

# Appendix

*Publications 2010*

*Training Programs and Courses*

*Seminars, Events and Awards*

*Funding*

*Staff Figures*





## Publications 2010

Publications by CNIC staff are listed by Department, followed by the Technical Units. In each section publications are listed alphabetically by first author. The table at the end summarizes the cumulative and average impact factors in each area, calculated according to de ISI Journal Citation Reports (JCR), 2009. Publications with no IF, for example book chapters or articles published in journals not currently listed by the JCR, are not included in the table.

### CARDIOVASCULAR DEVELOPMENTAL BIOLOGY

Bochmann L, Sarathchandra P, Mori F, [Lara-Pezzi E](#), Lazzaro D and Rosenthal N. **Revealing new mouse epicardial cell markers through transcriptomics.** *PLoS One* (2010) 5: e11429  
IF: 4.351

Brand NJ, [Lara-Pezzi E](#), Rosenthal N and Barton PJ. **Analysis of cardiac myocyte biology in transgenic mice: a protocol for preparation of neonatal mouse cardiac myocyte cultures.** *Methods Mol Biol* (2010) 633: 113-24  
IF: n/a

[Carramolino L](#), Fuentes J, [Garcia-Andres C](#), [Azcoitia V](#), Riethmacher D and [Torres M](#). **Platelets play an essential role in separating the blood and lymphatic vasculatures during embryonic angiogenesis.** *Circ Res* (2010) 106: 1197-201  
IF: 9.214

[Fernandez-Tresguerres B](#), [Canon S](#), [Rayon I](#), [Pernaute B](#), [Crespo M](#), [Torroja C](#) and [Manzanares M](#). **Evolution of the mammalian embryonic pluripotency gene regulatory network.** *Proc Natl Acad Sci U S A* (2010) 107: 19955-19960  
IF: 9.432

[Flores I](#) and Blasco MA. **The role of telomeres and telomerase in stem cell aging.** *FEBS Lett* (2010) 584: 3826-3830  
IF: 3.541

[Garcia-Andres C](#) and [Torres M](#). **Comparative expression pattern analysis of the highly conserved chemokines SDF1 and CXCL14 during amniote embryonic development.** *Dev Dyn* (2010) 239: 2769-77  
IF: 2.833

[Gonzalez-Rosa JM](#), [Padron-Barthe L](#), [Torres M](#) and [Mercader N](#). **[Lineage tracing of epicardial cells during development and regeneration].** *Rev Esp Cardiol* (2010) 63 Suppl 2: 36-48  
IF: 2.746

Grego-Bessa J, Pérez-Pomares JM and de la Pompa JL. **Signaling Pathways in Valve Formation: The Origin of Congenital Defects.** *Heart Development and Regeneration* (2010) 1: 389-413  
IF: n/a

[Grimes AC](#), Duran AC, Sans-Coma V, Hami D, Santoro MM and [Torres M](#). **Phylogeny informs ontogeny: a proposed common theme in the arterial pole of the vertebrate heart.** *Evol Dev* (2010) 12: 552-67  
IF: 3.179

Jimenez-Guri E, Udina F, Colas JF, Sharpe J, [Padron-Barthe L](#), [Torres M](#) and Pujades C. **Clonal analysis in mice underlines the importance of rhombomeric boundaries in cell movement restriction during hindbrain segmentation.** *PLoS One* (2010) 5: e10112  
IF: 4.351

Kouwenhoven EN, van Heeringen SJ, Tena JJ, Oti M, Dutilh BE, [Alonso ME](#), de la Calle-Mustienes E, Smeenk L, Rinne T, Parsaulian L, Bolat E, Jurgelenaite R, Huynen MA, Hoischen A, Veltman JA, Brunner HG, Roscioli T, Oates E, Wilson M, [Manzanares M](#), Gomez-Skarmeta JL, Stunnenberg HG, Lohrum M, van Bokhoven H and Zhou H. **Genome-wide profiling of p63 DNA-binding sites identifies an element that regulates gene expression during limb development in the 7q21 SHFM1 locus.** *PLoS Genet* (2010) 6: e1001065  
IF: 9.532

[Lara-Pezzi E](#) and Rosenthal N. **Genetic Enhancement of Cardiac Regeneration.** *Heart Development and Regeneration* (2010) 2: 981-997  
IF: n/a

[Luna-Zurita L](#), [Prados B](#), [Grego-Bessa J](#), [Luxan G](#), [Del Monte G](#), [Benguria A](#), Adams RH, Perez-Pomares JM and de la Pompa JL. **Integration of a Notch-dependent mesenchymal gene program and Bmp2-driven cell invasiveness regulates murine cardiac valve formation.** *J Clin Invest* (2010) 120: 3493-507  
IF: 15.387

[Macgrogan D](#), [Nus M](#) and de la Pompa JL. **Notch signaling in cardiac development and disease.** *Curr Top Dev Biol* (2010) 92: 333-65  
IF: 5.753





# Publications 2010



Pernaute B, Canon S, Crespo M, Fernandez-Tresguerres B, Rayon T and Manzanares M.

**Comparison of extraembryonic expression of *Eomes* and *Cdx2* in pregastrulation chick and mouse embryo unveils regulatory changes along evolution.**

*Dev Dyn* (2010) 239: 620-9  
IF: 2.833

Pittman AM, Naranjo S, Jalava SE, Twiss P, Ma Y, Olver B, Lloyd A, Vijaykrishnan Y, Qureshi M, Broderick P, van Wezel T, Morreau H, Tuupanen S, Aaltonen LA, Alonso ME, Manzanares M, Gavilan A, Visakorpi T, Gomez-Skarmeta JL and Houlston RS.  
**Allelic Variation at the 8q23.3 Colorectal Cancer Risk Locus Functions as a Cis-Acting Regulator of EIF3H.**  
*PLoS Genet* (2010) 6: e1001126  
IF: 9.532

Ragvin A, Moro E, Fredman D, Navratilova P, Drivenes O, Engstrom PG, Alonso ME, Mustienes Ede L, Skarmeta JL, Tavares MJ, Casares F, Manzanares M, van Heyningen V, Molven A, Njolstad PR, Argenton F, Lenhard B and Becker TS.  
**Long-range gene regulation links genomic type 2 diabetes and obesity risk regions to HHEX, SOX4, and IRX3.**  
*Proc Natl Acad Sci U S A* (2010) 107: 775-80  
IF: 9.432

Rossello CA and Torres M.  
**Gene transfer by electroporation into hemogenic endothelium in the avian embryo.**  
*Dev Dyn* (2010) 239: 1748-54  
IF: 2.833

Spruce T, Pernaute B, Di-Gregorio A, Cobb BS, Merkenschlager M, Manzanares M and Rodriguez TA.  
**An early developmental role for miRNAs in the maintenance of extraembryonic stem cells in the mouse embryo.**  
*Dev Cell* (2010) 19: 207-19  
IF: 13.363

## EPIDEMIOLOGY, ATHEROTHROMBOSIS AND IMAGING

Araujo F, Mateo de Castro J and Encinas Barrios C.  
**[Ezetimibe: caution in the face of doubt].**  
*Farm Hosp* (2010) 34: 212-4  
IF: n/a

Badimon JJ and Ibanez B.  
**Increasing high-density lipoprotein as a therapeutic target in atherothrombotic disease.**  
*Rev Esp Cardiol* (2010) 63: 323-33  
IF: 2.746

Carson AP, Fox CS, McGuire DK, Leviton EB, Laclaustra M, Mann DM and Muntner P.  
**Low Hemoglobin A1c and Risk of All-Cause Mortality Among US Adults Without Diabetes.**  
*Circ Cardiovasc Qual Outcomes* (2010) 3: 661-7  
IF: n/a

Cruz-Adalia A, Jimenez-Borreguero LJ, Ramirez-Huesca M, Chico-Calero I, Barreiro O, Lopez-Conesa E, Fresno M, Sanchez-Madrid F and Martin P.  
**CD69 Limits the Severity of Cardiomyopathy After Autoimmune Myocarditis.**  
*Circulation* (2010) 122: 1396-404  
IF: 14.816

Elmariyah S, Delaney JA, O'Brien KD, Budoff MJ, Vogel-Claussen J, Fuster V, Kronmal RA and Halperin JL.  
**Bisphosphonate Use and Prevalence of Valvular and Vascular Calcification in Women MESA (The Multi-Ethnic Study of Atherosclerosis).**  
*J Am Coll Cardiol* (2010) 56: 1752-9  
IF: 12.535

Fadowski JJ, Navas-Acien A, Tellez-Plaza M, Guallar E, Weaver VM and Furth SL.  
**Blood lead level and kidney function in US adolescents: The Third National Health and Nutrition Examination Survey.**  
*Arch Intern Med* (2010) 170: 75-82  
IF: 9.813

Franco M, Sanz B, Otero L, Dominguez-Vila A and Caballero B.  
**Prevention of childhood obesity in**

**Spain: a focus on policies outside the health sector. SESPAS report 2010.**  
*Gac Sanit* (2010) 24: 49-55  
IF: 1.172

Fuster JJ and Andres V.  
**A role for miR-33 in p53 regulation: New perspectives for hematopoietic stem cell research.**  
*Cell Cycle* (2010) 9: 3397-8  
IF: 4.087

Fuster JJ, Fernandez P, Gonzalez-Navarro H, Silvestre C, Nabah YN and Andres V.  
**Control of cell proliferation in Atherosclerosis: insights from animal models and human studies.**  
*Cardiovasc Res* (2010) 86: 254-64  
IF: 5.801

Fuster JJ, Gonzalez JM, Edo MD, Viana R, Boya P, Cervera J, Verges M, Rivera J and Andres V.  
**Tumor suppressor p27Kip1 undergoes endolysosomal degradation through its interaction with sorting nexin 6.**  
*FASEB J* (2010) 24: 2998-3009  
IF: 6.401

Fuster V.  
**Fine-tuning therapy for acute coronary syndromes.**  
*N Engl J Med* (2010) 363: 976-7  
IF: 47.050

Fuster V.  
**[Science, health and education: a priority and a model.].**  
*Arch Cardiol Mex* (2010) 80: 261-271  
IF: n/a

Fuster V, Jimenez-Borreguero JL, Sanz G and Ibanez B.  
**HIV and cardiovascular disease: urgent need for sub-clinical detection.**  
*Nat Rev Cardiol (CNIC Edition)* (2010) 7: 17-21  
IF: n/a

Fuster V, Lois F and Franco M.  
**Early identification of atherosclerotic disease by noninvasive imaging.**  
*Nat Rev Cardiol* (2010) 7: 327-33  
IF: n/a

Fuster V and Sweeny JM.  
**Clopidogrel and the reduced-function CYP2C19 genetic variant: a limited piece of the overall therapeutic puzzle.**  
*JAMA* (2010) 304: 1839-40  
IF: 28.899


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Fuster V and Vahl TP.

**The role of noninvasive imaging in promoting cardiovascular health.**  
*J Nucl Cardiol* (2010) 17: 781-90  
IF: 2.777

Galende E, Karakikes I, Edelmann L, Desnick RJ, Kerenyi T, Khoueiry G, Lafferty J, McGinn JT, Brodman M, Fuster V, Hajjar RJ and Polgar K.

**Amniotic fluid cells are more efficiently reprogrammed to pluripotency than adult cells.**  
*Cell Rerogram* (2010) 12: 117-25  
IF: 2.692

Garcia-Alvarez A, Fernandez-Friera L, Fuster V and Sanz J.

**Role of new imaging techniques in the emergency department diagnosis of acute coronary syndrome.**  
*Emergencias* (2010) 22: 125-129  
IF: n/a

Gomez-Abellan P, Gomez-Santos C, Madrid JA, Milagro FI, Campion J, Martinez JA, Ordovas JM and Garaulet M.

**Circadian expression of adiponectin and its receptors in human adipose tissue.**  
*Endocrinology* (2010) 151: 115-22  
IF: 4.752

Gonzalez-Navarro H, Abu Nabah YN, Vinue A, Andres-Manzano MJ, Collado M, Serrano M and Andres V.

**p19(ARF) deficiency reduces macrophage and vascular smooth muscle cell apoptosis and aggravates Atherosclerosis.**  
*J Am Coll Cardiol* (2010) 55: 2258-68  
IF: 12.535

Guallar E, Miller ER, 3rd, Ordovas JM and Stranges S.

**Vitamin D supplementation in the age of lost innocence.**  
*Ann Intern Med* (2010) 152: 327-9  
IF: 16.225

Ibanez B and Fuster V.

**Ischaemic conditioning for myocardial salvage after AMI.**  
*Lancet* (2010) 375: 1691; author reply 1692  
IF: 30.758

Jones S, Solomon A, Sanz-Rosa D, Moore C, Holbrook L, Cartwright EJ, Neyses L and Emerson M.

**The plasma membrane calcium ATPase (PMCA) modulates calcium**

**homeostasis, intracellular signalling events and function in platelets.**  
*J Thromb Haemost* (2010) 8: 2766-74  
IF: 6.069

Laclaustra M.

**Adipose tissue, the metabolic syndrome and Atherosclerosis.**  
*Nat Rev Cardiol (CNIC Edition)* (2010) 7: 29-34  
IF: n/a

Laclaustra M.

**Fisiopatología y síndrome metabólico: el papel del tejido adiposo.**  
*La opinión de los expertos* (2010) 51: 4-8  
IF: n/a

Laclaustra M, Ordovas JM and Civeira F.

**Fisiopatología del síndrome metabólico. De la resistencia a la insulina y las adipocinas a la disfunción endotelial.**  
*El síndrome metabólico* (2010) 23-40  
IF: n/a

Laclaustra M, Stranges S, Navas-Acien A, Ordovas JM and Guallar E.

**Serum selenium and serum lipids in US adults: National Health and Nutrition Examination Survey (NHANES) 2003-2004.**  
*Atherosclerosis* (2010) 210: 643-8  
IF: 4.522

Lamas JR, Rodriguez-Rodriguez L, Varade J, Lopez-Romero P, Tornero-Esteban P, Abasolo L, Urcelay E and Fernandez-Gutierrez B.

**Influence of IL6R rs8192284 Polymorphism Status in Disease Activity in Rheumatoid Arthritis.**  
*J Rheumatol* (2010) 37: 1579-81  
IF: 3.854

Lamas JR, Rodriguez-Rodriguez L, Vigo AG, Alvarez-Lafuente R, Lopez-Romero P, Marco F, Camafeita E, Dopazo A, Callejas S, Villafuertes E, Hoyas JA, Tornero-Esteban MP, Urcelay E and Fernandez-Gutierrez B.

**Large-scale gene expression in bone marrow mesenchymal stem cells: a putative role for COL10A1 in osteoarthritis.**  
*Ann Rheum Dis* (2010) 69: 1880-5  
IF: 8.111

Liao SL, Elmariah S, van der Zee S, Sealove BA and Fuster V.

**Does medical therapy for thoracic**

**aortic aneurysms really work? Are beta-blockers truly indicated? CON.**  
*Cardiol Clin* (2010) 28: 261-9  
IF: 1.247

Lobatto ME, Fayad ZA, Silvera S, Vucic E, Calcagno C, Mani V, Dickson S, Nicolay K, Banciu M, Schiffelers RM, Metselaar J, van Bloois L, Wu HS, Fallon J, Rudd J, Fuster V, Fisher EA, Storm G and Mulder WJ.

**Multimodal clinical imaging to longitudinally assess a nanomedical anti-inflammatory treatment in experimental Atherosclerosis.**  
*Mol Pharm* (2010) 7: 2020-9  
IF: 4.531

Lobo E, Dufouil C, Marcos G, Quetglas B, Saz P, Guallar E and Lobo A.

**Is There an Association Between Low-to-Moderate Alcohol Consumption and Risk of Cognitive Decline?**  
*Am J Epidemiol* (2010) 172: 708-16  
IF: 5.589

Lopez-Romero P, Gonzalez MA, Callejas S, Dopazo A and Irizarry RA.

**Processing of Agilent microRNA array data.**  
*BMC Res Notes* (2010) 3: 18  
IF: n/a

Menke A, Guallar E, Rohrmann S, Nelson WG, Rifai N, Kanarek N, Feinleib M, Michos ED, Dobs A and Platz EA.

**Sex steroid hormone concentrations and risk of death in US men.**  
*Am J Epidemiol* (2010) 171: 583-92  
IF: 5.589

Miller ER, 3rd, Juraschek S, Pastor-Barriuso R, Bazzano LA, Appel LJ and Guallar E.

**Meta-analysis of folic acid supplementation trials on risk of cardiovascular disease and risk interaction with baseline homocysteine levels.**  
*Am J Cardiol* (2010) 106: 517-27  
IF: 3.575





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Muntendam P, McCall C, Sanz J, Falk E and Fuster V.

**The Biolmage Study: novel approaches to risk assessment in the primary prevention of atherosclerotic cardiovascular disease--study design and objectives.**

*Am Heart J* (2010) 160: 49-57 e1  
IF: 4.357

Nurmi T, Mursu J, Penalvo JL, Poulsen HE and Voutilainen S.

**Dietary intake and urinary excretion of lignans in Finnish men.**

*Br J Nutr* (2010) 103: 677-85  
IF: 3.446

Rivera J, Megias D and Bravo J.

**Sorting nexin 6 interacts with breast cancer metastasis suppressor-1 and promotes transcriptional repression.**

*J Cell Biochem* (2010) 111: 1464-72  
IF: 2.935

Rodriguez J, Calvo F, Gonzalez JM, Casar B, Andres V and Crespo P.

**ERK1/2 MAP kinases promote Cell Cycle entry by rapid, kinase-independent disruption of retinoblastoma-lamin A complexes.**

*J Cell Biol* (2010) 191: 967-79  
IF: 9.575

Rodriguez-Artalejo F, Guallar E, Borghi C, Dallongeville J, De Backer G, Halcox JP, Hernandez-Vecino R, Jimenez FJ, Masso-Gonzalez EL, Perk J, Steg PG, Banegas JR and Investigators E.

**Rationale and methods of the European Study on Cardiovascular Risk Prevention and Management in Daily Practice (EURIKA).**

*BMC Public Health* (2010) 10: 382  
IF: 2.223

Sanz G, Redondo J and Fuster V.

**Progress of the Spanish National Cardiovascular Research Centre (CNIC).**

*Nat Rev Cardiol (CNIC Edition)* (2010) 7: 55-60  
IF: n/a

Sanz J and Fuster V.

**Update in cardiology.**

*Ann Intern Med* (2010) 152: 786-91  
IF: 16.225

Sanz J, Moreno PR and Fuster V.

**The year in atherothrombosis.**

*J Am Coll Cardiol* (2010) 55: 1487-98  
IF: 12.535

Saura M, Tarin C and Zaragoza C.

**Recent insights into the implication of nitric oxide in osteoblast differentiation and proliferation during bone development.**

*ScientificWorldJournal* (2010) 10: 624-32  
IF: 1.658

Silvestre C, Fuster JJ, Molina P and Andres V.

**Targeting Cell Cycle regulators in the diagnosis and treatment of Atherosclerosis and restenosis: Emerging topics, current limitations and future directions.**

*Nat Rev Cardiol (CNIC Edition)* (2010) 7: 35-40  
IF: n/a

Speidl WS, Cimmino G, Ibanez B, Elmariah S, Hutter R, Garcia MJ, Fuster V, Goldman ME and Badimon JJ.

**Recombinant apolipoprotein A-I Milano rapidly reverses aortic valve stenosis and decreases leaflet inflammation in an experimental rabbit model.**

*Eur Heart J* (2010) 31: 2049-57  
IF: 9.800

Stranges S, Laclaustra M, Ji C, Cappuccio FP, Navas-Acien A, Ordovas JM, Rayman M and Guallar E.

**Higher selenium status is associated with adverse blood lipid profile in British adults.**

*J Nutr* (2010) 140: 81-7  
IF: 4.091

Stranges S, Navas-Acien A, Rayman MP and Guallar E.

**Selenium status and cardiometabolic health: State of the evidence.**

*Nutr Metab Cardiovasc Dis* (2010) 20: 754-60  
IF: 3.517



Stranges S, Sieri S, Vinceti M, Griioni S, Guallar E, Laclaustra M, Muti P, Berrino F and Krogh V.

**A prospective study of dietary selenium intake and risk of type 2 diabetes.**

*BMC Public Health* (2010) 10: 564  
IF: 2.223

Tai ES and Ordovas JM.

**Genome-wide association studies for blood lipids. A great start but a long way to go.**

*Curr Opin Lipidol* (2010) 21: 101-3  
IF: 6.133

Tellez-Plaza M, Navas-Acien A, Crainiceanu CM, Sharrett AR and Guallar E.

**Cadmium and Peripheral Arterial Disease: Gender Differences in the 1999-2004 US National Health and Nutrition Examination Survey.**

*Am J Epidemiol* (2010) 172: 671-81  
IF: 5.589

Tellez-Plaza M, Navas-Acien A and Guallar E.

**Cadmium as a novel cardiovascular risk factor: Supportive evidence and future directions.**

*Nat Rev Cardiol (CNIC Edition)* (2010) 7: 41-6  
IF: n/a

Teslovich TM, Musunuru K, Smith AV, Edmondson AC, Stylianou IM, Koseki M, Pirruccello JP, Ripatti S, Chasman DI, Willer CJ, Johansen CT, Fouchier SW, Isaacs A, Peloso GM, Barbalic M, Ricketts SL, Bis JC, Aulchenko YS, Thorleifsson G, Feitosa MF, Chambers J, Orho-Melander M, Melander O, Johnson T, Li X, Guo X, Li M, Shin Cho Y, Jin Go M, Jin Kim Y, Lee JY, Park T, Kim K, Sim X, Tsee-Hee Ong R, Croteau-Chonka DC, Lange LA, Smith JD, Song K, Hua Zhao J, Yuan X, Luan J, Lamina C, Ziegler A, Zhang W, Zee RY, Wright AF, Witteman JC, Wilson JF, Willemsen G, Wichmann HE, Whitfield JB, Waterworth DM, Wareham NJ, Waeber G, Vollenweider P, Voight BF, Vitart V, Uitterlinden AG, Uda M, Tuomilehto J, Thompson JR, Tanaka T, Surakka I, Stringham HM, Spector TD, Soranzo N, Smit JH, Sinisalo J, Silander K, Sijbrands EJ, Scuteri A, Scott J, Schlessinger D, Sanna S, Salomaa V, Saharinen J, Sabatti C, Ruokonen A, Rudan I, Rose LM, Roberts R, Rieder M, Psaty BM, Pramstaller PP, Pichler I, Perola M,


**Publications 2010**


Penninx BW, Pedersen NL, Pattaro C, Parker AN, Pare G, Oostra BA, O'Donnell CJ, Nieminen MS, Nickerson DA, Montgomery GW, Meitinger T, McPherson R, McCarthy MI, McArdle W, Masson D, Martin NG, Marroni F, Mangino M, Magnusson PK, Lucas G, Luben R, Loos RJ, Lokki ML, Lettre G, Langenberg C, Launer LJ, Lakatta EG, Laaksonen R, Kyvik KO, Kronenberg F, König IR, Khaw KT, Kaprio J, Kaplan LM, Johansson A, Jarvelin MR, Cecile JWJA, Ingelsson E, Igl W, Kees Hovingh G, Hottenga JJ, Hofman A, Hicks AA, Hengstenberg C, Heid IM, Hayward C, Havulinna AS, Hastie ND, Harris TB, Haritunians T, Hall AS, Gyllenstein U, Guiducci C, Groop LC, Gonzalez E, Gieger C, Freimer NB, Ferrucci L, Erdmann J, Elliott P, Ejebe KG, Doring A, Dominiczak AF, Demissie S, Deloukas P, de Geus EJ, de Faire U, Crawford G, Collins FS, Chen YD, Caulfield MJ, Campbell H, Burt NP, Bonnycastle LL, Boomsma DI, Boehmholdt SM, Bergman RN, Barroso I, Bandinelli S, Ballantyne CM, Assimes TL, Quertermous T, Altshuler D, Seielstad M, Wong TY, Tai ES, Feranil AB, Kuzawa CW, Adair LS, Taylor HA, Jr., Borecki IB, Gabriel SB, Wilson JG, Holm H, Thorsteinsdottir U, Gudnason V, Krauss RM, Mohlke KL, [Ordovas JM](#), Munroe PB, Kooner JS,

Tall AR, Hegele RA, Kastelein JJ, Schadt EE, Rotter JI, Boerwinkle E, Strachan DP, Mooser V, Stefansson K, Reilly MP, Samani NJ, Schunkert H, Cupples LA, Sandhu MS, Ridker PM, Rader DJ, van Duijn CM, Peltonen L, Abecasis GR, Boehnke M and Kathiresan S.

**Biological, clinical and population relevance of 95 loci for blood lipids.**  
*Nature* (2010) 466: 707-13  
[IF: 34.480](#)

Underhill HR, Hatsukami TS, Fayad ZA, [Fuster V](#) and Yuan C.

**MRI of carotid Atherosclerosis: clinical implications and future directions.**  
*Nat Rev Cardiol* (2010) 7: 165-73  
[IF: n/a](#)

Zaitsev S, Spitzer D, [Murciano JC](#), Ding BS, Tliba S, Kowalska MA, Bdeir K, Kuo A, Stepanova V, Atkinson JP, Poncz M, Cines DB and Muzykantov VR.

**Targeting of a mutant plasminogen activator to circulating red blood cells for prophylactic fibrinolysis.**  
*J Pharmacol Exp Ther* (2010) 332: 1022-31  
[IF: 4.093](#)

Zaitsev S, Spitzer D, [Murciano JC](#), Ding BS, Tliba S, Kowalska MA,

[Marcos-Contreras OA](#), Kuo A, Stepanova V, Atkinson JP, Poncz M, Cines DB and Muzykantov VR.  
**Sustained thromboprophylaxis mediated by an RBC-targeted pro-urokinase zymogen activated at the site of clot formation.**  
*Blood* (2010) 115: 5241-8  
[IF: 10.555](#)

[Zaragoza C](#), [Ibanez B](#), Jimenez-Borreguero JL, Schulz V, Fayad Z and [Fuster V](#).  
**Future Perspectives In Cardiovascular Imaging. Simultaneous PET/MRI Technology In Biomedical Research.**  
*Nat Rev Cardiol (CNIC Edition)* (2010) 7: 7-10  
[IF: n/a](#)

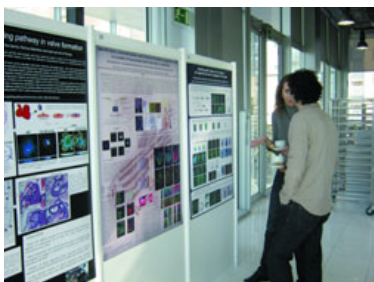
Zhang Z, Ersoz E, Lai CQ, Todhunter RJ, Tiwari HK, Gore MA, Bradbury PJ, Yu J, Arnett DK, [Ordovas JM](#) and Buckler ES.  
**Mixed linear model approach adapted for genome-wide association studies.**  
*Nat Genet* (2010) 42: 355-60  
[IF: 34.284](#)

## REGENERATIVE CARDIOLOGY

Abramov AY, Smulders-Srinivasan TK, Kirby DM, [Acin-Perez R](#), [Enriquez JA](#), Lightowler RN, Duchon MR and Turnbull DM.  
**Mechanism of neurodegeneration of neurons with mitochondrial DNA mutations.**  
*Brain* (2010) 133: 797-807  
[IF: 9.490](#)

[Aguirre E](#) and [Cadenas S](#).  
**GDP and carboxyatractylate inhibit 4-hydroxynonenal-activated proton conductance to differing degrees in mitochondria from skeletal muscle and heart.**  
*Biochim Biophys Acta* (2010) 1797: 1716-26  
[IF: 3.688](#)

[Aguirre E](#), [Rodriguez-Juarez F](#), Bellelli A, Gnaiger E and [Cadenas S](#).  
**Kinetic model of the inhibition of respiration by endogenous nitric oxide in intact cells.**  
*Biochim Biophys Acta* (2010) 1797: 557-65  
[IF: 3.688](#)


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Borniquel S, [Garcia-Quintans N](#), [Valle I](#), [Olmos Y](#), [Wild B](#), [Martinez-Granero E](#), [Soria E](#), [Lamas S](#) and [Monsalve M](#).  
**Inactivation of Foxo3a and subsequent downregulation of PGC-1{alpha} mediates nitric oxide induced endothelial cell migration.**  
*Mol Cell Biol* (2010) 30: 4035-44  
 IF: 6.057

[Carvajal-Vergara X](#), [Sevilla A](#), [D'Souza SL](#), [Ang YS](#), [Schaniel C](#), [Lee DF](#), [Yang L](#), [Kaplan AD](#), [Adler ED](#), [Rozov R](#), [Ge Y](#), [Cohen N](#), [Edelmann LJ](#), [Chang B](#), [Waghray A](#), [Su J](#), [Pardo S](#), [Lichtenbelt KD](#), [Tartaglia M](#), [Gelb BD](#) and [Lemischka IR](#).  
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IF: n/a

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**Data integration and exploration for the identification of molecular mechanisms in tumor-immune cells interaction.** *BMC Genomics* (2010) 11 Suppl 1: S7  
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**Substantiation of ovarian effects of leptin by challenging a mouse model of obesity/type 2 diabetes.** *Theriogenology* (2010) 73: 1088-95  
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**Modeling the tortuosity of retinal vessels: does calibre play a role?** *IEEE Trans Biomed Eng* (2010) 57: 2239-47  
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## A p p e n d i x

 *Publications 2010*

	TOTAL (*)	TOTAL IF Publications (*)	CUMULATIVE IF	AVERAGE IF
TOTAL	139	111	866.548	7.807
CARDIOVASCULAR DEVELOPMENTAL BIOLOGY	19	16	108.312	6.770
EPIDEMIOLOGY, ATHEROTHROMBOSIS AND IMAGING	58	43	413.865	9.625
REGENERATIVE CARDIOLOGY	25	21	139.681	6.651
TRANSLATIONAL CARDIOVASCULAR RESEARCH	7	5	13.899	2.780
VASCULAR BIOLOGY AND INFLAMMATION	19	16	148.950	9.309
TECHNICAL UNITS	20	17	127.095	7.476

(\*) The sum of publications for all Departments and Units in these columns exceeds the total given in the first row because some publications are signed by members from more than one Department or Unit, and these duplicates have been eliminated from the total.

## Training Programs and Courses

Training is one of the CNIC's core activities, and the Center has devised a comprehensive training plan, called **CNIC-JOVEN**, which includes programs for people at all levels, from senior high school students to postdoctoral researchers and other professionals.

The **CNIC-JOVEN Training Plan** is designed to bring young people into biomedical research and create a strong base of talented researchers in the cardiovascular area.

### *Pre-university & Undergraduate Students*

#### ACÉRCATE Program

The ACÉRCATE Program offers senior high school students studying natural and health sciences the chance to experience life as a biomedical researcher, with the aim of awakening interest in a career in research.

Participants spend two weeks at the CNIC, learning modern techniques used in biomedical research, conducting supervised experiments, operating sophisticated scientific equipment and presenting the results of their work, all under the supervision of our researchers.

#### Fellowships in 2010

Name	Secondary School	Comunidad Autónoma
Andrés Sanz, Julio Alberto	I.E.S. El Portillo	Aragón
García Vargas, Laura	I.E.S. Nicolás Salmerón y Alonso	Andalucía
López Machado, Marta	Santa María del Pilar	Aragón
Muñoz González, Héctor	I.E.S. Satafi	Madrid
Pérez Hernández, Ana Isabel	I.E.S. Javier García Téllez	Extremadura
Pérez Ramírez, Álvaro	I.E.S. Fernando III El Santo	Andalucía
Sánchez Martínez, Domingo Antonio	C.E.S. Ciudad del Sol	Murcia
Santos Urios, María	I.E.S. La Nía	Valencia

#### CICERONE Program

The CICERONE Program is open to advanced undergraduate students studying towards a biomedicine-related university degree. Participants extend their scientific training through hands-on experience of laboratory-based biomedical research during the summer recess. In addition to carrying out a supervised research project, the students also attend CNIC seminars and workshops.

The aim of the program is to give university students first-hand knowledge of biomedical research so that they can make more informed choices about the possibility of pursuing a scientific career in the future.



## Training Programs and Courses

### Fellowships in 2010

Name	Degree	University
Albacete, Lucas	Biochemistry	Autónoma de Madrid
Alonso, Álvaro	Biology	Autónoma de Madrid
Arenas, Enrique Javier	Biotechnology	Politécnica de Valencia
Bernal Mera, Aurora	Biology	Autónoma de Madrid
Bilal Álvarez, Usama	Medicine	Oviedo
Borkowska, Natalia	Biotechnology	Warsaw /Polonia
Cano Romero, Francisco	Biochemistry	Granada
Castillo, Verónica	Pharmacy	Granada
Clemente Toribio, Cristina	Biology	Autónoma de Madrid
Cosín Roger, Jesús	Biotechnology	Politécnica de Valencia
Cruz Uréndez, Francisco Miguel	Biochemistry	Granada
Cumienny, Rafal	Biotechnology	JagiellonianUniversity / Poland
Dhungel, Bijay	Molecular Biology	Acharia Nagarjuna (India) / University of Eastern Finland
Gómez, Jesús María	Biotechnology	Francisco de Vitoria
Hamczyk, Magda	Biotechnology	Jagiellonian University/Poland
Lázaro, Ana	Biology	Autónoma de Madrid
Luengo Lago, Alba	Chemical Engineering	Columbia University
Maroto, Lucía	Food Technology	Autónoma de Madrid
Martín Higuera, Cristina	Biology	La Laguna
Martínez López, María	Biochemistry	Granada
Merás Colunga, Pablo	Medicine	Oviedo
Mota, Alba	Biochemistry	Autónoma de Madrid
Navarro, Miguel	Medicine	Complutense de Madrid
Oller Pedrosa, Jorge	Biochemistry	Autónoma de Madrid
Ruiz Rivero, Juncal	Medicine	Complutense de Madrid
Sánchez, Damián	Medicine	Autónoma de Madrid
Surkont, Jaroslaw	Biotechnology	Jagiellonian University / Poland
Torres, María del Mar	Biochemistry	Autónoma de Madrid
Villaroy Beltri, Carolina	Biochemistry	Autónoma de Madrid
Wade, Kaitlin	Biology and Mathematics	University of Bristol

## *Training Programs and Courses*

### **CICERONE Workshop: “What you need to know about cardiovascular research”**

This group of lectures provides a general introduction to cardiovascular research in Spain, and also gives participants the chance to ask questions to key researchers and opinion leaders in the field. The 2010 edition of the CICERONE workshop took place in Valencia as part of the Cardiovascular Diseases Meeting of the Sociedad Española de Cardiología.

**Date:** 21 October 2010

**Attendees:** 40

### **VASCULAR BIOLOGY Course**

Dr Valentín Fuster delivers this lecture series, sponsored by the pharmaceutical company Esteve, on "Vascular biology: basic and clinical research" as part of the summer program of the Universidad Internacional Menéndez Pelayo (UIMP) in Santander.

**Dates:** 19-20 July 2010

**Attendees:** 112



## Training Programs and Courses

### Recent Graduates

#### CARDIOVASCULAR POSTGRADUATE Program

The CNIC is developing a Cardiovascular Postgraduate Program, run through collaboration with Spanish universities. The first strand in this Program has been established through a formal agreement with the Universidad Autónoma de Madrid (UAM).

In the academic year 2010/2011, the CNIC has collaborated in the Masters in Molecular Biomedicine offering a module in Cardiovascular Disease. This optional module provides a broad overview of cardiovascular biology, including perspectives from basic, clinical and translational research.

**Dates:** 17 January-18 February 2011

**Venue:** CNIC

**Students:** 10



#### MASTER Program

This grants program provides individual funding for study towards a Masters degree at a Spanish university. The program is directed at students who are going to study for a PhD in one of the CNIC's laboratories: completion of an official Masters (Máster Oficial) has been introduced as an obligatory stage towards a PhD in Spain, in accordance with the Bologna process to standardize academic qualifications across Europe.

#### Fellowships in 2010

Name	Master	Degree-University
Bernal Mera, Aurora	Molecular Biomedicine	Autónoma de Madrid
Clemente Toribio, Cristina	Cellular and Molecular Biology	Autónoma de Madrid
Cruz Uréndez, Francisco Miguel	Molecular Biomedicine	Granada
María Gómez, Jesús	Molecular Biomedicine	Francisco de Vitoria
Martínez López, María	Molecular Biomedicine	Granada
Lázaro Carrillo, Ana	Molecular Biomedicine	Autónoma de Madrid
Torres Capelli, María del Mar	Cellular and Molecular Biology	Granada
Villarroya Beltri, Carolina	Molecular Biomedicine	Autónoma de Madrid

## Training Programs and Courses

### PREDOCTORAL (PhD) Program

The PREDOCTORAL Program provides a common framework for all researchers at the CNIC who are working towards a doctoral degree. All predoctoral researchers are signed up to this program, independently of their funding source.

The aims of the program are as follows:

- To ensure uniform quality of predoctoral training at the CNIC
- To ensure fair and equal access of predoctoral researchers to training opportunities
- To work in accordance with the rights and obligations laid out in *Real Decreto 63/2006*, which relates to the training of research personnel

### Graduate students at the CNIC who obtained their PhD degrees in 2010

Name	Title of thesis	University	CNIC Department	Thesis Advisor(s)
Cruz Adalia, Aranzazu	Leukocyte activation molecule CD69 as a regulator of inflammatory processes	Faculty of Medicine. Universidad Autónoma de Madrid	Vascular Biology and Inflammation	Francisco Sánchez-Madrid and Pilar Martín
García Maceira, Patricia	Regulation of the HIF path: implications for tumor autogenesis	Faculty of Biology Sciences. Universidad Complutense de Madrid	Epidemiology, Atherothrombosis and Imaging	Jesús Mateo de Castro
López Frontal, Raquel	Role of the tumor suppressor P19ARF in the inflammatory response	Faculty of Sciences. Universidad Autónoma de Madrid	Regenerative Cardiology	Sonsoles Hortelano
Luna Zurita, Luis	Integration of signals during heart valves development: role of the Notch pathway	Faculty of Sciences. Universidad Autónoma de Madrid	Cardiovascular Developmental Biology	José Luis de la Pompa
Olmos Buchelt, Yolanda	Characterization of the complex that regulates the protection system against mitochondrial oxidative stress	Faculty of Biology. Universidad Complutense de Madrid	Regenerative Cardiology	María Monsalve Pérez
Sala Valdés, Mónica	Links between the tetraspanin web and the actin cytoskeleton and their role in migration and immune synapse formation	Faculty of Biology. Universidad Autónoma de Madrid	Vascular Biology and Inflammation	María Yáñez-Mó and Francisco Sánchez-Madrid
Tarín Cerezo, Carlos A.	Remodeling processes mediated by vasoactive nitric oxide and its relevance to cardiovascular disease through the activation of proteolytic enzymes	Faculty of Medicine. Universidad Alcalá de Henares	Epidemiology, Atherothrombosis and Imaging	Carlos Zaragoza Sánchez

 *Training Programs and Courses*
**Graduate students carrying their PhD theses at the CNIC during 2010**

Name	Funding Agency	University	CNIC Departmen	Joined previously through another Training Programme
Aix Sacido, Esther	FPU (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Cardiovascular Developmental Biology	BMM9 2009 - 2010 / MASTER Program 2009
Alameda Serrano, Daniel	FPI (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Regenerative Cardiology	CICERONE Program 2007
Bednareck, Dorota	FPI (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Cardiovascular Developmental Biology	No
Bergacín Liberman, Gabriel	CNIC contract	Universidad Autónoma de Madrid	Regenerative Cardiology	No
Blanco Menéndez, Noelia	CNIC contract	Universidad Autónoma de Madrid	Vascular Biology and Inflammation	No
Casanova Acebes, María	FPI (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Epidemiology, Atherothrombosis and Imaging	No
Cedenilla Horcajuelo, Marta	FPU (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Regenerative Cardiology	CICERONE Program 2008 / Cardiovascular Postgraduate Program 2008 - 2009 / MASTER Program 2008
D'Amato, Gaetano	Marie Curie Initial Training Network (NotchIT)	Universidad Autónoma de Madrid	Cardiovascular Developmental Biology	No
Del Monte Nieto, Gonzalo	Spanish Ministry of Science and Innovation	Universidad Autónoma de Madrid	Cardiovascular Developmental Biology	No
Díez Cabezas, Begoña	FPU (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Vascular Biology and Inflammation	No
Escolano Artigas, Amelia	FPI (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Vascular Biology and Inflammation	No
Escudero Gonzalez, Beatriz	FIS (Spanish Ministry of Health)	Universidad Autónoma de Madrid	Regenerative Cardiology	No



## Training Programs and Courses

Fernández-Tresguerres Torrecillas, Beatriz	FPI (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Cardiovascular Developmental Biology	No
Foronda Álvaro, Miguel	FPU (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Vascular Biology and Inflammation	CICERONE Program 2007 and 2008 / MASTER Program 2008
Gárate Mutiloa, Zita	Vasque Government	Universidad Autónoma de Madrid	Regenerative Cardiology	Cardiovascular Postgraduate Program 2009-2010
García-Prieto Cuesta, Jaime	CNIC contract	Universidad Autónoma de Madrid	Epidemiology, Atherothrombosis and Imaging	No
Giraldo Prado, Patricia	CNIC contract	Universidad Autónoma de Madrid	Regenerative Cardiology	No
Gómez Cabañas, Laura	FPU (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Regenerative Cardiology	CICERONE Program 2008 / MASTER Program 2008
González Rosa, Juan Manuel	FPU (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Cardiovascular Developmental Biology	CICERONE Program 2008 / MASTER Program 2008
Guadamilla Mora, Marta C.	FPI (Spanish Ministry of Education and Science)	Universidad Complutense de Madrid	Vascular Biology and Inflammation	No
Gutiérrez Vázquez, Cristina	CAM (Madrid Autonomic Region)	Universidad Autónoma de Madrid	Vascular Biology and Inflammation	CICERONE Program 2007 / Cardiovascular Postgraduate Program 2008 -2009
Hernández de Riquer, M <sup>a</sup> Victoria	FPI (Spanish Ministry of Education and Science)	Universidad Complutense de Madrid	Vascular Biology and Inflammation	No
Herrera Merchan, Antonio	Human Frontier Science Foundation	Universidad Autónoma de Madrid	Regenerative Cardiology	No
Izarra Pérez, Alberto	FPI (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Regenerative Cardiology	No
Koziol, Agnieszka	FPU (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Vascular Biology and Inflammation	No

 *Training Programs and Courses*

Lara Astiaso, David	FPU (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Regenerative Cardiology	Cardiovascular Postgraduate Program 2008 -2009 / MASTER Program 2008
Latorre Pellicer, Ana	Diputación General de Aragón	Universidad de Zaragoza	Regenerative Cardiology	No
Lavín Plaza, Begoña	FPI (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Epidemiology, Atherothrombosis and Imaging	No
López Fontal, Raquel	FIS (Spanish Ministry of Health)	Universidad Autónoma de Madrid	Regenerative Cardiology	No
Lozano Vidal, Noelia	FPU (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Vascular Biology and Inflammation	Cardiovascular Postgraduate Program 2009 -2010 / MASTER Program 2009
Luna Zurita, Luis	CNIC contract	Universidad Autónoma de Madrid	Cardiovascular Developmental Biology	No
Luxán García, Guillermo	FPI (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Cardiovascular Developmental Biology	No
Marco Lázaro, Ricardo	CNIC contract	Universidad de Zaragoza	Regenerative Cardiology	No
Martín Alonso, Mara	FPI (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Vascular Biology and Inflammation	CICERONE Program 2008 / Cardiovascular Postgraduate Program 2009 -2010
Mateos San Martín, Daniel	CAM (Madrid Autonomic Region)	Universidad Autónoma de Madrid	Cardiovascular Developmental Biology	CNIC
Matesanz Marín, Adela	FPI (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Vascular Biology and Inflammation	No
Méndez Barbero, Nerea	FPU (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Vascular Biology and Inflammation	Cardiovascular Postgraduate Program 2008 -2009 / MASTER Program 2008
Mendoza Daroca, Pilar	Human Frontier Science Foundation	Universidad Autónoma de Madrid	Regenerative Cardiology	No

 *Training Programs and Courses*

Molina Sánchez, Pedro	FPU (Spanish Ministry of Education and Science)	Universidad de Valencia	Epidemiology, Atherothrombosis and Imaging	No
Montes Ruiz, Antonio José	Human Frontier Science Foundation	Universidad Autónoma de Madrid	Regenerative Cardiology	CICERONE Program 2007 / Cardiovascular Postgraduate Program 2008 -2009
Moreno Rodríguez, Vanessa	CAM (Madrid Autonomic Region)	Universidad Autónoma de Madrid	Vascular Biology and Inflammation	No
Munch, Juliane	Notch IT, Marie Curie	Universidad Autónoma de Madrid	Cardiovascular Developmental Biology	Cardiovascular Postgraduate Program 2009 -2010
Muñoz Agudo, Carmen	FPI (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Vascular Biology and Inflammation	No
Muriel López, Olivia	FIS (Spanish Ministry of Health)	Universidad Autónoma de Madrid	Vascular Biology and Inflammation	CICERONE Program 2006
Núñez Andrade, Norman	FPI (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Vascular Biology and Inflammation	No
Olmos Buchelt, Yolanda	SAF (Spanish Ministry of Science and Innovation)	Universidad Complutense de Madrid	Regenerative Cardiology	No
Rayón Alonso, Teresa	FPU (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Cardiovascular Developmental Biology	No
Rodríguez, Juan Camilo Estrada	Red TERCEL (La Paz Hospital)	Universidad Autónoma de Madrid	Regenerative Cardiology	No
Roselló Díez, Alberto	FPI (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Cardiovascular Developmental Biology	No
Sala Valdés, Mónica	FIS (Spanish Ministry of Health)	Universidad Autónoma de Madrid	Vascular Biology and Inflammation	No
Sánchez Ramos, Cristina	FPI (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Regenerative Cardiology	No
Silvestre Roig, Carlos	Mariano Losantos del Campo Foundation	Universidad de Valencia	Epidemiology, Atherothrombosis and Imaging	No
Tarín Cerezo, Carlos A.	FPI (Spanish Ministry of Education and Science)	Universidad de Alcalá	Epidemiology, Atherothrombosis and Imaging	No



## Training Programs and Courses

Tejera Puente, Emilio	FIS (Spanish Ministry of Health)	Universidad Autónoma de Madrid	Vascular Biology and Inflammation	No
Tomé Pizarro, María	CNIC contract	Universidad Autónoma de Madrid	Regenerative Cardiology	CICERONE Program 2008 / Cardiovascular Postgraduate Program 2008 - 2009
Uribe Sokolov, Verónica	FPU (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Cardiovascular Developmental Biology	CICERONE Program 2007 and 2008 / MASTER Program 2008
Urso, Katia	FIS (Spanish Ministry of Health)	Universidad Autónoma de Madrid	Vascular Biology and Inflammation	No
Valiente Alandí, Iñigo	FPU (Spanish Ministry of Education and Science)	Universidad Autónoma de Madrid	Regenerative Cardiology	CICERONE Program 2008 / Cardiovascular Postgraduate Program 2008-2009 / MASTER Program 2008
Wild, Brigitte	Spanish Ministry of Science and Innovation contract	Universidad Autónoma de Madrid	Regenerative Cardiology	No

## CARDIO-IMAGE Program

The CARDIO-IMAGE Program (CNIC-MSSM) has been launched against the backdrop of the Collaboration Agreement signed between the CNIC and the Mount Sinai School of Medicine (MSSM), the aim of which is to create a Joint Training and Research Unit in Cardiovascular Imaging. The objective of this Program is to offer blue-ribbon training in state-of-the-art cardiovascular imaging. This will be achieved through laboratory-based training at the CNIC-MSSM Joint Unit, located on the MSSM campus in New York.

## Fellowships in 2010

Name	Institution
Arias Guedón, Teresa	Centro de Investigación Aplicada - Navarra
Mateo de Castro, Jesús	Centro Nacional de Investigaciones Cardiovasculares - Madrid

## Training Programs and Courses

### Postgraduate Students & Medical Professionals

#### INVESMIR Program

The INVESMIR Program offers medical professionals, during their specialization period as resident interns, the opportunity to further their training through a research project in one of the CNIC's laboratories, under the supervision of a CNIC scientist.

An important aim of the program is that participants establish contacts and collaborations in the CNIC that will support them, after completion of their MIR specialization training, in pursuing their own research projects at their centers within the Spanish National Health System.



#### Fellowships in 2010

Name	Hospital	CNIC Department
Dobarro Pérez, David	Hospital Universitario de La Paz - Madrid	Cardiovascular Developmental Biology
Domínguez Vila, Adrián	Hospital Materno-infantil de Las Palmas de Gran Canaria - Canarias	Epidemiology, Atherothrombosis and Cardiovascular Imaging
Henríquez Camacho, César Augusto	Hospital Clínico San Carlos - Madrid	Vascular Biology and Inflammation
Kallmeyer Mayor, Andrea	Hospital Clínico San Carlos - Madrid	Epidemiology, Atherothrombosis and Cardiovascular Imaging

### CARDIOVASCULAR PATHOPHYSIOLOGY Course: “From symptoms to genes”

The course in CARDIOVASCULAR PATHOPHYSIOLOGY offers a translational vision of cardiology to medical specialists by introducing them to the study of pathophysiology and basic research. Participants are given an overview of the molecular and genetic factors that underlie cardiac diseases and gain a modern vision of cardiac physiology.

**Dates:** 19 and 20 November 2010

**Venue:** CNIC Lecture Hall

**Attendees:** 101



## Seminars, Events and Awards

### January

04 **Elisa Yañiz,**  
Mount Sinai School of Medicine,  
Cardiovascular Research Center,  
New York, USA

25 **Roger Hajjar,**  
Mount Sinai School of Medicine,  
New York, USA

### February

01 **Javier Nieto,**  
Universidad de Wisconsin, USA

08 **Ramón Muñoz Chapuli,**  
Universidad de Málaga, Spain

15 **Takayuki Asahara,**  
Stem Cell Translational Research,  
Institute of Biomedical Research and  
Innovation, Kobe, Japan

25 **Keisuke Kaji,**  
Institute for Stem Cell Research,  
MRC Centre for Regenerative  
Medicine, University of Edinburgh, UK

### March

01 **Hong Chen,**  
Mayo Clinic, Rochester, USA

04 **Matthieu Pesa,**  
University of Burgundy, Dijon, France

15 **Tadaomi Takenawa,**  
Graduate School of Medicine,  
Kobe University, Japan

22

**Ralf Adams,**  
Max-Planck-Institut für molekulare  
Biomedizin, Münster, Germany

### April

12 **Alessandro Giacomello,**  
Cenci-Bolognetti Foundation,  
Pasteur Institute, University La  
Sapienza, Rome, Italy

16 **Eloi Montanez,**  
Max Planck Institute of Biochemistry,  
Martinsried, Germany

20 **Antonio García de Herreros,**  
IMIM-Hospital del Mar,  
Universidad Pompeu Fabra,  
Barcelona, Spain

27 **Cédric Patthey,**  
Umea Center for Molecular Medicine,  
Sweden

30 **Joan Isren,**  
Mount Sinai School of Medicine  
(MSSM), New York, USA

### May

03 **Rainer Pepperkok,**  
EMBL, Heidelberg, Germany

05 **Sir Magdi Yacoub,**  
Imperial College London, UK

06 *Meeting between the Preventive  
Cardiology Section and Rehabilitation  
of the SEC and the CNIC*

07 **Simón Méndez-Ferrer,**  
Mount Sinai School of Medicine  
(MSSM), New York, USA



 **Seminars, Events and Awards**

17 **Pier Paolo Di Fiore,**  
Istituto FIRC di Oncologia Molecolare,  
Milan, Italy

20 **Ugo Cavallaro,**  
IFOM - FIRC Institute of Molecular  
Oncology, Milan, Italy

24 **Deepak Srivastava,**  
Gladstone Institute of Cardiovascular  
Disease, San Francisco, USA

25 **William A. Muller,**  
Northwestern University, Feinberg  
School of Medicine, Chicago, USA

25 **Thierry Pedrazzini,**  
University of Lausanne Medical School,  
Switzerland

27 **Alexandra Aicher,**  
Nottingham Trent University,  
Interdisciplinary Biomedical Research  
Centre School of Science and  
Technology, UK

May 31 - Jun 4 *CNIC Workshop "Principle of  
Fluorescence Techniques 2010"*

31 **Christine Mummery,**  
Leiden University Medical Center,  
The Netherlands

**June**

02 **Paul Kubes,**  
University of Calgary, Alberta, Canada

07 **Ihor Lemishka,**  
Mount Sinai School of Medicine,  
New York, USA

11 *Experimental Design CNIC Conference  
2010*

14 **Robert A. Hegele,**  
Robarts Research Institute, The  
University of Western Ontario, Canada

16 **Guadalupe Sabio Buzo,**  
Centro Nacional de Biotecnología -  
CSIC, Madrid, Spain

18 **Katia Georgopoulos,**  
Massachusetts General Hospital,  
Harvard Medical School, Charlestown,  
USA

21 **Angelika Schnieke,**  
Livestock Biotechnology, Freising-  
Weihenstephan, Germany

22 **Christopher Antos,**  
Center for Regenerative Therapies,  
Dresden, Germany

28 **Silvia Priori,**  
Università di Pavia, Cardiologia  
Molecolare, Fondazione Salvatore  
Maugeri, Pavia, Italy

29 **Jörg Männer,**  
University of Goettingen, Germany

**July**

05 **Gerald R. Crabtree,**  
Howard Hughes Medical Institute,  
Stanford University School of Medicine,  
USA

06 **Vincent M. Christoffels,**  
University of Amsterdam,  
The Netherlands

12 **Nadia Rosenthal,**  
EMBL Monterotondo, Italy

14 **Lars Knoch,**  
Sigma-Aldrich, Stuttgart und  
Umgebung, Deutschland

23 **Eduardo Moreno,**  
CNIO, Madrid, Spain

<p><b>"New insights into cell &amp; tissue interactions in cardiovascular development and disease"</b></p> <p>Organizers: JM Perez-Pomares, U Málaga; V Andrés, CNIC and JL de la Pompa, CNIC Venue: CNIC, Madrid, Spain</p> <p>Topics: Cardiac valve development and disease, model systems and genomics; Genetics of vascular development, patterning and remodeling; endothelial heterogeneity and the onset of blood vessel dysfunction; Epicardium, coronary development and cardiac ischemic disease; New insights into the genetic control of muscular and non-muscular heart tissue interactions; Cell migration and differentiation in the developing outflow tract; Regulation of myocardial cellular diversification and maturation; building cardiac chambers; Novel cell testing, imaging and tissue engineering approaches to study cardiac development and disease</p> <p>Information and preliminary program: <a href="http://www.cnic.es/workshops/cardiacdisease">http://www.cnic.es/workshops/cardiacdisease</a></p>		<p><b>Confirmed speakers</b></p> <p>V Andrés Madrid R Choudhury Oxford VM Christoffels Amsterdam S Cook London JL de la Pompa Madrid E Dejana Milan D García Dorado Barcelona L García-Guereta Madrid M Giacca Trieste D Henderson Newcastle B Ibáñez Madrid R Kelly Marseille J Lincoln Miami RR Markwald Charleston A F Moorman Amsterdam R Muñoz-Chápuli Málaga JM Perez-Pomares Málaga W Pu Boston N Rajamannan, Chicago M Torres Madrid J Xavier-Neto São Paulo</p>
		
<p><b>International symposium</b></p>		<p><b>Madrid September 23-24 2010</b></p>
		



## Seminars, Events and Awards

### September

- 13 **M<sup>a</sup> Luisa Iruela-Arispe**,  
Cell and Developmental Biology, UCLA,  
Los Angeles, USA
- 17 **Armando del Río**,  
Columbia University, New York, USA
- 21 **Wolfgang Schamel**,  
Max Planck Institute for Immunology  
and University of Freiburg, Germany
- 21 **Harald Kranz**,  
Gene Bridges, Heidelberg, Germany
- 23 - 24 *International Symposium "New insights  
into cell & tissue interactions in  
cardiovascular developmental and  
disease"*
- 27 **Charles Lowenstein**,  
University of Rochester School of  
Medicine and Dentistry, USA

### October

- 04 **Paul Riley**,  
UCL-Institute of Child Health,  
London, UK
- 05 **Antonio Maraver**,  
CNIO, Madrid, Spain
- 06 **Sasha Belenkov**,  
Perkin Elmer, Milan, Italy
- 07 - 08 *First International Definiens  
Symposium*
- 15 *METOCARD Course "Integration of the  
emergency extrahospital services and  
sanitary transport in clinical essays"*
- 18 **Gianluigi Condorelli**,  
Institute of Biomedical Technologies,  
National Research Council, Milan, Italy
- 20 **Michel Ovize**,  
Claude Bernard University, Lyon,  
France
- 21 *Cicerone Conference "What you need to  
know about Cardiovascular Research"*

- 25 **Stefan Offermanns**,  
Max-Planck-Institute for Heart and  
Lung Research, Bad Nauheim,  
Germany

- 26 **Christiana Ruhrberg**,  
University College London, UK

### November

- 02 **Klaus Ley**,  
La Jolla Institute for Allergy and  
Immunology, California, USA
- 08 **Benjamin Caballero**,  
Johns Hopkins Bloomberg School of  
Public Health, Baltimore, USA
- 16 **Bin Zhou**,  
Albert Einstein College of Medicine,  
New York, USA
- 19 - 20 *Cardiovascular Physiopathology Course  
"From the symptom to the genes"*
- 19 **Tom Misteli**,  
National Cancer Institute, National  
Institutes of Health, Bethesda, USA
- 22 **Antonio Vidal-Puig**,  
Institute of Metabolic Science,  
Cambridge, UK
- 25 - 26 *Annual Meeting of the Cellular Therapy  
Net (TERCEL)*
- 29 **Ziad Mallat**,  
Addenbrooke's Hospital, Cambridge,  
UK

### December

- 13 **Erwin Wagner**,  
CNIO, Madrid, Spain
- 20 **Abel Sanchez-Aguilera**,  
Children's Hospital Boston, USA

## Seminars, Events and Awards



### Awards

#### Cardiovascular Developmental Biology

*Award:* ASH Scholar Award 2009-2010. American Society of Hematology.  
*Awarded to:* **Simón Méndez-Ferrer**

*Award:* Extraordinary Ph D Thesis prize 2010 from the Universidad Autónoma de Madrid.  
*Awarded to:* **Luis Luna Zurita** (José Luis de la Pompa Group)

*Award:* Elected Member of the Working Group on Developmental Anatomy and Pathology of the European Society of Cardiology.  
*Awarded to:* **José Luis de la Pompa**

#### Vascular Biology and Inflammation

*Award:* Premio de Investigación de la Comunidad de Madrid "Miguel Catalán" a la carrera investigadora en Ciencias.  
*Awarded to:* **Francisco Sánchez-Madrid**

#### Epidemiology, Atherotrombosis and Imaging

*Award:* Honorary Degree, International University of Catalonia, Barcelona, Spain. 2010.  
*Awarded to:* **Valentín Fuster**

*Award:* Honorary Degree, Menéndez Pelayo International University, Santander, Spain. 2010.  
*Awarded to:* **Valentín Fuster**

*Award:* Dr. Leon Dumont Prize 2010, Sociedad Belga de Cardiología.  
*Awarded to:* **Vicente Andrés**

*Award:* Premio Impulsa Ciencia y Academia, Fundación Príncipe de Gerona.  
*Awarded to:* **Borja Ibáñez**

*Award:* Joint Runner Up Prize in the Young Investigator Award Poster Competition, Heart Failure Winter Research Meeting on Translational Heart Failure Research, European Society of Cardiology.  
*Awarded to:* **José Javier Fuster**



## Funding

### Public-Private Partnership

In spite of the enormous advances in diagnosis and treatment witnessed over the last 20 years, cardiovascular diseases continue to be the main cause of death in the developed world. The costs generated in economic, social and human terms are immense. In response to this reality, the Spanish Government, through the Instituto de Salud Carlos III (Carlos III Health Institute) of the Ministerio de Ciencia e Innovación (Spanish Science and Innovation Ministry), created the CNIC to bring together the best of Spanish cardiovascular research and provide it with a modern infrastructure and ample funding to carry out world-leading biomedical research.

To achieve the funding necessary for its ambitious plan, The Spanish government appealed to the sense of social obligation of some of the major players in Spanish civil society, by inviting the largest businesses in the country to make an active and long-term commitment to this project. The outcome was an agreement, signed in December 2005, between the Spanish Government and a group of some of the most important Spanish businesses. Under the terms of this agreement these companies pledged their commitment to funding the CNIC up until 2012. This commitment has recently been extended until 2020.

Shortly after the agreement was signed, on January 24, 2006, this group of companies was formally constituted as the ProCNIC Foundation. Through its creation, some of the largest companies in the country have made a long-term commitment to biomedical research which represents the most significant act of business sponsorship in recent years in terms of the amount of funding it provides, its social significance, the group of companies involved, and the anticipated outcomes.

Since the signing of this agreement, the CNIC's funding is based on a public-private partnership of a broad, socially-committed nature. In this innovative PPP, state funding is complemented by financing through the ProCNIC Foundation (<http://www.fundacionprocnic.es>).

New companies have since joined the ProCNIC Foundation, and there are now 13 members: Acciona, Banco Santander, BBVA, Endesa, Fundación Abertis, Fundación Ramón Areces, Gas Natural, Grupo Prisa, Inditex, La Caixa, Repsol YPF, Fundación de Investigación Mutua Madrileña, and Telefónica. This funding scheme allows the CNIC to fund special programs for the discovery and training of young investigators, to award extramural grants aimed at integrating basic and clinical research to answer specific questions, to acquire specialized research equipment that would otherwise be difficult to fund, and to run programs to incentivize and retain valuable investigators.

But the ProCNIC Foundation not only provides the CNIC with money; it also contributes its accumulated managerial and business expertise. Representatives of the ProCNIC Foundation sit on the CNIC's Board of Trustees, and actively participate in the management, planning and decision taking related to the Center. In this way, some of the most important organizations in the private sector in Spain have committed themselves to a direct involvement in biomedical research and the fight against cardiovascular diseases.

A major strength of this socially-committed PPP model is that it provides a more solid base than traditional forms of charitable financing, giving the CNIC a more stable financial support than it would have if it depended on sporadic donations from benefactors. This stability gives the CNIC greater freedom to commit itself to long-term, high-return research strategies in collaboration with public and private institutions, and allows for a more effective use of its own resources generated through competitive projects and the exploitation of intellectual property rights.

A p p e n d i x

 *Funding*

**Public Funding**



**Private Funding**



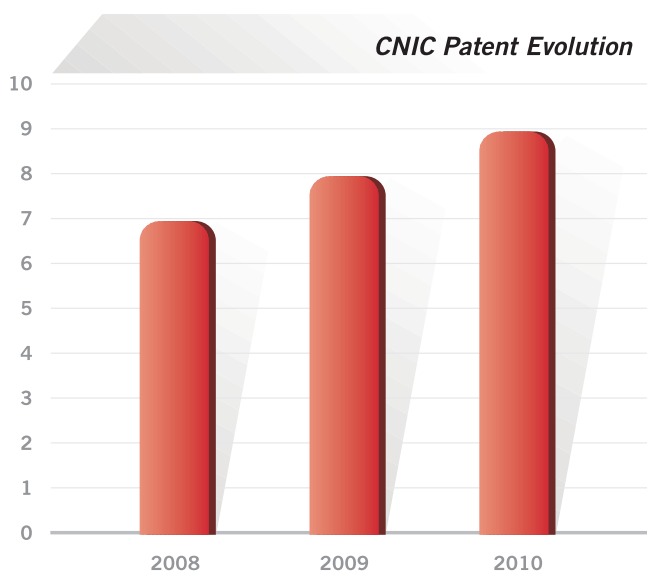
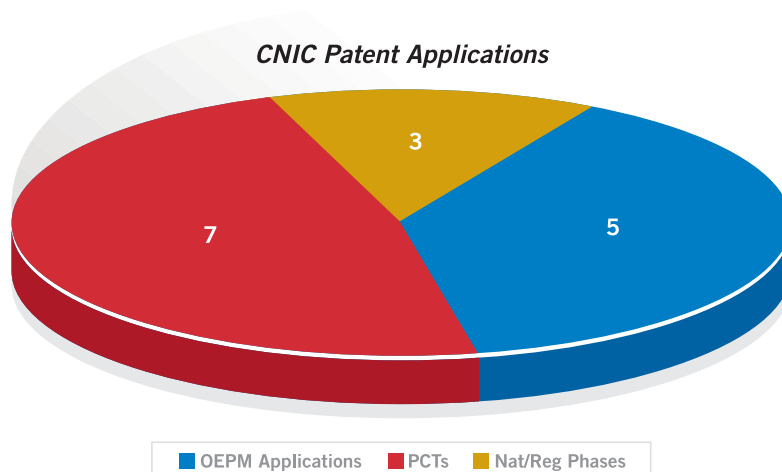
 Funding

### Technology Transfer

A coherent policy of technology transfer is essential for ensuring efficient translational research. Patents and their licensing are the basic tools of technology transfer, and the CNIC therefore encourages its researchers to identify findings with potential for development and application so that they can be assessed for possible patent protection.

Seven invention disclosures were assessed in 2010, of which five were protected by filing new Spanish patent applications. Four previous applications were extended to international patent applications, three through the Spanish patent office and one through the European patent office. Furthermore, protection of intellectual property rights related to the Polypill project is being extended to national and regional phases in collaboration with Ferrer.

This brings the total number of patent families on which the CNIC is an applicant or co-applicant to fifteen: five Spanish applications, seven international applications under the patent cooperation treaty, and three files that have been extended to different national or regional patent offices. Figures for the last three years (see figure) show that the CNIC increased its technology portfolio every year, demonstrating a clear appreciation by CNIC researchers of the importance of patent protection for transferring knowledge from bench to bedside. We hope that this trend will continue in the coming years.

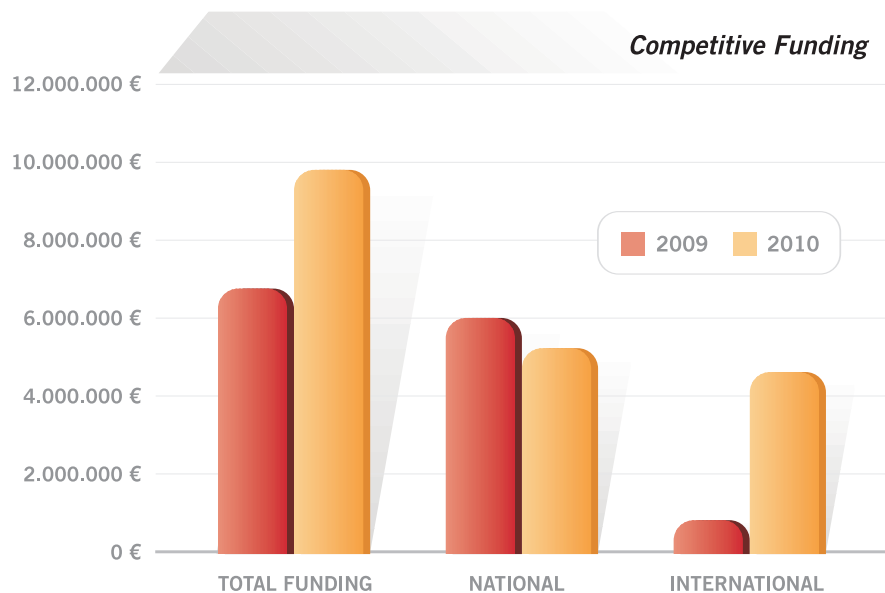


## Funding

### Competitive funding

A total of 49 grant applications (8 European and 41 Spanish) were granted last year, providing more than €9.5 million of external funding to the CNIC. Of this, more than €4.6 million came from international sources and more than €5.1 million from national calls. Most of this funding was for research projects (~ €7.7 million), and most of the rest was funding for contracts and fellowships.

Fellowships awarded last year include 3 “Ramón y Cajal” contracts, 2 Juan de la Cierva fellowships and 1 “Sara Borrell” award. CNIC researchers also garnered a total of 9 fellowships under the FPU and FPI programmes (Spanish PhD fellowships). In addition, 2 Marie Curie International Reintegration Grants, 1 European Reintegration Grant and 1 Intra-European Fellowships for Career Development were awarded. During 2010, the CNIC also began negotiations for a COFUND project to recruit young group leaders.

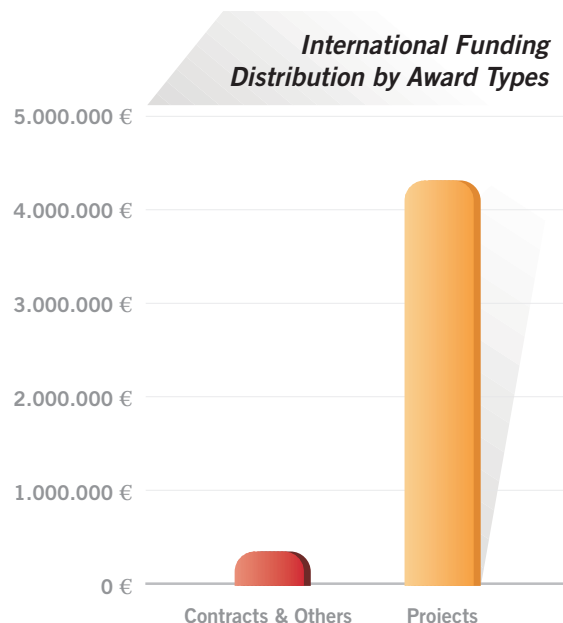
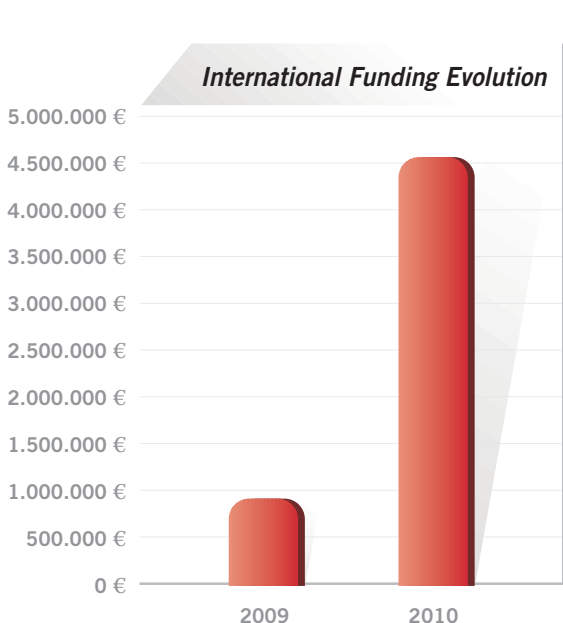


 Funding

**International Funding**

The €4.5 m of international funding awarded to the CNIC in 2010 represents an increase of more than 5 fold over the level of funding in 2009. These funds correspond to 7 research projects: 3 Marie Curie awards; 2 European Research Council Starting Grants; 1 coordinated Cooperation project (CARE-MI); and 1 travel-grant from the Federation of Laboratory Animal Science Associations. The CNIC also received funds for a European Science Foundation funded COST project, which are not included in the total indicated above.

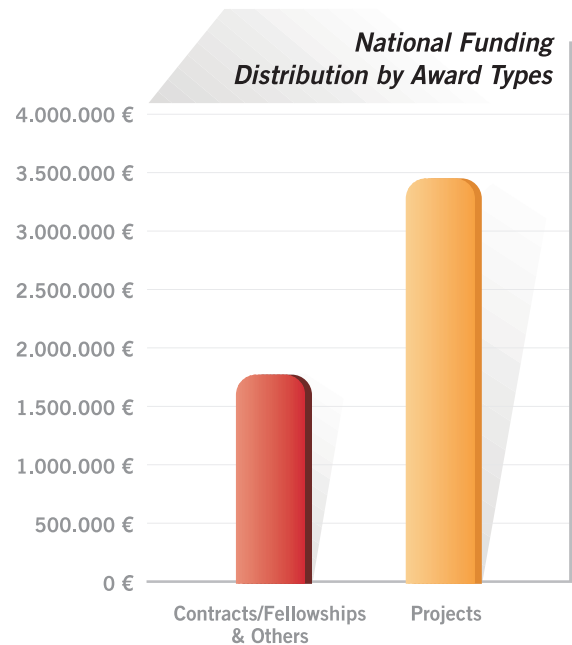
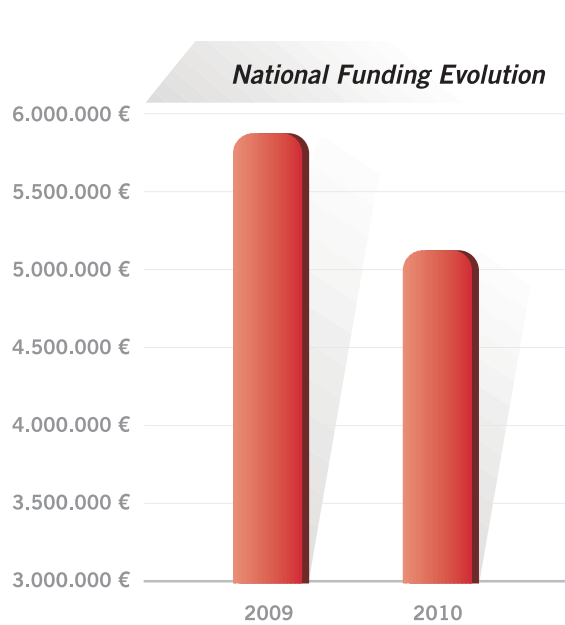
This brings the number of international projects in which the CNIC participates to 17. This includes CNIC coordination of the European Commission FP7 projects CARE-MI (a large scale integrating project) and FOCUS (a small-medium scale project), and participation in Hyperimage (FP7) and Heart Repair (FP6).



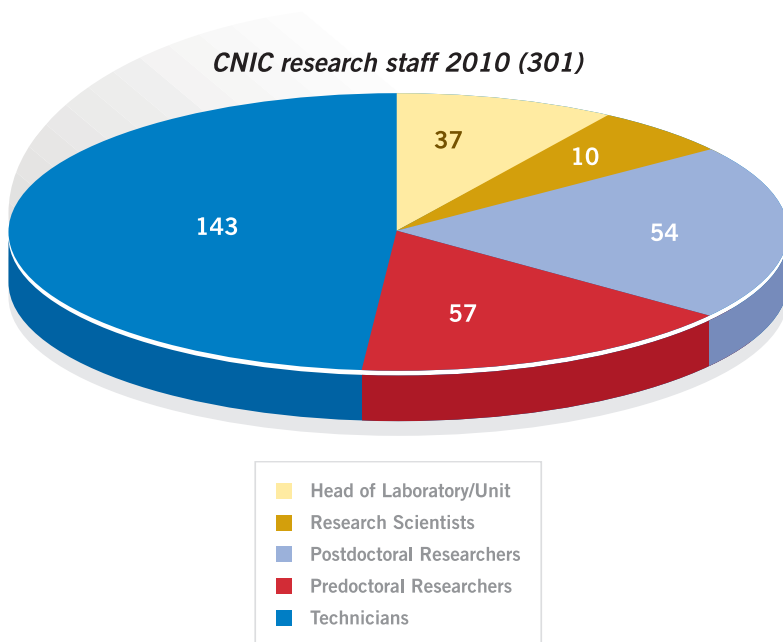
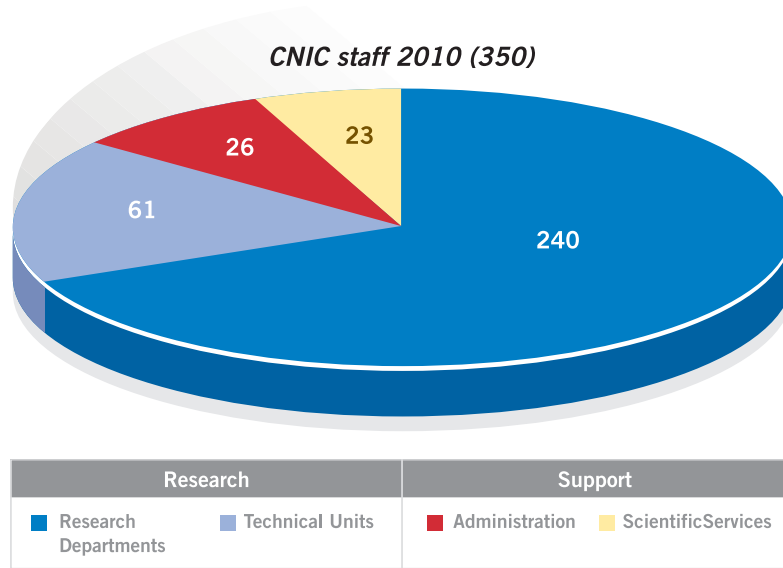
## Funding

### *National Funding*

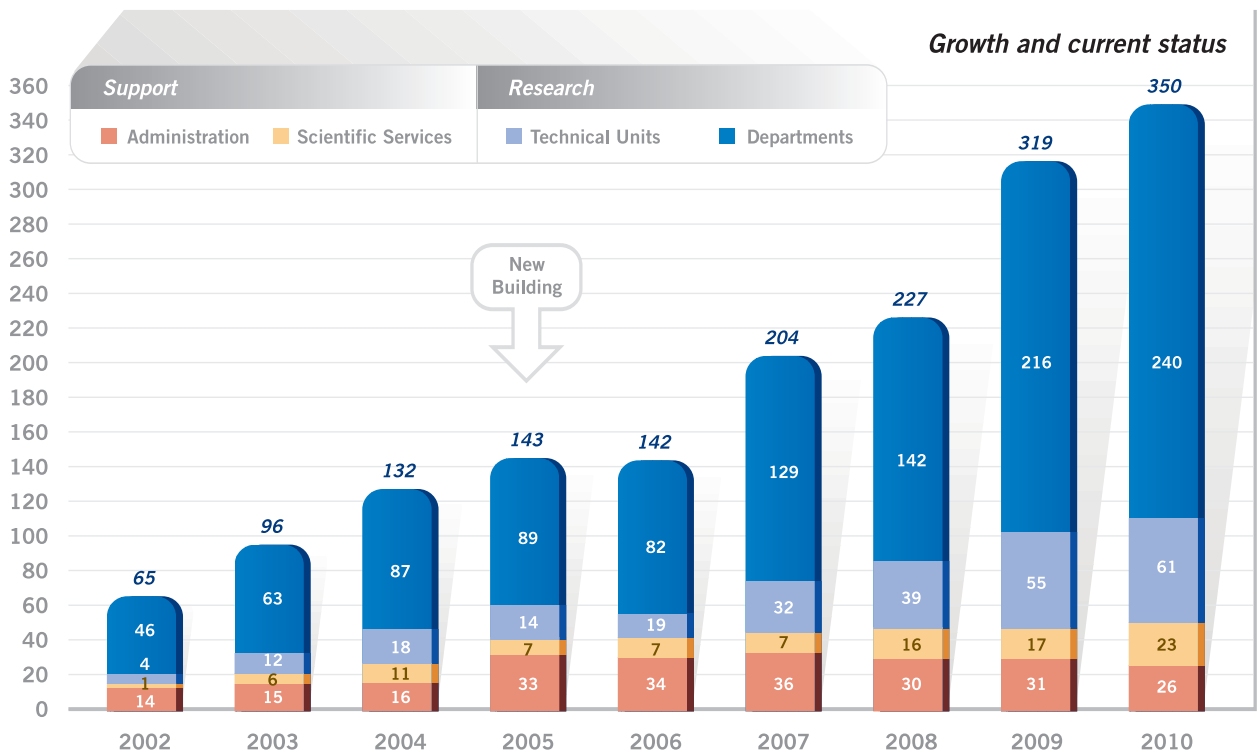
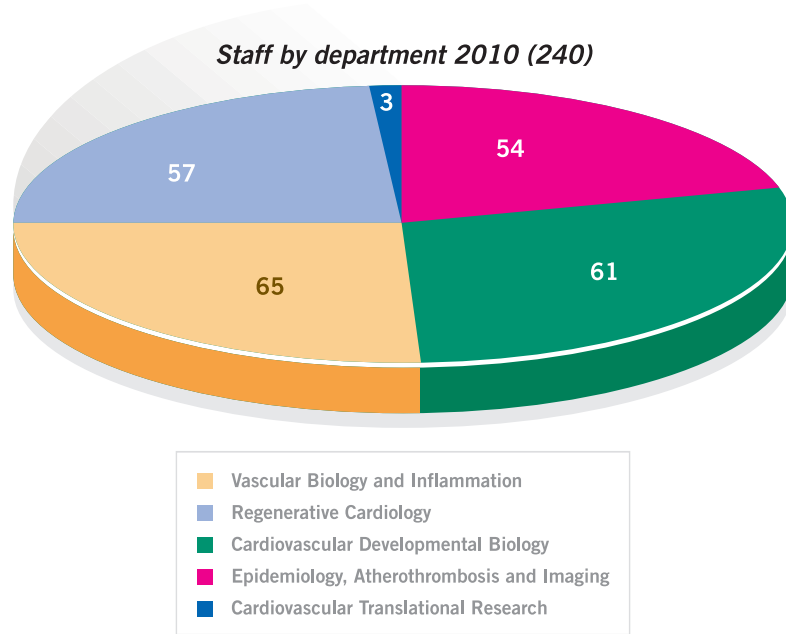
Although the national funding obtained in 2010 was approximately €0.7 million less than in 2009, the number of proposals approved was almost the same. National projects awarded last year included an INNPACTO Project, supporting cooperation between the CNIC and partners in the private sector.



 *Staff Figures*



 *Staff Figures*



 *Staff Figures*

