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. In 2016, researchers at the CNIO were involved in 148 projects that received extramural funding.

CNIO actively participates in 64 collaborative projects in total: 30 were international collaborative projects (4 of which are coordinated by the CNIO) and 34 collaborative projects at the national level (12 of them coordinated by the CNIO). The international collaborative projects were funded by institutions such as the European Commission through the 7 Framework Programme and Horizon 2020, the Interreg SUDOE Programme, the US National Institutes of Health (NIH), the US Department of Defense (DoD), the Melanoma Research Alliance, the Paradifference Foundation, the Worldwide Cancer Research and the Volkswagen foundation.

In addition to these collaborative projects, researchers at the CNIO attracted funding for projects carried out by individual groups. In 2016, 21 of these projects received international funding while 63 of them received national funding (mainly the Spanish Ministry of Economy, Industry and Competitiveness and the Institute of Health Carlos III). The international individual projects are funded by the European Commission (European Research Council (ERC) grants and the Marie Curie Actions), the Worldwide Cancer Research (WCR), the Howard Hughes Medical Institute (HHMI) and the European Foundation for the Study of Diabetes (EFSD).

INTERNATIONAL GRANTS

The CNIO attracts a substantial proportion of its funding from external sources. Most of this funding comes from national and international funding bodies. In 2016, researchers at the CNIO were involved in 148 projects that received extramural funding.

The CNIO actively participates in 64 collaborative projects in total: 30 were international collaborative projects (4 of which are coordinated by the CNIO) and 34 collaborative projects at the national level (12 of them coordinated by the CNIO). The international collaborative projects were funded by institutions such as the European Commission through the 7 Framework Programme and Horizon 2020, the Interreg SUDOE Programme, the US National Institutes of Health (NIH), the US Department of Defense (DoD), the Melanoma Research Alliance, the Paradifference Foundation, the Worldwide Cancer Research and the Volkswagen foundation.

In addition to these collaborative projects, researchers at the CNIO attracted funding for projects carried out by individual groups. In 2016, 21 of these projects received international funding while 63 of them received national funding (mainly the Spanish Ministry of Economy, Industry and Competitiveness and the Institute of Health Carlos III). The international individual projects are funded by the European Commission (European Research Council (ERC) grants and the Marie Curie Actions), the Worldwide Cancer Research (WCR), the Howard Hughes Medical Institute (HHMI) and the European Foundation for the Study of Diabetes (EFSD).

The CNIO attracts a substantial proportion of its funding from external sources. Most of this funding comes from national and international funding bodies. In 2016, researchers at the CNIO were involved in 148 projects that received extramural funding.

The CNIO actively participates in 64 collaborative projects in total: 30 were international collaborative projects (4 of which are coordinated by the CNIO) and 34 collaborative projects at the national level (12 of them coordinated by the CNIO). The international collaborative projects were funded by institutions such as the European Commission through the 7 Framework Programme and Horizon 2020, the Interreg SUDOE Programme, the US National Institutes of Health (NIH), the US Department of Defense (DoD), the Melanoma Research Alliance, the Paradifference Foundation, the Worldwide Cancer Research and the Volkswagen foundation.

In addition to these collaborative projects, researchers at the CNIO attracted funding for projects carried out by individual groups. In 2016, 21 of these projects received international funding while 63 of them received national funding (mainly the Spanish Ministry of Economy, Industry and Competitiveness and the Institute of Health Carlos III). The international individual projects are funded by the European Commission (European Research Council (ERC) grants and the Marie Curie Actions), the Worldwide Cancer Research (WCR), the Howard Hughes Medical Institute (HHMI) and the European Foundation for the Study of Diabetes (EFSD).
SMALL OR MEDIUM-SCALE FOCUSED RESEARCH PROJECTS

**PRINCIPAL INVESTIGATOR**

Malats, Núria

**PROJECT TITLE**

TransBlBC: Translation of novel Biomarkers for Bladder Cancer for clinical outcome prediction (Ref.: 601933)

Robledo, Mercedes

**PROJECT TITLE**

ENSTg-T: CANCER: European network for the study of adrenal tumours-structured clinical research on adrenal cancers in adults. (Ref.: 259733)

ERA-NET ON TRANSLATIONAL CANCER RESEARCH (TRANS CANCER)

**PRINCIPAL INVESTIGATOR**

Malats, Núria

**PROJECT TITLE**

Bio-Flac: Biomarkers of tumor recurrence in pancreatic cancer (financed by ISOC, Ref.: AC1400025)

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

**PRINCIPAL INVESTIGATOR**

Malumbres, Marcos

**PROJECT TITLE**

MicroKin: Deciphering the multifaceted pathways underlying MCPH pathogenesis in the mouse and human (Financed by MEC Ref.: FCN-2015-0027)

HORIZON 2020 (2014-2020)

RESEARCH INFRASTRUCTURES, INCLUDING E-INFRASTRUCTURES

**PRINCIPAL INVESTIGATOR**

Valencia, Alfonso

**PROJECT TITLE**

ELIXIR-EXCELERATE: Fast-track ELIXIR implementation and drive early user exploitation across the life-sciences (Ref.: 676559)

Valencia, Alfonso

**PROJECT TITLE**

OpenMinTeD: Mining Infrastructure for Text and Data (Ref.: 654021)

MARIE SKŁODOWSKA-CURIE ACTIONS (MSCA)

**PRINCIPAL INVESTIGATOR**

Soengas, María S.

**PROJECT TITLE**

ITN IMMУTRAIN: Training network for the immunotherapy of cancer (Ref.: 641549)

SOCIAL CHALLENGE I: HEALTH, DEMOGRAPHIC CHANGE AND WELLBEING

**PRINCIPAL INVESTIGATOR**

Benítez, Javier

**PROJECT TITLE**

BRIDGES: Breast cancer risk after diagnostic gene sequencing (Ref.: 634935)

INDUSTRIAL TECHNOLOGIES: ADVANCED MATERIALS AND NANOTECHNOLOGIES

**PRINCIPAL INVESTIGATOR**

Hidalgo, Manuel

**PROJECT TITLE**

NoCanTer: Nanomedicine upscaling for early clinical phases of multimodal cancer therapy (Ref.: 685795)

INTERREG SUDOE PROGRAMME

**PRINCIPAL INVESTIGATOR**

Valencia, Alfonso

**PROJECT TITLE**

European Network for Translational Research and Innovation in Oncology / Réseau Européen de Recherche Translationnelle et d’Innovation en oncologie (Ref.: SOE1/P1/F0082)

MELANOMA RESEARCH ALLIANCE (MRA)

**PRINCIPAL INVESTIGATOR**

Peinado, Héctor; Soengas, María S. (coordinator)

**PROJECT TITLE**

Imaging and therapeutic targeting of lymphangiogenesis in melanoma (Ref.: 269626)

Soengas, María S. (coordinator) Imaging and targeting dormant and pro-metastatic melanoma lesions in vivo (Ref.: 401181)

THE PARADIFFERENCE FOUNDATION

**PRINCIPAL INVESTIGATOR**

Robledo, Mercedes

**PROJECT TITLE**

SDHB-related metastatic paragangloma: search for the cure

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

**PRINCIPAL INVESTIGATOR**

Peinado, Héctor

**PROJECT TITLE**

Radiolabeled exosomes for the early detection of metastases and to predict breast cancer premetastatic niche (Ref.: W81XWH-13-1-0249)

Peinado, Héctor Organ-tropic metastatic secretomes and exosomes in breast cancer (Ref.: W81XWH-13-1-0427)

Peinado, Héctor Exosomes in Development and Therapy of Malignant Mesothelioma (Ref.: W81XWH-14-1-0199)

US NATIONAL INSTITUTES OF HEALTH (NIH)

**PRINCIPAL INVESTIGATOR**

Peinado, Héctor

**PROJECT TITLE**

Characterization and functional analysis of breast cancer secreted exosomes in malignant progression (Ref.: U01CA169538)

Peinado, Héctor Exosome-mediated transfer of c-MET to bone marrow progenitors promotes metastasis (Ref.: R01CA169416)

Malats, Núria

**PROJECT TITLE**

GENCODE 2: Integrated human genome annotation: generation of a reference gene set (Ref.: HG007234-01)

WORLDWIDE CANCER RESEARCH (WCR, FORMERLY AICR)

**PRINCIPAL INVESTIGATOR**

Malats, Núria (coordinator)

**PROJECT TITLE**

Oral microbiotic profiles and its association with risk of pancreatic ductal adenocarcinoma (Ref.: 15-0391)

**PRINCIPAL INVESTIGATOR**

Malats, Núria

**PROJECT TITLE**

TransBioBC: Translation of novel Biomarkers for Bladder Cancer for clinical outcome prediction (Ref.: 601933)

**PRINCIPAL INVESTIGATOR**

Malats, Núria

**PROJECT TITLE**

Bio-Flac: Biomarkers of tumor recurrence in pancreatic cancer (financed by ISOC, Ref.: AC1400025)

**PRINCIPAL INVESTIGATOR**

Malumbres, Marcos

**PROJECT TITLE**

MicroKin: Deciphering the multifaceted pathways underlying MCPH pathogenesis in the mouse and human (Financed by MEC Ref.: FCN-2015-0027)

**PRINCIPAL INVESTIGATOR**

Valencia, Alfonso

**PROJECT TITLE**

ELIXIR-EXCELERATE: Fast-track ELIXIR implementation and drive early user exploitation across the life-sciences (Ref.: 676559)

**PRINCIPAL INVESTIGATOR**

Valencia, Alfonso

**PROJECT TITLE**

OpenMinTeD: Mining Infrastructure for Text and Data (Ref.: 654021)

**PRINCIPAL INVESTIGATOR**

Soengas, María S.

**PROJECT TITLE**

ITN IMMУTRAIN: Training network for the immunotherapy of cancer (Ref.: 641549)

**PRINCIPAL INVESTIGATOR**

Benítez, Javier

**PROJECT TITLE**

BRIDGES: Breast cancer risk after diagnostic gene sequencing (Ref.: 634935)

**PRINCIPAL INVESTIGATOR**

Hidalgo, Manuel

**PROJECT TITLE**

NoCanTer: Nanomedicine upscaling for early clinical phases of multimodal cancer therapy (Ref.: 685795)

**PRINCIPAL INVESTIGATOR**

Valencia, Alfonso

**PROJECT TITLE**

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**

Peinado, Héctor; Soengas, María S. (coordinator)

**PROJECT TITLE**

Imaging and therapeutic targeting of lymphangiogenesis in melanoma (Ref.: 269626)

Soengas, María S. (coordinator) Imaging and targeting dormant and pro-metastatic melanoma lesions in vivo (Ref.: 401181)

**PRINCIPAL INVESTIGATOR**

Robledo, Mercedes

**PROJECT TITLE**

SDHB-related metastatic paragangloma: search for the cure

**PRINCIPAL INVESTIGATOR**

Peinado, Héctor

**PROJECT TITLE**

Radiolabeled exosomes for the early detection of metastases and to predict breast cancer premetastatic niche (Ref.: W81XWH-13-1-0249)

Peinado, Héctor Organ-tropic metastatic secretomes and exosomes in breast cancer (Ref.: W81XWH-13-1-0427)

Peinado, Héctor Exosomes in Development and Therapy of Malignant Mesothelioma (Ref.: W81XWH-14-1-0199)

**PRINCIPAL INVESTIGATOR**

Peinado, Héctor

**PROJECT TITLE**

Characterization and functional analysis of breast cancer secreted exosomes in malignant progression (Ref.: U01CA169538)

Peinado, Héctor Exosome-mediated transfer of c-MET to bone marrow progenitors promotes metastasis (Ref.: R01CA169416)

Malats, Núria

**PROJECT TITLE**

GENCODE 2: Integrated human genome annotation: generation of a reference gene set (Ref.: HG007234-01)

**PRINCIPAL INVESTIGATOR**

Lietha, Daniel

**PROJECT TITLE**

Nanoapertures loaded with individual molecules (Ref.: 86416-1)

**PRINCIPAL INVESTIGATOR**

Malats, Núria

**PROJECT TITLE**

TransBioBC: Translation of novel Biomarkers for Bladder Cancer for clinical outcome prediction (Ref.: 601933)

**PRINCIPAL INVESTIGATOR**

Malumbres, Marcos

**PROJECT TITLE**

MicroKin: Deciphering the multifaceted pathways underlying MCPH pathogenesis in the mouse and human (Financed by MEC Ref.: FCN-2015-0027)

**PRINCIPAL INVESTIGATOR**

Valencia, Alfonso

**PROJECT TITLE**

ELIXIR-EXCELERATE: Fast-track ELIXIR implementation and drive early user exploitation across the life-sciences (Ref.: 676559)

**PRINCIPAL INVESTIGATOR**

Valencia, Alfonso

**PROJECT TITLE**

OpenMinTeD: Mining Infrastructure for Text and Data (Ref.: 654021)

**PRINCIPAL INVESTIGATOR**

Soengas, María S.

**PROJECT TITLE**

ITN IMMУTRAIN: Training network for the immunotherapy of cancer (Ref.: 641549)

**PRINCIPAL INVESTIGATOR**

Benítez, Javier

**PROJECT TITLE**

BRIDGES: Breast cancer risk after diagnostic gene sequencing (Ref.: 634935)

**PRINCIPAL INVESTIGATOR**

Hidalgo, Manuel

**PROJECT TITLE**

NoCanTer: Nanomedicine upscaling for early clinical phases of multimodal cancer therapy (Ref.: 685795)

1. This Programme is cofunded by the European Regional Development Fund (ERDF)
### INTERNATIONAL GRANTS | INDIVIDUAL PROJECTS

#### 7th FRAMEWORK PROGRAMME (2007-2013)

**EUROPEAN RESEARCH COUNCIL (ERC)**

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fernández-Capetillo, Óscar</td>
<td>ERC Consolidator Grant EHEALTH: Investigating the causes and consequences of replication stress in mammalian health (Ref: 67840)</td>
</tr>
</tbody>
</table>

#### MARIE CURIE ACTIONS (MCA)

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al-Shahrour, Fátima</td>
<td>PERSPEDOMICS: Bioinformatics and integrative genomics for a novel personalized cancer therapy (Ref: 35430)</td>
</tr>
<tr>
<td>Peinado, Héctor</td>
<td>WHRI COFUND ADIPOMET: Analyzing the crosstalk of tumor and adipose tissue during metastasis (Ref: 608765)</td>
</tr>
<tr>
<td>Ramón, Santiago; Moreno, María</td>
<td>WHRI COFUND CAD_FIL: Revealing the functional mechanism of CAD and its potential as a therapeutic target (Ref: 608765)</td>
</tr>
<tr>
<td>Squatrito, Massimo</td>
<td>GLDD: DNA Damage Response (DDR) signaling in tumor formation and therapeutic resistance of gliomas (Ref: 64875)</td>
</tr>
<tr>
<td>Wagner, Erwin F.; Gago, Nuria</td>
<td>WHRI COFUND STEM-PSO: Unraveling the contribution of Epidermal and Non-Epidermal Progenitor (Ref: 608765)</td>
</tr>
</tbody>
</table>

#### HORIZON 2020 (2014-2020)

**EUROPEAN RESEARCH COUNCIL (ERC)**

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efeyan, Alejo</td>
<td>ERC Starting Grant NutrientSensingVivo: The Physiology of Nutrient Sensing by mTOR (Ref: 638891)</td>
</tr>
<tr>
<td>Hidalgo, Manuel</td>
<td>ERC Advanced Grant AVATAR: Integrating Genomics and Avatar Mouse Models to Personalize Pancreatic Cancer Treatment (Ref: 670582)</td>
</tr>
<tr>
<td>Serrano, Manuel</td>
<td>ERC Advanced Grant CELLPASTICITY: New Frontiers in Cellular Reprogramming: Exploiting Cellular Plasticity (Ref: 669622)</td>
</tr>
</tbody>
</table>

#### EUROPEAN FOUNDATION FOR THE STUDY OF DIABETES (EFSD)

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Djouder, Nabil</td>
<td>Growth factors and nutrients in type 2 diabetes: role of URI in β cell plasticity and glucose homeostasis</td>
</tr>
</tbody>
</table>

#### HOWARD HUGHES MEDICAL INSTITUTE (HHMI)

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fernández-Capetillo, Óscar</td>
<td>Exploring the role of replicative stress in cancer and ageing (Ref: 500347)</td>
</tr>
</tbody>
</table>

#### MELANOMA RESEARCH ALLIANCE (MRA)

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soengas, Maria S.</td>
<td>Prognostic and therapeutic impact of lymphovascular niches in melanoma (Ref: 348673)</td>
</tr>
</tbody>
</table>

#### PROSTATE CANCER FOUNDATION

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olmos, David</td>
<td>Integration of clinical, molecular and biological characteristics to define an aggressive subtype of prostate cancer based on deficient homologous recombination</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blanco, Maria</td>
<td>Targeting telomeres in cancer (Ref: 16-1177)</td>
</tr>
<tr>
<td>Lietha, Daniel</td>
<td>Targeting regulatory mechanisms for allosteric cancer drug discovery (Ref: 15-1177)</td>
</tr>
<tr>
<td>Malumbres, Marcos</td>
<td>New therapeutic strategies by inhibiting Mst1 in breast tumors (Ref: 15-0278)</td>
</tr>
<tr>
<td>Peinado, Héctor</td>
<td>Evaluation of obesity as a novel risk factor in metastasis (Ref: 16-1244)</td>
</tr>
<tr>
<td>Pérez Moreno, Nima A.</td>
<td>Defining the role of macrophage-derived Wnts in squamous cell carcinoma (Ref: 15-1219)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peinado, Héctor</td>
<td>Role of exosomes and Endoglin in Neurofibromatosis Progression (Ref: W81XWH-16-1-0131)</td>
</tr>
</tbody>
</table>

#### INTERNATIONAL GRANTS | INDIVIDUAL PROJECTS

##### EUROPEAN COMMISSION

#### EFSD

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Djouder, Nabil</td>
<td>Growth factors and nutrients in type 2 diabetes: role of URI in β cell plasticity and glucose homeostasis</td>
</tr>
</tbody>
</table>

#### HOWARD HUGHES MEDICAL INSTITUTE (HHMI)

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fernández-Capetillo, Óscar</td>
<td>Exploring the role of replicative stress in cancer and ageing (Ref: 500347)</td>
</tr>
</tbody>
</table>

#### MELANOMA RESEARCH ALLIANCE (MRA)

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soengas, Maria S.</td>
<td>Prognostic and therapeutic impact of lymphovascular niches in melanoma (Ref: 348673)</td>
</tr>
</tbody>
</table>
This Programme is cofunded by European Structural and Development Funds (ERDF and ESF)

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

3. This Programme is cofunded by the European Structural and Development Fund (ERDF)

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

5. This Programme is cofunded by the European Regional Development Fund (ERDF)
**FACTS & FIGURES**

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbacid, Mariano (Coordinator)</td>
<td>A multifaceted approach to target pancreatic cancer (Ref: GCB13142070)</td>
</tr>
<tr>
<td>Benítez, Javier</td>
<td>Cancer and immunodeficiency in children (Ref: CB14142070)</td>
</tr>
<tr>
<td>Malats, Núria, Rea, Francisco X. (Coordinator)</td>
<td>Molecular analysis of Capicua, a novel tumor suppressor involved in RTK signaling and transcriptional repression (Ref: 20131730/31)</td>
</tr>
<tr>
<td>González-Pláu, David, Pérez-Arberas, Héctor, Soengas, María S. (Coordinator)</td>
<td>Distinct routes of metastatic dissemination in different melanoma subtypes. Implications in the validation of new tumor biomarkers and therapeutic targets (Ref: GCB15152978)</td>
</tr>
<tr>
<td>Soengas, María S.</td>
<td>Role of RNA binding proteins in melanoma progression: searching for new diagnostic markers and therapeutic targets (Ref: 20134430/31)</td>
</tr>
<tr>
<td>Dean’s Office for Academic Affairs; Soengas, María S.</td>
<td>European Researchers’ Night 2014, organized by Madri+d Foundation and founded by European Commission on the framework of H2020 Programme</td>
</tr>
</tbody>
</table>

**NATIONAL GRANTS | INDIVIDUAL PROJECTS**

**INSTITUTE OF HEALTH CARLOS III / INSTITUTO DE SALUD CARLOS III (IECI)**

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benítez, Javier</td>
<td>Biologic and genetic bases of telomere shortening in hereditary breast cancer: Searching for new high susceptibility genes in BRCA1/2 families with short telomeres (Ref: PI12/00070)</td>
</tr>
<tr>
<td>Casón, Alberto</td>
<td>Exome sequencing of trio, mother-father-proband, in pediatric patients with multiple phaeochromocytomas/paragangliomas (Ref: PI12/00236)</td>
</tr>
<tr>
<td>Casón, Alberto</td>
<td>Next generation sequencing of genes directly and indirectly involved in the Krebs cycle, applied to phaeochromocytomas/paragangliomas with hypermethylated phenotype (Ref: PI12/00782)</td>
</tr>
<tr>
<td>Cigudosa, Juan C.</td>
<td>Genetic diagnostics by next-generation sequencing in myeloid neoplasias: step towards its clinical use and characterization studies on the mutation genome and functional pathological effects (Ref: PI10/0425)</td>
</tr>
<tr>
<td>García, María José</td>
<td>Definition of novel ovarian cancer susceptibility genes using next-generation sequencing technology and a LoM candidate region approach in high-risk non-BRCA1/2 patients (Ref: PI12/0139)</td>
</tr>
<tr>
<td>González-Nerja, Anna</td>
<td>Personalizing breast cancer treatment: prediction model construction for taxanes and anthracyclines efficacy thought the integration of different genomic approaches (Ref: PI12/00226)</td>
</tr>
<tr>
<td>Hidalgo, Manuel</td>
<td>Targeting Pancreatic Cancer Stromal (Ref: PI11/00230)</td>
</tr>
<tr>
<td>Malats, Núria</td>
<td>Aetiology of pancreas cancer: Application of “omics” technologies in the assessment of risk factors (Ref: PI10/0085)</td>
</tr>
<tr>
<td>Malats, Núria</td>
<td>Building and validation of risk prediction model for pancreas cancer. The application of a multi-omics approach (Ref: PI15/01573)</td>
</tr>
<tr>
<td>Melé, Anna Esther</td>
<td>Dietary patterns, antioxidants and biomarkers of oxidant-antioxidant status in the EPIC-Granada and EPIC-Gipuzkoa (European Prospective Investigation into Cancer and Nutrition) cohort (Ref: PI02/00052)</td>
</tr>
<tr>
<td>Pérez de Castro, Ignacio</td>
<td>An integrative Study of Chromosomal Instability and Cancer: Looking for prognostic markers and therapeutic opportunities (Ref: PI14/00227)</td>
</tr>
<tr>
<td>Olimos, David</td>
<td>Homologous recombination DNA repair deficiency related chromosomal instability in aggressive prostate cancer (Ref: PI13/00267)</td>
</tr>
<tr>
<td>Quintela, Miguel Ángel</td>
<td>From systems biology to clinical trials: high-throughput studies and definition of predictive factors and resistance mechanisms against breast cancer drugs (Ref: PI13/00345)</td>
</tr>
<tr>
<td>Robledo, Mercedes</td>
<td>Prognostic profiles in endocrine tumours identified by next generation sequencing, and definition of markers with clinical utility (Ref: PI14/00240)</td>
</tr>
<tr>
<td>Rodríguez, Sandra</td>
<td>Exonic Sarcoma Model: induction of the (t[11;22]) translocation in human mesenchymal stem and iP cells by the CRISPR-Cas9 system and study of the cellular context and other secondary events role (Ref: PI14/00884)</td>
</tr>
<tr>
<td>Squatrito, Massimo</td>
<td>Investigating the role of Frail and Fial in glioma tumor formation and treatment response (Ref: PI15/00328)</td>
</tr>
<tr>
<td>Urioste, Miguel</td>
<td>PTEN-hamartoma tumour syndrome research: Phenotypic spectrum, associated cancers, molecular basis and search of new gene (Ref: PI10/00459)</td>
</tr>
</tbody>
</table>

**ANNUAL REPORT 2016**

6. This Programme is cofunded by the European Regional Development Fund (ERDF) and founded by European Commission on the framework of H2020 Programme.

3. This Programme is cofunded by the European Regional Development Fund (ERDF).
CHALLENGES-RESEARCH / RETOS-INVESTIGACIÓN

PRINCIPAL INVESTIGADOR
PROJECT TITLE

Barbadillo, Mariano
PANTHER: A three prong strategy to fight pancreatic ductal adenocarcinoma (Ref.: SAF2014-59864-R)

Blasco, María A.
Telom: Telomeres, telomerase and disease (Ref.: SAF2015-40111-R)

Djouder, Nabil
MILC: Metabolic inflammation in liver cancer (Ref.: SAF2015-46089-R)

El hay, Alex
NUTRIENTOR: Physiology of nutrient sensing and signaling by the mTOR complex 1 (Ref.: SAF2015-67538-R)

Fernández-Capetillo, Óscar
BREAKINGRAD: Exploring the limits of radiosensitization in mammals (Ref.: SAF2014-59498-R)

Loiada, Ana
COHESIN: Cohesin function and regulation, a multidisciplinary approach (Ref.: BFU2013-48481-R)

Guardia, Victoria
EXOS: Tumor exosome as a diagnostic marker for breast cancer (Ref.: SAF2016-64930-R)

González, Luis
PRINCIPAL INVESTIGADOR
PROJECT TITLE

Barbadillo, Mariano
PANTHER: A three prong strategy to fight pancreatic ductal adenocarcinoma (Ref.: SAF2014-59864-R)

Blasco, María A.
Telom: Telomeres, telomerase and disease (Ref.: SAF2015-40111-R)

Djouder, Nabil
MILC: Metabolic inflammation in liver cancer (Ref.: SAF2015-46089-R)

El hay, Alex
NUTRIENTOR: Physiology of nutrient sensing and signaling by the mTOR complex 1 (Ref.: SAF2015-67538-R)

Fernández-Capetillo, Óscar
BREAKINGRAD: Exploring the limits of radiosensitization in mammals (Ref.: SAF2014-59498-R)

Loiada, Ana
COHESIN: Cohesin function and regulation, a multidisciplinary approach (Ref.: BFU2013-48481-R)

Malumbres, Marcos
CyclinT: Physiological and therapeutic relevance of mitotic kinases and phosphatases (Ref.: SAF2015-69920-R)

Muñoz, Daniel
REMODEL: Cellular senescence as an active player in tissue remodeling (Ref.: BFU2014-60020-R)

Muñoz, Javier
StMP: Understanding ground state pluripotency of embryonic stem cells through mass spectrometry-based proteomics (Ref.: SAF2015-45504-R)

Ortega, Sagapio
Haplo4Scammer: haplo4 Scammer for cancer research (Ref.: SAF2015-44866-R)

Osores, Ana

Pastor, Joaquín
CDK9iDO: CDK9i as a novel target in cancer therapy. Relevance of CDK9 kinase activity, discovery and optimization of selective orally bioavailable CDK9 inhibitors (Ref.: SAF2015-44267-R)

Pérez, Hector
METASTAXOME: Role of tumor-associated exosomes in lymph node microenvironment reprogramming during metastasis (Ref.: SAF2014-54543-R)

Pérez Moreno, Mima A.
ESSENCE: Extrinsic control of the skin stem cell niche in homeostasis and cancer (Ref.: BFU2015-71376-R)

Real, Francisco X.
TRANS-PDAC: Transcriptional control of pancreatic cancer development (Ref.: SAF2015-70553-R)

Rodríguez, Cristina
PREDICT: Identification of genetic markers and pathophysiologic factors predictive of the peripheral neuropathy of paclitaxel and of other oncologic drugs: massive sequencing of candidate genes (Ref.: SAF2015-64850-R)

Serrano, Manuel
CANCERAGE: Cancer and ageing-associated disorders: new frontiers and new strategies (Ref.: SAF2015-48256-R)

Soengas, María S.
MEL-STOP: Vascular trafficking in melanoma progression and treatment response (Ref.: SAF2014-56868-R)

Valiente, Manuel
InVACTive BrainMET: Dissecting the role of reactive astrocytes in brain metastasis (Ref.: SAF2014-5043-R)

Valencia, Alfonso
ECIP: Expression Patterns of Inverse Comorbidity (Ref.: BFU2015-70414-R)

Wagner, Erwin F.
CANSOR: Investigating Cancer Risk in Psoriasis (Ref.: SAF2015-70167-R)

EXCELLENCE-EUROPE / EUROPA EXCELENCIA

PRINCIPAL INVESTIGADOR
PROJECT TITLE

Rodríguez, Cristina
ANGIOMARKER: Predicting antiangiogenic drug response in cancer: markers and mechanisms (Ref.: SAF2015-70180-ERC)

Valiente, Manuel
BrainMET: Deconstructing metastatic disease in the brain (Ref.: SAF2015-65457-ERC)

RESEARCH-EUROPE / EUROPA INVESTIGACIÓN

PRINCIPAL INVESTIGADOR
PROJECT TITLE

Valencia, Alfonso
CancerCoreAdvisor: An open bioinformatics platform for personalized treatment of cancer (Ref.: EU2014-62887)

Blasco, María A.
CNO in Horizon 2020: support for proposal preparation and project management (Ref.: EUC2014-5367)

NETWORKS AND SCIENTIFIC MANAGERS-EUROPE / EUROPA REDES Y GESTORES

PRINCIPAL INVESTIGADOR
PROJECT TITLE

Blasco, María A.
CNO in Horizon 2020: support for proposal preparation and project management (Ref.: EUC2014-5367)

ANNUAL REPORT 2016

SPANISH NATIONAL CANCER RESEARCH CENTRE, CNIO

8. This Programme is cofunded by the European Regional Development Fund (ERDF)
9. This Programme is cofunded by the European Regional Development Fund (ERDF)
### Scientific Management | Competitive Funding

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Djouder, Nabil</td>
<td>Understanding the role of growth factors and nutrients in inflammatory bowel disease and colon cancer</td>
</tr>
</tbody>
</table>

#### Olga Torres Foundation / Fundación Olga Torres

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peinado, Héctor</td>
<td>Use of exosomes circulating as markers of progression in neurofibromatosis and for the determination of new therapeutic strategies</td>
</tr>
</tbody>
</table>

#### Bbva Foundation / Fundación BBVA

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valencia, Alfonso</td>
<td>PerMed: Precision Medicine from Big Data to Cognitive Computing CNIO (Ref.: 76/2016)</td>
</tr>
</tbody>
</table>

#### Fondo Pfizer

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peinado, Hector</td>
<td>Tumour exosome integrins determine organotrophic metastasis</td>
</tr>
</tbody>
</table>

### Young Researchers Program / Programa Jóvenes Investigadores

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecca, Emilio</td>
<td>LBQRFP: Modulation of DNA Replication by deacetylation of chromatin proteins (Ref.: BFU2014-55688-JIN)</td>
</tr>
</tbody>
</table>

#### Scientific Infrastructures / Infraestructura Científico-Tecnológica

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muñoz, Javier</td>
<td>Sistema cromatográfico UPLC acoplado a Espectrómetro de Masas de alta resolución para estudios de proteómica avanzada (Ref.: CNIO-EE-2855)</td>
</tr>
<tr>
<td>Pisano, David G.</td>
<td>Cluster SMP de Análisis HPC (Ref.: CNIO-EE-3845)</td>
</tr>
</tbody>
</table>

### AstraZeneca Foundation / Fundación AstraZeneca

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olmos, David</td>
<td>Carcinoma de próstata familiar y esporádico asociado a alteraciones genéticas, germinal y/o somáticas, en genes de la reparación del DNA</td>
</tr>
<tr>
<td>Quintela, Miguel Ángel</td>
<td>Reprogrammation immune en cáncer de mama presuntivo a antiangiogénicos inductores de apoptosis</td>
</tr>
</tbody>
</table>

### Fero Foundation / Fundación Fero

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peinado, Héctor</td>
<td>Liquid biopsy by nanoplasmonic detection of exosomes: predicting response to (immuno- and radio-)therapy</td>
</tr>
<tr>
<td>Valiente, Manuel</td>
<td>Predictive biomarkers for brain metastasis in small cell lung cancer</td>
</tr>
</tbody>
</table>

### Spanish Society of Medical Oncology / Sociedad Española de Oncología Médica (SEOM)

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olmos, David</td>
<td>Validación de una firma de expresión con utilidad pronóstica en cáncer de próstata resistente a la castración en una cohorte multi-institucional de pacientes tratados con docetaxel</td>
</tr>
</tbody>
</table>

### Atresmedia Corporation / Atresmedia Corporación

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fernández-Capetillo, Oscar</td>
<td>Premio Constantes y Urrutias en la categoría “Joven talento en investigación biomédica” 2015 (A3M 2015)</td>
</tr>
</tbody>
</table>

---

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