



## CURRICULUM VITAE ABREVIADO (CVA)

**IMPORTANT** – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

### Part A. PERSONAL INFORMATION \*

First name	Stefania		
Family name	Carobbio		
Gender (*)		Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail	scarobbio@cipf.es	URL Web	<a href="https://www.cipf.es/science/research/metabolic-disorders/obesity-diabetes-and-comorbidities/">https://www.cipf.es/science/research/metabolic-disorders/obesity-diabetes-and-comorbidities/</a>
Open Researcher and Contributor ID (ORCID) (*)	0000-0001-6631-7930		

(\*) *Mandatory*

#### A.1. Current position

Position	Group Leader (Principal Investigator - Independent Research Group). Coordinator of the Metabolic Disorders Program at CIPF.		
Initial date	October 2021		
Institution	Centro de Investigacion Principe Felipe		
Department/Center	Obesity, Diabetes and Comorbidities Research Group, Metabolic Disorders Program	CIPF	
Country	Spain	Teleph. number	96 328 96 60
Key words	Obesity, adipocyte biology, adipose tissue, thermogenesis, metabolism, metabolic resilience, lipids, uncoupling, comorbidities, MASLD		

#### A.2. Previous positions (research activity interruptions, indicate total months)

Period	Position/Institution/Country/Interruption cause
2021-2021 (3 months)	Senior Research Associate/University of Cambridge/UK
2015- 2021 (6 years, 5 months)	Staff Scientist/Senior Research Associate/Genome Research Limited-Wellcome Sanger Institute/UK
	Senior Research Associate/University of Cambridge/UK
2013-2015 (2 years)	Research Associate/Genome Research Limited-Wellcome Sanger Institute/UK
2007-2013 (5 years, 5 months)	Research Associate/University of Cambridge/UK
2006-2007 (5 months)	Postdoctoral Researcher/University of Geneva/Switzerland
2001-2006 (5 years)	PhD student/University of Geneva/Switzerland

#### A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Biology	University of Geneva	2006
Diploma in Biology	University of Geneva	1998
Degree in Biology	University of Geneva	1996

### Part B. CV SUMMARY (max. 5000 characters, including spaces)

Dr. **Stefania Carobbio** is an established independent researcher and **Group Leader** at the Príncipe Felipe Research Centre (CIPF), where she leads the **Obesity, Diabetes and Comorbidities Laboratory**. Her scientific career spans **more than 20 years** across

**Switzerland, the United Kingdom and Spain, with sustained focus on adipose tissue biology, energy expenditure and the mechanisms linking obesity to metabolic disease.** She obtained her PhD in Biology from the University of Geneva (2006) and received two highly competitive fellowships- the **Swiss National Science Foundation fellowship (2007)** and the **Marie Curie Intra-European Fellowship (2008)** - which enabled her to join the prestigious Institute of Metabolic Science at the **University of Cambridge** and to **develop an independent research line within Prof. A. Vidal-Puig's programme.**

During her years at the **University of Cambridge and the Wellcome Sanger Institute**, she made **internationally recognised contributions** to adipocyte biology, identifying regulators of thermogenesis and determinants of healthy versus pathological adipose expansion. At the Sanger Institute, **she pioneered the use of human pluripotent stem cells (hPSCs)** to model human thermogenic and white/beige adipocyte development, **establishing a translational platform** for investigating lipid biology, thermogenic programming and metabolic resilience. She transferred and expanded this platform when she founded her laboratory at CIPF in 2021. Since establishing her group, Dr. Carobbio has demonstrated **clear scientific independence, strategic leadership and strong capacity-building.** In only four years, she has secured major competitive funding, including the **national Consolidación Grant (CNS2023-144691)** from the Ministry of Science and Innovation -one of the most significant recognitions of scientific excellence and independence in Spain. She has also obtained a **CIDEGENT fellowship (and its extension)**, an **EU Horizon Europe award (EDC-MASLD Consortium)**, the **FERP** fellowship and a **SECO clinical–basic collaborative grant.** These grants have guaranteed stable, diversified funding to strengthen her research programme, **hire postdoctoral and PhD-level staff**, recruit **predoctoral students**, and **consolidate international collaborations.**

She is the **Coordinator of the Metabolic Disorders Programme at CIPF**, where she promotes scientific integration, strategic alignment and external visibility. Her laboratory investigates mechanisms that enable **metabolically healthy adipose expansion**, integrating mouse physiology, stem-cell platforms, multi-omics and endocrine disruption. The group participates in **ENKORE, an EU research cluster** on endocrine disruptors and metabolic health, further strengthening its **European positioning.**

Dr. Carobbio has an extensive and solid publication record: **43 original articles, 13 reviews/editorials, and 3 book chapters**, with more than **4,200 citations (h-index 29).** She has co-supervised PhD theses, mentored postdoctoral researchers, trained research assistants and undergraduate students, and regularly reviews manuscripts for high-impact journals and proposals for national and international agencies. She maintains active collaborations across Spain, the UK, Switzerland, Italy, France, Sweden and the Netherlands. She is an active member of **SECO, AEEH and SEEDO**, and serves on the **International Indirect Calorimetry Consensus Committee**, contributing to the standardisation of methodologies in metabolic research. She also participates in scientific outreach activities such as *La Noche de la Investigación*, reinforcing public understanding of metabolic health.

Beyond scientific excellence, her work has **relevance for society, clinical translation and public health.** By uncovering mechanisms that **uncouple adiposity from metabolic disease**, her research informs the development of **biomarkers, therapeutic targets and personalised metabolic health strategies.** The group's findings are of interest for the pharmaceutical sector, obesity and diabetes clinicians, and for public health bodies seeking effective, evidence-based approaches to reduce obesity-related morbidity. Through **international collaborations**, participation in European consortia and engagement with clinical partners, Dr. Carobbio's research contributes to **improving metabolic health, reducing disease burden and supporting the societal goals of healthy ageing, gender-sensitive medicine and precision prevention.**

Overall, Dr. Carobbio leads a **competitive, funded and internationally recognised research programme**, integrating human genetics, stem-cell biology, lipidomics and metabolic physiology to elucidate and therapeutically exploit the mechanisms that drive metabolic resilience in obesity.

## **Part C. RELEVANT MERITS**

### **C.1. Publications (selection)**

**Publications: 43 original publications, 13 reviews and editorials, 3 book chapter**

**Total number of citations: 4,242; h-index: 29**

**Publications (excluding reviews) as first author: 8**

**Publications (excluding reviews) as co-author: 35**

Her track record shows increasing senior authorship roles, including a major last-author manuscript that is currently being finalised for submission:

1. Kalenderoglou N., Dimitri F., Navarro Gonzalez C., ..., **Carobbio S.**, Christian M. miR-10b-5p regulates adipocyte lineage commitment and adipogenesis via targeting of Gata6 and Tubb3. (corr-auth). **Submitted to Cell Communication and Signalling. Author (7/8).**

2. Alijagica A. \*, Castro-Alves V. \*, Orešič M., ....., **Carobbio S.**, Orešič M., Hyötyläinen T. PFAS Exposure Alters Gut Microbiota Metabolites Associated with Hepatic Metabolism. **Submitted to Journal of Hazardous Materials. Author (9/11).**

3. Banks A.S., Allison D.B., Alquier T., ....., **Carobbio S.**, .... International Indirect Calorimetry Consensus Committee (IICCC). **2025.** A consensus guide to preclinical indirect calorimetry experiments. *Nat Metab.* 2025 Sep;7(9):1765-1780. doi: 10.1038/s42255-025-01360-4. **Author (9/80).**

4. Thomas C.P., Tyrrell V.J., Burston J.J., ....., **Carobbio S.**, Jones S.A., O'Donnell V.B. **2025.** 15-lipoxygenase orchestrates murine wound healing via PPAR $\gamma$ -activating oxylipins acting holistically to dampen inflammation. *PNAS.* Sep 9;122(36):e2502640122. doi: 10.1073/pnas.2502640122. **Author (18/20).**

5. **Carobbio S.**, Pellegrinelli V., Vidal-Puig A. **2024.** Adipose Tissue Dysfunction Determines Lipotoxicity and Triggers the Metabolic Syndrome: Current Challenges and Clinical Perspectives. *Adv Exp Med Biol*,1460:231-272. DOI: 10.1007/978-3-031-63657-8\_8. ISBN 978-3-031-63656-1. **Author (1/3) and corresponding author (CA).**

6. Navarro-Perez J., **Carobbio S.** **2024.** Adipose tissue-derived stem cells, in vivo and in vitro models for metabolic diseases. *Biochem Pharmacol*, 222: 116108. DOI: 10.1016/j.bcp.2024.116108. **Author (2/2) and CA.**

7. Pellegrinelli V., Vidal-Puig A., **Carobbio S.** **2024.** Adipose Structure (White, Brown, Beige). *Metabolic Syndrome. A Comprehensive Textbook.* Springer Nature. doi.org/10.1007/978-3-031-40116-9. ISBN 978-3-031-40115-2. **Author (3/3) and CA.**

8. **Carobbio S.**, Vidal-Puig A. **2023.** Differentiation of Human Pluripotent Stem Cells (hPSCs) into Brown-Like Adipocytes. *Methods Mol Biol*, 2662: 1-9. DOI: 10.1007/978-1-0716-3167-6\_1 ISBN 978-1-0716-3166-9. **Author (1/2) and CA.**

9. Pellegrinelli V., Figueroa-Juárez E., ..., **Carobbio S.**, ..., and Vidal-Puig A. **2023.** Defective extracellular matrix remodeling in brown adipose tissue is associated with fibro-inflammation and reduced diet-induced thermogenesis. *Cell Rep*, 42(6):112640. DOI: 10.1038/s42255-022-00561-5. **Author (14/16).**

10. Castellá M., Blasco-Roset A., Peyrou M., **Carobbio S.**, ..., and Cereijo R. **2023.** Adipose tissue plasticity in pheochromocytoma patients suggests a role of the splicing machinery in human adipose browning. *iScience*, 26:1068. DOI: 10.1016/j.isci.2023.106847. **Author (12/19).**

11. Pellegrinelli V., Rodriguez-Cuenca S., Rouault C., ..., **Carobbio S.**, ..., and Vidal-Puig A. **2022.** Dysregulation of macrophage PEPD in obesity determines adipose tissue fibro-inflammation and insulin resistance. *Nat Metab*, 4: 476-494. DOI: 10.1038/s42255-022-00561-5. **Author (14/28).**

12. Bidault G., Virtue S., Petkevicius K., ..., **Carobbio S.**, ..., and Vidal-Puig A. **2021.** SREBP1-induced fatty acid synthesis depletes macrophages antioxidant defences to promote their alternative activation. *Nat Metab*, 3:1150-1162. DOI: 10.1038/s42255-021-00440-5. **Author (12/17).**

13. Huang L.O., Rauch A., Mazzaferro E., ....., **Carobbio S.**, ..., and Loos R.J.F. **2021.** Genome-wide discovery of genetic loci that uncouple excess adiposity from its comorbidities. *Nat Metab*, 3:228-243. DOI: 10.1038/s42255-021-00346-2. **Author (5/16).**

14. **Carobbio S.**\*, Guenantin A.C.\*, Bahri M., ...Vidal-Puig A. **2021.** Unravelling the Developmental Roadmap toward Human Brown Adipose Tissue. *Stem Cell Reports*, 16: 641-655. DOI: 10.1016/j.stemcr.2021.01.013. **Author (1/17, \*Equal contribution) and CA.**

**15. Carobbio S** (CA), Guénantin AC, Samuelson I, Bahri M, Vidal-Puig A. 2019. Brown and beige fat: From molecules to physiology and pathophysiology. *Biochim Biophys Acta Mol Cell Biol Lipids*, 1864:37-50. DOI: 10.1016/j.bbali.2018.05.013. **Author (1/5) and CA.**

### C.2. Congress (selection)

The entries below constitute a curated selection of invited lectures, oral communications and contributions to scientific meetings, illustrating her active engagement with both national and international research communities.

**1.** Martin-Grau M., Burks D., Vidal-Puig A., **Carobbio S.** *Effects of endocrine-disrupting chemicals on MASLD progression in vivo.* **Jornada Científica CIBERDEM-CIBEREHD**, Sevilla (2025). **Flash talk.**

**2.** **Carobbio S.** *Effects of endocrine disrupting chemicals (EDCs) in MASLD progression.* **Yellow Webinars Series**, Fondazione Italiana Fegato (2025). **Invited lecture.**

**3.** Navarro-Pérez J., **Carobbio S.** *Role of Pla2g6 in adipocyte differentiation & function.* **ADIPOBROAD Scientific Meeting**, Barcelona (2025). **Oral communication.**

**4.** Navarro-Pérez J., **Carobbio S.** *Role of Pla2g6 in adipocyte differentiation & function.* **SEEDO 2024**, Santiago de Compostela (2024). **Oral communication.**

**5.** Navarro-Pérez J., Navarro-González C., **Carobbio S.** *Role of Pla2g6 in adipocyte differentiation & function.* **SEEDO 2023**, Sevilla (2023). **Poster.**

**6.** **Carobbio S.** *Human adipose stem cells.* **SEEDO 2022**, Barcelona (2022). **Invited lecture.**

**7.** **Carobbio S.** *Obesity, Diabetes and Comorbidities: a stem-cell approach.* **IBUB Seminar**, University of Barcelona (2022). **Invited lecture.**

### C.3. Research projects (selection)

The following entries provide a selected sample of competitive research projects that demonstrate her ability to attract external funding and consolidate her scientific independence.

**1.** **Title:** Molecular basis of healthy obesity: understanding pathology through paradoxical phenotypes. **Type of participation:** **Carobbio S (PI).** **Funding body, Fellowship number:** Generalitat Valenciana, CIDEAGENT (CIDEAGENT/10/2021-EXT). **Start-End date:** 01/10/2025-30/09/2027. **Amount:** 200,000€.

**2.** **Title:** “Expandabilidad del tejido adiposo blanco y termogénesis del tejido adiposo marrón como mecanismos esenciales en el tratamiento de la obesidad y sus complicaciones metabólicas”. **Type of participation** Cassinello N (PI), **Carobbio S (PI).** **Funding body, Fellowship type:** BECA FUNSECO-Proyectos de investigación clínico. **Start-End date:** 29/05/2025-28/05/2027. **Amount:** 8,000€.

**3.** **Title:** Investigation of endocrine-disrupting chemicals as contributors to progression of non-alcoholic fatty liver disease. **Type of participation:** **Carobbio S (PI)**, and Vidal-Puig A (Co-PI). Collaborative project, EDC-MASLD consortium. **Funding body, Fellowship number:** European Union, HORIZON-HLTH-2023-ENVHLTH-02-03. **Start-End date:** 01/01/2024 – 01/01/2029. **Amount:** 458,000€

**4.** **Title:** Papel de Evi5 en la expansión y función del tejido adiposo en el contexto de la obesidad y comorbilidades asociadas. **Funding body, Fellowship number:** Ministerio de Ciencia e Innovación AEI, CNS2023-144691. **Type of participation, Centre:** **Stefania Carobbio (PI).** **Start-End date:** 01/04/2024 - 31/03/2026. **Amount:** 200.000€

**5.** **Title:** Neuromodulación no invasiva de la termogénesis del tejido adiposo pardo como nueva terapia para enfermedades metabólicas. **Type of participation:** **Carobbio S (PI).** **Funding body, Fellowship number:** Fundación E. Rodríguez Pascual 2022 (FERP-2022-22). **Start-End date:** 01/01/2023-30/06/2025. **Amount:** 25.000€

**6.** **Title:** Una nueva aproximación terapéutica a la obesidad: mecanismos moleculares de la disociación entre la expansión de la masa grasa y el desarrollo de complicaciones metabólicas. **Type of participation:** **Carobbio S (PI).** **Funding body, Fellowship number:** Ministerio de Ciencia e Innovación, “Proyectos de generación de conocimiento” (PID2021-125406OB-I00). **Start-End date:** 01/09/2022-30/08/2025. **Amount:** 145.200€

**7.** **Title:** Molecular basis of healthy obesity: understanding pathology through paradoxical phenotypes. **Type of participation:** **Carobbio S (PI).** **Funding body, Fellowship number:** Generalitat Valenciana, CIDEAGENT (CIDEAGENT/10/2021). **Start-End date:** 01/10/2021-30/09/2025. **Amount:** 339.970,10€