

<b>Date</b>	November 4 <sup>th</sup> . 2019
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**Part A. PERSONAL DATA**

Name and surname	M <sup>a</sup> del Carmen Iglesias-de la Cruz		
DNI/NIE/passport	08993859-P	Age	48
ID number	Researcher ID	A-6630-2010	
	ORCID code	0000-0003-0596-1284	

**A.1. Current professional status**

Organism	Universidad Autónoma de Madrid		
Department and School	Department of Physiology. School of Medicine		
Address	Avda Arzobispo Morcillo, nº2. 28029. Madrid		
Phone	+34 914976973	Email	<a href="mailto:mc.cruz@uam.es">mc.cruz@uam.es</a>
Professional category	Full Professor	Start date	Feb 1 <sup>st</sup> , 2011
UNESCO code for specialization	2410.01 (Human Physiology)		
Keywords	Nanomedicine, Physiology, <i>in vivo</i> studies.		

**A.2. Academic training (title, institution, date)**

Bachelor/Degree/PhD	University	Year
Pharmacy	Alcalá University, Madrid. Spain	1994
Pharmacy	Alcalá University, Madrid, Spain	1998

**A.3. General Quality indicators of scientific production**

- Total citations: 3278 (Web of Science).
- Mean impact factor over the last 5 years: 6.7
- Publications in the first quartile: 28 (of a total of 40).
- H-index: 26.

**Part B. FREE SUMMARY OF CV**

Graduated in Pharmacy at the University of Alcalá (UA) in 1994 (nº1 of the XIV Promotion), in 1995 I obtained a predoctoral fellowship from the Ministry of Education and Science. I defended my Doctoral Thesis in the Dept of Physiology, School of Medicine of the UA in 1998, with the qualification of Summa Cum Laude. My predoctoral scientific production was 6 original articles, 13 contributions to international congresses, and 1 invited lecture at the XV Congress of the International Society of Nephrology. In addition, I made a brief stay in Dr. Fuad Ziyadeh's laboratory at the University of Pennsylvania (UPenn), beginning a very prolific collaboration for the future. Thanks to a postdoctoral fellowship from the Ministry of Education and Culture, and later to a contract, I made a postdoctoral stay at UPenn for 3 years. As a remarkable milestone, we were the first to cultivate kidney podocytes, a highly differentiated cell type. I personally designed the experiments to explore their physiology, culminating in the granting of a National Institutes of Health project, as well as the first manuscript (lead author) to report the effects of high glucose on podocytes. During the last year at UPenn I was a group leader, training new members and directing my own line of research. As scientific production during my stay of 3 years at UPenn, I published 10 original articles, 1 book chapter, 8 contributions to International Congresses (1 oral communication),

and a guest seminar at the UA. Upon my return to Spain in 2002, I joined the group of Dr. Amparo Cano at Biomedical Research Institute *Alberto Sols*, expert in molecular biology of epithelial tumorigenesis. Using the latest generation methodology (double hybrid system), and in collaboration with the University of Hawaii, we were the first to describe the LOXL-2 as a new molecular cofactor of Snail, essential for the progression of epithelial tumors. These results were published in *EMBO J*, being the first co-author and presented at 3 International Congresses. Between 2005 and 2011, I developed teaching activities as an interim Professor in the Dept of Biology at the Universidad Autónoma de Madrid (UAM), joining Dr. Ángeles Juarranz's research group of Photodynamic Therapy of epithelial tumors. During this period, I participated in 2 research projects granted by the Spanish National Institute of Health, 5 contracts with pharmaceutical companies (technology transfer), published 5 original articles, and presented 7 contributions to international congresses. In addition, I started a scientific collaboration with the Dept of Physics of Materials of the UAM, being a founding member of the Fluorescence Imaging Group (FIG). Since February 2011, I am a Full Professor of Physiology, School of Medicine at UAM, with undergraduate and postgraduate teaching.

My current line of research as part of the FIG, is within the diverse projects funded by several national and international organisms (see *Participation in Research Projects, C2*). We work in a multidisciplinary team and our main interest is the use of different fluorescence nanoparticles for diagnostic and treatment diseases, from cardiovascular to neurological. I am also part of the research group at the IRyCIS (Ramón y Cajal Institute of Health Research), effectively creating interdisciplinary synergies that have served to accelerate the implementation of translational health research results.

## **Part C. MOST RELEVANT MERITS**

### **C.1. Publications in the last five years (total 40)**

1. Amor S, Iglesias-de la Cruz MC, Ferrero E, García-Villar O, Barrios V, Fernandez N, Monge L, García-Villalón AL, Granado M: Peritumoral adipose tissue as a source of inflammatory and angiogenic factors in colorectal cancer. *Int J Colorectal Dis* 31(2): 365-75. 2016 Q1. **IF 2.449 (12 citations)**.
2. Granado M, Amor S, Fernández N, Carreño-Tarragona G, Iglesias-de la Cruz MC, Martín-Carro B, Monge L, García-Villalón AL: Effects of early over nutrition on the renal response to Ang II and expression of RAAS components in rat renal tissue. *NMCD (Nutrition, Metabolism and Cardiovascular Diseases* 27 (10): 930-37. 2017. Q2. **IF 3.318 (1 citation)**.
3. Ortgies DH, de la Cueva L, Del Rosal B, Sanz-Rodríguez F, Fernández N, Iglesias-de la Cruz MC, Salas G, Cabrera D, Teran FJ, Jaque D, Martín Rodríguez E: *In Vivo* Deep Tissue Fluorescence and Magnetic Imaging Employing Hybrid Nanostructures. *ACS Appl Mater Interfaces* 8(2): 1406-14. 2016 Q1. **IF 6.723 (27 citations)**.
4. Santos HDA, Ximendes EC, Iglesias-de la Cruz MC, Chaves-Coira I, del Rosal B, Jacinto C, Monge L, Rubia-Rodríguez I, Ortega D, Mateos S, García Solé J, Jaque D, Fernández N: *In vivo* early tumor detection and diagnosis by infrared luminescence transient nanothermometry. *Adv. Funct. Mater* 1803924-37. 2018 Q1. **IF 13.325. (11 citations)**.
5. Hu J, Ortgies DH, Martín-Rodríguez E, Rivero F, Aguilar-Torres R, Alfonso F, Fernández N, Carreño-Tarragona G, Monge L, Sanz-Rodríguez F, **Iglesias-de la Cruz MC**, Granado M, García-Villalón AL, García-Solé J, Jaque D: Optical Nanoparticles for Cardiovascular Imaging. *Adv. Opt. Mater* 6 (22): 1800626-937. 2018. Q1. **IF: 7.43). (4 citations)**.

**C.2. Participation in Research Projects (selected from a total of 16)**

- *Podocyte Dysfunction in Diabetic Glomerulopathy.*  
National Institutes of Health / NIDDK (modalidad KO8). July 2002-March 2007  
Principal investigator (PI): Dr. Sheldon Chen (University of Pennsylvania, USA) 650K \$.
- *Luminescent inorganic nanoparticles for optical imaging in fluids and biological systems.*  
Ministry of Science and Innovation. Ref MAT2010-16161. Jan 2011-Dec 2013.  
PI: Daniel Jaque García. 182K €.
- *Multifunctional nanostructures for controlled image and thermotherapy.*  
Ministry of Science and Innovation. Ref MAT2013-47395-C4-1-R. Jan 2013-Dec 2016.  
PI: Daniel Jaque. 203K €.
- *Adipocytes as a source of angiogenic and pro-inflammatory factors in colorectal tumors.*  
Inter-university cooperation projects with USA (UAM-Santander Bank). Jun 2011-Jun 2012.  
PI: M<sup>a</sup> Carmen Iglesias de la Cruz. 12K €.
- *Modulation of cellular micro RNAs as a therapeutic strategy for the cure of HIV infection.*  
Ministry of Economy and competitiveness. Health Institute Carlos III (PIE13/00040). Jun 2014-Jun 2017.  
PI: Francisco Sanz Rodríguez. 605K €.
- *Nanomaterials for studying cardiovascular diseases.*  
Ministry of Economy and competitiveness. Ref MAT2016-75362-C3-1-R. Jan 2017-Dec 2019.  
PI: Daniel Jaque. 225K €.
- *Nanoparticles and laser speckle for in vivo tisular diagnosis.*  
Inter-university cooperation projects with Europe, Yerun network (UAM-Santander Bank). Jul 2017-Dec 2018.  
PI: Nuria Fernández Monsalve. 15K €.
- *Madrid network for Molecular Imaging in Nanomedicine (RENIM-CM).*  
Autonomous Community of Madrid. Jan 2018-Dec 2021.  
PI: Manuel Desco Menéndez.
- *Nanoparticles-based thermal bioimaging technologies (NanoTBTech).*  
European Research Council H2020-FETOPEN. Jan 2019-Dec 2021.  
Coordinator: Luis Carlos. PI@ UAM and IRYCIS: Daniel Jaque. 450K €.

**C.3. Contracts with companies (selected from a total of 6)**

- Me-ALA evaluation as preventive treatment in UV light-induced lesions in mice. Laboratorios Galderma. 2007-2009. PI: Ángeles Juarranz de la Fuente. 18K €.
- Preventive and/or therapeutic potential of PRODX in UV light-induced in mice. Apoteknos Derma S.L.. 2007-2009. PI: Ángeles Juarranz de la Fuente. 48K €.
- Development of a photocarcinogenesis model in mice.  
Apoteknos Derma S.L.. 2009 PI: Ángeles Juarranz de la Fuente. 21K €.

**C.4. Previous employment and other experience**

JOB POST	INSTITUTION	DATES
Collaboration Fellow	Dept of Physiology. Universidad de Alcalá. Madrid. Spain	1994
Predoctoral fellow (Ministry of	Dept of Physiology. Universidad de Alcalá.	Sept 1994-Dec 1998

Education and Science, MEC)	Madrid. Spain.	
Predoctoral fellow (Ministry of Education and Science, MEC)	Dept of Medicine. University of Pennsylvania. Philadelphia, USA. Penn Center for Molecular Studies of kidney diseases	Jun 1997-Sep 1997
Postdoctoral Fellow (MEC/UPenn)	Dept of Medicine. University of Pennsylvania. Philadelphia, USA. Penn Center for Molecular Studies of kidney diseases	Jan 1999-Dec 2001
Research postdoctoral	Biomedical Research Institute <i>Alberto Sols</i> . CSIC/UAM. Madrid. Spain.	May 2002-Feb 2004
Assistant Professor	Dept of Biology. School of Biosanitary Sciences. Universidad Francisco de Vitoria. Madrid. Spain.	Feb 2004-Jun 2004
Interim Full Professor	Dept of Biology. School of Science. Universidad Autónoma de Madrid. Madrid. Spain.	Feb 2005-Jan 2011
Full Professor	Dept of Physiology. School of Medicine. Universidad Autónoma de Madrid. Madrid. Spain.	Feb 2011-Present

### **C.5. Evaluation activity**

- Expert Evaluator (Biomedicine, Autonomous Community of Andalusia): 2014 call for Grants for Biomedical Research and Health Sciences in Andalusia. 2012-2014
- Expert Evaluator (Biomedicine, National Agency of Evaluation, Spain)
  - 2011: Torres Quevedo Program (Inncorpora Line). Ministry of Science and Innovation.
  - 2015-2017: State Program for Research, Development and Innovation Oriented to the Challenges of Society, young researchers and Ciber networks. General Directorate of Scientific and Technical Research. Subdirectorate General of Research Projects. MINECO.
- End of Degree Projects Evaluation Tribunal. School of Sciences, Food Science and Technology Degree and Human Nutrition and Dietetics Degree. UAM 2013-15, 2018.
- Final Project Evaluation Tribunal. School of Sciences, Biology Degree. UAM 2005-06 and 2007-08.
- Participation as a member of the Evaluation Court of 8 Doctoral Theses.

### **C.4. Other merits**

- Recognition of 3 stages of teaching (five-year periods) (UAM).
- Scientific activity management: Scientific Secretary of the International Summer School on Fluorescent Nano-particles in Bio-medicine, organized by the Nicolás Cabrera Materials Science Institute. International Summer School, scientific-teaching environment. July 2012
- Participation in 8 Teaching Innovation Projects (2011-2019). Dept. of Physiology. Faculty of Medicine, UAM.

- Regulated undergraduate and postgraduate teaching, uninterrupted during the last 13 years in different Degrees at UAM (Medicine, Biochemistry, Biology, Human Nutrition and Dietetics, Food Science and Technology, Physical Activity and Sports Sciences). Average hours per academic year: 120.
- More than 50 contributions (posters and oral communications) to National and International Congresses. Invited lecture XV International Congress of Nephrology, Buenos Aires, Argentina (1999).

In Madrid, 4<sup>th</sup> of November, 2019



Signed by Dr. M. Carmen Iglesias-de la Cruz