

# CURRICULUM VITAE



## PERSONAL DATA

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

Institucional address: Rua da Câmara Pestana, 1150-082 Lisbon, Portugal  
Mobile Phone: +351 967190669  
E-mail address: [raffaella.gozzelino@fcm.unl.pt](mailto:raffaella.gozzelino@fcm.unl.pt); [raffaellagozzelino@gmail.com](mailto:raffaellagozzelino@gmail.com)

## WORK EXPERIENCES

- 05.2015 - **PRESENT** **Principal Investigator**. Inflammation and Neurodegeneration Laboratory, Chronic Diseases Research Centre (CEDOC), Faculty of Medicine (FCM) of the NOVA University of Lisbon, Portugal
- 04.2012 - 04.2015 **Staff Scientist** (Immunology/Infection/Neurobiology). Inflammation Laboratory, Instituto Gulbenkian de Ciência, Oeiras, Portugal
- 12.2007 – 04.2012 **Post-doctoral Scientist** (Immunology/Infection). Inflammation Laboratory, Instituto Gulbenkian de Ciência, Oeiras, Portugal
- 01.2005 – 12.2007 **Research Scientist** (Neuroscience/Neurobiology). Cell Signalling and Apoptosis Laboratory, Faculty of Medicine, University of Lerida – Arnau de Vilanova Hospital, Spain.
- 01.2002 - 02.2003 **Scientific Advisor** for production and products development. Products promoter (quality control department). WITT ITALIA S.p.A., Santena, Torino, Italy

## RESEARCH INTERESTS

My current research is focused on understanding the role of inflammation and immunity in neurodegenerative diseases, such as Parkinson's disease (PD). The main interest of my Laboratory is to assess the role immune response activation in the pathogenesis of Parkinson's disease and to investigate the molecular mechanisms underlying the involvement of heme and iron in neuroinflammation and neuronal death.

## **PARTICIPATION IN INTERNATIONAL EVALUATION PANELS FOR PEER-REVIEWING RESEARCH GRANT APPLICATIONS**

- 04.2015 - PRESENT Hungarian National Scientific Research Foundation (OKTA)  
05.2015 - PRESENT French National Research Agency (ANR)

## **EDITORIAL ACTIVITIES**

- 05.2015 - PRESENT Guest Associated Editor of **Mediators of Inflammation** (Hindawi Publishing Group)  
05.2014 - PRESENT Guest Associated Editor of **Frontiers in Bioscience** (Nature Publishing Group)  
05.2012 - PRESENT Member of the Editorial Board of the **European Journal of Pharmacology** (Elsevier Publishing Group)  
01.2012 - PRESENT Guest Associated Editor of **Frontiers in Pharmacology** (Nature Publishing Group)

## **PARTICIPATION IN INTERNATIONAL EVALUATION PANELS FOR PEER-REVIEWING ARTICLES**

- 12.2014 - PRESENT Scientific Reviewer: **Free Radical Biology & Medicine** (Elsevier Publishing Group)  
11.2014 - PRESENT Scientific Reviewer: **Arab Journal of Gastroenterology** (Elsevier Publishing Group)  
07.2014 - PRESENT Scientific Reviewer: **Cellular and Molecular Life Sciences** (Elsevier Publishing Group)  
04.2014 - PRESENT Scientific Reviewer: **Free Radical Biology & Medicine** (Elsevier Publishing Group)  
01.2012 - PRESENT Scientific Reviewer: **PLoS One** (Public Library of Science)

## **OUTREACH ACTIVITY AND PROFESSIONALIZATION OF HIGH SCHOOL TEACHERS**

- 04.2013 – 04.2014 Course for the Accredited Certification of Life Science Biology of High School Teachers. Instituto Gulbenkian de Ciência, Oeiras, Portugal.

## **TEACHING ACTIVITIES**

- 05.2014 - PRESENT **Lecturer** at the PhD Graduate Program in Areas from Basic and Applied Biology (**GABBA**), University of Porto  
06.2014 - PRESENT **Lecturer** at the PhD Graduate Program Science for Development (**PGCD**), promoted by the Institute Gulbenkian de Ciência in Portuguese-speaking African Countries, UniCV, Cape Verde.

## MENTORING ACTIVITIES

- 11.2015 - **PRESENT** **Supervisor of the PhD thesis** of Catarina Vaz Carreto Martins at the Chronic Diseases Research Centre (CEDOC), Lisbon, Portugal, entitled "*The role of immunity in neurodegenerative diseases*".
- 04.2012 - **PRESENT** **Co-supervisor of the PhD thesis** of Ana Martins Ribeiro at the Inflammation Laboratory at the Instituto Gulbenkian de Ciencia, Oeiras, Portugal entitled "*Tissue Damage Control: Protection against necroptosis by the transcription factor NF-E2-related factor 2 (Nrf2)*".

## PARTICIPATION IN THESIS DEFENSE

- 05.03.2015 - **Member** of Liliana Alves da Silva Marques's PhD thesis at the Faculdade de Ciências da Universidade de Lisboa, entitled "*Iron homeostasis in immune mononuclear cells: a potential role in atherogenesis*".
- 04.11.2013 - **Member** of Claudia Figueiredo Pereira's Master thesis at the Faculdade de Ciências e Tecnologia, Lisbon (Universidade Nova de Lisboa), entitled "*Carbon monoxide, autophagy and cytoprotection in response to cerebral ischemia*".
- 08.07.2011 - **External member** of Maria Linares' PhD thesis at the University of Madrid, Spain (Universidad Computense de Madrid), entitled "*Factores neuroprotectores y redox en el desarrollo del fenotipo neurológico de la malaria cerebral murina*".

## ORGANIZATION OF INTERNATIONAL CONFERENCES

- 09.2014 – 09.2014 Member of the international scientific committee of the **European Iron Club 2014**, September 11-14, Verona, Italy

## PRIZES/AWARDS

- 04.2013 – **Best podium presentation**, Biolron meeting held in London, April 14-18, 2013.

## FELLOWSHIPS AWARDED

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

Implication of TNF superfamily 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.

## PARTICIPATION IN PROJECTS AWARDED

### As Team Member:

*In vitro* and *in vivo* analysis of Ret mutants. Ministerio de Educacion y Ciencia. Spanish Government. BFU2004-03632. From 2004 to 2009. Principal Investigator: Mario Encinas Martin.

Implication of the death receptor Fas and its functional antagonists in the neuronal apoptotic cell death. Ministerio de Sanidad y Consumo. Catalonia Government. FIS PI020051. From 2002 to 2005. Principal Investigator: Joan X. Comella Carnicé.

### As Consultant:

DAMAGECONTROL. European Research Council, 7th Framework Grant ERC-2011-AdG. 294709. Consultancy service from 2012 to 2014 (Specific Aim 1 of the aforementioned grant). Principal Investigator: Miguel P. Soares.

## MEMBERSHIP

|                       |   |
|-----------------------|---|
| 2014 – <b>PRESENT</b> | Member of the <b>European Iron Club (EIC)</b>                   |
| 2012 – <b>PRESENT</b> | Member of the <b>International Biolron Society (IBIS)</b> .     |
| 2011 – <b>PRESENT</b> | Member of the <b>Sociedade Portuguesa de Imunologia (SPI)</b> . |

## ACADEMIC DEGREES

|                   |   |
|-------------------|---|
| 03.2003 – 11.2007 | <b>PhD Thesis</b> in Cell Biology/Neurobiology (Title: Implication of TNF superfamily receptors and their functional antagonists in neuronal apoptotic cell death).<br>Classification: Excellent: Maximum.<br>Cell Signalling and Apoptosis Laboratory, Faculty of Medicine, University of Lerida – Arnau de Vilanova Hospital, Spain |
| 11.2006 – 04.2007 | <b>PhD external training</b> in Cell Biology and Immunology (Neurobiology/Autoimmune diseases)<br>Project: Assessment of the cytoprotective effect of heme oxygenase-1 in death receptor mediated oligodendrocyte injury.<br>Inflammation Laboratory, Instituto Gulbenkian de Ciencia, Oeiras, Portugal                               |
| 03.2003 – 11.2005 | <b>Diploma Advanced Studies (DEA)</b> in Cell Biology/Neurobiology ( <b>Master equivalent</b> ).<br>Classification: Excellent<br>Cell Signalling and Apoptosis Laboratory, University of Lerida – Arnau de Vilanova Hospital, Spain   |
| 11.1995 – 07.2001 | <b>MSc in Chemistry and Pharmaceutical Technologies</b> (specialization in Pharmacology).<br>Classification: 106/110<br>Faculty of Pharmacy, University of Parma, Italy.  |
| 05.2000 – 07.2001 | <b>Undergraduate student researcher</b> (Cell Biology)<br>Project: Induction of HSP70 in human fibroblasts during aging in vitro.<br>Dep. of Medicine and Experimental Pharmacology, University of Parma, Italy.  |

## POST-GRADUATION COURSES

- 2013 **Drugs and the Brain.**  
Online course offered by California Institute of Technology (Caltech).
- 2012 **Writing in the Sciences.**  
Online course offered by University of Stanford.
- 2012 **Experimental Genome Science.**  
Online course offered by University of Pennsylvania
- 2010 **Practical 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 **Therapeutic Phyto-chemistry.**  
Centro la Torre, Torino, Italy.

## PUBLICATIONS

**Gozzelino R.** The pathophysiology of heme in the brain. *Curr Alzheimer Research* (*In press*).

**Gozzelino R\*** and Arosio P\*. The importance of iron in pathophysiologic conditions. Editorial comment, *Front Pharmacol.* 2015 Feb 24;6:26 (\* **equal contribution**).

Yilmaz B, Portugal S, Tran TM, **Gozzelino R**, Ramos S, Gomes J, Regalado A, Cowan PJ, d'Apice AJF, Chong AS, Doumbo OK, Traore B, Crompton PD, Silveira H and Soares MP. Gut microbiota elicits a protective immune response against malaria transmission. *Cell.* 2014 Dec 4;159(6):1277-89.

Soares MP, **Gozzelino R** and Weis S. Tissue damage control in disease tolerance. *Trends Immunol.* 2014 Aug 30.

Penha-Gonçalves C, **Gozzelino R** and Vieira de Morais L. Iron overload in *Plasmodium*-infected placenta as a pathogenesis mechanism underlying poor fetal viability. *Front Pharmacol.* 2014 Jul 1;5:155.

**Gozzelino R\*** and Soares MP\*. Coupling heme and iron metabolism via Ferritin H chain. *Antioxid Redox Signal.* 2014 Apr 10 (\* **equal contribution**).

Figueiredo N, Chora A, Raquel H, Pejanovic N, Pereira P, Hartleben B, Neves-Costa A, Moita C, Pedroso D, Pinto A, Marques S, Faridi H, Costa P, **Gozzelino R**, Zhao JL, Soares MP, Gama-Carvalho M, Martinez J, Zhang Q, Döring G, Grompe M, Simas JP, Huber TB, Baltimore D, Gupta V, Green DR, Ferreira JA, Moita LF. Anthracyclines induce DNA damage response-mediated protection against severe sepsis. *Immunity.* 2013 Nov 14;39(5):874-84.

Marques-Fernandez F, Planells-Ferrer L, **Gozzelino R**, Galenkamp K, Reix S, Llecha-Cano N, Lopez-Soriano J, Yuste VJ, Moubarak R, and Comella J. TNF $\alpha$  induces PC12 cells survival through the FLIP-L-dependent activation of the MAPK/ERK pathway. *Cell Death Dis.* 2013 Feb 14;4:e493.

Casanelles E\*, **Gozzelino R\***, Marques-Fernandes F, Iglesias-Guimaraes V, Sole C, Comella JX, Yuste V. Bcl-x<sub>L</sub>, but not Mcl-1, Bcl-2 or Bcl-w, controls TNF-triggered apoptosis regardless of NF- $\kappa$ B activation in HeLa cells. *Biochim Biophys Acta*. 2013 Jan 28 (\* equal contribution).

**Gozzelino R**, Andrade BB, Larsen R, Luz NF, Vanoaica L, Seixas E, Coutinho A, Cardoso S, Rebelo S, Poli M, Barral-Netto M, Darshan D, Kühn L, Soares MP. Metabolic adaptation to tissue iron overload confers tolerance to malaria. *Cell Host Microbe*. 2012 Nov 15;12(5):693-704.

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

**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. *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<sub>L</sub> 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-kB signaling. *J Cell Biol*. 2004 Nov 8;167(3):479-92. Epub 2004 Nov 1.

#### CHAIRMAN TO INTERNATIONAL CONGRESSES

06.2015 – 06.2015 Invited chairman at the 20<sup>th</sup> congress of the **European Hematological Association (EHA)**, June 11-14, Vienna, Austria

09.2014 – 09.2014 Member of the international scientific committee of the **European Iron Club** 2014, September 11-14, Verona, Italy

## ORAL PARTICIPATIONS TO INTERNATIONAL CONGRESSES

**Gozzelino R**, Bezerril Andrade B, Larsen R, Luz NF, Vanoaica L, Seixas E, Coutinho A, Cardoso S, Rebelo S, Poli M, Barral-Netto M, Darshan D, Kuhn LC, Soares MP. Metabolic Adaptation to Tissue Iron Overload Confers Tolerance to Malaria. Biolron meeting. London. April 14-18, 2013.

**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.