Curriculum vitae

PERSONAL INFORMATION

Name (family, first): **Benitah, Salvador Aznar**
Researcher ORCID: http://orcid.org/0000-0002-9059-5049
Date of birth: 12 June, 1975 (Montreal, Canada)
Nationality: Spanish, Canadian
URL for web site: https://www.irbbarcelona.org/es/research/stem-cells-and-cancer

CURRENT POSITIONS

2023-present Coordinator of Aging and Metabolism Program, IRB Barcelona
2014-present ICREA Professor at IRB Barcelona (Stem cells and Cancer Laboratory)
2025-present Founder and Scientific Advisor of *HeliX-AI*
2019-present Founder and Scientific Advisor of *ONA Therapeutics*
2020-2025 Founder Pediatric Osteosarcoma laboratory for Metastasis, IRB/SJD Hospital, Barcelona

EDUCATION AND PREVIOUS POSITIONS

2007-2013 Junior ICREA Group Leader, Center for Genomic Regulation (Barcelona)
2003-2006 Postdoctoral fellow, London Research Institute, Cancer Research UK
1998-2003 PhD (*Magna cum laude*), Biomedical Research Institute (Madrid, Spain)
1997-1998 Masters in Biochemistry, McGill University, (Montreal, Canada)
1993-1998 Bsc Biochemistry **AND** Bsc Molecular Biology (*Honours degree*), McGill University (Canada)

AWARDS

2025 Top 50 most innovative and influential biomedical researchers by *Cell* press
2022 Foundation Lilly Award for Life Sciences
2022 Spanish Association for Cancer Research award (2022)
2021 EACR best publication of the year award in cancer in Europe
2020 ***i)*** Lilliane Bettencourt Award for Life Sciences; ***ii)*** Axa Award in Life Sciences; ***iii)*** Carmen and Severo Ochoa Award in Life Sciences; ***iv)*** Foundation Serra in Biomedicine Award
2018 ***i)*** Foundation Pfizer Award; ***ii)*** ERC Advanced Grant
2017 ***i)*** Bank Caja Rural National Award for Life Sciences; ***ii)*** City of Barcelona Award for Life Sciences; ***iii)*** Catalan Society of Biology Award
2016 Spanish National Award in Biomedicine
2014-2015 ***i)*** Banc Sabadell Award in Biomedicine (2015); ***ii)*** Foundation Botín Award (2014)
2013 ***i)*** Beug Foundation Award; ***ii)*** ERC Consolidator Grant
2001-2012 ***i)*** Lancöme Award for Skin Research ***ii)*** Max Dellbruck Award for Stem Cell Research**;** ***iii)*** Marie Curie Intra-European Postdoctoral Fellowship**;** ***iv)*** Long-Term EMBO Postdoctoral Fellowship**;** ***v)*** Cancer Research UK Postdoctoral Prize**;** ***vi)*** Award for Best PhD Thesis of the Year, Spain**;** ***vii)*** EACR Young Investigator Award 2001 AND 2002

ORGANIZATION OF MEETINGS

2024 *Forbeck Meeting* on Cancer and Metabolism
2023 *Keystone Meeting* on Aging AND *Gordon Research Conference* Epithelial Differentiation
2022-2023 Virtual monthly meetings for epithelial stem cell community (over 300 attendees monthly)
2022 Biomed Conference on Aging IRB meeting (Barcelona)
2021 *Skin Epigenetics Symposia*, International Society of Dermatology
2019 *Gordon Research Conference Epithelial Differentiation* (USA)
2018 *Metastasis Research Society,* Princeton University (USA)
2018 *Mechanisms of Metastasis* IRB meeting (Barcelona)
2017 *Epigenetics in Skin* Symposium (Salzburg)
2016 *Beyond the Cancer Genomes* meeting (Barcelona)

INSTITUTIONAL RESPONSIBILITIES/ ACTIVITIES

2023-now Coordinator of the Aging and Metabolism Department, IRB Barcelona
2023-now Member of the EMBO Council (selection of EMBO members, EMBO YIP, etc)
2023-now Member of the ERC Consolidator Grant Evaluating Panel
2023-now Member of the AACR organizing committee
2021-now Director of the Cancer Node at the IRB Barcelona
2018-now EMBO Member
2009-2012 Executive Board member of the Spanish Association for Cancer Research

2014-now International Committee *International Society for Stem Cell Research* (ISSCR)
2014-now Scientific advisor for *L´Oreal* (Paris, France)
2014-now ***i)*** Lectures to the public at the Center for Contemporary Culture of Barcelona
ii) Lectures of the City Council of Barcelona on stem cells, cancer, and aging
2013-now Evaluating panel of the *Leo Pharma Award*
2012-2017 Board member of the *European Society for Dermatological Research*
Since 2011 Lectures for PhD students at Universitat de Barcelona AND at University Pompeu Fabra
2007-2012 Permanent member of the *Ethical Committee for Animal Research*

REVIEWER AND EDITORIAL BOARDS

Journals: *Nature, Science, Cell Stem Cell, Cell, Aging Cell, Cancer Discovery, Cell Reports, Cell Metabolism, Nat Cell Biol, Nat Med, Nature Cancer, Nat Genetics, Nature Aging, Elife, Journal of Cell Science, The EMBO Journal, EMBO rep, Oncogene, PloS Genetics, Development, and J Invest Dermat.*
Associate Editor: *Aging Cell, Science Advances,* AND *Stem Cell Reports*
Grant reviewer: France, Belgium, US, MRC/*Wellcome Trust*, WWCR), Italy, ERC Consolidator panel
2009-2015: Permanent evaluating committee for the *Spanish National Agency for Grant Reviewing*

SELECTED PUBLICATIONS

Vlassakev I, et al., **Benitah SA***, Petrus P. The liver clock modulates circadian rhythms in white adipose tissue. ***Mol Metab*** 2025

Mortimer T, et al, **Benitah SA**. Gating brain signals by the epidermal clock guarantees skin homeostasis. ***Cell Stem Cell*** 2024

Kumar A, et al., **Benitah SA*,** Muñoz-Cánoves P*. Brain-muscle tissue communication prevents aging by maintaining daily physiology. ***Science*** 2024 (*co-corresponding)

Redondo-Muñoz M, Rodriguez-Baena F, Aldaz P, et al., **Benitah SA***, Arozarena I*. Metabolic rewiring induced by ranolazine improves melanoma responses to targeted therapy and immunotherapy. ***Nature Metabolism*** 2023 (*co-corresponding)

Smith JG, Koronoski, et al, **Benitah SA***, Sassone-Corsi P*. A Minimal Circadian Clock Network for Glucose Tolerance in Mice. ***Cell Reports*** 2023 (*co-corresponding)

Sola P, Mereu E, et al, **Benitah SA**. Local IL17 orchestrates skin aging. ***Nature Aging*** 2023

Moiseeva M, Cisneros A, et al, **Benitah SA**, et al, Muñoz-Cánoves P. A senescence blueprint defines an aged-like inflamed niche that inhibits muscle regeneration. ***Nature*** 2023

Delaunay S, Pascual G, Feng B, et al, **Benitah SA***, Frye M*. Mitochondrial RNA modifications shape metabolic plasticity in metastasis. ***Nature*** 2022 (*co-corresponding)

Petrus P, Smith JG, Koronowski KB, et al, **Benitah SA**. The central clock suffices to drive the majority of circulatory metabolic rhythms. ***Science Advances*** 2022

Pascual G, Domínguez D, Elosúa-Bayes M, et al, **Benitah SA**. Dietary palmitic acid promotes a prometastatic memory via Schwann cells. ***Nature*** 2021

Welz PS, Zinna VM, Symeonidi A, et al, **Benitah SA**. BMAL1-Driven Tissue Clocks Respond Independently to Light to Maintain Homeostasis. ***Cell*** 2019

Koronowski KB, Kinouchi K, et al, **Benitah SA***, Sassone-Corsi P*. Defining the Independence of the Liver Circadian Clock. ***Cell*** 2019 (*co-corresponding)

Salzer MC, Lafzi A, Berenguer-Llergo A, et al, **Benitah SA**. Identity Noise and Adipogenic Traits Characterize Dermal Fibroblast Aging. ***Cell*** 2018

Solanas G, Peixoto FO, Perdiguero E, et al, **Benitah SA**. Aged Stem Cells Reprogram Their Daily Rhythmic Functions to Adapt to Stress. ***Cell*** 2017

Sato S, Solanas G, et al, **Benitah SA*,** Sassone-Corsi P*. Circadian Reprogramming in the Liver Identifies Metabolic Pathways of Aging. ***Cell*** 2017 (*co-corresponding)

Pascual G, Avgustinova A, Mejetta S, et al, **Benitah SA.** Targeting metastasis-initiating cells through the fatty acid receptor CD36. ***Nature*** 2017

Rinaldi L, Datta D, Serrat J, et al, **Benitah SA**. Dnmt3a and Dnmt3b Associate with Enhancers to Regulate Human Epidermal Stem Cell Homeostasis. ***Cell Stem Cell*** 2016

Uribesalgo I, Buschbeck M, Gutiérrez A, et al, **Benitah SA***, Di Croce L*. E-box-independent regulation of transcription and differentiation by MYC. ***Nat Cell Biol*** 2011 (*co-corresponding)

Luis NM, Morey L, et al, **Benitah SA**. Regulation of human epidermal stem cell proliferation and senescence requires polycomb- dependent and -independent functions of Cbx4. ***Cell Stem Cell*** 2011

Janich P, Pascual G, Merlos-Suárez A, et al, **Benitah SA**. The circadian molecular clock creates epidermal stem cell heterogeneity. ***Nature*** 2011

SELECTED REVIEWS

Mortimer T, **Benitah SA**. Circadian communication homeostasis and ageing. ***Nat Rev Mol Cell Biol*** 2025

Martin-Perez M, Urdiroz U, **Benitah SA**. The role of lipids in cancer metastasis. ***Cell Metabolism*** 2023

Benitah SA, Welz PS. Circadian regulation of adult stem cell homeostasis and aging. ***Cell Stem Cell*** 2020

Avgustinova A, **Benitah SA**. Epigenetic control of adult stem cell function. ***Nat Rev Mol Cell Biol*** 2016

Solanas G, **Benitah SA**. Regenerating the skin: stem cells and their niche. ***Nat Rev Mol Cell Biol*** 2013

MEETINGS AS SPEAKER (selected from the last 10 years): *Metastasis Research Society* (2018, 2020, 2022, 2023); *Nature:* Cancer and metastasis (2019, 2020); *Foundation Les Treilles* Stem Cells and Cancer (2018, 2019, 2023); *Cold Spring Harbor* Stem Cells (2011, 2012, 2017); *Keystone:* Metastasis (2023, 2021); Cancer Metabolism (2023, 2022, 2017); Ageing (2023, 2016); Epigenetics (2015, 2016, 2018, 2020); *Gordon Research Conference:* Epithelial Differentiation (2013, 2015, 2017, 2023); Ageing (2013); Chronobiology (2011, 2013, 2017); Stem Cells (2023, 2017, 2019); *International Society for Stem Cell Research* ISSCR (2012, 2014, 2016, 2017, 2019, 2024); *EMBO:* Aging (2020); Tumor Metabolism (2022, 2018); Stem Cells (2010, 2011); Cancer (2010, 2012); *Nature Medicine:* Metastasis (2016); *Cell:* Epigenetics (2015); Chronobiology and aging (2018, 2021); EACR (2008, 2015, 2018, 2020, 2022; 2023); Universities*: Cambridge; Oxford; Heidelberg, Princeton*, *Weizmann*, *Harvard*, *Yale, MIT.*

CONTRACTS, TECHNOLOGICAL OR TRANSFER MERITS

2017-2019: Scientific Advisor *with L´Oreal* (France)
2016-present: **Patent granted**: *Targeting metastatic stem cells through a fatty acid receptor.* Number: 15382474.3-4303. Countries: Europe and USA.
2021-present: **Five more patents filed** in 2021 through *ONA Therapeutics*.
2019: Co-founder of ***ONA Therapeutics*** to develop Abs for metastasis therapies. 32M eur Series A funding.
2025: Co-founder of ***HELIX-AI*** to develop AI-based algorithms for biomedical purposes.