CURRICULUM VITAE ABREVIADO (CVA)

Part A. PERSONAL INFORMATION

First name	Murielle		
Family name	Saade		
Gender (*)	Female, mother of two children (9 and 6 years old).	Birth date (dd/mm/yyyy)	25/09/1979
Social Security, Passport, ID number	Y0516739N		
e-mail	msabmc@ibmb.csic.es	URL Web: https://www.ibmb.csic.es/en/staff-member/murielle-saade/	
Open Researcher and Contributor ID (ORCID) (*)		https://orcid.org/0000-0002-3937-4291	

A.1. Current position

Position	investigadora Ramón y Cajal en expectativa de nombramiento en la escala de personal científico titular O.E.P 2020-2021		
Initial date	2020		
Institution	Consejo Superior de Investigaciones Científicas (CSIC)		
Department/Center	Instituto de Biología Molecular de Barcelona (IBMB)		
Country	Spain	Teleph. number	934034972
Key words	Centrosome, Cilia, Neurogenesis, Central Nervous System		

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

Period	Position/Institution/Country/Interruption cause
2009-2019	Postdoctoral Scientist, IBMB-CSIC, Spain
2008-2009	Postdoctoral Scientist, UMR U1090, France
2008 (4 months)	Internship, Scholler lab, Upenn, USA

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Immunology	Université Aix-Marseille II, Marseille, France	2008
BSc in Cell Biology, Biochemistry and Genetics	Université Saint-Joseph, Beirut, Lebanon	2001

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

My fascination to understand embryonic development started early in my scientific career and exponentially has grown during my training in 4 different internationally recognized institutions from 4 different countries. I started satisfying my desire to understand and manipulate this process during my BSc training at the University of Saint-Joseph-USJ (Lebanon). Then pursuing my personal-driven ambition to work as a scientist, I moved to University of Aix-Marseille II (France) where I performed my Master and PhD under the supervision of Dr. Catherine Nguyen (UMR U1090), and received prestigious fellowships from INSERM-PACA, AFM and la LIGUE, to study embryonic thymus development and severe combined immunodeficiency. In addition, during my PhD training, I obtained EMBO support for an internship at UPenn (US). I acquired a strong background in developmental biology of the immune system and triggered my interest to search for a postdoctoral training in the neuro-developmental field.

To that end, I moved to IBMB-CSIC (Spain) to join the laboratory of Dr. Elisa Marti, as a postdoctoral scientist. During my postdoc, I developed innovative tools to separately follow the three division modes (PP/PN/NN) of a neural precursor cells (NPCs) and in combination with mathematical simulations, I modeled the dynamics of motor neuron generation in the developing central nervous system (Saade et al., Cell Reports 2013). I made seminal discoveries in elucidating the link between centrosome asymmetry and the fate choices of the prospective daughter cell during neurogenesis (Saade et al., Nature Cell Biology, 2017). More recently, I unraveled the crucial mechanisms by which the Zika virus induces microcephaly, providing breakthroughs on the roles of the centrosome/ciliary axis in neurogenesis in health and disease (Saade et al., Cell Stem Cell, 2020).

In 2020, the Spanish Government recognized my achievements by awarding me one of the highly competitive Ramón y Cajal position. The general aim of my lab is to unravel key mechanisms controlling proper neural development, from the centrosome/cilia axis to neurogenesis, in link with human neurodevelopmental disorders. I have been awarded independent grants from the Spanish Ministry of Science and Innovation and from the European Jerome Lejeune Foundation. My team is currently composed of one research technician, one PhD student and one postdoctoral scientist. Being fully aware that any ground-breaking research needs international collaborations, I have also established a network with top-notch researchers in Spain (Dr. Nuria Verdaguer-IBMB, Dr. Cedric Boeckx-UB) and abroad (Dr. Giuseppe Testa-HT, Italy, Dr. Naiara Akizu- Upenn, USA, Dr. Yasir Syed-NMHIR, Cardiff, UK and Christina Kyrousi- UA, Athens, Greece).
I am also involved in teaching activities. I am a current guest lecturer and president in evaluation board of final degree projects for TFG in Bioinformatics, at the University of Pompeu Fabra in Barcelona. Being always committed to science dissemination I have also participated in different programs (mentoring, inspiring talks, hands-on courses) targeting scholars, girls and women. My internationalization and relevance in the field is also reflected in the fact that I have been invited to present my work in several meetings and institutes; EMBO meeting (Sant Feliu de Guíxols-2023), SCB (Barcelona-2022); CATCAT (Barcelona-2021), EMBO meeting (Sitges-2014), seminars (UCL-2021, IRB-2016). I ultimately started my commitment to science evaluation by contributing as an external grant reviewer for to ANEP and the European ERC advanced, and becoming guest Editor and member of the Editorial Board of Frontiers journals (Frontiers in Neuroscience and Frontiers in Cell and Developmental Biology). I have also been invited by the Cell Stem Cell editor, to introduce myself to the international community as an "Early-Career Researchers in the Time of COVID-19" (https://doi.org/10.1016/j.stem.2021.01.012). I am also a member of the Spanish Red of Developmental Biology (RedDevNeural), the Spanish Society of Neuroscience (SENC).

Part C. RELEVANT MERITS

C.1. Publications *(selected from the last 10 years)*

https://www.ncbi.nlm.nih.gov/myncbi/collections/mybibliography/

1.- Axelle Wilmerding, Paula Espana-Bonilla, Nikolaos-Nikiforos Giakoumakis, **Murielle Saade*** (2023) Expansion microscopy brings the centrosome into focus in chick embryo neural tube. **STAR Protoc**. 4(1):101997. doi: 10.1016/j.xpro.2022.101997. *** corresponding**.

2.- Carolina Gracia-Diaz, Yijing Zhou, Qian Yang, Chul-Hwan Lee, Paula Espana-Bonilla, //, Elizabeth Heller, **Murielle Saade**, Hongjun Song, Guo-Li Ming, Fowzan S. Alkuraya, Reza Maroofian, Pankaj B. Agrawal, Danny Reinberg, Elizabeth J. Bhoj, Marian Martinez-Balbas, Naiara Akizu (2023) Gain and loss of function variants in EZH1 disrupt neurogenesis and cause dominant and recessive neurodevelopmental disorders. **Nat Commun**, 2023 Jul 11;14(1):4109. doi: 10.1038/s41467-023-39645-5.

3.- Murielle Saade*, Diego S Ferrero, José Blanco-Ameijeiras, Elena Gonzalez-Gobartt, Marco Flores-Mendez, Victor M Ruiz-Arroyo, Elena Martínez-Sáez, Santiago Ramón y Cajal, Naiara Akizu, Nuria Verdaguer and Elisa Martí * (2020) Multimerization of Zika Virus-NS5 causes a ciliopathy and forces premature neurogenesis**. Cell Stem Cell** 27(6): 920-936.e8. doi:10.1016/j.stem.2020.10.002. ***Co-corresponding.**
https://pubmed.ncbi.nlm.nih.gov/33147489/
Highlighted in Nature Review Microbiol https://www.nature.com/articles/s41579-020-00481-9

4.- **Murielle Saade***, Jose Blanco-Ameijeiras, Elena Gonzalez-Gobartt, and Elisa Martí (2018) A centrosomal view of CNS growth. **Development** 145: dev170613. doi: 10.1242/dev.170613. * **Corresponding**.https://pubmed.ncbi.nlm.nih.gov/30401784/

5.- Murielle Saade, Elena Gonzalez-Gobartt, Rene Escalona, Susana Usieto and Elisa Martí (2017) Shh-mediated centrosomal recruitment of PKA promotes symmetric proliferative neuroepithelial cell division. **Nature Cell Biology** 19, 493–503 (2017) doi:10.1038/ncb3512. http://www.nature.com/ncb/journal/v19/n5/abs/ncb3512.html

6.- Antonio Herrera, **Murielle Saade**, Anghara Menendez, Elisa Marti and Sebastian Pons (2014) Pre-neoplastic growth caused by sustained Wnt/β-Catenin depends on the localization and activation of aPKC at the apical pole of neuroepithelial cells. **Nat Commun** 5:4168. doi: 10.1038/ncomms5168. http://www.ncbi.nlm.nih.gov/pubmed/24942669

7.- Miriam Yammine, **Murielle Saade**, Sophie Chauvet, Catherine Nguyen (2014) Spatial gene's (Tbata) implication in neurite outgrowth and dendrite patterning in hippocampal neurons. **Mol Cell Neurosci** 59:1-9 doi:10.1016/j.mcn.2013.12.007. https://pubmed.ncbi.nlm.nih.gov/24361585/

8.- Gwenvael Le Dréau, **Murielle Saade**, Irene Gutierrez-Vallejo and Elisa Martí (2014) The strength of SMAD1/5 activity determines stem cell fate in the developing spinal cord. **J Cell Biol.** 204 (4) 591-605. doi: 10.1083/jcb.201307031 https://pubmed.ncbi.nlm.nih.gov/24515346/
Cover picture http://jcb.rupress.org/content/204/4.cover.pdf
Highlighted in JCB, "*Career guidance for stem cells*" J Cell Biol 2014 204:463. doi:10.1083/jcb.2044if http://jcb.rupress.org/content/204/4/591.abstract

9.- Murielle Saade, Irene Gutierrez, Gwenvael Le Dreau, M Angeles Rabadán, David G. Miguez, Javier Buceta and Elisa Martí (2013) Sonic hedgehog signaling switches the mode of division in the developing nervous system. **Cell Reports** 4(3):492-503. doi: 10.1016/j.celrep.2013.06.038. http://www.ncbi.nlm.nih.gov/pubmed/23891002
Highlighted in F1000 http://f1000.com/prime/718050366#recommendations-content

C.2. Congress *(selected from the last 10 years)*
2023.- Invited speaker, EMBO workshop "Hedgehog signalling: From Molecular Structure to Developmental Biology and Human Diseases", Sant Feliu de Guíxols
2022.- Invited speaker, Cellular and Molecular Biology meeting of the Societat Catalana de Biologia, SCB, Barcelona
2021.- Invited speaker, University College of London (Dr. Paula Alexandre)
2021.- Invited speaker, Cell and Tissue Research in Catalunya- CATCAT meeting, Barcelona
2016.- Invited speaker, Institute for Research in Medicine-IRB, Barcelona
2016.- Invited speaker, Spanish Red of Developmental Biology, Sevilla
2014.- Selected talk, EMBO workshop "Spinal cord development and regeneration", Sitges

C.3. Research projects
1.- REF: PID2022-140285NB-I00 "1q21.1 NEURODEVELOPMENTAL DISORDERS: IN SEARCH FOR THE BIOLOGICAL BASES OF THE DISEASE". PI **Murielle Saade** (300,000 € + 4-year PhD Fellowship (Spanish FPI)
2.- REF: RED2022-134100-T "UNA APROXIMACION INTEGRATIVA HACIA EL ENTENDIMIENTO DE LA LOGICA DEL DESARROLLO NEURONAL" ReDevNeural 4.0 PI **Murielle Saade** (Coordinator: **Paola Bovolenta,** 20,000 €)
3.- REF: Jerome Lejeune Foundation GRT-2022A-2105 "UNDERSTANDING THE CELLULAR MECHANISMS OF THE 1q21.1 NEURODEVELOPMENTAL DISORDER", PI **Murielle Saade** (78,000 €)
4.- REF: PID2019-110157RA-I00 "UNDERSTAINDING THE MOLECULAR MECHANISMS UNDERLYING ZIKA VIRUS ASSOCIATED NEUROPATHY", PI **Murielle Saade** (142,780 €)
5.- REF: RYC2018-025379-I "UNDERSTANDING THE MOLECULAR MECHANISMS UNDERLYING ZIKA VIRUS (ZIKV) INFECTION ASSOCIATION TO CONGENITAL MICROCEPHALY", PI **Murielle Saade** (40.000 €)

C.4. Other merits
C.4.1- Students supervision
4 Past Master/Diploma Students (France [1], Italy [1], Bulgaria [1], Uruguay [1], past)
Saber Haroufi, Master in Cell and Molecular Biology, Université Rennes I
Giulia Bracchini, Master in Molecular Biotechnology, University of Pisa (Currently PhD student in J. Ferrer lab, CRG, Barcelona)

Nicole Elenter, Master in Biomedicine-UPF, Barcelona (Currently PhD student in R. Straussman lab, Weizmann Institute, Israel)
Yvette Dimitrova, Undergraduate student in Bioinformatics-UPF, Barcelona
2 PhD Students (Spain [2], 1 past, 1 current)
Paula España Bonilla, PhD student UB (AGAUR-FI 2021 fellowship, co-supervision with Dr. Cedric Boeckx, ICREA, UB)
Irene Gutierrez Vallejo PhD UB, Dec2015 APTO CUM LAUDE and European Mention (co-supervision with Dr. Elisa Marti)
2 Postdoctoral Fellows (Spain [1], current)
Gloria Casas Gimeno, PhD at J. Paridaen lab, UMCG, University of Groningen

C4.2-Teaching Activities
2023-2022.- President in evaluation board of Final Degree Projects, BSc degree in Bioinformatics, UPF
2019-2022.- Lecturer, BSc in Bioinformatics, UPF, Barcelona
2006-2007.- Practical work in Immunology, Ecole Ingénieur Biomédical, Université Aix-Marseille II

C4.3- Awards and distinctions
2020.- Ramón y Cajal Scientist from the Spanish ministry of Science
2008.- Boehringer Ingelheim Fonds short-term fellowship
2008.- EMBO short-term fellowship
2007.- Ligue Nationale contre le Cancer fellowship, France.
2007.- Association Française contres les Myopathie-AFM fellowship, France
2005.- Awarded for the13th PhD seminar series of Aix-Marseille universities, France
2004.- INSERM PACA PhD fellowship, France

C4.4- REVIEWING/EVALUATION ACTIVITIES
Since 2021.- Editorial Board Member of Morphogenesis and Patterning, Frontiers in Cell and Developmental Biology
2021.- Editor of Special Issue “Centrosome and Cilia in Neural Development and Disease”, Frontiers in Neuroscience and Frontiers in Cell and Developmental Biology
2023.- External Grant Reviewer ANEP
2019.- External Grant Reviewer for Advanced ERC Grant Panel in Cellular and Developmental Biology
2018.- Referee, Development, the Company of Biologists
2007, 2009.- Referee, Biology of Reproduction, Oxford journals

C4.5- Scientific dissemination
2022.- Inspiring talk for the International Day of Women and Girls in Science, Escola Pi d´en Xandri, Barcelona
2016.- Café Tertulia “Mujeres y neurocientíficas”, Casa de la Ciencia, Sevilla

C4.6- SOCIETY MEMBER AND INSTITUTIONAL RESPONSIBILITIES
2023.- Representative of the Sociedad Española de Neurociencia (SENC) in the ALBA Network (https://www.alba.network)
2023.- Member of the Spanish Society of Neuroscience (SENC)
2022.- Member of the RedDevNeural (http://redevneural.cbm.uam.es/index.php/en/)
2023-2022.- IBMB-CSIC seminar series organizer (PhD, Postdoc, External speakers)
Since 2020.- Member of the IBMB-YPI “Young Principal Investigator” network