

<b>Part A. PERSONAL INFORMATION</b>		<b>CV Date</b>	06/09/2019
First and Family Name	Javier Blanco Rivero		
DNI/NIE/Passport	11840929T	Age	39
Researcher Numbers	Researcher ID	J-6118-2014	
	Orcid Code	0000-0001-7232-2314	

**A.1. Current professional situation**

Name of University/Institution	Universidad Autónoma de Madrid		
Department	Physiology/School of Medicine		
Address	C/ Arzobispo Morcillo 4; 28029; Madrid		
Phone Number	+34914975446/+34637361875	e-mail	<a href="mailto:Javier.blanco@uam.es">Javier.blanco@uam.es</a>
Current position	Associate professor	From	16/10/2010
UNESCO Code	241103; 310909		
Key words	Obesity; Cirrhosis; Hypertension, Diabetes; Thyroid hormones; Vascular Tone Regulation; Superior Mesenteric Artery; Sympathetic innervation; Nitrergic Innervation; Sensory Innervation; Oxidative Stress; Symbiotics.		

**A.2. Education**

Degree	University/Institution	Year
PhD Physiology	Universidad Autónoma de Madrid	2006
Diploma de Estudios Avanzados	Instituto de Farmacología Toxicología	2004
BSc Biology	Universidad Autónoma de Madrid	2002

**A.3. JCR articles, h Index, thesis supervised...**

- 40 original articles indexed in JCR (25 in Q1)
- 2 non-indexed research articles
- 5 review articles
- 2 letters to editor
- 3 chapter books
- 1 original article under review
- Total number of citations: 601 (32 in the last 5 years).
- h-Index: 15
- (Data taken from Web of Science -Thomsom Reuters- 6<sup>th</sup> September 2019).
- Currently, supervisor of 1 doctoral theses, and 1 Master thesis.
- Previous supervision:
  - \* 2 doctoral thesis (Universidad Autónoma de Madrid/ Universidad Complutense de Madrid).
  - \* 3 Master thesis (Universidad Autónoma de Madrid)
  - \* 15 BSc thesis (Universidad Autónoma de Madrid)

**Part B. CV Summary**

The research line of Dr. Blanco-Rivero is focused on studying the role of perivascular innervation in superior mesenteric arteries from rats submitted to different pathophysiological situations, such as aging, obesity, hypertension, diabetes, liver cirrhosis, thyroid hormone disorders and fetal programming, in which alterations on peripheral vascular resistance have been reported. Specifically, his research is based on studying the modifications on sympathetic, nitrergic and sensory components of perivascular innervation in the situations mentioned above, by analysing the release of their different neurotransmitters/neuromodulators, as well as the mechanisms implicated on the participation of these innervations. Additionally, he has specialized in studying the signalling pathway of neuronal nitric oxide, focusing on the mechanisms that determine its release, and on its bioavailability, which is determined by its metabolism produced by reactive oxygen species. Recently,

Dr Blanco-Rivero has started to determine how different either pharmacological treatments or alterations on dietary/life habits (probiotic agent intake, aerobic exercise training) can affect these alterations. Because of this research, Dr. Blanco-Rivero has published 45 original articles; most of them published in high impact scientific journals (New England Journal of Medicine, Cardiovascular Research, Hypertension...).

### Previous positions

2010 Postdoctoral fellow (Sara Borrell and Juan de la Cierva programs) at the Universidad Complutense de Madrid (Spain).

2007-2009 Postdoctoral fellow (Contrato para la Incorporación de Doctores) at the Universidad Autónoma de Madrid (Spain).

2006-2007 Postdoctoral fellow at the Instituto Catalán de Ciencias Cardiovasculares (CIC-CSIC; Barcelona-Spain).

2003-2006 Undergraduate Student at the Universidad Autónoma de Madrid (Spain).

2002-2003 Undergraduate Student at the Instituto Mixto de Farmacología y Toxicología (CSIC-UCM; Madrid-Spain).

2000-2002 Undergraduate Student at the Universidad Autónoma de Madrid (Spain).

## Part C. RELEVANT MERITS

### C.1. Publications (including books)

#### Original Research (Peer reviewed)

- 40 original articles indexed in JCR (25 in Q1).

1. Caracuel L, Sastre E, Llévenes P, Prieto I, Funes T, Aller MÁ, Arias J, Balfagón G, **Blanco-Rivero J**. Acute-on-chronic liver disease enhances phenylephrine-induced endothelial nitric oxide release in rat mesenteric resistance arteries through enhanced PKA, PI3K/AKT and cGMP signalling pathways. *Sci Rep*. 2019 May 6;9(1):6993. (12/64; IF: 4.112)
2. de Las Heras N, Klett-Mingo M, Ballesteros S, Martín-Fernández B, Escribano O, **Blanco-Rivero J**, Balfagón G, Hribal ML, Benito M, Lahera V, Gómez-Hernández A. Chronic Exercise Improves Mitochondrial Function and Insulin Sensitivity in Brown Adipose Tissue. *Front Physiol*. 2018; 9:1122. (Q1; 20/83; IF: 3.394)
3. Sastre E, Caracuel L, Prieto I, Llévenes P, Aller MÁ, Arias J, Balfagón G, **Blanco-Rivero J**. Decompensated liver cirrhosis and neural regulation of mesenteric vascular tone in rats: role of sympathetic, nitrenergic and sensory innervations. *Sci Rep*. 2016; 6:31076. (10/64; IF: 4.26)
4. Sastre E, Caracuel L, Balfagón G, **Blanco-Rivero J**. Aerobic exercise training increases nitrenergic innervation function and decreases sympathetic innervation function in mesenteric artery from rats fed a high fat diet. *J. Hypertens*. 2015;33(9):1819-30. (9/63; IF: 5.06)
5. Sastre E, Balfagón G, Revuelta-López E, Aller MA, Nava MP, Arias J, **Blanco-Rivero J**. Effect of short and long-term portal hypertension on adrenergic, nitrenergic and sensory functioning in rat mesenteric artery. *Clin Sci (Lond)* 2012; 122(7):337-48. (17/121; IF: 4.816)
6. **Blanco-Rivero J**, de las Heras N, Martín-Fernández B, Cachofeiro V, Lahera V, Balfagón G. Rosuvastatin restored adrenergic and nitrenergic function in mesenteric arteries from obese rats. *Br J Pharmacol* 2011; 162(1):271-285. (35/261, IF: 4.409)
7. **Blanco-Rivero J**, Márquez-Rodas I, Xavier FE, Aras-López R, Arroyo-Villa I, Ferrer M, Balfagón G. Long-term fenofibrate treatment impairs endothelium-dependent dilation to acetylcholine by altering the cyclooxygenase pathway. *Cardiovasc Res* 2007 75(2):398-407 (5/75; IF 6.127)

8. **Blanco-Rivero J**, Cachofeiro V, Lahera V, Aras-López R, Márquez-Rodas I, Salaices M, Xavier FE, Ferrer M, Balfagón G. Participation of prostacyclin in endothelial dysfunction induced by adosterone in normotensive and hypertensive rats. *Hypertension*. 2005; 46(1):107-112 (5/51; IF 6.33)
9. Fernandez-Velasco M, Goren N, Benito G, **Blanco-Rivero J**, Bosca L, Delgado C. Regional distribution of hyperpolarization-activated current (I<sub>f</sub>) and HCN expression in ventricular cells from control and hypertrophied rat hearts. *J Physiol-London* 2003; 553 (Pt 2):395-405 (7/74; IF 4.312).

Letters to editor

Balfagón G, **Blanco-Rivero J**, Márquez-Rodas I. CGRP blockade in migraine and vascular effects. *N Engl J Med*. 2018;378(8):773-774 (1/155; IF: 72.41).

Aller MA, Arias J, **Blanco-Rivero J**. The porto-hepatic spectrum of cirrhotic encephalopathy. *Hepatology*. 2019 (In press)

Book chapters

**Blanco-Rivero J**, Miguel Crespo, M. Bases bioquímicas del envejecimiento y la diabetes: posibles nexos. In: *Nutrición y Diabetes en el Envejecimiento*. ENE Ediciones. ISBN: 978-84-85395-75-0, 2009 Pp. 21-33.

Aller MA, Prieto I, **Blanco-Rivero J**, Arias JI, Balfagón G, Arias J. The Wound Healing Reaction. In: *ARIAS J, ARIAS JI, ALLER MA. Surgical Inflammation*. e-Book. Bentham Scientific. ISBN: 978-1-60805-786-3, 2013 Pp. 129-153.

María Angeles Aller, **Javier Blanco-Rivero**, Ana Arias and Jaime Arias. The Wound-Healing Portal Hypertensive Response. *Inflammation - From Molecular Basis to Clinical Outcomes*. ISBN: ISBN 978- 1-78984-357-6. In press.

**C.2. Research projects and grants**

Participation in 14 national and international research projects.

1. Mediators and Molecular mechanisms implicated in aortic and valvular pathologies. Comunidad de Madrid (Programa de actividades I+D entre grupos de la Comunidad de Madrid en Tecnologías y Biomedicina) (B2017/BMD-3676) (**Scientific collaborator**)

2. Red Cardiovascular (CIBER-CV). Instituto de Salud Carlos III. General coordinator: Francisco Fernández Avilés. PI UAM: Mercedes Salaices. (**Scientific collaborator**)

3. “Efectos de la práctica del ejercicio físico regular en el sistema vascular en la obesidad inducida por una dieta rica en lípidos. Mecanismos de acción” Fundación Mapfre (15.000 €). Javier Blanco Rivero. (Universidad Autónoma de Madrid). 15/02/2013 - 15/05/2014. (**Principal Investigator**)

4. “Efectos de la exposición a metales pesados sobre la función y estructura vascular”, (Programa hispano-brasileño de cooperación interuniversitaria, Ministerio de Educación, Cultura y Deporte. PHB2011-0001-PC). Main Researcher: Dra. M<sup>o</sup> Jesús Alonso. (**Scientific collaborator**).

**C.3. Contracts**

1. “Beneficio de la suplementación con agentes simbióticos en la prevención y mejora de las alteraciones de la inervación perivascular asociadas a la ingesta de una dieta rica en grasas.”. Italfarmaco, S.A. (**Principal Investigator**) March 2018-Present. 42350 €

#### **C.4. Patents**

#### **C.5. Institutional responsibilities**

- Member of the Hiring Commission (Dpt Physiology, Universidad Autónoma de Madrid, 2016-present).
- Member of the Library Commission (Dpt Physiology, Universidad Autónoma de Madrid, 2016-present).
- President of the Commission of 1<sup>st</sup> course of Human Nutrition and Dietetic Degree (Universidad Autónoma de Madrid, 2016-present).
- Member of the Joint Commission of Human Nutrition and Dietetic Degree (Dpt Physiology, Universidad Autónoma de Madrid, 2016-present).
- Coordination of several subjects from different Bachelor and Master degrees.

#### **C. 6. Membership to research groups**

- Member of the Research group on Cardiovascular net Ciber-CV directed by Dr. Mercedes Salaices (RD12/0042/0024, Instituto de Salud Carlos III).
- Member of the Research group “Fisiología y Farmacología Cardiovascular” Instituto de Investigación Sanitaria La Paz (IdIPaz), directed by Dr. Mercedes Salaices Sánchez.
- Member of the Research group on Cardiovascular net RECAVA directed by Dr. Mercedes Salaices de (RD12/0042/0024, Instituto de Salud Carlos III).

#### **C. 7. Visits to foreign institutions**

6 months at the Biomedical Sciences Institute (Universidad de Sao Paulo), with two competitive grants: Programa Becas Iberoamérica Jóvenes Profesores e Investigadores, Banco Santander, and Programa Auxílio à Pesquisa - Pesquisador Visitante, Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP).

#### **C. 8. Congresses**

63 communications to national and international scientific meetings.

Invited Speaker at XXIII National Congress of Atherosclerosis Spanish Society (SEA, Córdoba 2010).

#### **C. 9. Awards**

- PhD Extraordinary award (2006)
- Fundación San Nicolás PhD award (Real Academia Nacional de Medicina, 2008).
- 1st and 2nd on the III Medical Education Congress (CEEM, Albacete 2010)
- Special Mention; XXIII National Congress of Atherosclerosis Spanish Society (SEA, Córdoba 2010).
- Honour Mention on the XXIX Annual Meeting FeSBE (Caxambú, Brasil, 2014)