Fecha del CVA	04/03/2020

Parte A. DATOS PERSONALES

Nombre y Apellidos	Francisco José Iborra Rodríguez		
DNI/NIE/Pasaporte		Edad	54
Núm. identificación del investigador	Researcher ID		
	Scopus Author ID	7004717492	
	Código ORCID	0000-0002-0692-3696	

A.1. Situación profesional actual

Organismo	Consejo Superior de Investigaciones Científicas		
Dpto. / Centro			
Dirección			
Teléfono		Correo electrónico	fjiborra@cnb.csic.es
Categoría profesional	Cientifico Titular	Fecha inicio	2008
Espec. cód. UNESCO	240000 - Ciencias de la Vida		
Palabras clave	Reproducción; Biología aplicada; Biología molecular; Bioinformática		

A.2. Formación académica (titulo, institución, fecha)

Licenciatura/Grado/Doctorado	Universidad	Año

A.3. Indicadores generales de calidad de la producción científica

Dispongo de cuatro sexenios de investigación, el último concedido el 1 de enero de 2015.
Desde el año 2009, he dirigido 3 tesis doctorales.
El numero de citas totales en el periodo 2015-2019 es de 1345. Lo que hace una media de 269 citas por año.
Publicaciones en el primer cuatil: 6
Indice h: 32, según Google Scholar.

Parte B. RESUMEN LIBRE DEL CURRÍCULUM

I'm a tenured scientist at the Centro Nacional de Biotecnología (CNB) at the CSIC. I'm a member of the Real Academia de Medicina de la Comunidad Valenciana. Currently I'm the head of the Molecular and Cellular Biology department at the Centro Nacional de Biotecnología (CSIC), 14 research groups. After my Thesis, in 1995 I joined the lab of Professor Peter Cook at the Sir William Dunn School of Pathology in Oxford University. In 2003 I become Principal Investigator (PI) at the Institute of Molecular Medicine at Oxford University. In 2010 I joined the CNB as a tenured scientist. Since sepetember 2019 I'm at the unidad mixta CIPF-IBV in Valencia.

I'm a cell biologist with a broad background in cell and systems biology, with expertise in quantitative biology, I'm currently focusing my research on the implementation of mathematical modeling approaches for the study of biological systems and processes. I combine quantitative imaging and gene expression data with mathematical modelling. My research aims to understand the basis of tumor cell heterogeneity and its implications, which requires an integrative approach.

As PI on MRC and Spanish Science Ministry funded grants, I set the basis for the discovery of the importance of mitochondrial heterogeneity on cellular variability. I developed new methods allowing us to carry out quantitative measurements in microscopical samples. As a result of the methods that I developed we build new biological concepts like transcription factories or discoveries like nuclear translation. Moreover, as an example of the microscopy mastery, we studied the dynamics of mitochondrial genomes which conducted to better understanding the metabolism of mitochondrial genomes. Nowadays, my lab tries to understand the origin and the

consequences of phenotypic variability. Our study has identified a new mechanism of tumor induction trough metabolic rewiring.

I nurtured successful collaborations with other researchers. My long-standing collaborator is professor Tariq Enver, head of the Cancer Institute at University College London. Which, in a regular basis we publish studies on the biology of noise in gene expression and stem cell biology

Parte C. MÉRITOS MÁS RELEVANTES (ordenados por tipología)

C.1. Publicaciones

1 **Artículo científico**. Rodriguez H; et al. 2019. "PHOTOLUMINESCENCE ACTIVATION OF ORGANIC DYES VIA OPTICALLY TRAPPED QUANTUM DOTS" 019, doiX revista: ACS Nano.13, pp.7223-7230.
2 **Artículo científico**. S Márquez-Jurado; et al. 2018. "MITOCHONDRIAL LEVELS DETERMINE VARIABILITY IN CELL DEATH BY MODULATING APOPTOTIC GENE EXPRESSION" X revista: Nature Communications.NPG. 9-389, pp.1-11.
3 **Artículo científico**. Guantes R; Diaz-Colunga J; Iborra F J.2016. "MITOCHONDRIA AND THE NON-GENETIC ORIGINS OF CELL-TO-CELL VARIABILITY: MORE IS DIFFERENT" X revista: Biessays. 38, pp.64-76.
4 **Artículo científico**. Guantes R; et al. 2015. "GLOBAL VARIABILITY IN GENE EXPRESSION AND ALTERNATIVE SPLICING IS MODULATED BY MITOCHONDRIAL CONTENT." X revista: Genome Res.25, pp.633-644.
5 **Artículo científico**. Canals Hamann AZ; et al. 2013. "A BIOPHYSICAL MODEL FOR TRANSCRIPTION FACTORIES".X revista: BMC Biophysics. 6-2, pp.1-6.
6 **Artículo científico**. Romero-Moya D; et al. 2013. "CORD BLOOD CD34+ HEMATOPOIETIC CELLS WITH LOW LEVELS OF MITOCHONDRIAL MASS ARE ENRICHED IN HEMATOPOIETIC REPOPULATING STEM CELL FUNCTION".X revista: Haematologica. 98, pp.1022-1029.
7 **Artículo científico**. I G Johnston; et al. 2012. "MITOCHONDRIAL VARIABILITY AS A SOURCE OF EXTRINSIC CELLULAR NOISE".X revista: PLoS Comput Biol. 8-3, pp.1-14.
8 **Artículo científico**. das Neves RP; et al. 2010. "CONNECTING VARIABILITY IN GLOBAL TRANSCRIPTION RATE TO MITOCHONDRIAL VARIABILITY" PLoS Biol.8, pp.e1000560.
9 **Artículo científico**. Brown JM; et al. 2008. "CHROMATIN ENVIROMENT AND SPLICING FACTOR AGGREGATIONS ARE STOCHASTIC MODULATORS OF ASSOCIATION BETWEEN ACTIVE GENES" J Cell Biol. 182, pp.1083-1097.
10 **Artículo científico**. Iborra FJ. 2007. "CAN VISCO-ELASTIC PHASE SEPARATION, MACROMOLECULAR CROWDING AND COLLOIDAL PHYSICS EXPLAIN NUCLEAR ORGANISATION?" Theoretical Biology and Medical Modelling. 4:15, pp.1-11.
11 **Artículo científico**. Gupta R; et al. 2007. "NOV/CCN3 FUNCTIONS AS A REGULATOR OF HUMAN HEMATOPOIETIC STEM/PROGENITOR CELLS." Science. 316, pp.590-593.
12 **Artículo científico**. Kimura H; et al. 2006. "A NOVEL HISTONE-EXCHANGE FACTOR, PROTEIN PHOSPHATASE 2C?? MEDIATES THE EXCHANGE AND DEPHOSPHORYLATION OF H2A/H2B" J Cell Biol. 175, pp.389-400.
13 **Artículo científico**. Brown JM; et al. 2006. "COREGULATED HUMAN GLOBIN GENES ARE FREQUENTLY IN SPATIAL PROXIMITY WHEN ACTIVE." J Cell Biol. 172, pp.177-187.
14 **Artículo científico**. Hieda M; et al. 2005. "DIFFERENT POPULATIONS OF RNA POLYMERASE II IN LIVING MAMMALIAN CELLS".Chromosome Research. 13, pp.135-144.
15 **Artículo científico**. F.J. Iborra; et al. 2004. "MOLECULAR CROSS-TALK BETWEEN THE TRANSCRIPTION, TRANSLATION, AND NONSENSE-MEDIATED DECAY MACHINERIES" Journal of Cell Science.117, pp.899-906.
16 **Artículo científico**. Iborra FJ; Jackson DA; Cook PR.2004. "THE CASE OF NUCLEAR TRANSLATION".Journal of Cell Science.117, pp.5713-5720.

17 **Artículo científico**. F.J. Iborra; H. Kimura; P.R. Cook. 2004. "THE FUNCTIONAL ORGANIZATION OF MITOCHONDRIAL GENOMES IN HUMAN CELLS" BMC Biology. 2:9, pp.1-14.

18 **Artículo científico**. F.J. Iborra. 2002. "THE PATH THAT RNA TAKES FROM THE NUCLEUS TO THE CYTOPLASM: A TRIP WITH SOME SURPRISES" Robert Feulgen Prize Lecture Histochem Cell Biol. 118, pp.95-103.

19 **Artículo científico**. F.J. Iborra; D.A. Jackson; P.R. Cook. 2001. "COUPLED TRANSCRIPTION AND TRANSLATION WITHIN NUCLEI OF MAMMALIAN CELLS" Science. 36, pp.1139-1142.

20 **Artículo científico**. F A. Pombo; et al. 2000. SPECIALIZED TRANSCRIPTION SITES WITHIN MAMMALIAN NUCLEI" Critical Reviews in Eukaryotic Gene Expression. 10, pp.21-29.

21 **Artículo científico**. D.A. Jackson; A. Pombo; F.J. Iborra. 2000. "THE BALANCE SHEET FOR TRANSCRIPTION: TOWARS UNDERSTANDING GENE EXPRESSION IN MAMMALIAN CELLS" FASEB J..14, pp.242-254.

22 **Artículo científico**. F.J. Iborra; D.A. Jackson; P.R. Cook. 2000. "THE PATH OF RNA THROUGH NUCLEAR PORES: APPARENT ENTRY FROM THE SIDES INTO SPECIALIZED PORES" Journal of Cell Science. 113, pp.291-302.

23 **Artículo científico**. D.A. Jackson F.J. Iborra; E. Manders; P.R. Cook *. 1998. "NUMBERS AND ORGANIZATION OF RNA POLYMERASES, NASCENT TRANSCRIPTS AND TRANSCRIPTION UNITS IN HELA NUCLEI" * En este paper D.A. Jackson y F.J. Iborra han contribuido en igual medida al trabajo.Molecular Biology of the Cell. 9, pp.1523-1536.

24 **Artículo científico**. F.J. Iborra; D.A. Jackson; P.R. Cook. 1998. "THE PATH OF TRANSCRIPTS FROM SYNTHETIC SITES TO NUCLEAR PORES: TRANSCRIPTS IN TRANSIT ARE CONCENTRATED IN DISCRETE SITES CONTAINING SR PROTEINS" Journal of Cell Science.111, pp.2269-2282.

25 **Artículo científico**. F.J. Iborra; A. Pombo; D.A. Jackson P.R. Cook. 1996. "ACTIVE RNA POLYMERASES ARE LOCALIZED WITHIN DISCRETE TRANSCRIPTION "FACTORIES" IN HUMAN NUCLEI" Journal of Cell Science. 109, pp.1427-1436.

C.2. Proyectos

C.3. Contratos

C.4. Patentes

Beatriz Henandez Juarez; Ricardo Arias Gonzalez de la Aleja; Hector Rodríguez Rodríguez; María Acebrón Rodicio; Francisco José Iborra Rodríguez. P201830775. MÉTODO DE DETECCIÓN DE ESTRUCTURAS MARCADAS España. 27/07/2018. FUNDACIÓN IMDEA NANOCIENCIA.