MINISTERIO DE CIENCIA E INNOVACIÓN

Cofinanciado por la Unión Europea

AGENCIA ESTATAL DE INVESTIGACIÓN

CURRICULUM VITAE (CVA)

Part A. PERSONAL INFORMATION

CV date	13/Nov/2025

First name	ISIDRO		
Family name	SANCHEZ-GARCIA		
Gender (*)	V	Birth date (dd/mm/yyyy)	12/09/1963
, ID number	07844538C		
e-mail	isg@usal.es	URL Web: https://www.cicancer.org/	
Open Researcher and Contributor ID (ORCID) (*)	0000-0001-6989-9905		

(*) Mandatory

A.1. Current position

Position	Profesor de Investigación del CSIC	
Initial date	4/October/2019	
Institution	Agencia Estatal Consejo Superior de Investigaciones Cientificas	
Department/Center	Instituto de Biología Molecular y Celular del Cáncer (IBMCC)	
Country	Spain	Teleph. Number: 923 294813
Key words	childhood leukemia; epigenetic modulation; infection exposure; mutational pattern; genetic susceptibility	

A.2. Previous positions

1988-1991 Predoctoral Fellow in Molecular Genetics, University of Salamanca, Spain.
1990 Visiting Scientist, MRC-LMB (PNAC Division), Cambridge, UK.
1991-1995 Post-Doc Scientist, MRC-LMB (PNAC Division), Cambridge, UK.
1996-1997 Tenured-Track Scientist, IMB-CSIC, Salamanca, Spain.
1997-2000 Tenured Scientist, IMB-CSIC, Salamanca, Spain.
2000-2002 Tenured Scientist, Cancer Research Center, IBMCC-CSIC, Salamanca, Spain.
2002-2019 Senior Staff Researcher, Cancer Research Center, IBMCC-CSIC, Salamanca, Spain.

A.3. Education

MD (1st Class Honors)	University of Salamanca Medical School, Spain.	1987
MS (1st Class Honors)	University of Salamanca Medical School, Spain.	1987
PhD	University of Salamanca Medical School, Spain.	1991

A.4. General indicators of quality of scientific production *(see instructions)*

	Total	Since 2020
- Citations:	**12054**	**4219**
- *h*-index:	**55**	**32**
- Index i10:	**112**	**69**

(last update on 30-Oct-2025)

-Inclusion in the Ranking of the World Scientists: Worls's Top 2% Scientists (*PLoS Biol. 2020 Oct 16;18(10):e3000918****).***

*- Recognized as an Expert in Precursor B-Cell Lymphoblastic Leukemia-Lymphoma (**ranks in the top 0.31%)** https://expertscape.com/ex/precursor+b-cell+lymphoblastic+leukemia-lymphoma*

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

My research is focused on attaining a better understanding of the initiation, maintenance, and progression of lymphoid tumors, and their response to (inmuno) chemotherapy toward improving current treatment strategies. In this effort, I employ tools from functional genomics, computational biology, molecular genetics, and mouse models. Isidro Sanchez-Garcia has an extensive track record of high-quality scientific contributions to the field of leukemia etiology, focusing on genetic predisposition and mechanisms of childhood leukemogenesis. His pioneering work on the link

between infections and childhood leukemia has been awarded several international prizes and was published and highlighted in leading scientific journals (including Nature, Nature Reviews Cancer, Cancer Discovery, Blood, Leukemia). Primary scientific contributions are the discovery of the causal role of the exposure to infections and the development of childhood leukemia, the link between microbiome and the susceptibility childhood leukemia, and the interdependence of the cellular metabolism and the progression to childhood leukemia. He has demonstrated that the predisposition to lymphoid malignancies arises as a result of an epigenetic priming process. These contributions have fostered our group as a leader in the field of childhood leukemia and prevention in the world (Nat. Rev. Immunology 2021; Trends in Immunology 2021; Cancer Discovery 2024). As I result of this, the doctors graduated from the research team have obtained positions in both Spanish and foreign research institutions or biotech companies. **This knowledge will lead to a paradigm shift in the clinical treatment of childhood leukemia.**

Our clinical contributions to solve childhood leukemia and clinical collaborators: We are opening a completely new paradigm of treatment against pediatric acute leukemia: leukemia prevention. Our preclinical mouse models, where B-ALL occurs naturally, are indispensable for elucidating the early phases of B-ALL development, which are typically unnoticed in children, making it nearly impossible to study the initial phases of leukemic transformation in humans. To that aim **we work closely with pediatric oncologists both in Spain (Dr. Manuel Ramírez-Orellana, Hospital Niño Jesús, Madrid), Europe (Gianni Cazzaniga, Medical Genetics, School of Medicine and Surgery, Univ. Milan Bicocca) and USA (Dr. Kim Nichols, St. Jude Children's Research Hospital).** All findings obtained previously using these mouse models have later been mirrored in pediatric B-ALL patients by our team using clinical information and samples provided by our clinical collaborators. paving the way to the arrival of such a new paradigm (leukemia prevention) into routine clinical practices, leading to a very significant impact on patients and their communities.

Part C. RELEVANT MERITS *(sorted by typology)*

C.1. Publications (including books)

1 -My group has uncovered for the first time the causal role of natural infection in B-cell leukemia development:

a. Martin-Lorenzo A, et al **.** Infection exposure is a causal factor in B-precursor acute lymphoblastic leukemia as a result of Pax5 inherited susceptibility. **Cancer Discovery (research article) 2015** 5:1328-1343. (**ISG is corresponding author**)

b. Rodríguez-Hernández G, et al. Infection exposure promotes *ETV6-RUNX1* precursor B cell leukemia via impaired H3K4 demethylases. **Cancer Res. 2017** Aug 15;77(16):4365-4377. (**ISG is corresponding author**)

c. Chan, LN et al. Metabolic gatekeeper function of B-lymphoid transcription factors. **Nature 2017**; 542: 479-483. (**ISG is co-author**)

d. Martín-Lorenzo A, et al. Loss of Pax5 exploits Sca1-BCR-ABLp190 susceptibility to confer the metabolic shift essential for pB-ALL **Cancer Res. 2018** May 15;78(10):2669-2679. (**ISG is corresponding author**)

e. Vicente-Dueñas, C. et al. Epigenetic priming in Cancer Initiation. **Trends Cancer 2018** Jun;4(6):408-41. (**ISG is corresponding author**)

f. Rodríguez-Hernández G, et al. Infectious stimuli promote malignant B-cell acute lymphoblastic leukemia in the absence of AID. **Nature Communications 2019** Dec 5;10(1):5563. (**ISG is corresponding author**)

g. Vicente Dueñas C, et al. An intact gut microbiome protects genetically predisposed mice against leukemia. **Blood 2020** ;136 (18):2003 -2017. (**Plenary paper**). (**ISG is corresponding author**)

h. Raboso-Gallego, J.et al., Conditional expression of HGAL leads to the development of diffuse large B-cell lymphoma in mice. **Blood 2021** Apr 1; 137 (13): 1741–1753. (**ISG is corresponding author**)

i) Cobaleda, C., et al. Infectious triggers and novel therapeutic opportunities in childhood B cell leukaemia. **Nature Reviews Immunol 2021**; 21:570-581. (**ISG is corresponding author**)

j) Cobaleda C, et al. An immune window of opportunity to prevent childhood B cell leukemia. **Trends in Immunology 2021**, 42(5): 371-374. (**ISG is corresponding author**)

h) Casado-García A, et al. Transient Inhibition of the JAK/STAT Pathway Prevents B-ALL Development in Genetically Predisposed Mice. **Cancer Res. 2022** Mar 15;82(6):1098-1109. (**ISG is corresponding author**)

k) Cobaleda C, et al. Revisiting the concept of childhood preleukemia.. **Trends Cancer. 2022** Nov;8(11):887-889. (**ISG is corresponding author**)
l) Isidro-HernándezM,et al. Immune stress suppresses innate immune signaling in preleukemic precursor B-cells to provoke leukemia in predisposed mice. **Nat Commun. 2023** Aug 24;14(1):5159. (**ISG is corresponding author**)
m) Cobaleda C, et al Insights into the Molecular Mechanisms of Genetic Predisposition to Hematopoietic Malignancies: The Importance of Gene-Environment Interactions.**Cancer Discov. 2024** Mar 1;14(3):396-405. (**ISG is corresponding author**)
n) Cobaleda C, et al. Childhood B cell leukemia: Intercepting the paths to progression. **Bioessays. 2024** Sep;46(9):e2400033. (**ISG is corresponding author**)
o) Cobaleda C, Sánchez-García I. Childhood leukemia prevention within reach. **Blood. 2024** Aug 22;144(8):799-800. (**ISG is corresponding author**)

2- My group has demonstrated that tumor cell identity in hematologic malignancies arise as a result of a epigenetic priming.
a. Ute Fischer, et al. Cell Fate Decisions: The Role of Transcription Factors in Early B Cell Development and Leukemia. **Blood Cancer Discovery** 2020 Nov;1(3):224-233. (**ISG is corresponding author**)
b. Vicente-Dueñas C, et al Dnmt1 links BCR-ABLp210 to epigenetic tumor stem cell priming in myeloid leukemia. **Leukemia. 2019** Jan;33(1):249-278. (**ISG is corresponding author**)
c. García-Ramírez I, et al Lmo2 expression defines tumor cell identity during T-cell leukemogenesis. **EMBO J. 2018** Jul 13;37(14). pii: e98783. (**ISG is corresponding author**)
d. García-Ramírez, I. Et al. Creep loss cooperates with Bcl2 over expression to promote lymphoma in mice. **Blood 2017**; 129(19):2645-56. (**ISG is corresponding author**)
e. Green MR, et al. Transient expression of Bcl6 is sufficient for oncogenic function and induction of mature B-cell lymphoma. **Nature Communications 2014** Jun 2;5:3904. (**ISG is corresponding author**)
f. Sara Mainardi, et al. Identification of cancer initiating cells in *K-Ras* driven lung adenocarcinoma. **Proc Natl Acad Sci U S A. 2014** Jan 7;111(1):255-60 (**ISG is corresponding author**)
g. Carolina Vicente-Dueñas, et al. Function of oncogenes in cancer development: a changing paradigm. **The EMBO Journal 2013**, **32**, 1502 - 1513. (**ISG is corresponding author**)
h. Romero-Camarero I., et al. Germinal centre protein HGAL promotes lymphoid hyperplasia and amyloidosis via BCR-mediated Syk activation. **Nature Communications 2013** Jan 8;4:1338. (**ISG is corresponding author**)
i. Vicente-Dueñas C, et al., A novel molecular mechanism involved in multiple myeloma development revealed by targeting MafB to hematopoietic progenitors. **The EMBO Journal 2012, 31**, 3704-17. (**ISG is corresponding author**)
j. Vicente-Dueñas C, et al. Expression of MALT1 oncogene in hematopoietic stem/progenitor cells recapitulates the pathogenesis of human lymphoma in mice. **Proc Natl Acad Sci U S A. 2012;** 109(26): 10534-10539. (**ISG is corresponding author**)
k M. Pérez-Caro, et al. Cancer induction by restriction of oncogene expression to the stem cell compartment. **EMBO J. 2009;** 28(1):8-20. (**ISG is corresponding author**)
l. I. Sánchez-García. The Crossroads of Oncogenesis and Metastasis. **N Engl J Med. 2009**; 360(3):297-299. (**ISG is corresponding author**)

Complete List of Published Work in My Bibliography:
http://www.ncbi.nlm.nih.gov/pubmed/?term=sanchez-garcia+i

C.2. Active Research projects and grants

-- TITLE OF PROJECT: Deciphering Epigenetic Biomarkers to Identify Preleukemic Carriers at Risk (REACTION). - Grant number: TRANSCAN2023-1858-066
-SOURCE: TRANSCAN-3 Joint Transnational Call 2023 "Translational research on Cancer epigenetics"
DATES OF FUNDED PROJECT: 1.01 2025 – 31.12.2028
LEAD APPLICANT: Julie Lessard, Véronique Maguer-Satta, Yariv Wine, Bastien Gerby, Manuel Ramírez Orellana, **Isidro Sanchez-García**
-- TITLE OF PROJECT: Preventing ETV6::RUNX1 acute lymphoblastic leukemia
-SOURCE: Danish Childhood Cancer Foundation
DATES OF FUNDED PROJECT: 1.01 2025 – 31.12.2028
COORDINATOR: Kjeld Schmiegelow.
PARTNERS: Søren Buus; Henrik Hjalgrim, Arndt Borkhardt, Signe Modvig, and **Isidro Sanchez-Garcia.**
- TITLE OF PROJECT: Early Risk Detection in Children with Genetic Predisposition to leukemia.

Project acronym: CHILDCARE. - Grant number: HR25-00537
SOURCE: CaixaResearch Health 2025
DATES OF FUNDED PROJECT: 1ST NOV 2025- 31ST DEC 2028
Project Leader: **Isidro Sánchez-Garcia (IBMCC, CSIC).**
-- TITLE OF PROJECT: Paving the Way to Prevention: Intercepting Childhood B Cell Leukemia Course
ACRONYM: *A PRIORI*
Grant number: PID2024-155590OB-I00
SOURCE: Convocatoria 2024 - PROPUESTA DE RESOLUCIÓN PROVISIONAL
DATES OF FUNDED PROJECT: 1.01.2026 – 31.12.2028
PI: Isidro Sánchez-García
- TITLE OF PROJECT: Infectious triggers and novel therapeutic opportunities in childhood B cell leukemia (PREVENT).
Grant number: PRYCO211305SANC (Ayuda Proyectos Coordinados AECC 2021)
-SOURCE: Fundación Científica AECC.
DATES OF FUNDED PROJECT: 1st October 2021-30th September 2026
Coordinator: **Isidro Sánchez-García** (IBMCC, Salamanca)
-- TITLE OF PROJECT: *Immune contexture and tumor evolution in B-cell acute lymphoblastic leukemia.*
ACRONYM: *ITACA*
Grant number: PID2021-122185OB-I00
SOURCE: Convocatoria 2021 - «Proyectos de Generación de Conocimiento»
DATES OF FUNDED PROJECT: 1.09.2022 – 28.02.2026
PI: Isidro Sánchez-García
-- **TITLE OF PROJECT**: "Nueva estrategia terapéutica para la prevención de la LLA-B infantil"
Grant number: CSI016P23.
SOURCE: Consejería de Educación-JCyL.
DATES OF FUNDED PROJECT: 1.11.2023-30.4.2027
PI: Isidro Sánchez-García
- TITLE OF PROJECT: Validating novel molecular determinants of predisposition to childhood acute lymphoblastic leukemia.
Grant number: Cunina 2 - SOURCE: Fundación UnoEntreCienMil
DATES OF FUNDED PROJECT: 19 ABRIL 2024- 18 ABRIL 2027
PI: Manuel Ramírez Orellana (Hospital Universitario Niño Jesús, Madrid); César Cobaleda (CBMSO, CSIC); Paula Río Galdo (Hematopoietic Innovative Therapies Division. CIEMAT/CIBERER/IIS-FJD, UAM), and **Isidro Sánchez-Garcia (IBMCC, CSIC).**

C.3. Contracts

1- TITLE: "Agreement for information and advice on environmental factors and cancer". **TELEFÓNICA** (23.02.2013 – 21.02.2026); **2-** TITLE: "In vivo treatment of Pax5+/- mice under infection exposure using Ruxolitinib (food formulation)". **NOVARTIS PHARMA AG** (20-12-2016 – 31.12.2028); **3-** TITLE: "The role of environmental infection exposure in the development of pB-ALL". **ST. JUDE CHILDREN'S RESEARCH HOSPITAL** (July 2019- December 2029).

C.4. Patents

(1) U.S. Patent Application No. 11/500,162 filed August 7, 2006. BINDING PROTEINS FOR RECOGNITION OF DNA. Inventors: A. Klug, Y. Choo y I. Sánchez-García. In explotation by *Sangamo BioSciences, Inc.* **-This technolgy has been highlighted in** *Nature. 2008 Sep 11;455(7210):160-4* **and** *Nat Biotechnol. 2009 Feb;27(2):140-4.* **This technology has been selected as Method of the year 2011 by Nature Methods 2012, 9(1), 23-26)**

(2) Non-human transgenic mammals used as models for human pathologies originating from stem cells (ES2195751 y WO03046181). Inventors: I. Sánchez-García ,y J. Pérez-Losada. In explotation by *ONCOSTEM PHARMA*- **First patent granted in the field of cancer stem cells.**

(3) A non-human animal model of HGAL-linked lymphoma, US Provisional Patent Application number 61/569,377. Inventors: Sánchez García, Isidro; Lossos, Izidore. CSIC and University of Miami. *Licensed to Pharmacyclics* (Stanford, USA)

(4) PATENT NUMBER: WO 2013053765. DESCRIPTION: A new polynucleotide comprising a hematopoietic stem cell–specific... Assignee: CSIC, USAL and PROYECTO BIOMEDICINA CIMA Inventors: Sánchez García, Isidro; Martínez Climent, José Ángel; Cobaleda Hernández, César José; Fontán Gabás, Lorena; Vicente Dueñas, Carolina ***Highlighted in Nature Biotechnology 2013, 31 (7), 607 :"Recent patent applications in hematopoietic stem cells"***

(5) Patent Application NUMBER: EP20382923.9. DESCRIPTION: Methods and compositions for the treatment of Hematologic malignancies. Assignee: CSIC. Inventor: Sánchez García, Isidro.