

Part A. PERSONAL INFORMATION**CV date** 02/09/21

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|--------------------------------------|--|---------------------|--|
| First and Family name | Juan Rodríguez Vita | | |
| Social Security, Passport, ID number | | Age | |
| Researcher codes | WoS Researcher ID | U-6337-2019 | |
| | SCOPUS Author ID | 8335679300 | |
| | Open Researcher and Contributor ID (ORCID) | 0000-0001-9547-5508 | |

A.1. Position

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|---------------------|--|---------|--|
| Name of Institution | Príncipe Felipe Research Center Foundation (CIPF) | | |
| Program | Molecular Basis of Human Disease | | |
| Address and Country | Eduardo Primo Yúfera, 3. 46012 Valencia. Spain | | |
| Phone number | +34963289680+3104 | E-mail: | jrodriguez@cipf.es |
| Position | Group leader | From | 01/09/2021 |
| UNESCO spec. code | 240000 - Life Science | | |
| Key words | Cancer, immunology, fibroblast, endothelial cell, macrophage | | |

A.2. Education

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|---|--------------------------------|------|
| PhD | University | Year |
| Biochemistry, Molecular Biology and Biomedicine | Universidad Autónoma de Madrid | 2007 |

Part B. CV SUMMARY

During my career I have worked with many different cell types in different contexts. I worked with vascular smooth muscle cells (VSMCs) in the context of hypertension and atherosclerosis, studying mechanisms of fibrosis (Rodríguez-Vita et al. 2005, Rodríguez-Vita et al. 2005, Rodríguez-Vita et al. 2008). I have worked on Macrophages in the context of tumor biology, studying tumor induced immune evasion (Goossens and Rodríguez-Vita et al. 2019). And finally, I have worked on endothelial cells (ECs) in the context of endothelial dysfunction studying endothelial oxidation and damage (Ribera and Rodríguez-Vita et al. 2019); or in the context of tumor biology studying their involvement in tumor metastasis (Wieland and Rodríguez-Vita et al. 2017). One thing that I have learnt after all these years is that cell biology depends on cell communication. The behavior of a cell type is not the same if this cell is isolated as if the same cell is in contact with others. Cell biology has traditionally been restricted to the study of a single cell type under different conditions. However, cell communication starts to attract attention for its influence in cell biology. Most of my work has focused on this particular feature: I have described how tumor cells alter the membrane composition of the macrophages, inducing a dysregulation in the signaling pathways transducing inflammatory signaling, and eventually leading to immune suppression (Goossens and Rodríguez-Vita et al. 2019); I have also contributed to show how tumor cells induce endothelial cell senescence, rendering the endothelium more permeable and potentiating metastasis (Wieland and Rodríguez-Vita et al. 2017). These two works are the foundation of my line of research, which is focused on how tumor cells and their stroma communicate with each other, and how this interaction can influence tumor development.

Part C. RELEVANT MERITS**C.1. 10 most relevant publications (*Equal contribution)**

1. **Scientific paper.** Alsina-Sanchis E, Mülfarth R, Moll I, Mogler C, Rodríguez-Vita J*(AC), Fischer A*(AC). 2021. Intraperitoneal Oil Application Causes Local Inflammation with Depletion of Resident Peritoneal Macrophages. *Mol Cancer Res* 19-2, pp.288-300. ISSN 557-3125. *Featured as cover story.*
2. **Scientific paper.** Ribera J*, Rodríguez-Vita J*, Cordoba B; Morales-Ruiz M. (9/1). 2019. Functionalized cerium oxide nanoparticles mitigate the oxidative stress and pro-

inflammatory activity associated to the portal vein endothelium of cirrhotic rats. PLOS ONE. 14-6, pp.e0218716. ISSN 1932-6203.

3. **Scientific paper.** Goossens P*, Rodriguez-Vita J*, Etzerodt A, Lawrence T (AC). (17/1). 2019. Membrane Cholesterol Efflux Drives Tumor-Associated Macrophage Reprogramming and Tumor Progression CELL METABOLISM. 29-6, pp.1376-+. ISSN 1550-4131.
4. **Scientific paper.** Wieland E*, Rodriguez-Vita J*, Liebler SS, Fischer A (AC) (19/1). 2017. Endothelial Notch1 Activity Facilitates Metastasis CANCER CELL. 31-3, pp.355-367. ISSN 1535-6108.
5. **Scientific paper.** Lee MY, Luciano AK, Ackah E, Morales-Ruiz M(AC), Sessa WC(AC). (10/4). 2014. Endothelial Akt1 mediates angiogenesis by phosphorylating multiple angiogenic substrates PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA. 111-35, pp.12865-12870. ISSN 0027-8424.
6. **Scientific paper (review).** Rodriguez-Vita, J.; Lawrence, T. (2/1). 2010. The resolution of inflammation and cancer CYTOKINE & GROWTH FACTOR REVIEWS. 21-1, pp.61-65. ISSN 1359-6101.
7. **Scientific paper.** Rodríguez-Vita J, Sánchez-Galán E, Santamaría B, Ruiz-Ortega M (AC). (9/1). 2008. Essential Role of TGF-beta/Smad Pathway on Statin Dependent Vascular Smooth Muscle Cell Regulation PLOS ONE. 3-12. ISSN 1932-6203.
8. **Scientific paper.** Rodriguez-Vita J, Ruiz-Ortega M, Rupérez M, Ruiz-Ortega M., Egido J. (AC). (7/1). 2005. Endothelin-1, via ETA receptor and independently of transforming growth factor-beta, increases the connective tissue growth factor in vascular smooth muscle cells CIRCULATION RESEARCH. 97-2, pp.125-134. ISSN 0009-7330.
9. **Scientific paper.** Rodríguez-Vita J, Sánchez-López E, Esteban V, Ruiz-Ortega M. (AC). (6/1). 2005. Angiotensin II activates the SMAD pathway in vascular smooth muscle cells by a transforming growth factor-beta-independent mechanism CIRCULATION. 111-19, pp.2509-2517. ISSN 0009-7322.
10. **Scientific book.** Manuel Morales-Ruiz (AC), Juan Rodríguez-Vita, Jordi Ribera, Wladimiro Jiménez 2015. Pathophysiology of Portal Hypertension PANVASCULAR MEDICINE. pp.3631-3665. Springer Link ISBN 978-3-642-37077-9

C.2. Research projects and grants in the postdoctoral period (Those as PI are underlined)

1. Reference: PID2020-117946GB-I00. Papel del receptor neuropilina-2 en la regulación de las células supresoras derivadas de mieloides. (Centro de investigación Príncipe Felipe). Ministerio de Ciencia e innovación. 2021-2024. 181.500,00€. Principal investigator
2. Reference: 394046768. Vascular control of adipose tissue and consequences for tumor progression. Deutsche Forschungsgemeinschaft. (Deutsches Krebsforschungszentrum). 2019-2023. 670,800 €. Team member.
3. Reference: 70113888. Role of the SEMA4a-NRPs axis on tumor suppression. Deutsche Krebshilfe. (Deutsches Krebsforschungszentrum). 01/01/2020-31/12/2022. 280,200 €. Principal investigator.
4. Reference: 419966437. Role of the different Semaphorin-3C isoforms in cancer-associated desmoplasia. Deutsches Forschungsgemeinschaft. (Deutsches Krebsforschungszentrum). 01/02/2019- 31/01/2022. 248.950 €. Principal investigator.

5. Reference: 323771171. Control of immune cell infiltration into tumors by endothelial Notch signaling. Deutsche Forschungsgemeinschaft. (Deutsches Krebsforschungszentrum). 2016-2019. Team member.
6. Reference: 260753. TARGETING TUMOUR ASSOCIATED MACROPHAGES IN CANCER European Research Council. (Centre d'immunologie Marseille-Luminy). 2010-2015. € 1,499,222 €. Team member.
7. Reference: 234823. The role of Prostaglandin D2 in cancer-associated inflammation Research Executive Agency (Brussels). (Centre d'Immunologie De Marseille-Luminy). 01/08/2009- 31/07/2011. 160,000 €. Principal investigator.
8. Reference: SAF2005-03378. Estudio de nuevas rutas de señalización intracelular y mediadores implicados en el daño vascular y renal mediado por Angiotensina II. Ministerio de Educacion y Ciencia. (Fundación Jiménez Díaz). 2005-2008. 122,570 €. Team member.

C.4. Patents

Inventors/authors/obtainers: Toby Lawrence; Pieter Goossens; Juan Rodriguez Vita.

Nº of application: PCT/EP2020/053906.

Title registered industrial property: METHODS OF INDUCING PHENOTYPIC CHANGES IN MACROPHAGES 27/08/2020.

Entity holder of rights: INSERM, CNRS and UNIVERSITÉ D'AIX MARSEILLE.

C.5. Obtained grants and scholarships

Name of the Fellowship: Programa de ayudas **Ramon y Cajal**.

Aims: Post-doctoral.

Awarding entity: Ministerio de Ciencia e Innovación

Conferral date: 23/11/2020 Duration: 5 years

End date: 30-04-2026

Entity where activity will be carried out: Centro de Investigación Principe Felipe. Valencia.

Name of the Fellowship: **Marie Slodovska Curie Action** Individual Fellowship-**BIOTRACK**

Aims: Post-doctoral

Awarding entity: Comisión Europea Type of entity: Agencia estatal

Conferral date: 01/06/2012 Duration: 2 years - 10 months

End date: 31/03/2015

Entity where activity was carried out: Institut d'Investigacions Biomèdiques August Pi i Sunyer

Name of the Fellowship: **Marie Slodovska Curie Action** Individual Fellowship

Aims: Post-doctoral

Awarding entity: Comisión Europea Type of entity: Agencia estatal

Conferral date: 01/09/2009 Duration: 2 years

End date: 31/08/2011

Entity where activity was carried out: Centre d'Immunologie Marselle-Luminy

Name of the Fellowship: Beca Predoctoral del **Fondo de Investigaciones Sanitarias**

Aims: Pre-doctoral

Awarding entity: Instituto de Salud Carlos III Type of entity: Public Research Body

Conferral date: 2004 Duration: 4 years

End date: 2008

Entity where activity was carried out: Fundación Jiménez Díaz

C.6 Prizes, mentions and distinctions

Description: Premio extraordinario de tesis doctoral

Awarding entity: Universidad Autónoma de Madrid Type of entity: University

Conferral date: 2007

C.7 Experience supervising doctoral thesis and/or final year projects

C.7.1 Master Theses

1. Project title: Tumor cells modify Semaphorin 3C-mediated response in macrophages

Entity: Universitätsmedizin Mannheim

Student: Mirian Fernández Vaquero

Date of reading: 17/08/2018

2. Project title: The role of Neuropilin 2 on inflammation depends on its isoform

Entity: Universidad de Heidelberg

Student: Cemre Miray Çetin

Date of reading: 15/10/2019

3. Project title: Dissecting the role of HAPLN1 in Pancreatic Ductal Adenocarcinoma Aggressiveness

Entity: University of Amsterdam

Student: Nuria Vaquero Sigüero

Date of reading: 16/06/2020

C.7.2 PhD Theses

1. Project title: Endothelial Notch signaling and the crosstalk with immune and tumor cells

Entity: Universidad de Heidelberg

Student: Ronja Mülfarth

Date of reading: To be read in 2021

2. Project title: Normalization of desmoplastic stroma in liver fibrosis and pancreatic cancer to improve treatment options

Entity: Universidad de Heidelberg

Student: Lena Wiedmann

Date of reading: To be read in 2021