CV Date	28/10/2026

Part A. PERSONAL INFORMATION

First Name			
Family Name			
Sex		Date of Birth	
ID number Social Security, Passport			
URL Web			
Email Address			
Open Researcher and Contributor ID (ORCID)			

A.1. Current position

Job Title	Junior Group Leader		
Starting date	2026		
Institution	Centro de Investigación Príncipe Felipe		
Department / Centre			
Country	Spain	Phone Number	(+34) 96 328 96 80
Keywords			

A.2. Previous positions (Research Career breaks included)

Period	Job Title / Name of Employer / Country
2024 - 2026	Senior investigator / FUNDACIO PRIVADA INSTITUT D'INVESTIGACIO ONCOLOGICA DE VALL-HEBRON (VHIO)
2023 - 2024	Research Associate / FUNDACIO PRIVADA INSTITUT D'INVESTIGACIO ONCOLOGICA DE VALL-HEBRON (VHIO)
2019 - 2023	Postdoctoral Fellow / FUNDACIO PRIVADA INSTITUT D'INVESTIGACIO ONCOLOGICA DE VALL-HEBRON (VHIO)
2015 - 2019	Postdoctoral Fellow / Cold Spring Harbor Laboratory
2011 - 2015	PhD student / Fundación Instituto Valenciano de Oncología
2010 - 2011	Research assistant / Universitat Autònoma de Barcelona
2009 - 2010	Research assistant / Max Delbruck Center for Molecular Biology

A.3. Education

Degree/Master/PhD	University / Country	Year
PhD Biochemistry, molecular biology and biomedicine	Universitat de València	2015
Master in Biochemistry, Biomedicine and Molecular Biology	Universitat Autònoma de Barcelona	2011
Bachelor in Biotechnology	Universitat Politècnica de València	2010

Part B. CV SUMMARY

As a biomedical scientist specializing in prostate cancer genomics, I have focused on identifying precise biomarkers for this disease. My PhD research (2011–2015), conducted at IVO and CIPF, demonstrated the prognostic potential of microRNAs. During this time, I also trained at leading international labs in New York and Bologna. I later joined Cold Spring Harbor Laboratory (2015–2019), where I expanded my expertise in genomic analysis and mouse models, receiving the US Department of Defense Early Investigator Research Award for work on prostate cancer evolution. In 2019, I joined VHIO in Barcelona, focusing on liquid biopsy tools for genomic and transcriptomic profiling. My work on extracellular vesicle–based biomarkers for predicting disease progression and treatment response led to a first-author publication in Cancer Cell (2024) and supported my promotion to Senior Investigator. I now lead an independent research line on novel liquid biopsy approaches. Throughout my career, I have

demonstrated leadership through independent project design, 26 peer-reviewed publications, competitive national and international funding, and mentorship of students and staff. I have built strong collaborations with international experts, enhancing my expertise in EV biology, computational analysis, and clinical translation, and bridging basic and clinical research. I have also partnered with pharmaceutical companies such as Pfizer, Amgen, Guardant Health, and AstraZeneca as co-principal investigator, leading liquid biopsy components involving ctDNA and EV-based assays. These collaborations have strengthened the clinical relevance of my work.In addition to research, I have been active in science outreach, contributing to public dissemination, educational programs, and initiatives promoting diversity in science.

My future work will focus on developing non-invasive tools to monitor tumor evolution and therapy resistance. Supported by a Ramón y Cajal Fellowship and an ERC Starting Grant, I will establish an independent lab to advance integrative liquid biopsy strategies, initially in prostate cancer and later across other solid tumors, with the goal of improving patient stratification and personalized treatment.

Part C. RELEVANT ACCOMPLISHMENTS

C.1. Most important publications in national or international peer-reviewed journals, books and conferences

AC: corresponding author. (nº x / nº y): position / total authors. If applicable, indicate the number of citations

1 **Scientific paper**. F Zacchi; E Castro; K Imbach; et al; J Mateo. 2026. Talazoparib plus enzalutamide in high-volume metastatic hormone-naive prostate cancer: a randomized phase 2 trial.Nature medicine. ISSN 1078-8956. https://doi.org/10.1038%2Fs41591-026-04671-5

2 **Scientific paper**. Sara Arce-Galego; Victor Esquefa; Heura Domenech; et al; Joaquin Mateo; (14/18) Irene Casanova-Salas. 2025. Combination therapy overcomes secondary PARPi resistance in ATM-deficient prostate cancer.NPJ Precis Oncol.9-1. https://doi.org/10.1038%2Fs41698-025-01179-y

3 **Scientific paper**. Julian Brandariz; Lara de Llobet; Victor Esquefa; et al; Nicolas Herranz; (14/21) Irene Casanova-Salas. 2025. Harnessing Senolytics and PARP Inhibition to Expand the Antitumor Activity of CDK4/6 Inhibitors in Prostate Cancer. Mol Cancer Ther. 24-12. https://doi.org/10.1158%2F1535-7163.MCT-24-0903

4 **Scientific paper**. Arce-Gallego, Sara; Morgado, Pablo Cresta; Delgado-Serrano, Luisa; et al; others; (19/30) others. 2025. Homologous recombination repair status in metastatic prostate cancer by next-generation sequencing and functional immunofluorescence. Cell Reports Medicine. Elsevier. https://doi.org/10.1016%2Fj.xcrm.2025.101937

5 **Scientific paper**. (1/31) Casanova-Salas, Irene; Aguilar, Daniel; Cordoba-Terreros, Sarai; et al; others. 2024. Circulating tumor extracellular vesicles to monitor metastatic prostate cancer genomics and transcriptomic evolution. Cancer Cell. Elsevier. 42-7, pp.1301-1312. https://doi.org/10.1016%2Fj.ccell.2024.06.003

6 **Scientific paper**. Garcia-Ruiz, Alonso; Macarro, Carlos; Zacchi, Francesca; et al; others; (6/26) Casanova-Salas, Irene. 2024. Whole-body magnetic resonance imaging as a treatment response biomarker in castration-resistant prostate cancer with bone metastases: the iPROMET clinical trial. European urology. 86-3, pp.272-274. https://doi.org/10.1016%2Fj.eururo.2024.02.016

7 **Scientific paper**. Mateo, Joaquin; Borque, Angel; Castellano, Daniel E.; et al; Carles, Joan; (12/20) Casanova Salas, Irene. 2022. A randomized phase 2 trial to evaluate the antitumor activity of enzalutamide (EZ) and talazoparib (TALA) for the treatment of metastatic hormone-naive prostate cancer (mHNPC): ZZFIRST.JOURNAL OF CLINICAL ONCOLOGY. 40. ISSN 0732-183X. https://doi.org/10.1200%2FJCO.2022.40.6_suppl.TPS209

8 **Scientific paper**. Grussu, Francesco; Bernatowicz, Kinga; (3/8) Casanova-Salas, Irene; Castro, Natalia; Nuciforo, Paolo; Mateo, Joaquin; Barba, Ignasi; Perez-Lopez, Raquel. 2022. Diffusion MRI signal cumulants and hepatocyte microstructure at fixed diffusion time: Insights from simulations, 9.4T imaging, and histology. Magnetic Resonance in Medicine. 88. ISSN 0740-3194. https://doi.org/10.1002%2Fmrm.29174

9 **Scientific paper**. Zurita, Amado J.; Graf, Ryon P.; Villacampa, Guillermo; et al; Mateo, Joaquin; (10/16) Casanova-Salas, Irene. 2022. Genomic Biomarkers and Genome-Wide Loss-of-Heterozygosity Scores in Metastatic Prostate Cancer Following Progression on Androgen-Targeting Therapies. JCO Precision Oncology. 6. WOS (2) https://doi.org/10.1200%2FPO.22.00195

10 **Scientific paper**. (1/11) Irene Casanova Salas; Alejandro Athie; Paul C Boutros; et al; Joaquin Mateo. 2021. Quantitative and Qualitative Analysis of Blood-based Liquid Biopsies to Inform Clinical Decision-making in Prostate Cancer.European Urology. S0302-2838-20. https://doi.org/10.1016%2Fj.eururo.2020.12.037

11 **Scientific paper**. Antje Neeb; Nicolás Herranz; Sara Arce-Gallego; et al; Johann S de Bono; (19/42) Irene Casanova-Salas. 2020. Advanced Prostate Cancer with ATM Loss: PARP and ATR Inhibitors.European Urology. 79-2, pp.200-211. https://doi.org/10.1016%2Fj.eururo.2020.10.029

12 **Scientific paper**. Gonçalo Rodrigues; Ayuko Hoshino; Candia M Kenific; et al; David Lyden; (10/47) Irene Casanova-Salas. 2019. Tumour exosomal CEMIP protein promotes cancer cell colonization in brain metastasis.Nature Cell Biology. 21-11, pp.1403-1412. https://doi.org/10.1038%2Fs41556-019-0404-4

13 **Scientific paper**. Caroline; Dawid; Ksenya; et al; Lloyd; (10/16) Irene. 2019. The PHLPP2 phosphatase is a druggable driver of prostate cancer progression.Journal of Cell Biology. Rockefeller University Press. https://doi.org/10.1083%2Fjcb.201902048

14 **Scientific paper**. A Naguib; G Mathew; CR Reczek; et al; LC Trotman; (7/15) I Casanova-Salas. 2018. Mitochondrial Complex I Inhibitors Expose a Vulnerability for Selective Killing of Pten-Null Cells. Cell Reports. Cell. 23-1, pp.58-67. ISSN 2211-1247. https://doi.org/10.1016%2Fj.celrep.2018.03.032

15 **Scientific paper**. (1/9) Mancarella, Caterina; Casanova-Salas, Irene; Calatrava, Ana; et al; Antonio Lopez-Guerrero, Jose. 2017. Insulin-like growth factor 1 receptor affects the survival of primary prostate cancer patients depending on TMPRSS2-ERG status. BMC Cancer. BMC. 17. ISSN 1471-2407. https://doi.org/10.1186%2Fs12885-017-3356-8

16 **Scientific paper**. Ramirez-Backhaus, M.; Fernandez-Serra, A.; Rubio-Briones, J.; et al; Lopez-Guerrero, J. A.; (7/10) Casanova Salas, I.2015. External validation of FXYD3 and KRT20 as predictive biomarkers for the presence of micrometastasis in muscle invasive bladder cancer lymph nodes. ACTAS UROLOGICAS ESPANOLAS. ENE EDICIONES SL. 39-8, pp.473-481. ISSN 0210-4806.

17 **Scientific paper**. Rubio-Briones, Jose; Borque, Angel; Esteban, Luis M.; et al; Lopez-Guerrero, Jose A.; (7/16) Casanova-Salas, Irene. 2015. Optimizing the clinical utility of PCA3 to diagnose prostate cancer in initial prostate biopsy. BMC CANCER. BIOMED CENTRAL LTD. 15. ISSN 1471-2407.

18 **Scientific paper**. Mancarella, Caterina; (2/10) Casanova-Salas, Irene; Calatrava, Ana; et al; Scotlandi, Katia. 2015. ERG deregulation induces IGF-1R expression in prostate cancer cells and affects sensitivity to anti-IGF-1R agents. Oncotarget. IMPACT JOURNALS LLC. 6-18, pp.16611-16622. ISSN 1949-2553. https://doi.org/10.18632%2Foncotarget.3425

19 **Scientific paper**. (1/9) Casanova-Salas, Irene; Masia, Esther; Arminan, Ana; et al; Lopez-Guerrero, Jose Antonio. 2015. MiR-187 Targets the Androgen-Regulated Gene ALDH1A3 in Prostate Cancer. Plos One. PUBLIC LIBRARY SCIENCE. 10-5. ISSN 1932-6203. https://doi.org/10.1371%2Fjournal.pone.0125576

20 **Scientific paper**. Fernandez-Serra, A.; (2/8) Casanova-Salas, I.; Rubio, L.; Calatrava, A.; Garcia-Flores, M.; Garcia-Casado, Z.; Lopez-Guerrero, J. A.; Rubio-Briones, J.2015. Update on the diagnosis of PCa in urine. The current role of urine markers. ARCHIVOS ESPANOLES DE UROLOGIA. INIESTARES, S.A.. 68-3, pp.240-249. ISSN 0004-0614.

21 **Scientific paper**. (1/10) Garcia-Flores, Maria; Casanova-Salas, Irene; Rubio-Briones, Jose; et al; Antonio Lopez-Guerrero, Jose. 2014. Clinico-pathological significance of the molecular alterations of the SPOP gene in prostate cancer. European Journal of Cancer. ELSEVIER SCI LTD. 50-17, pp.2994-3002. ISSN 0959-8049. https://doi.org/10.1016%2Fj.ejca.2014.08.009

22 **Scientific paper**. Caterina Mancarella; (2/4) Irene Casanova Salas; Jose Antonio Lopez Guerrero; Katia Scotlandi. 2014. TMPRSS2-ERG influences IGF-1R expression and affects its prognostic value in prostate cancer. Cancer Research supplement. 74-19, pp.2863.

23 **Scientific paper**. (1/16) Casanova-Salas, Irene; Rubio-Briones, Jose; Calatrava, Ana; et al; Antonio Lopez-Guerrero, Jose. 2014. Identification of miR-187 and miR-182 as Biomarkers of Early Diagnosis and Prognosis in Patients with Prostate Cancer Treated with Radical Prostatectomy. Journal of Urology. ELSEVIER SCIENCE INC. 192-1, pp.252-259. ISSN 0022-5347. https://doi.org/10.1016%2Fj.juro.2014.01.107

24 **Scientific paper**. (1/9) Irene Casanova Salas; Esther Masia; Ana Arminan; et al; Jose Antonio Lopez Guerrero. 2014. miR-187 targets the androgen-regulated gene ALDH1A3 in prostate cancer. European Journal of Cancer supplement. 50-5, pp.S163.

25 **Scientific paper**. Lopez-Guerrero, Jose A.; (2/8) Casanova-Salas, Irene; Fernandez-Serra, Antonio; Rubio, Luis; Calatrava, Ana; Garcia-Flores, Maria; Garcia-Casado, Zaida; Rubio-Briones, Jose. 2014. New biomarkers to optimize the selection and follow up of patients with prostate cancer on active surveillance. ARCHIVOS ESPANOLES DE UROLOGIA. INIESTARES, S.A.. 67-5, pp.462-472. ISSN 0004-0614.

26 **Scientific paper**. Rubio-Briones, J.; Casanova, J.; Dumont, R.; et al; Lopez-Guerrero, J. A.; (6/17) Casanova-Salas, I.2014. Optimizing prostate cancer screening; prospective randomized controlled study of the role of PSA and PCA3 testing in a sequential manner in an opportunistic screening program. ACTAS UROLOGICAS ESPANOLAS. ENE EDICIONES SL. 38-4, pp.217-223. ISSN 0210-4806.

27 **Scientific paper**. Rubio-Briones, J.; (2/9) Casanova-Salas, I.; Fernandez-Serra, A.; et al; Lopez-Guerrero, J. A.2013. Non-invasive diagnosis of prostate cancer: serum and urine markers. ARCHIVOS ESPANOLES DE UROLOGIA. INIESTARES, S.A.. 66-5, pp.440-452. ISSN 0004-0614.

28 **Scientific paper**. (1/4) Casanova-Salas, Irene; Rubio-Briones, Jose; Fernandez-Serra, Antonio; Antonio Lopez-Guerrero, Jose. 2012. miRNAs as biomarkers in prostate cancer. CLINICAL & TRANSLATIONAL ONCOLOGY. SPRINGER. 14-11, pp.803-811. ISSN 1699-048X.