

## COMPETITIVE FUNDING

The CNIO attracts a substantial proportion of its funding from external sources. Most of this funding comes from national and international funding bodies and is used not only to finance the Centre's outstanding R&D activities, but also strategic actions in Innovation together with Industry partners. The funding is also used to support other relevant activities related to dissemination and scientific outreach; these activities are aimed at promoting public awareness. In 2018, researchers at the CNIO were involved in 134 projects that received extramural funding.

In 2018, the CNIO actively participated in a total of 45 collaborative projects: 14 were international collaborative projects (3 of which are coordinated by the CNIO) and 31 were collaborative projects at the national level (12 of them are coordinated by the CNIO). The international collaborative projects were funded by institutions such as the European Commission through the 7<sup>th</sup> Framework Programme and Horizon 2020, the Interreg SUDOE Programme, the US National Institutes of Health (NIH), the US Department of Defense (DoD), the International Human Frontier Science Program Organization, the Melanoma Research Alliance (MRA), the Paradifference Foundation and Worldwide Cancer

Research. At the national level, collaborative projects received important public funding through grants from the Strategic Health Action that is managed by the Institute of Health *Carlos III (ISCIII)*, the State Research Agency of the Spanish Ministry of Science, Innovation and Universities (*AEI/MICIU*), and the R&D Activities Programmes of the Community of Madrid; most of the projects were cofunded by European Structural and Investment Funds (European Regional Development Fund and European Social Fund). Private funders and charities also recognised the excellence of our scientific projects, among them, the Scientific Foundation of the Spanish Association Against Cancer (*Fundación AECC*).

In addition to these collaborative projects, researchers at the CNIO attracted funding for projects carried out by individual groups. In 2018, 24 of these projects received international funds while 65 of them received national funding (mainly from the *AEI/MICIU*, the *ISCIII* and private foundations). The international individual projects are funded by the European Commission (3 ERC grants and 8 Marie Curie Actions), Worldwide Cancer Research, the Howard Hughes Medical Institute (HHMI), the Prostate Cancer Foundation, the US DoD and the MRA.

## INTERNATIONAL GRANTS COLLABORATIVE PROJECTS

### EUROPEAN COMMISSION



#### 7<sup>TH</sup> FRAMEWORK PROGRAMME (2007-2013)

##### ERA-NET ON TRANSLATIONAL CANCER RESEARCH (TRANSCAN)

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Malats, Núria	Bio-PaC: Biomarkers of tumor recurrence in pancreatic cancer (financed by ISCIII, Ref.: AC14/00025)

##### ERA NET NEURON II: NETWORK OF EUROPEAN FUNDING FOR NEUROSCIENCE RESEARCH

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Malumbres, Marcos	MicroKin: Deciphering the multifaceted pathways underlying MCPH pathogenesis in the mouse and human (financed by MEIC, Ref.: PCIN-2015-007)

#### HORIZON 2020 (2014-2020)

##### MARIE SKŁODOWSKA-CURIE ACTIONS (MSCA)

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Soengas, María S.	ITN IMMUTRAIN: Training network for the immunotherapy of cancer (Ref.: 641549)

##### SOCIETAL CHALLENGE 1: HEALTH, DEMOGRAPHIC CHANGE AND WELLBEING

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Benítez, Javier	BRIDGES: Breast cancer risk after diagnostic gene sequencing (Ref.: 634935)

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Al-Shahrour, Fátima	ONCONET: European Network for Translational Research and Innovation in Oncology /Réseau Européen de Recherche translationnelle et d'Innovation en oncologie (Ref.: SOE1/P1/F0082)

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Muñoz Fernández, Inés	Targeting Mdm2-MdmX E3 ligase for treatment of drug-resistant lymphoma (Ref.: R01CA208352)
Peinado, Héctor	Exosome-mediated transfer of c-MET to bone marrow progenitors promotes metastasis (Ref.: R01CA169416)
Tress, Michael	GENCODE 2: Integrated human genome annotation: generation of a reference gene set (Ref.: U41HG007234)

### INTERREG SUDOE PROGRAMME<sup>1</sup>



### US NATIONAL INSTITUTES OF HEALTH (NIH)



1. This Programme is cofunded by the European Regional Development Fund (ERDF)



**US CONGRESSIONALLY  
DIRECTED MEDICAL  
RESEARCH PROGRAMS  
(CDMRP)/US DEPARTMENT  
OF DEFENSE**


PRINCIPAL INVESTIGATOR	PROJECT TITLE
Olmos, David	Clinical qualification of DNA repair defects as prognostic and predictive biomarker in metastatic prostate cancer using genomics and tissue-based functional assays (Ref.: W81XWH-18-1-0770)
Peinado, Héctor	Organ-tropic metastatic secretomes and exosomes in breast cancer (Ref.: W81XWH-13-1-0427)

**MELANOMA RESEARCH  
ALLIANCE (MRA)**


PRINCIPAL INVESTIGATOR	PROJECT TITLE
Soengas, María S. (coordinator)	Imaging and targeting dormant and pro-metastatic melanoma lesions <i>in vivo</i> (Ref.: 401181)

**THE PARADIFFERENCE  
FOUNDATION**


PRINCIPAL INVESTIGATOR	PROJECT TITLE
Robledo, Mercedes	SDHB-related metastatic paraganglioma: search for the cure

**WORLDWIDE CANCER  
RESEARCH (WCR,  
FORMERLY AICR)**


PRINCIPAL INVESTIGATOR	PROJECT TITLE
Malats, Núria (coordinator)	Oral microbiotic profiles and its association with risk of pancreatic ductal adenocarcinoma (Ref.: 15-0391)

**INTERNATIONAL HUMAN  
FRONTIER SCIENCE  
PROGRAM ORGANIZATION  
(HFSP)**


PRINCIPAL INVESTIGATOR	PROJECT TITLE
Llorca, Óscar (Coordinator)	Photochemical trap and high-resolution imaging of transient chromatin complexes from living cells (Ref.: RGP0031/2017)

**INTERNATIONAL GRANTS INDIVIDUAL PROJECTS**
**EUROPEAN COMMISSION**

**7<sup>TH</sup> FRAMEWORK PROGRAMME (2007-2013)**
**EUROPEAN RESEARCH COUNCIL (ERC)**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Fernández-Capetillo, Óscar	ERC Consolidator Grant RSHEALTH: Investigating the causes and consequences of replication stress in mammalian health (Ref.: 617840)

**MARIE CURIE ACTIONS (MCA)**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Peinado, Héctor	WHRI COFUND ADIPOMET: Analyzing the crosstalk of tumor and adipose tissue during metastasis (Ref.: 608765 WHRI-309)
Plaza, Iván	WHRI COFUND: Structure-Function studies of oncogenic RET kinase Fusions in non-small cell Lung Cancer (NSCLC): from structure to targeted therapy (Ref.: 608765 WHRI-612)
Ramón, Santiago Moreno, María	WHRI COFUND CAD_FL: Revealing the functional mechanism of CAD and its potential as a therapeutic target (Ref.: 608765 WHRI-222)
Real, Francisco X Paliwal, Sumit	WHRI COFUND: NFIC as a novel regulator of pancreatic acinar differentiation and homeostasis (Ref.: 608765 WHRI-609)
Squatrito, Massimo	GLIDD: DNA Damage Response (DDR) signaling in tumor formation and therapeutic resistance of gliomas (Ref.: 618751)
Wagner, Erwin F. Gago, Nuria	WHRI COFUND STEM-PSO: Unraveling the contribution of Epidermal and Non-Epidermal Progenitor (Ref.: 608765 WHRI-319)

**HORIZON 2020 (2014-2020)**
**EUROPEAN RESEARCH COUNCIL (ERC)**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Barbacid, Mariano	ERC Advanced Grant THERACAN: Novel therapeutic strategies to treat pancreatic and lung cancer (Ref.: 695566)
Efeyan, Alejo	ERC Starting Grant NutrientSensingVivo: The Physiology of Nutrient Sensing by mTOR (Ref.: 638891)

**MARIE SKŁODOWSKA-CURIE ACTIONS (MSCA)**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Soengas, María S. Frago, Susana	METMEL: Long range-acting drivers of premetastatic niches in melanoma (Ref.: 753442)
Efeyan, Alejo Fernández-Capetillo, Óscar Zauri, Melania	METLINK: Identification of links between cancer cell growth and metabolism genes (Ref.: 794177)

**HOWARD HUGHES MEDICAL  
INSTITUTE (HHMI)**


PRINCIPAL INVESTIGATOR	PROJECT TITLE
Fernández-Capetillo, Óscar	Exploring the role of replicative stress in cancer and ageing (Ref.: 55007417)

**MELANOMA RESEARCH ALLIANCE (MRA)**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Soengas, María S.	Prognostic and therapeutic impact of lymphovascular niches in melanoma (Ref.: 348673)
Valiente Cortes, Manuel	Blocking melanoma brain metastasis by targeting the environment (REF.: 498103)

**PROSTATE CANCER FOUNDATION**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Olmos, David	Integration of clinical, molecular and biological characteristics to define an aggressive subtype of prostate cancer based on deficient homologous recombination
Castro, Elena	Prospective study of lethal prostate cancer clinical and genomic evolution in DNA repair deficient tumours

**WORLDWIDE CANCER RESEARCH (WCR, FORMERLY AICR)**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Blasco, María	Targeting telomeres in cancer (Ref.: 16-1177)
Lietha, Daniel	Targeting regulatory mechanisms for allosteric cancer drug discovery (Ref.: 15-1177)
Malumbres, Marcos	New therapeutic strategies by inhibiting Mastl in breast tumors (Ref.: 15-0278)
Peinado, Héctor	Evaluation of obesity as a novel risk factor in metastasis (Ref.: 16-1244)
Soengas, María S.	Harnessing endo/exocytosis for a coordinated targeting of melanoma cells, their vasculature and the immune system (Ref.: 15-1374)

**US CONGRESSIONALLY DIRECTED MEDICAL RESEARCH PROGRAMS (CDMRP)/US DEPARTMENT OF DEFENSE**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Peinado, Héctor	Role of exosomes and Endoglin in Neurofibromatosis Progression (Ref.: W81XWH-16-1-0131)

**CANCER RESEARCH INSTITUTE**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Valiente, Manuel	Brain-specific strategies to improve responses to immunotherapy (Ref.: 54545)

**BEUG FOUNDATION FOR METASTASIS RESEARCH**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Valiente, Manuel	Altered brain vessels as a novel target in brain metastasis

**NATIONAL GRANTS COLLABORATIVE PROJECTS****INSTITUTE OF HEALTH CARLOS III / INSTITUTO DE SALUD CARLOS III (ISCIII) STRATEGIC HEALTH ACTION / ACCIÓN ESTRATÉGICA EN SALUD (AES)****SUB-PROGRAMME OF GRANTS FOR RESEARCH SUPPORT PLATFORMS IN HEALTH SCIENCES AND TECHNOLOGY/ SUBPROGRAMA DE AYUDAS PARA PLATAFORMAS DE APOYO A LA INVESTIGACIÓN EN CIENCIAS Y TECNOLOGÍAS DE LA SALUD<sup>2</sup>**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Artiga, M <sup>º</sup> Jesús (Coordinator), Morente, Manuel (until August 2018)	Plataforma de Biobancos (Coordination node and Group, Ref: PT13/0010/0001)
Benitez, Javier	Plataforma de recursos biomoleculares y bioinformáticos, PRB <sup>2</sup> (Group, Ref: PT13/0001/0005)
Muñoz, Javier	Plataforma de recursos biomoleculares y bioinformáticos, PRB <sup>2</sup> (Group, Ref: PT13/001/0010)
Al-Shahrou, Fátima	Plataforma de Bioinformática. Instituto Nacional de Bioinformática (Group Ref: PT17/0009/0011)
Artiga, M <sup>º</sup> Jesús Morente, Manuel (until August 2018)	Plataforma de Biobancos (Group, Ref: PT17/0015/0004)
Benitez, Javier	Plataforma de proteómica, genotipado y líneas celulares. Plataforma de recursos biomoleculares, PRB <sup>3</sup> (Group, Ref: PT17/0019/0020)
Muñoz, Javier	Plataforma de proteómica, genotipado y líneas celulares. Plataforma de recursos biomoleculares, PRB <sup>3</sup> (Group, Ref: PT17/0019/0005)

**RESEARCH PROJECTS IN HEALTH/PROYECTOS DE INVESTIGACIÓN EN SALUD<sup>3</sup>**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Artiga, M <sup>º</sup> Jesús (Coordinator) Morente, Manuel (until August 2018)	OPTIMARK project: Optimization of tissue samples for the development and validation of disease biomarkers (Ref.: PI16/00946)
Malats, Núria (Coordinator)	Building and validation of risk prediction models for pancreas cancer. The application of a multi-omics approach (Ref.: PI15/01573)
Olmos, David (Coordinator)	THERATLAS Project: integration of early and adaptive genetic events to establish therapeutic subgroups in Castration-Resistant Prostate Cancer (Ref.: PI16/01565)
Robledo, Mercedes (Coordinator)	Prognostic profiles in endocrine tumours identified by next generation sequencing, and definition of markers with clinical utility (Ref.: PI14/00240)

**TECHNOLOGICAL DEVELOPMENT PROJECTS/PROYECTOS DE DESARROLLO TECNOLÓGICO<sup>4</sup>**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Blasco, María (Coordinator)	Translational Studies for the Development of Telomerase Gene Therapies as Treatments for Myocardial Infarction and Pulmonary Fibrosis (Ref.: DTS17/00152)

2, 3, 4. This Programme is cofunded by the European Regional Development Fund (ERDF)



**STATE RESEARCH AGENCY, MINISTRY OF SCIENCE, INNOVATION AND UNIVERSITIES / AGENCIA ESTATAL DE INVESTIGACIÓN. MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES**



**NATIONAL PLAN FOR SCIENTIFIC AND TECHNICAL RESEARCH AND INNOVATION ( 2013- 2016 AND 2017- 2020)**

**EXCELLENCE NETWORKS/REDES DE EXCELENCIA**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Efeyan, Alejo (Coordinator)	METABOCANCER: Crosstalk between systemic and cellular metabolism in cancer (Ref.: SAF2016-81975-REDT)
Fernández-Capetillo, Óscar (Coordinator)	UBIRed: Ubiquitin like proteins in signalling, proliferation and cancer (Ref.: SAF2017-90900-REDT)

**CHALLENGES-COLLABORATION PROJECTS/PROYECTOS RETOS-COLABORACIÓN<sup>5</sup>**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Barbacid, Mariano	New approaches for treatment of lung cancer. (Ref.: RTC-2017-6576-1)
Djouder, Nabil	NRCANCER: <i>Desarrollo de nueva terapia antitumoral basada en nicotinamida-ribosido</i> (Ref.: RTC-2016-5431-1)
Muñoz, Inés Martínez-Torrecaudrada, Jorge	ATTACK: Cancer immunotherapy with bispecific antibodies that engage T-lymphocytes (Ref.: RTC-2017-5944-1)
Real, Francisco X.	IMMOPDL2: Preclinical development of antibodies against the immunomodulator PD-L2 for the treatment of diseases caused by cellular damage. Validation of the strategy in residual tumors and fibrosis (Ref.: RTC-2017-6123-1)

**COMMUNITY OF MADRID / COMUNIDAD AUTÓNOMA DE MADRID**



**R&D ACTIVITIES PROGRAMME IN BIOMEDICINE<sup>6</sup>:**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Al-Shahrour Núñez, Fátima Roncador, Giovanna	<i>Programa LINFOMAS-CM: Linfomas agresivos, análisis clínico y genómico integrado para una medicina de precisión</i> (Ref.: B2017/BMD-3778)
Blasco, María	<i>Programa RypSE-CM: RNA y proteínas de unión a RNA. Implicaciones en salud y enfermedad</i> (Ref.: B2017/BMD-3770)
Djouder, Nabil	<i>Programa TomoXliver-CM: Estudio de la disfunción del hepatocito desde un abordaje multidisciplinar</i> (Ref.: B2017/BMD3817)
Malumbres Marcos (Coordinator) Barbacid M., Mariano	<i>Programa iLUNG-CM: Terapias personalizadas y nanotecnología en cáncer de pulmón</i> (Ref.: B2017/BMD-3884)
Mulero, Francisca	<i>Programa RENIM-CM: Red Madrileña de Nanomedicina en Imagen Molecular</i> (Ref.: B2017/BMD-3867)
Quintela, Miguel Ángel	<i>Programa IMMUNOTHERCAN-CM: Inmunidad tumoral e inmunoterapia del cáncer</i> (Ref.: B2017/BMD-3733)
Robledo, Mercedes	<i>Programa TIRONET2-CM: Fisiopatología Tiroidea. Mecanismos implicados en cáncer, autoinmunidad y acción de las hormonas tiroideas</i> (Ref.: B2017/BMD-3724 )
Soengas, María S.	<i>Programa NANODENDMEDII-CM: Nanosistemas dendríticos como agentes y vectores terapéuticos en distintas aplicaciones biomédicas (II)</i> (Ref.: B2017/BMD-3703 )

**MADRI+D FOUNDATION / FUNDACIÓN PARA EL CONOCIMIENTO MADRI+D**



**SCIENTIFIC FOUNDATION OF THE SPANISH ASSOCIATION AGAINST CANCER / FUNDACIÓN CIENTÍFICA DE LA ASOCIACIÓN ESPAÑOLA CONTRA EL CÁNCER (AECC)**



PRINCIPAL INVESTIGATOR	PROJECT TITLE
Dean's Office for Academic Affairs Soengas, María S.	European Researchers' Night 2018-2019, organized by Madri+d Foundation and founded by EU-H2020 Programme. Marie Skłodowska-Curie actions GA 818528
PRINCIPAL INVESTIGATOR	PROJECT TITLE
Barbacid, Mariano (Coordinator)	A multifaceted approach to target pancreatic cancer (Ref.: GC16173694BARB)
Malats, Núria Real, Francisco X. (Coordinator)	Invasive bladder cancer: towards precision medicine (Ref.: GCB14142293REAL)
Gómez, Gonzalo Peinado, Héctor Soengas, María S. (Coordinator)	Distinct routes of metastatic dissemination in different melanoma subtypes. Implications in the validation of new tumor biomarkers and therapeutic targets (Ref.: GCB15152978SOEN)
Valiente, Manuel	Study of the molecular mechanisms involved in primary (glioblastoma) and secondary (metastasis) brain tumors to identify novel therapeutic targets and anti-cancer agents, biomarkers to select treatments and novel non-invasive methods for molecular diagnosis (Ref.: GCTRA160155EOA)

5. This Programme is cofunded by the European Regional Development Fund (ERDF)



EUROPEAN UNION

European Regional Development Fund

6. These Programmes are cofunded by the European Regional Development Fund (ERDF) and European Social Fund (ESF)

## NATIONAL GRANTS INDIVIDUAL PROJECTS

**INSTITUTE OF HEALTH  
CARLOS III / INSTITUTO DE  
SALUD CARLOS III (ISCIII)  
STRATEGIC HEALTH ACTION  
/ ACCIÓN ESTRATÉGICA EN  
SALUD (AES)**
RESEARCH PROJECTS IN HEALTH<sup>7</sup>

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Benítez, Javier	Massive sequencing contributes to decipher the genetic bases of families with rare tumors (Ref.: PI16/00440)
Cascón, Alberto	Next-generation sequencing of genes directly and indirectly involved in the Krebs cycle, applied to pheochromocytomas/paragangliomas with hypermethylated phenotype (Ref.: PI15/00783)
Quintela, Miguel Ángel	Tumor-tolerant immune reprogramming secondary to hypoxia-inducing antiangiogenics in breast cancer: physiopathogenic mechanisms and therapeutic utility (Ref.: PI16/00354)
Robledo, Mercedes	Progression related mechanisms in endocrine and neuroendocrine tumours (Ref.: PI17/01796)
Rodríguez, Sandra	Ewing Sarcoma Model: induction of the t(11;22) translocation in human mesenchymal stem and iPS cells by the CRISPR-Cas9 system and study of the cellular context and other secondary events role (Ref.: PI14/01884)
Rodríguez, Sandra	Study of the role of epigenetic modifications in the development of Ewing sarcoma: High-throughput screening of epigenetic genes using CRISPR libraries in human (11; 22) + t cells (Ref.: PI17/02303)
Urioste, Miguel	PTEN-hamartoma tumour syndrome research: Phenotypic spectrum, associated cancers, molecular basis and search of new gene (Ref.: PI14/00459)

**STATE RESEARCH AGENCY.  
MINISTRY OF SCIENCE,  
INNOVATION AND  
UNIVERSITIES / AGENCIA  
ESTATAL DE INVESTIGACIÓN.  
MINISTERIO DE CIENCIA,  
INNOVACIÓN Y  
UNIVERSIDADES**


## NATIONAL PLAN FOR SCIENTIFIC AND TECHNICAL RESEARCH AND INNOVATION ( 2013-2016)

## CENTRES OF EXCELLENCE "SEVERO OCHOA" AND UNITS "RAMIRO DE MAEZTU" "SUB-PROGRAMME/SUBPROGRAMA DE APOYO A CENTROS DE EXCELENCIA 'SEVERO OCHOA' Y UNIDADES 'RAMIRO DE MAEZTU'"

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Blasco, María	Centre of Excellence "Severo Ochoa" (Ref.: SEV-2015-0510)

R&D EXCELLENCE PROJECTS/PROYECTOS DE I+D EXCELENCIA<sup>8</sup>

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Fernández-Leiro, Rafael	Macromolecular complexes in the mitochondrial DNA replication and repair pathways: structural and molecular mechanisms by cryo-EM (Ref.: BFU2017-87316-P)
Llorca, Óscar	Structural and molecular mechanisms regulating the PIKK family of kinases, including DNA- PKcs, SMG1 and mTOR (Ref.: SAF2017-82632-P)
Murga, Matilde Ruiz, Sergio (until April 2018)	Role of RAS signaling in pluripotency and totipotency (Ref.: SAF2016-80874-P)

CHALLENGES-RESEARCH PROJECTS/PROYECTOS RETOS-INVESTIGACIÓN<sup>9</sup>

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Barbacid, Mariano	PANTHER: A three prong strategy to fight pancreatic ductal adenocarcinoma (Ref.: SAF2014-59864-R)
Blasco, Maria	TELOHEALTH: Telomeres and Disease (Ref.: SAF2017-82623-R)

7, 8, 9. This Programme is cofunded by the European Regional Development Fund (ERDF)



Djouder, Nabil	URIPAT: URI loss in intestinal pathologies (Ref.: SAF2016-76598-R)
Efeyan, Alejo	NUTRIENTOR: Physiology of nutrient sensing and signaling by the mTOR complex 1 (Ref.: SAF2015-67538-R)
Fernández-Capetillo, Óscar	BREAKINGRAD: Exploring the limits of radioresistance in mammals (Ref.: SAF2014-59498-R)
Lietha, Daniel	FAKACT: Structural studies elucidating the activation mechanism of Focal Adhesion Kinase (Ref.: BFU2016-77665-R)
Llorca, Óscar	RuvBL1-RuvBL2 ATPases in DNA/RNA surveillance and human diseases: molecular and structural mechanisms (Ref.: SAF2014-52301-R)
Losada, Ana	COHESIN2: Molecular mechanisms of variant cohesin function (Ref.: BFU2016-79841-R)
Malumbres, Marcos	Cyclexit: Physiological and therapeutic relevance of mitotic kinases and phosphatases (Ref.: SAF2015-69920-R)
Méndez, Juan	REPLICON2: Control of eukaryotic DNA replication (Ref.: BFU2016-80402-R)
Muñoz, Javier	EPI-MASS: Epigenetic modifiers in pluripotency: a proteomic analysis of non-histone protein methylation (Ref.: SAF2016-74962-R)
Ortega, Sagrario	ESSENCE: Extrinsic control of the skin stem cell niche in homeostasis and cancer (Ref.: BFU2015-71376-R)
Ortega, Sagrario	HaploEScancer: Haploid ES cells for cancer research (Ref.: SAF2013-44866-R)
Osorio, Ana	IPAGEN: Exploring the mechanism of action of PARP inhibitors in breast and ovarian cancer patients. Identification of new genetic predictors of response (Ref.: SAF2014-57680-R)
Peinado, Héctor	EXO-NGFR: Analyzing the relevance exosome-derived NGFR during pre-metastatic niche formation (Ref.: SAF2017-82924-R)
Plaza, Iván	ESFORET: Structure-function studies of oncogenic RET kinase fusions in human cancers: from mechanism of action to targeted therapy (Ref.: BFU2017-86710-R)
Real, Francisco X.	TRANS-PDAC: Transcriptional control of pancreatic cancer development (Ref.: SAF2015-70553-R)
Rodríguez, Cristina	PREDICT: Identification of genetic markers and physiopathologic factors predictive of the peripheral neuropathy of paclitaxel and of other oncologic drugs: massive sequencing of candidate genes (Ref.: SAF2015-64850-R)
Soengas, María S.	MEL-STOP: Vesicular trafficking in melanoma progression and treatment response (Ref.: SAF2014-56868-R)
Soengas, María S.	MEL-STOP Whole-body imaging of melanoma metastasis as a platform for gene discovery and pharmacological testing (Ref.: SAF2017-89533-R)
Valiente, Manuel	ReACTIVE BrainMET: Dissecting the role of reactive astrocytes in brain metastasis (Ref.: SAF2014-57243-R)
Valiente, Manuel	Stat3 ReACTIVE: Biology of Stat3+ reactive astrocytes in brain metastasis (Ref.: SAF2017-89643-R)
Wagner, Erwin F.	CANPSOR: Investigating Cancer Risk in Psoriasis (Ref.: SAF2015-70857-R)

  

EXPLORA PROJECTS/PROYECTOS EXPLORA	
PRINCIPAL INVESTIGATOR	PROJECT TITLE
Blasco, María	Non canonical treatment for neurodegenerative diseases: telomerase gene therapy (Ref.: SAF2015-72455-EXP)
Djouder, Nabil	Thermo-regulation of NAD+ to protect from age-related diseases and cancer (Ref.: SAF2017-92733-EXP)
Malumbres, Marcos	Improving naive pluripotency and the generation of insulin-producing cells with a single microRNA (Ref.: SAF2017-92729-EXP)

Rodríguez, Sandra	Delivery of functional CRISPR component by pseudotyped virus-like particles (Ref.: BIO2017-91272-EXP)
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**NETWORKS AND SCIENTIFIC MANAGERS-EUROPE/EUROPA REDES Y GESTORES**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Blasco, María	CNIO in Horizon 2020: support for proposal preparation and project management (Ref.: EUC2014-51617)

**YOUNG RESEARCHERS PROGRAMME/PROGRAMA JÓVENES INVESTIGADORES<sup>10</sup>**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Álvarez, Mónica	GPGenCan: Functional relevance of Greatwall/PP2A pathway in the maintenance of genomic stability: therapeutic implications in cancer (Ref.: SAF2014-60442-JIN)
Lecona, Emilio (until September 2018)	UBQREP: Modulation of DNA Replication by ubiquitination of chromatin proteins (Ref.: BFU2014-55168-JIN)

**SCIENTIFIC INFRASTRUCTURES/INFRAESTRUCTURAS CIENTÍFICO-TECNOLÓGICAS<sup>11</sup>**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Muñoz, Javier	Sistema cromatográfico UHPLC acoplado a Espectrómetro de Masas de alta resolución para estudios de proteómica avanzada (Ref.: CNIO15-EE-2855)
Al-Shahrour, Fátima	Clúster SMP de Análisis HPC (Ref.: CNIO15-EE-3845)

**SPANISH FOUNDATION FOR SCIENCE AND TECHNOLOGY / FUNDACIÓN ESPAÑOLA PARA LA CIENCIA Y TECNOLOGÍA (FECYT)**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Pola, Carolina	'CNIO and the City' - <i>Construyendo un Puente a la Sociedad</i> (Ref.: FCT-16-11115)
Pola, Carolina	'CNIO & the City' - <i>Co-creando conocimiento con la sociedad</i> (Ref.: FCT-17-12743)

**"LA CAIXA" BANKING FOUNDATION AND CAIXA CAPITAL RISK**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Blasco, María	TRF1 inhibitors as a first-in-class therapy for glioblastoma and lung cancer (Ref.: CI18-00016)
Rodríguez, Sandra	Gene therapy for human cancers driven by fusion genes (Ref.: CI18-00017)

**SCIENTIFIC FOUNDATION OF THE SPANISH ASSOCIATION AGAINST CANCER / FUNDACIÓN CIENTÍFICA DE LA ASOCIACIÓN ESPAÑOLA CONTRA EL CÁNCER (AECC)**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Blasco, María	Grant for projects in childhood cancer: Targeting telomeres in neuroblastoma (Ref.: CICPF18004BLAS)
de Cárcer, Guillermo (until September 2018)	Grant for Emerging Groups: Identification of new biomarkers for breast cancer: mechanisms of sensitivity and resistance to cell cycle drugs (Ref.: LABAE16017DECÁ)
Efeyan, Alejo	Grant for Emerging Groups: Nutrient signaling in the pathogenesis and treatment of B cell Lymphoma (Ref.: LABAE16001EFEY)
Squatrito, Massimo	Grant for emerging Groups: Novel therapeutic approaches for therapy-resistant malignant brain tumors (Ref.: LABAE16015SQUA)
Squatrito, Massimo	"Idea Semilla" Grant: Identification of biomarkers of tumor treating fields (TTFields) in glioblastoma (Ref.: IDEAS185SQUA)

10, 11. This Programme is cofunded by the European Regional Development Fund (ERDF)

**FUNDACIÓN INOCENTE**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Blasco, María	Validation of the TRF1 telomere protective protein as a novel anticancer target in pediatric glioma and ependymoma

**ASOCIACIÓN DE CÁNCER DE PÁNCREAS-ASOCIACIÓN ESPAÑOLA DE PANCREATOLOGÍA**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
CARMEN DELGADO/MIGUEL PÉREZ-MATEO GRANTS	
Guerra, Carmen	Desarrollo de estrategias terapéuticas dirigidas contra el estroma del cáncer de páncreas
Malats, Núria	Marcadores microbianos para el diagnóstico del adenocarcinoma ductal de páncreas

**LEUKEMIA AND LYMPHOMA FOUNDATION / FUNDACIÓN LEUCEMIA Y LINFOMA**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Ortega, Ana	"Marcos Fernández" Grant: Functional characterization of RagC mutations in Follicular Lymphoma pathogenesis

**SPANISH ASSOCIATION OF GASTROENTEROLOGY / ASOCIACIÓN ESPAÑOLA DE GASTROENTEROLOGÍA**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Molina, M <sup>ª</sup> Esther	Evaluación del valor pronóstico de diabetes mellitus tipo II (DM2) en pacientes con cáncer de páncreas

**FERO FOUNDATION / FUNDACIÓN FERO**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Peinado, Héctor	Liquid biopsy by nanoplasmonic detection of exosomes: predicting response to (immuno- and radio)-therapy
Valiente, Manuel	Predictive biomarkers for brain metastasis in small cell lung cancer

**ATRESMEDIA CORPORATION / ATRESMEDIA CORPORACIÓN**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Fernández-Capetillo, Óscar	Premio Constantes y Vitales en la categoría "Joven talento en investigación biomédica" 2015

**FUNDACIÓN PROYECTO NEUROFIBROMATOSIS**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Peinado, Héctor	Análisis de Hsp90 como una nueva diana en neurofibromatosis

**BBVA FOUNDATION / FUNDACIÓN BBVA**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
LEONARDO GRANTS	
Olmeda, David	Leonardo Grant: Nuevas estrategias para el tratamiento preventivo de la enfermedad metastásica en Melanoma (Ref.: IN18_BBM_TRA_0293)
Squatrito, Massimo	Leonardo Grant: Precision glioma mouse models by somatic genome editing with the RCAS-CRISPR-Cas9 system (Ref.: IN17_BBM_TRA_0366)

**FUNDACIÓN PFIZER**

PRINCIPAL INVESTIGATOR	PROJECT TITLE
Peinado, Héctor	Tumour exosome integrins determine organotropic metastasis
Djouder, Nabil	Metabolic Inflammation-Associated IL-17A Causes Non-alcoholic Steatohepatitis and Hepatocellular Carcinoma