

## ***Silvia Vilares Conde Curriculum Vitae***

<b>Personal Data and Education</b>			
<i>Surname:</i> Conde		<i>First Name:</i> Silvia	
<i>Present Position/Title:</i> Tenured Assistant Professor		<i>Nationality:</i> Portuguese	
<i>Department/Laboratory:</i> CEDOC, Chronic Diseases Research Center			
<i>Institution:</i> NOVA Medical School, Faculdade de Ciências Médicas			
<i>EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)</i>			
INSTITUTION AND LOCATION	DEGREE (IF APPLICABLE)	MM/YY	FIELD OF STUDY
Sciences Faculty, Lisbon University, Portugal	Magister	2000	Biochemistry
Valladolid University, Spain	Master	2005	Physiology
NOVA University, Portugal	PhD	2007	Pharmacology
Valladolid University, Spain	PhD	2007	Biotechnology

### **A. Personal Statement**

My expertise is in Physiology, Pathophysiology and Pharmacology. My research focuses on understanding the physiology of the *autonomic nervous system, in particular the carotid body, in the regulation of metabolism*. We apply our findings in pathological states to the identification of molecular targets for therapy. Specific projects include: the role of carotid body in the genesis of metabolic diseases; role of dopamine as a modulator of adipose tissue insulin sensitivity; carotid body and ageing and sympathetic nervous system activity and dysmetabolism. I have over *15 years of experience in animal manipulation, animal surgery, animal models of insulin resistance and diabetes, electrophysiological recordings, cardiovascular, respiratory and metabolic evaluation and biomarkers quantification*. In the last years, I have developed a new line of research on the *carotid body and dysmetabolism* and I have been dedicated to elucidate new pathophysiological mechanisms that can contribute to insulin resistance and glucose intolerance. Additionally, *in collaboration with Galvani Bioelectronics we are using bioelectronic devices to modulate carotid body activity to treat type 2 diabetes*.

### **B. Positions and Honors**

#### **1. Positions and Employment:**

**2013–Present** - Principal Investigator of NEURONAL CONTROL OF METABOLIC DISTURBANCES: THERAPEUTIC STRATEGIES group at CEDOC (Chronic Diseases Research Center), NOVA Medical School, Lisbon Portugal

**2012 –Present** - Tenured Assistant Professor, NOVA Medical School, NOVA University, Lisbon Portugal

**2007-2012** – Invited Assistant Professor of Pharmacology, NOVA Medical School, NOVA University, Lisbon, Portugal

**2007- 2009** – Post-doc at Emilia Monteiro laboratory at NOVA Medical School, NOVA University, Lisbon, Portugal

**2004-2007** – PhD Fellow at Prof. C. Gonzalez Laboratory, Faculty of Medicine, IBGM, Univ of Valladolid, Valladolid, Spain.

**2003-2004** – Calouste Gulbenkian Foundation Fellow at Prof. C. Gonzalez Laboratory, Faculty of Medicine, IBGM, Univ of Valladolid, Valladolid, Spain.

**2000-2003** – Researcher at Prof. Monteiro laboratory at the Department of Pharmacology, NOVA Medical School, NOVA University

## **2. Honors and awards**

**2016** - National Diabetes Award 2016 from the Portuguese Society of Diabetes

**2016** -Hargreaves 2016 Award from the Portuguese Society of Diabetes /JABA RECORDATI

**2014** -EPHAR Young Investigator Award 2014 to PhD Student Maria João Ribeiro (Silvia Conde lab) for the best publication (Ribeiro et al., 2013 in Diabetes)

**2014** - AstraZeneca Innovate Competition to Bernardete Melo (Master Student Silvia Conde lab)

**2012** - Hargreaves 2012 Award from the Portuguese Society of Diabetes /JABA RECORDATI

**2009** - L’Oreal Portugal Medals of Honor for Women in Science from L’Oreal, Portuguese Science and Technology Foundation and UNESCO

**2009** -Nuno Castel Branco Award from the Portuguese Society of Diabetes and Lilly Portugal

## **3. Services**

### **Peer reviewer grants:**

2016 – Present – Reviewer Post Doc Grants for the Portuguese Foundation for Science and Technology

2014 - Present - Reviewer Portuguese Society Medical Sciences Grants

2014 - Present – Reviewer AstraZeneca Innovate Competition

2014 - Reviewer GAI Best Scientific Article Award Coimbra University, Portugal

### **Editorial Activities:**

Member of the Editorial Board of “Bioelectronics in Medicine” and Reviewing Editor of the Scientific Journal “Experimental Physiology” and “Journal of Physiology”

### **Peer reviewer scientific journals:**

American Journal Physiology Cell Physiology; American Journal of Physiology, Regulatory, Integrative and Comparative Physiology; Applied Physiology Nutrition and Metabolism; Brain Research; Diabetes, Obesity and Metabolism (DOM); European Journal of Neurosciences; Experimental Physiology; Frontiers Physiology; Journal Caffeine Research; Journal of Histochemistry and Cytochemistry; Journal of Neurochemistry; Journal of Physiology; Journal Physiology Pharmacology; Obesity; Molecular Biology Reports; Neurochemistry International; Respiratory Physiology and Neurobiology; Science Signaling.

### **Scientific Societies:**

**Member of:** European Association for the Study of Diabetes; Portuguese Neuroscience Society; Portuguese Pharmacology Society; Portuguese Society of Diabetes; Portuguese Society of Laboratory Animal Science.

## **4. Selected Presentations**

**2017 – Invited Speaker** – “Carotid body: a metabolic sensor implicated in insulin resistance”. Simpósio “Polymodal Properties of Carotid Body Chemoreceptors Beyond Hypoxia: Relation to Health and Disease. IUPS 38th World Congress – Rythms of Life, Rio de Janeiro, Brasil.

**2016 – Invited Speaker.** Symposium “Visceral Autonomic Nerves as Targets for Precision Bioelectronic Medicines”, Society for Neuroscience 2016, San Diego, USA.

**2016 – Invited Speaker.** Symposium “Un Nuevo papel para el cuerpo carotideo en la patologia. Simposio en memoria del Profesor Constancio González”, Zaragoza, Spain

**2016 - Invited Speaker.** Symposium “Hypoxia, the carotid body, and the brain”, European Respiratory society Meeting 2016, London, UK

**2016 – Invited Speaker.** Symposium “The carotid body chemoreflex and its pivotal role in autonomic dysregulation: Finding new avenues to restore the autonomic function”, Physiology 2016, Joint Meeting of the American Physiological Society and The Physiological Society, Dublin, Ireland

**2015 – Invited Speaker.** Symposium “Targeting autonomic imbalance in pathophysiology: is the carotid body the new nirvana?” ISAN (International Society Autonomic neuroscience) Stresa, Italy

**2013 - Invited Speaker.** Symposium “Dysfunctional chemoreceptors: cause or consequence of the symptoms of cardiorespiratory disease?” International Union of Physiological Societies, Birmingham, United Kingdom

2012 - Invited Speaker. Symposium "Oxygen sensing and metabolic disturbances", EPHAR 2012, Granada Spain

### C. Selected Peer-reviewed Publications/ Contributions

**1. Number of publications:** 1) 34 publications, 2) 19 as first author and 3) one as second author and 4) 8 as last author.

#### 2. Select peer-reviewed scientific publications (last 5 years)

- Sacramento JF, Chew DJ, Melo BF, Donegá M, Dopson W, Guarino MP, Robinson A, Prieto-Lloret J, Patel S, Holinski BJ, Ramnarain N, Píkov V, Famm K, **Conde SV** (2017). Bioelectronic modulation of carotid sinus nerve activity in the rat: a potential therapeutic approach for type 2 diabetes. *Diabetologia* (in press), Q1
- Sacramento JF, Ribeiro MJ, Rodrigues T, Olea E, Melo BF, Guarino MP, Fonseca-Pinto R, Ferreira CR, Coelho J, Obeso A, Seíça R, Matafome P, **Conde SV**. (2017) Functional abolition of carotid body activity restores insulin action and glucose homeostasis in rats: key roles for visceral adipose tissue and the liver. *Diabetologia*. 60:158-168, Q1
- **Conde SV**, Ribeiro MJ, Melo BF, Guarino MP, Sacramento JF (2016) Insulin resistance: A new consequence of altered carotid body chemoreflex? *J Physiol* doi: 10.1113/JP271684, Q1
- **Conde SV**, Sacramento JF, Guarino MP, Gonzalez C, Obeso A, Diogo LN, Monteiro EC, Ribeiro MJ. (2014) Carotid body, insulin, and metabolic diseases: unraveling the links. *Front Physiol*. 5:418., Q1
- Ribeiro MJ, Sacramento JF, Gonzalez C, Guarino MP, Monteiro EC, **Conde SV**. (2013) Carotid body denervation prevents the development of insulin resistance and hypertension induced by hypercaloric diets. *Diabetes*. 62:2905-16. Q1
- **Conde SV**, Monteiro EC, Rigual R, Obeso A, Gonzalez C. (2012) Hypoxic intensity: a determinant for the contribution of ATP and adenosine to the genesis of carotid body chemosensory activity. *J Appl Physiol* 112:2002-10. Q1

#### 3. Patents

- Conde SV, Chew DJ, Famm K, Guarino MP, Holinski B, Patel S (2015) Neuromodulation device. Patent PCT/PT2015/000047.

**4. H-index:** 15, **i-10 index:** 17

**5. Url:** <http://cedoc.unl.pt/neuronal-control-metabolic-disturbances/>

### D. Research Support

#### 1. Ongoing Research Support

- August 2016 – August 2018 – Pre-clinical Rodent plan for type 2 diabetes. Galvani Bioelectronics - 340.316,00€ - Principal Investigator

#### 2. Completed Research Support

- November 2013 – May 2016- The Carotid Body as a therapeutic target in metabolic diseases: Mapping carotid sinus nerve activity in diabetes rat models. Glaxo Smith Kline Bioelectronic Exploratory Funding - 147.905,56€ - Principal Investigator
- March 2015 – April 2016 - Wireless Interfacing of the Carotid Sinus Nerve for Hypoxic Response Modulation. GlaxoSmithKline Innovation Challenge Funding. 200.000\$. Investigator (PIs: Romero 20%, Troyk 40%, Cogan 20%, Conde 20%)
- March 2011 – Dec 2013 - Insulin and carotid body: a new mechanism for insulin resistance and hypertension. Portuguese Foundation for Science and Technology- 100.000,00€ - Principal Investigator