

Part A. PERSONAL INFORMATION

CV date

04-12-2020

First and Family name	Rosa María Reguera Torres		
Social Security, Passport, ID number	09770214K	Age	52
Researcher codes	Open Researcher and Contributor ID (ORCID**)	0000-0001-9148-2997	
	SCOPUS Author ID (*)	57202396216	
	WoS Researcher ID (*)	K-6027-2017	

(*) *Optional*

(**) *Mandatory*

A.1. Current position

Name of University/Institution	University of León		
Department	Biomedical Sciences		
Address and Country	Campus de Vegazana s/n 24071, León (SPAIN)		
Phone number	987295225	E-mail	rmregt@unileon.es
Current position	Full Professor (CU)	From	2010
Key words	Drug Discovery, Molecular Parasitology, Toxicology,		

A.2. Education

PhD, Licensed, Graduate	University	Year
Licensed	University of León	1992
PhD	University of León	1998

A.3. General indicators of quality of scientific production (*see instructions*)

- Number of recognised research 6-years periods: 4 /Last period 2013-2018
- PhD: (2010-2020): 4
- Sum of times cited: 1513 / Average of citations per item: 17,4 /average citations per: 60,5
- Índice H = 24

Part B. CV SUMMARY (*max. 3500 characters, including spaces*)

Training: Ldo Veterinaria ULE (1992), Dr. Veterinaria ULE (1998)

Positions held: Assistant ULE (1999) Professor (TEU) ULE (2000-2002); Professor (TU) ULE (2002- 2010); Full Professor ULE (2010-continued).

Scholarships: Pre-Doctoral Scholarship from the Provincial Council of León (1992-1996); Short Stays Abroad MEC (2003).

Stays abroad: Department of Microbiology. State University of N.Y. (SUNY). (1994). Total 6 months. Dept. of Physiology and Cancer Research Center PENNSTATE University USA (1996) total 6 months Dept. of Microbiology University of Washington at St. Louis USA (2003) total 6 months

Academic positions: Director of the Department of Biomedical Sciences ULE (2015-continued)

Since her graduation in 1992, Dr Reguera has focused her research on the molecular basis of the pharmacological treatment and MOLECULAR BIOLOGY of leishmaniasis. During her pre-doctoral stays at the Labs of Drs Bruce Stanley at PENNSTATE USA, and Jorge Galán at STONY BROOK University in New York, where she investigated the potential of polyamine metabolism and more specifically MAT/ODC as a possible therapeutic target, with which she obtained her PhD in 1998. This metabolic pathway was explored for more than 10 years at ULE which served to give several European conferences (COST). In 2000, he began to study Leishmania DNA-topoisomerase I, demonstrating that trypanosomes had a protein with unique structural characteristics that could be exploited as a target for different compounds. During the last 10 years the molecular characterization of this enzyme and the screening of chemical compounds on it has allowed to give several international conferences in 2007 (Frejus, France), 2008 (Norwich, UK) and 2014 (Málaga). Since 2009 Dr. Reguera is working on MASSIVE SCREENING of chemical compounds in GENETICALLY MODIFIED pathogens to



adapt them to HTS systems. As a consequence, she has been invited as a speaker at the Zing Conference in Drug Discovery held in Malaga in 2014, 6th WordLeish International Congress in Toledo in 2017 and forms part of an "OpenLab" on drug discovery of visceral leishmaniasis with **GSK**.

In 2012 she started a collaboration with several groups of organic chemists involved in nanoparticle synthesis. This is the case of Drs. Gómez and de la Mata from the University of Alcalá de Henares and more specifically with Dr. Calderón from the Free University of Berlin (Germany) who is participating in this project.

Finally, she is starting a collaboration with Dr. Salvador Iborra (Faculty of Medicine, UCM) on the cellular response to visceral leishmaniasis.

Dr. Reguera is a member of the Consolidated Research Unit 108 (UIC108) of the Regional Government of Castilla y León since 2015.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

Soto M, Ramírez L, Solana JC, Cook ECL, Hernández-García E, Charro-Zanca S, Redondo-Urzaínqui A, **Reguera RM**, Balaña-Fouce R, Iborra S. Resistance to Experimental Visceral Leishmaniasis in Mice Infected With *Leishmania infantum* Requires Batf3. *Front. Immunol.*, 10 December 2020 | <https://doi.org/10.3389/fimmu.2020.590934> **IF: 5,085**

Franch O, Gutiérrez-Corbo C, Domínguez-Asenjo B, Boesen T, Jensen PB, Nejsum LN, Keller JG, Nielsen SP, Singh PR, Jha RK, Nagaraja V, Balaña-Fouce R, Ho YP, **Reguera RM**, Knudsen BR. DNA flowerstructure co-localizes with human pathogens in infected macrophages. *Nucleic Acids Res.* 2020 Jun 19;48(11):6081-6091. **IF: 11,502**

Solana JC, Ramírez L, Cook EC, Hernández-García E, Sacristán S, Martín ME, Manuel González V, **Reguera RM**, Balaña-Fouce R, Fresno M, Requena JM, Iborra S, Soto M. Subcutaneous Immunization of *Leishmania* HSP70-II Null Mutant Line Reduces the Severity of the Experimental Visceral Leishmaniasis in BALB/c Mice. *Vaccines (Basel)*. 2020 Mar 23;8(1):141. **IF: 4,086**

Álvarez-Velilla R, Gutiérrez-Corbo MDC, Punzón C, Pérez-Pertejo MY, Balaña-Fouce R, Fresno M, **Reguera RM**. A chronic bioluminescent model of experimental visceral leishmaniasis for accelerating drug discovery. *PLoS Negl Trop Dis.* 2019 Feb 14;13(2):e0007133. **IF: 3,885**

Balaña-Fouce R, Pérez Pertejo MY, Domínguez-Asenjo B, Gutiérrez-Corbo C, **Reguera RM**. Walking a tightrope: drug discovery in visceral leishmaniasis. *Drug Discov Today*. 2019 May;24(5):1209-1216. **IF: 7,321**

Iborra S, Martínez-López M, Cueto FJ, Conde-Garrosa R, Del Fresno C, Izquierdo HM, Abram CL, Mori D, Campos-Martín Y, **Reguera RM**, Kemp B, Yamasaki S, Robinson MJ, Soto M, Lowell CA, Sancho D. *Leishmania* uses mincle to target an inhibitory ITAM signaling pathway in dendritic cells that dampens adaptive immunity to infection. *Immunity*. 2016 Oct 18;45(4):788-801. **IF: 24,082**

Gutiérrez V, Seabra AB, **Reguera RM**, Khandare J, Calderón M. New approaches from nanomedicine for treating leishmaniasis. *Chem Soc Rev.* 2016 Jan 7;45(1):152-68. **IF: 36,001**

Calvo-Álvarez E, Stamatakis K, Punzón C, Álvarez-Velilla R, Tejería A, Escudero-Martínez JM, Pérez-Pertejo Y, Fresno M, Balaña-Fouce R, **Reguera RM**. Infrared fluorescent imaging as a potent tool for in vitro, ex vivo and in vivo models of visceral leishmaniasis. *PLoS Negl Trop Dis.* 2015 Mar 31;9(3):e0003666. **IF: 3,948**

Calvo-Álvarez E, Álvarez-Velilla R, Jiménez M, Molina R, Pérez-Pertejo Y, Balaña-Fouce R, **Reguera RM**. First evidence of intracolonial genetic exchange in trypanosomatids using two *Leishmania infantum* fluorescent transgenic clones. *PLoS Negl Trop Dis.* 2014 Sep 4;8(9):e3075. **IF: 4,446**

Calvo-Álvarez E, Guerrero NA, Alvarez-Velilla R, Prada CF, Requena JM, Punzón C, Llamas MÁ, Arévalo FJ, Rivas L, Fresno M, Pérez-Pertejo Y, Balaña-Fouce R, **Reguera RM**.



Appraisal of a *Leishmania major* strain stably expressing mCherry fluorescent protein for both in vitro and in vivo studies of potential drugs and vaccine against cutaneous leishmaniasis. *PLoS Negl Trop Dis.* 2012;6(11):e1927. **IF: 4,569**

C.2. Research projects

Project name: “Autovía de los lisosomas dirigiendo a macrófagos infectados”

Reference: SAF2017-83575-R

Implementing organisation: University of León

Principal Investigator: Rosa M Reguera

Number of researchers: 2

Funding entity: MINECO

Duration: 01/01/2018 to 31/12/2020

Funding: 120,000 €

Project name: “Small-molecule screening against visceral leishmaniasis using ex-vivo splenic explant cultures”

Reference: <http://www.openlabfoundation.org/research/projects/details7.html>.

Implementing organisation: OpenLab Foundation Tres Cantos

Principal Investigator: Rosa M Reguera and Manuel Fresno

Number of researchers: 7

Funding entity: OpenLab Foundation (GlaxoSmithKline)

Duration: 01/2016 to 01/2018

Funding: £220,510

Project name: “Nanotecnología y células dendríticas en el desarrollo de una vacuna terapéutica frente al VIH”

Reference: RED CYTED 214RT0482

Principal Investigator: María Ángeles Muñoz Fernández

Funding entity: Programa Iberoamericano CYTED Ciencias y Tecnología para el Desarrollo

Duration: 2014 - 2017

Funding: 80.000 €

Project name: “Eficacia leishmanicida de antitumorales no camptotecínicos vehiculizados con dendrímeros carbosilano.”

Reference: FIS PI12/00104

Implementing organisation: Universidad de León

Principal Investigator: Rosa M Reguera

Number of researchers: 5

Funding entity: ISCIII (MINECO)

Duration: 2013-2015

Funding: 95,000 €

Project name: “Uso de antitumorales (derivados de camptotecina, e indenoisoquinolinas) frente a *Leishmania*”

Reference: FIS PS09/00448

Implementing organisation: Universidad de León

Principal Investigator: Rosa M Reguera

Number of researchers: 5

Funding entity: ISCIII

Duration: 2010-2012

Funding: 113,135 €

Project name: “Redes Temáticas de Investigación Cooperativa (RICET)”

Reference: RD06/0021/1004

Implementing organisation: Universidad de León

Principal Investigator: Rosa M Reguera

Number of researchers: 5

Funding entity: Instituto de Salud Carlos III



Duration: 2008- 2012

Funding: 120,000 €

C.3. Contracts, technological or transfer merits

Contract name: “Analysis of the synergic antitumoral effect exerted by postbiotic administered in combination with immunotherapy in an in vivo murine model of lung carcinoma”

Principal Investigator: Rosa M^a Reguera

Number of researchers: 5

Implementing organisation: Universidad de León

Funding entity: Instituto de Biotecnología de León (INBIOTEC)

Duration: 2019-2019

Funding: 18.478,27 €

Contract name: “Suplementos alimenticios en la prevención de la salmonelosis aviar”

Principal Investigator: Rosa M^a Reguera

Number of researchers: 6

Implementing organisation: Universidad de León/NOREL & Nature

Funding entity: CDTI

Duration: 2014-2014

Funding: 13.043 €

Contract name: “Desarrollo de un producto vacunal frente a la Leishmaniosis canina.”

Principal Investigator: Rosa M^a Reguera

Number of researchers: 4

Implementing organisation: Universidad de León/Laboratorios Ovejero, S.A

Funding entity: CDTI

Duration: 2013-2015

Funding: 16.480 €

C.4. Patents

Patent name: Homo- and hetero-functionalised carbosilane dendritic compounds

Publication number WO2014016460 A1

Application number PCT/ES2013/070529

Inventors: De La Mata FJ, Fernández-Muñoz MA, Gómez Ramírez R, Jiménez Fuentes J, Sánchez-Nieves Fernández J, Fernández soriano S, Galán Herranz M, Lorente Rodríguez R, Fuentes Paniagua E, Sánchez Rodríguez J, Peña González CE., Serramía Lobera MJ, Reguera RM Entidad titular: Universidad De Alcalá, Fundación Para La Investigación Biomédica Del Hospital Gregorio Marañón.

Priority country: Spain / date: 2014

C.5 Evaluation committees

- Expert of Agencia Nacional de Evaluación y Prospectiva (ANEP)
- Expert of ISCIII

C.6 Organization of R&D Conferences

- Member of Scientific Committee of “XXI Congreso Nacional y V Iberoamericano de Toxicología” León (Spain) 2015
- Member of Scientific Committee of “Global Challenges in Neglected Tropical Diseases” León (Spain) 2016