

CURRICULUM VITAE



PERSONAL DATA

Name: **Raffaella**
Last Name: **Gozzelino**
Nationality: **Italian**
Birth place and date: **Cuneo (Italy) on March 19th, 1976**

Institucional address: Rua da Quinta Grande 6, 2780-156 Oeiras, Portugal
Living address: Rua D. Mafalda 7, 3^oesq, 2605-601, Massamá Norte – Belas, Portugal
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WORK EXPERIENCES

- 01.2012 - **PRESENT** Scientific Reviewer: PLoS One (Public Library of Science).
11.2011 - **PRESENT** Medical and Scientific Freelance Translator: Cactus Communications (from Portuguese to English).
10.2010 - **PRESENT** Scientific Reviewer: European Journal of Pharmacology (Elsevier Publishing Group).
12.2007 - **PRESENT** **Senior Scientist (Cell and Molecular Biology / Pharmacology expert), currently working in Immunology and Infection. Inflammation Laboratory, Instituto Gulbenkian de Ciência, Oeiras, Portugal**
01.2005 – 12.2007 Scientist (Neuroscience/Neurobiology).
Cell Signaling and Apoptosis Laboratory, University of Lerida – Arnau de Vilanova Hospital, Spain.
01.2002 - 02.2003 Scientific advisor on production and new products development, products promoter (quality control department).
WITT ITALIA S.p.A.
Santena, Torino, Italy

AREAS OF SCIENTIFIC ACTIVITY

Laboratory expertise in cell biology and molecular biology (Neuroscience, Neurobiology, Oncology, Immunology, Infection), cell cultures, cytotoxicity assays/staining, signalling transduction pathways, transfection/transduction/infection, imaging, protein measurement techniques, DNA cloning, plasmid design, virus production/screening, host-pathogen interaction, *in vitro* screening for therapeutic target validation, drug safety assessment *in vitro* and *in vivo*, pharmacokinetics, pharmacodynamics, optimization of drug administration protocols *in vivo*,

application of fundamental science to animal models (mice, especially) to assess the outcome of inflammatory/infectious diseases. Experimental design, interpretation of the data observed, proposal and troubleshooting of new validation strategies and/or techniques. Project management. Literature research, organization and teaching of practical courses on cell biology techniques, give periodical seminars, students supervising, establishment of academic/corporate collaborations, scientific and medical writing, translating, editing, reviewing (European Journal of Pharmacology, PLoS One), assessment of the scientific content of research manuscripts/projects, presentation of data in international meetings and to different kinds of audiences, experimental design, interpretation of complex preclinical and clinical data, proposal of new validation strategies and/or techniques, projects management, commercial capacity to deal with providers and customers, project development plans, experimental and product support, product promotion, quality control analysis.

LABORATORY DOMAIN OF SPECIALIZATION

In vitro - Cell culture: cell lines and culture conditions, isolation of primary cell lines (such as cortical neurons, hepatocytes, bone marrow derived macrophages and tumour-derived cells), establishment of stable cell lines, cell viability and cell death assays/staining, cell transfection, cell transduction/infection, cell imaging, cell screening methods, therapeutic drugs validation (cytotoxicity assessment), pharmacokinetics, optimization of treatment protocols.

In vivo – Mouse model: establishment of mice colonies, breeding strategy, genotyping, intraperitoneal injections, gavage, blood collection (cardiac puncture, tail and cheek drawing), mice transduction, mice infection, therapeutic drugs validation (pharmacodynamics) and efficacy, optimization of drugs safety assessment and administration protocols.

Protein techniques: native and SDS-page gel electrophoresis, western blotting, activity assays, imaging technology (immunofluorescence), subcellular fractioning, oxidative stress measurement (ROS, lipid peroxidation), ELISA.

DNA techniques: cloning in bacteria in general, DNA amplification, primers and plasmids design, lentiviral and retroviral production, lentiviral screening transduction, PCR, shRNA construction.

RNA techniques: qualitative and quantitative RT-PCR.

ACADEMIC DEGREES

- 03.2003 – 11.2007 PhD Thesis in Cell Biology (Neurobiology, TNF superfamily receptors and their functional antagonists in the neuronal apoptotic cell death).
Classification: Excellent: Maximum.
Cell Signaling and Apoptosis Laboratory, University of Lerida – Arnau de Vilanova Hospital, Spain
- 11.2006 – 04.2007 PhD external training in Cell Biology and Immunology (Neurobiology/Autoimmune diseases, i.e. Multiple sclerosis)
Project: Assessment of the cytoprotective effect of heme oxygenase-1 in death receptor mediated oligodendrocyte injury.
Inflammation Laboratory, Instituto Gulbenkian de Ciencia, Oeiras, Portugal
- 03.2003 – 11.2005 Diploma Advanced Studies (DEA) in Cell Biology (Master equivalent, Neuroscience/Neurobiology).
Classification: Excellent
Cell Signaling and Apoptosis Laboratory, University of Lerida – Arnau de Vilanova Hospital, Spain

- 11.1995 – 07.2001 M.Sc in Chemistry and Pharmaceutical Technologies (specialization in Pharmacology).
Classification: 106/110
University of Parma, Italy
- 05.2000 – 07.2001 Student researcher (Cell Biology)
Project: Induction of HSP70 in human fibroblasts during aging *in vitro*.
Dep. of Medicine and Experimental Pharmacology, University of Parma, Italy.

POST-GRADUATION COURSES

- 2010 Pratical Course on Image Acquisition in Immunology.
Instituto Gulbenkian de Ciência, Oeiras, Portugal
- 2005 Diploma in Genetic Manipulation and Practical Animal Handling (FELASA, category C). University of Lerida, Spain.
- 2005 Pathological Diseases and Molecular Therapy.
University of Lerida, Spain.
- 2005 Methods in Biochemistry and Molecular Biology.
University of Lerida, Spain.
- 2005 Methods in Cellular Biology.
University of Lerida, Spain.
- 2002 Therapeutical Fito-chemistry.
Centro la Torre, Torino, Italy.

RESEARCH GRANTS AWARDED

Assessment of TNF-mediated neuronal cell death.
Ministerio de Ciencia y Innovación SAF2007-60287. Principal Investigador: Joan X. Comella

Death receptors (Fas) and functional antagonists implication in apoptotic neuronal cell death.
Ministerio de Sanidad y Consumo FIS PI020051. Principal Investigador: Joan X. Comella

Analysis of Ret punctual mutations *in vivo* e *in vitro*.
Ministerio de Educacion y Ciencia BFU2004-03632. Principal investigator: Mario Encinas Martin.

FELLOWSHIPS AWARDED

Implication of TNF supefamily receptor and their functional antagonists in the neuronal apoptotic cell death. Agència de Gestió d'Adjuts Universitaris i de Recerca. 2004FI 00108 (4 years fellowship). Catalunya Government.

Molecular mechanisms underlying heme sensitization to programmed cell death in malaria. SFRH/BPD/44256/2008 (3 years fellowship). FCT Fundação para Ciência e a Tecnologia. Portuguese Government.

PUBLICATIONS

Larsen R, Gouveia Z, Soares MP, **Gozzelino R**. Heme Cytotoxicity And The Pathogenesis of Immune Mediated Inflammatory Diseases. Front Pharmacol. 2012;3:77.

Figueiredo N, Chora A, Raquel H, Neves-Costa A, Moita C, Faridi H, Ferreira JA, Costa P, **Gozzelino R**, Zhao JL, Gupta V, Soares MP, Gama-Carvalho M, Baltimore D, Moita LF. The anthracycline epirubicin triggers an ATM-dependent protective response to the CLP mouse model of sepsis. (Manuscript under review).

Gozzelino R, Larsen R, Vanoaica L, Seixas E, Poli M, Coutinho A, Cardoso S, Rebelo S, Darshan D, Kühn L, Soares MP. Ferritin H chain affords tolerance to *Plasmodium* infection. (Manuscript under review).

Gozzelino R, Casanelles E, Marques-Fernandes F, Iglesias-Guimaraes V, Sole C, Comella JX, Yuste V. Bcl-x_L, but not Mcl-1, Bcl-2 or Bcl-w, controls TNF-triggered apoptosis regardless of NF-κB activation in HeLa cells. (Manuscript under review).

Gozzelino R and Soares MP. Heme sensitization to TNF-mediated programmed cell death. Book chapter in *Advances in Experimental Medicine and Biology*. Editors: David Wallach or Mark Feldmann. Springer-Verlag. Berlin Heidelberg. 2011;691:211-9.

Larsen R, **Gozzelino R**, Jeney V, Tokaji L, Bonaparte D, Cavalcante M, Chora Â, Ferreira A, Marguti I, Cardoso S, Sepulveda N, Smith A, Soares MP. Targeting free heme to suppress the pathogenesis of severe sepsis. *Science Translational Medicine*. 2010 (Sci Transl Med. 2010 Sep 29;2(51):51ra71).

Moubarak RS, Solé C, Pascual M, Gutierrez H, Llovera M, Pérez-García MJ, **Gozzelino R**, Segura MF, Iglesias-Guimaraes V, Reix S, Soler RM, Davies AM, Soriano E, Yuste VJ, Comella JX. The death receptor antagonist FLIP-L interacts with Trk and is necessary for neurite outgrowth induced by neurotrophins. *J Neurosci*. 2010 Apr 28;30(17):6094-105.

Gozzelino R, Jeney V, Soares MP. Mechanisms of cell protection by heme oxygenase-1. *Annual Rev Pharmacol Toxicol*. 2010;50:323-54. Review.

Seixas E*, **Gozzelino R***, Chora A, Ferreira A, Silva G, Larsen R, Rebelo S, Penido C, Smith NR, Coutinho A, Soares MP. Heme oxygenase-1 affords protection against noncerebral forms of severe malaria. *Proc Natl Acad Sci U S A*. 2009 Sep 15;106(37):15837-42. (* equal contribution)

Gozzelino R, Sole C, Llecha N, Segura MF, Moubarak RS, Iglesias-Guimaraes V, Perez-Garcia MJ, Reix S, Zhang J, Badiola N, Sanchis D, Rodriguez-Alvarez J, Trullas R, Yuste VJ, Comella JX. Bcl-x_L regulates TNF-alpha-mediated cell death independently of NF-kB, FLIP and IAPs. *Cell Res*. 2008 Oct;18(10):1020-36.

Segura MF, Sole C, Pascual M, Moubarak RS, Perez-Garcia MJ, **Gozzelino R**, Iglesias V, Badiola N, Bayascas JR, Llecha N, Rodriguez-Alvarez J, Soriano E, Yuste VJ, Comella JX. The long form of Fas apoptotic inhibitory molecule is expressed specifically in neurons and protects them against death receptor-triggered apoptosis. *J Neurosci*. 2007 Oct 17;27(42):11228-41.

Sole C, Dolcet X, Segura MF, Gutierrez H, Diaz-Meco MT, **Gozzelino R**, Sanchis D, Bayascas JR, Gallego C, Moscat J, Davies AM, Comella JX. The death receptor antagonist FAIM promotes neurite outgrowth by a mechanism that depends on ERK and NF-κB signaling. *J Cell Biol*. 2004 Nov 8;167(3):479-92. Epub 2004 Nov 1.

ORAL PARTICIPATIONS IN INTERNATIONAL AND NATIONAL CONGRESSES

Gozzelino R, Larsen R, Vanoaica L, Seixas E, Poli M, Coutinho A, Cardoso S, Rebelo S, Darshan D, Kühn L, Soares MP. Ferritin H chain affords tolerance to *Plasmodium* infection. Meeting of Plataforma Ibérica de Malária. Lisbon. June 22-24, 2011.

Gozzelino R, Seixas E, Chora A, Ferreira A, Silva G, Larsen R, Rebelo S, Penido C, Smith NR, Coutinho A, Soares MP. Heme sensitization to TNF-mediated programmed cell death dictates the outcome of Plasmodium infection in mice. 2009 International Biolron Society Meeting. Porto. June 07-11, 2009.

Gozzelino R, Seixas E, Chora A, Ferreira A, Silva G, Larsen R, Rebelo S, Penido C, Smith NR, Coutinho A, Soares MP. Heme sensitization to TNF-mediated programmed cell death dictates the outcome of Plasmodium infection in mice. 12th International TNF Conference. Madrid. April 26-29, 2009.

Gozzelino R, Sole C, Llecha N, Segura MF, Trullas R, Comella JX. TNF signaling mechanism inducing neuronal apoptotic cell death. Caracterización del mecanismo de Bioquímica y Biología Molecular. Sociedad Española de Bioquímica Y Biología Molecular. Zaragoza. September 12-15, 2005.

Gozzelino R, Solé C, Segura MF, Comella JX. Regulación de las vías de supervivencia y apoptosis por TNF en sistema nervioso. ApoRed, Red Española de Apoptosis. Miraflores de la Sierra (Madrid). May-June 28-01, 2005.

Gozzelino R, Segura MF, Solé C, Comella JX. Caracterización molecular de la muerte inducida por TNF en células PC12. Implicación de la via de NF kappa B. II Reunión anual de la RED del FIS sobre muerte neuronal. Madrid. November 8-9, 2004.

Gozzelino R, Segura MF, Solé C., Comella JX. TNFalpha signaling mechanism inducing cell death. Sociedad Española de Bioquímica y Biología Molecular. Lerida. September 12-15, 2004.

Gozzelino R, Segura MF, Solé C, Comella JX. Dual mechanism of cell death after TNFalpha treatment in PC12 cells. Red de grupos de muerte neuronal en modelos animales y patología. Sant Feliu de Guixols. October 22-24, 2003.

PARTICIPATION IN THESIS DEFENSES

2011 - I was external member of Maria Linares PhD thesis at the University of Madrid, Spain (Universidad Computense de Madrid). *Factores neuroprotectores y redox en el desarrollo del fenotipo neurológico de la malaria cerebral murina.*

LANGUAGES

Italian (mother tongue), English (fluent, written and spoken), Spanish (fluent, written and spoken), Portuguese (fluent written and spoken), Creol – Portuguese based (mother tongue).

INFORMATIC SKILLS

Windows operative system, Mac OS X Software, Word, Excel, Power Point, Adobe Photoshop, Image J, InStat, FlowJo, Canvas.