controlled by a promoter-selective enhancesome in the first intron. *J Neurosci.* **2008;** 28(10): 2459-70.
doi: 10.1523/JNEUROSCI.4600-07.2008
IF (2008): 7.452
Cit.:24

22. **De Jaco A**, Comoletti D, Kovarik Z, Gaietta G, Radić Z, Lockridge O, Ellisman MH and Taylor P. A mutation linked with autism reveals a common mechanism of endoplasmic reticulum retention for the α/β-hydrolase fold protein family. *J Biol Chem.* **2006**; 281 (14): 9667-76.
doi: 10.1074/jbc.M510262200
IF (2006): 5.808
Cit.: 41
Featured in: Phelps J Misfolded proteins presents potential molecular explanation for autism spectrum disorders. *Environmental Health Perspectives* **2006** vol. 114 (7): 409.

23. **De Jaco A**, Camp S., Taylor P. Influence of the 5' intron in the control of acetylcholinesterase gene expression during myogenesis. *Chem Biol Interact.* **2005**; 157-158:372-3.
doi: 10.1016/j.cbi.2005.10.058
IF (2005): 2.789
Cit.:9

24. **De Jaco A**, Kovarik Z, Comoletti D, Jennings LL, Gaietta G, Ellisman MH and Taylor P. A single mutation near the C-terminus in α/β–hydrolase fold protein family causes a defect in protein processing. *Chem Biol Interact.* **2005**; 157-158:371-2.
doi: 10.1016/j.cbi.2005.10.057
IF (2005): 2.789
Cit.:4

25. Comoletti D, **De Jaco A**, Jennings L, Flynn R, Gaietta G, Tsigelny I, Ellisman MH., Taylor P. The Arg451Cys-Neuroligin-3 Mutation Associated with Autism Reveals a Defect in Protein Processing. *J Neurosci.* **2004**; 24 (20): 4889-93.
doi: 10.1523/JNEUROSCI.0468-04.2004
IF (2004): 7.907
Cit.:175

26. Uccelletti D, **De Jaco A**; Farina F, Mancini P, Augusti-Tocco G, Biagioni S and Palleschi C. Cell surface expression of a GPI-anchored form of mouse acetylcholinesterase in Klpmr1Δ cells of *Kluyveromyces lactis*. *Biochem and Biophy Res Commun.* **2002**; 298, 559-565.
doi: 10.1016/s0006-291x(02)02513-5
IF (2002): 2.935
Cit.: 11

27. **De Jaco A**, Augusti-Tocco G and Biagioni S. Muscarinic acetylcholine receptors induce neurite outgrowth and activate the synapsinI gene promoter in neuroblastoma clones. *Neuroscience* **2002**; 113(2), 330-337.
doi: 10.1006/mcne.2001.1042
IF (2002): 3.457
Cit.: 16

28. **De Jaco A**, Augusti-Tocco G and Biagioni S. Alternative AChE molecular forms induce neurite outgrowth in transfected neuroblastoma clones. *J Neurosci Res.* **2002**; 15, 756-65.
doi: 10.1002/jnr.10436
IF (2002): 2.956
Cit.: 20

29. **De Jaco A**, Ajmone-Cat MA, Baldelli P, Carbone E, Augusti-Tocco G, Biagioni S. Modulation of acetylcholinesterase and voltage-gated Na+ channels in choline acetyltransferase-transfected neuroblastoma clones. *J Neurochem.* **2000**; 75,1123-31.
doi: 10.1046/j.1471-4159.2000.0751123.x
IF (2000): 4.9
Cit.:13

30. Biagioni S, Ciuffini L, **De Jaco A**, Vignoli AL and Augusti-Tocco G. Activation of neurospecific gene expression by *Antennapedia* Homeobox peptide. *Int J Dev Neurosci.* **2000**; 18, 93-99.
doi: 10.1016/S0736-5748(99)00077-5
IF (2000): 1.583
Cit.:3

31. Biagioni S, Tata AM, **De Jaco A** and Augusti-Tocco G. Acetylcholine synthesis and neuron differentiation. *Int J Dev Biol.* **2000**; 44, 689-697.
IF (2000): 1.963
Cit.:34

32. Bignami F, Bevilacqua P, Biagioni S, **De Jaco A**, Casamenti F, Felsani A, and Augusti-Tocco G. Cellular Acetylcholine content and neuronal differentiation. *J Neurochem.* **1997**; 69, 1374-1381.
doi: 10.1046/j.1471-4159.1997.69041374.x
IF (1997): 4.234
Cit.:33

Book Chapters

33. Taylor P, **De Jaco A**, Comoletti D. Neuroligins. *Encyclopedia of Neuroscience* **2009**; 493-496
doi: n.d.
IF (2009): n.d.
Cit.:0

Dichiaro che tutte le informazioni riportate nel presente allegato sono veritiere.