

Part A. Personal Information

DATE 28/05/2019

Surname(s)	María Monsalve Pérez	
Forename	50840973W	
Social Security, Passport, ID number	50840973W	
Sex	Female	
Age	49	
Researcher codes	WoS Researcher ID (*)	K-4416-2014
	SCOPUS Author ID(*)	
	Open Researcher and Contributor ID (ORCID)	0000-0003-2796-1453

(*) At least one of these is mandatory

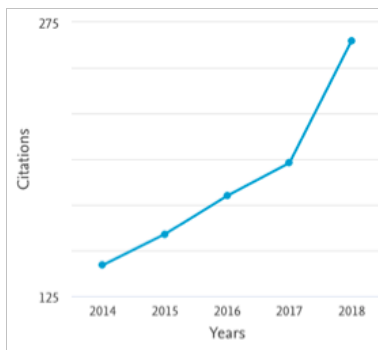
A.1. Current position

Post/ Professional Category	Científico Titular CSIC/ Group Leader at IIBm	
UNESCO Code	4215, 2407	
Key Words	Oxidative Metabolism, Cardiovascular Diseases, NAFLD, Cancer, Type 2 Diabetes.	
Name of the University/Institution	Consejo Superior de Investigaciones Científicas	
	Department/Centre	Instituto de Investigaciones Biomédicas "Alberto Sols"
	Full Address	Arturo Duperier, 4 28029-Madrid
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	Phone Number	915854471
Start date	01/03/2011	

A.2. Education (title, institution, date)

Year	University	Degree	Title
1993	Universidad Autónoma de Madrid	BS	Licenciado Ciencias Sec. Biológicas
1997	Universidad Autónoma de Madrid	PhD	Doctor en Bioquímica y Biología Molecular

A.3. Indicators of Quality in Scientific Production (See the instructions)



Sexenios: 4. 1994-1999, 2000-2005, 2006-2011, 2012-2017.

Supervised PhD in the last 10 years: 5. Yolanda Olmos, 2010. Cristina Sánchez Ramos, 2012. Brigitte Wild, 2015. Oscar Fabregat Andrés, 2017. Ignacio B. Prieto, 2018. In progress: Ramazan Yildiz, Gaurangkumar Patel, Sergio Rodriguez, Vitor da Silva, Inés Barahona, Julia Bernal.

Cittations Total: 1848. Average per year during the last 5 years: 188. Publications in the first quartil (Q1), 32.

Index h: 23

Part B. Free Summary of CV (Max. of 3.500 characters, including spaces)

First contact with the investigation.

During my university studies Prof. José Berenguer and Dr. Jose Miguel Hermoso introduced me to the knowledge of the basic mechanisms of gene regulation. It seemed fundamental to me to understand how organisms control the expression of genes. I became interested in laboratories that worked on

these subjects and I entered the laboratory of Dr. Juan Ayala, where I was a collaborating student during the fourth year of my career.

Doctoral thesis.

Then I got in touch with Dr. Margarita Salas, who offered to work on a leading project for the elucidation of basic mechanisms of regulation of gene expression. Enter as a collaborator during the fifth career course and then continue as a predoctoral student. The studies carried out during the thesis allowed the elucidation of a mechanism of transcriptional regulation to date unknown.

Postdoctoral abroad

Fundamental advances were being made in the knowledge of the mechanisms of regulation of gene expression in eukaryotes, first in yeasts, and soon after in mammals. Given my interest in the subject I joined as a post-doctoral, first to a leading team in the study of these mechanisms in yeast, Dr. Michel Green. Considering the importance of these basic studies to solve relevant problems in human pathology, I joined the group of Dr. Bruce Spiegelman, the study conducted there sought to understand the functioning at the molecular level of transcriptional regulators that control metabolism in mammals.

Ramón y Cajal, first projects as IP

At that time I decided to return to Spain and I joined Ramón y Cajal as a laboratory for Dr. Santiago Lamas, at this moment I started as a PI my own project that in its initial phase seeks to understand why metabolic dysfunctions are a risk factor for diseases cardiovascular, through the study of the activity of the master transcriptional regulator for the control of oxidative metabolism, in the vasculature.

Independent researcher, Junior I in the CNIC.

Then, thanks to a contract with the CNIC, I established myself as a group leader. The good results obtained allow us to propose more ambitious objectives at the mechanistic, phenotypic and therapeutic level, which seek to understand the molecular basis of metabolic diseases. All this we do with a translational approach that goes from the biochemical evaluation of the proposed mechanisms to the validation on human samples or valuation of biomarkers also in humans

Scientific head of the CSIC.

At this point I joined the CSIC as a Full Scientist in March 2011. The studies carried out at the CSIC are a direct continuation of the previous approaches, but after them the approach of new challenges arises.

Future.

The current social challenges demand a general rethinking of the strategies to be adopted in biomedical research, translationality prevails and the application of acquired knowledge. Our group, based on our experience in the knowledge of metabolic pathologies, proposes to address the new challenges of health research. The group participates as a co-coordinator in an ETN project of the H2020 (TREATMENT), has participated in two COST networks (Gassotransmitters and EU-ROS) and is an MC member of the COST MITOEAGLE network (2016-20).

Part C. Relevant accomplishments

C.1. Publications

1. Authors: I. Prieto, C. Rubio Alarcón, R. García-Gómez, M. Portero, Reinald Pamplona, A. Martínez-Ruiz, J.I. Ruíz-Sanz, M. Jove, S. Cerdán, M. Monsalve. "Metabolic adaptations in spontaneously immortalized PGC-1 α knock-out MEF increase their oncogenic potential". Submitted.
2. I. Prieto, A. Zambrano, J. Laso, A. Aranda, E. Samper, M. Monsalve. (2019) "Early induction of senescence and immortalization in PGC-1 α -deficient mouse embryonic fibroblasts." FRBM 138:23-32. Q1. IF: 6.020
2. Authors: Sánchez-Ramos, C., Tierrez, A., Laso, J., Bartrons, R., Roselló-Catafau, J., Monsalve, M. (2017). "PGC-1 α downregulation in the steatotic liver enhances ischemia-reperfusion injury and impairs ischemic preconditioning." ARS. Q1. IF: 7.093
3. Authors: García-Quintans, N., Prieto, I., Sánchez-Ramos, C., Luque, A., Arza, E., Olmos, Y., Monsalve, M. (2016). "Regulation of endothelial dynamics by PGC-1 α relies on ROS control of VEGF-A signaling". FRBM 93: 41-51. Q1. IF: 5.784
- Authors: García-Quintans, N., Prieto, I., Sánchez-Ramos, C., Tierrez, A., Arza, E., Alfranca, A., Redondo, J.M., Monsalve, M. (2016). "Oxidative stress induces loss of pericyte coverage and vascular instability in PGC-1 α deficient mice. Angiogenesis 19: 217-228. Q1. IF: 4.301
4. Klotz, L.O., Sánchez-Ramos, C., Prieto-Arroyo, I.; Urbánek, P., Steinbrenner, H., Monsalve, M. (2015). "Redox regulation of FoxO transcription factors". Redox Biology. 6: 51-72. Q1. IF: 6.235.
5. Fabregat-Andrés, O., Ridocci-Soriano, F., Berenguer-Jofresa, A., Corbí-Pascual, M., Valle-Muñoz, Barrabés, J.A. Estornell-Erill, J., Mata, M., Monsalve, M. (2015) "PGC- α blood levels have predictive

- value on cardiac haling and left ventricular remodeling after ST-segment elevation acute myocardial infarction” Rev. Esp Cardiol (Engl Ed) 68: 408-16. Q2. IF 3.8.
6. Olmos, Y., Sánchez-Gomez, F.J., Wild, B., García-Quintans, N., Cabezudo, S., Lamas, S., Monsalve, M. (2013). “SirT1 regulation of antioxidant genes is dependent on the formation of a FoxO3a/PGC-1 α complex.” ARS 19: 1507-1521. Q1. IF: 7.7
7. Fabregat-Andrés, O., Tierrez, A., Mata, M., Estornell-Erill, J., Ridocci-Soriano, F., and Monsalve, M. (2011) “Induction of PGC-1 α Expression Can Be Detected in Blood Samples of Patients with ST-segment Elevation Acute Myocardial Infarction” PLoS ONE 6: e26913-e26913. Q1. IF: 4.1
8. Sanchez, C., Tierrez, A., Wild, B., Fabregat, O., Sánchez-Cabo, F., Arduini, A., Dopazo, A., Monsalve, M. (2011). “PGC-1 α regulates TLS activity in oxidative stress protection genes” ARS 15: 325-337. Q1. IF: 8.5
9. Monsalve, M. and Olmos, Y. (2011) “The complex biology of FoxO”. Curr Drug Targets 12: 1322-1350. Q1. IF: 3.5
10. Borniquel, S., García-Quintans, N., Valle, I., Olmos, Y., Wild, B., Martínez-Granero, F., Soria, E., Lamas, S., and Monsalve, M. (2010) “Inactivation of Foxo3a and subsequent downregulation of PGC-1 α mediates nitric oxide induced endothelial cell migration” MCB 30: 4035-4044. Q1. IF: 6.2

C.2. Research Projects and Grants

1. Aplicación de la medida de la plasticidad metabólica al diagnóstico y seguimiento de la respuesta al tratamiento en enfermedades crónicas. Ministerio de Ciencia, Innovación y Universidades. RTI2018-093864-B-I00. IP Coordinator: Dr. M. Monsalve. 2019-2021. 145.200,00 €.
2. “Training European Network: Metabolic Dysfunctions associated with Pharmacological Treatment of Schizophrenia” (TREATMENT). Proposal Number: 674921. Horizon 2020 Call: H2020-MSCA-ITN-2016. IP: Dr. M. Monsalve. 2017-2020. Total 31723580,44 €/IIBm 991.491,84 €
3. “Nuevos Biomarcadores del Desarrollo Tumoral: Metabolismo y Resistencia al Estrés”. Ministerio de Economía y Competitividad SAF2015-63904-R. IP. Dr. M. Monsalve. 2016-2018. 121.000 €
3. “Consolidación Red Multidisciplinar en Biología Redox”. Ministerio de Economía y Competitividad SAF2015-71521-REDC. IP: Dr. M. Monsalve (coordinator Dr. S. Lamas). 01/12/2015-30/11/2017. 51.500,00 € (total).
4. “Patofisiología de la disfunción metabólica y el estrés oxidativo de origen mitocondrial”. Ministerio de Economía y Competitividad SAF2012-37693. IP: Dr. María Monsalve. 2013-2016. 187.200 €
5. Una nueva DNA primasa/polimerasa con un posible papel en envejecimiento. Comunidad de Madrid S2010/BMD-2361. IP Dr. M. Monsalve (coordinator Dr. L. Blanco, CBM-CSIC). 2012-2016. 113.850 €/644.000 € (total),
6. “Transcriptional control of ROS detoxification systems: mechanisms and physiology”. Ministerio de Ciencia e Innovación: SAF2009-07599. IP: Dr. María Monsalve. 2010-2013. 229.900 €
7. “Functional role of oxidative and nitrosative stress in diverse biological systems.”
Entidad Financiadora: Ministerio de Educación y Ciencia. Ref. CSD2007-00020. IP Dr. M. Monsalve (coordinator Dr. S. Lamas). 2008-2012. 400.000 €/51000.000 € (total).

C.3. Contracts

C.3 Participación en contratos, méritos tecnológicos o de transferencia.

1. CONTRATO DE APOYO TECNOLÓGICO. “Valoración del filtrado de agua corriente los filtros ALKANATUR sobre el desarrollo de procesos tumorales en ratones (ALKANCER)”. ALKANATUR, S.L.U. IP María Monsalve. 01/09/2017-31/08/2018. 15.317 €
2. CONTRATO DE APOYO TECNOLÓGICO. “Evaluación del efecto del consumo de agua alcalina sobre la hipertensión arterial y el estado inflamatorio (ALKTERIAL)” ALKANATUR, S.L.U. IP María Monsalve. 01/01/2019-31/12/2019 22.320 €

C.5, C.6, C.7... Other

Supervision of students:

Master:

1. Maite Bayo. Master en Bioquímica (UAM). 2017
1. Ana Peñas Pita da Veiga. Master en Biología Molecular y Celular (UAM). 2015
2. Ignacio Borja Prieto. Master en Biomedicina Molecular y Biotecnología (UAM). 2013
3. Jesús Ogando Castro. Master en Biotecnología (UAM). 2012

TFG

1. Isabel Córdova, grado en Ciencias Biomédicas (UL), 2018
2. José Carlos Martínez, grado en Bioquímica (UAM), 2018
3. Desiree Guerrero, Grado en Biología (UAH), 2017

4. Aitami Varela, grado en Biología Sanitaria (UAH), 2016
 5. Alejandro Hortal, grado en Bioquímica (UAM), 2015
 6. Carmen Rubio, grado en Bioquímica (UAM), 2014
 7. Sergio Cano, grado en Biología Sanitaria (UAH), 2014
 8. Ignacio Prieto, grado en Biología (UAM), 2012
 9. Javier Laso, grado en Biología (UAM), 2011
- Supervisor FPII
- I. Vazquez Indart (2014); S. Vegue Perezagua (2014); K. Plana Guadaño (2013); E. Garcinuño Bachiller (2012); Á. López Chamorro (2010); L. Durán Alcalde (2009); A. Caneva Serviddio (2008) DUAL, CAM,FPII de Anatomía Patológica: Raquel García Gómez (2016-2017).

Management activities

- Miembro del Consejo (Council) de la European Society for Free Radical Research E-SFRR (2016-)
- Vicedirectora del GEIRLI. (2015-)

-Dirección Grupo de Estrés Oxidativo, SEBBM (2016-2020)

-Miembro de la Comisión de Seminarios del IIBm, 2013-2014. 2016-presente.

-Miembro de la Comisión de Bioseguridad del IIBm, desde 2013

-Miembro del Comité de Bioseguridad del IIBm, desde 2014

-Miembro del Comité de Bioética del IIBm, desde 2013

-Miembro de la Comisión de Evaluación de los programas RyC y J. de la Cierva 2007, 2003.

-Evaluador ANEP y otras agencias internacionales desde 2002.

Miembro del Comité Organizador reuniones científicas:

-5th Symposium on Biomedical Research. Advances and Perspectives In Pharmacology, Drug Toxicity and Pharmacogenetics. (IIBm-Fac. de Medicina, UAM). 15-16 Marzo, 2018

-Symposium on Metabolic Dysfunctions associated with Pharmacological Treatment of Schizophrenia. 15-16 June, 2017.

-Oxidative stress and distress in pathophysiology: "CONSOLREDOX" network, 13 Febrero, 2017.

- XI Meeting of the Spanish Group for Free Radicals Research (GEIRLI) & VI International Congress on Nitric Oxide in Plants (NO-Plants). 13-15 Sept. 2016

-Advances and Perspectives in Cardiovascular Biomedicine, 21 Marzo, 2014

-WG Meeting COST Action no. BM1203. 9-11 Diciembre, 2013

-Int. symposium on redox signaling and oxidative stress in health and disease. 5-7 Junio, 2012.