Susana de la Luna

ICREA Research Professor

Group Leader, Gene Transcription and Signaling

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- ***WoS Researcher*** : E-9553-2015
- ***SCOPUS Author*** : 7004246916
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Research interests

Protein kinases are central to all cellular processes in eukaryotes, and often linked to disease in humans when their activation and/or expression is altered. I am interested in a family of protein kinases known as DYRK (dual-specificity tyrosine-regulated kinases), whose members participate in the regulation of critical processes important for cellular viability and homeostasis. Members of the DYRK family are found in four of the five main taxa (animalia, plantae, fungi and protista), and all DYRK proteins studied to date share common structural, biochemical and functional properties with the ancestral forms represented by yeast. In mammals, there are 5 DYRK proteins (DYRK1A, DYRK1B, DYRK2, DYRK3 and DYRK4) with a highly similar kinase domain. However, very little is known on the molecular determinants defining commonalities and differences among the DYRK human kinases. What is known is that dysregulation of DYRKs leads to disease in humans. For instance, haploinsufficiency of DYRK1A underlies a rare clinical syndrome characterized by general growth retardation, severe primary microcephaly, and alterations in many organs and systems. In addition, DYRK1A overexpression in Down syndrome (DS) individuals correlates with a wide range of the DS pathological phenotypes. These findings highlight the extreme dosage sensitivity of this gene, whose activity has been also associated to tumor progression. My group thus aims at dissecting how DYRK activities are linked to human pathology. We are particularly interested on the DYRK-associated activities that impact on the regulation of gene expression programs either directly through their recruitment to chromatin or indirectly through modulation of specific signaling pathways.

Education

1986 BsC in Biology, University Autonoma de Madrid, Spain

1989 PhD in Biology, University Autonoma de Madrid, Spain

Professional experience

2014 - Head of the “Gene Regulation and Signaling” group at the Gene Regulation, Stem Cells and Cancer Program.
Centre for Genomic Regulation (CRG), Barcelona, Spain.

2002 - 2013 Head of the “Gene Function” group at the Genes and Disease Program.
Centre for Genomic Regulation (CRG), Barcelona, Spain.

1999 - 2001 Research Associate at the Department of Human and Medical Genetics, Cancer Research Institute (IRO), Barcelona, Spain.
Research topic: Identification of chromosome 21 genes
Supervisor: Xavier Estivill

1996 - 1998 Postdoctoral Fellow at the Division of Biochemistry and Molecular Biology (IBLS), University of Glasgow, UK.
Research topic: Novel interactors of E2F transcription factor and role in G1/S transition
Supervisor: Nicholas B. La Thangue

1994 - 1996 Postdoctoral Fellow at the National Institute for Medical Research (NIMR), Medical Research Council (MRC), Mill Hill, London (UK).
Research topic: E2F transcription factor and regulation of mammalian cell cycle
Supervisor: Nicholas B. La Thangue

1991 - 1993 Postdoctoral Fellow at the National Centre of Biotechnology (CNB), Madrid, Spain.
Research topic: Regulation of transcription and translation in Influenza viruses
Supervisor: Juan Ortín

1990 Postdoctoral Fellow at the Scripps Clinic and Research Foundation, La Jolla, San Diego (USA).
Research topic: Cloning of the large RNA of the murine lymphocytic choriomeningitis virus genome
Supervisor: Michael B. Oldstone

1988 Predoctoral Fellow, 5-weeks stay at the London School of Hygiene and Tropical Medicine, London, UK.
Research topic: Prediction of regions of antigenic relevance
Supervisor: Janet Thornton

1986 - 1989 Predoctoral Fellow at the Centre of Molecular Biology “Severo Ochoa” (CBMSO), Madrid, Spain.
Research topic: Reverse genetics in Influenza viruses
Supervisor: Juan Ortín

1984-1985 Undergraduate Student at the Centre of Molecular Biology “Severo Ochoa” (CBMSO), Madrid, Spain.
Research topic: Markers for stable transformation of mammalian cells
Supervisor: Juan Ortín

Scientific appointments

Panels and Committees

Selection Committee for the “Ramón y Cajal” call (2008, 2014, 2015, 2016, 2017, 2020); Selection Committee for the Spanish research projects calls, section Biomedicine (2010, 2011, 2012, 2019); Selection Committee for the CONES call-AGAUR (2010, 2011); Selection Committee for the ”la Caixa” fellowships for postgraduate studies in Europe (2017, 2019, 2020); Selection Committee for Postdoctoral call- CRAG (2017, 2018, 2020); Selection Committee for the "Beatriu de Pinos" call-AGAUR (2017, 2019, 2020); External Scientific Committee of the IRB Barcelona Philanthropy Fund 1st call (2018); Member of the Spanish Agency for Evaluation-ANEP, section Biomedicine (2015-2018).

Invited grant reviewing

ANEP (Spanish Evaluation Agency Nacional, MICINN), Subdivision of Evaluation, Spanish Research Agency (AEI, Spanish Ministry of Science, Innovation and Universities); FIS (Fondo de Investigaciones Sanitarias, Spanish Ministry of Health), AGAUR (Generalitat de Catalunya), AAECA (Agencia Andaluza de Evaluación de la Calidad y Acreditación Universitaria), FONCYT (Fondo para la Investigación Científica y Tecnológica, Argentina), Medical Research Council (United Kingdom), Worldwide Cancer Research (United Kingdom).

Invited journal peer reviewing

BBA-Mol Cell Res, Cell Mol Life Sci, Dis Model Mechanism, Exp Cell Res, Human Mol Genet, J Biol Chem, J Clin Invest, J Cell Physiol, J Mol Cell Biol, Mol Cell Neurosci, Nucleic Acids Res, Oncogene, PLoS One, Proc Natl Acad Sci USA, Sci Rep, Science Signal.

CRG Committees and internal activities

CRG Infrastructure and Purchasing Committee (2002-2006); Scientific Advisor of the CRG Media Preparation Service (since 2002); CRG/PRBB Seminars Committee (2003-2008), CRG Postdoctoral Committee (2009-2013); User Advisory Committee for the CRG/UPF Proteomics Unit (since 2013); CRG Management Committee (since 2013); PRBB Scientific Good Practices Group (2015-2018); User Advisory Committee for the CRG Bioinformatic Unit (since 2016); Organizer of the CRG Faculty Meetings (since 2016); CRG Working group for the Misconduct Policy (2016); selection panel of CRG PhD call (2014, 2016, 2018, 2019); CRG Group Leader recruitment panel (2008, 2010, 2012, 2016).

Member of Thesis Committees

- PhD Advisory Committees at CRG: 36 PhD students Committees with annual meetings since 2005.
- PhD Advisory Committees at other Institutes: 12 PhD students Committees since 2006 (meetings every 2 years).
- PhD Defense Panels: 50 panels evaluating PhD thesis works in different Spanish Universities since 2004.

Organization of Conferences and Workshops

- 13th CRG International Symposium. Gene Regulation, Stem Cells and Cancer; co-organizer; October, 2014.
- Workshop on "Gene Therapy for Rare Diseases"; co-organizer; October, 2011.
- Workshop on "Down Syndrome: a Multidisciplinary Perspective"; Co-organizer; September, 2007.
- IV CRG International Symposium: Connecting the Genome with Disease; co-organizer; March, 2005.

Scientific Societies

- Spanish Society of Virology (since 1989).
- Spanish Society of Biochemistry and Molecular Biology (since 1998).

Teaching and Outreach activities

- CRG-organized Masters/PhD course "Advanced Seminars in Biomedical Research" (since 2013).
- Supervisor of graduate students from different degrees in Europe to perform their experimental projects.
- Collaboration with the association D'Genes and Spanish families with children with the DYRK1A haploinsufficiency syndrome (since 2019).
- Centro de Cultura Contemporánea de Barcelona. Serie "Grandes retos de la biomedicina". "El síndrome de Down: una historia de cromosomas". 19 de Junio de 2013

Research Support

On-going research support

As principal investigator:

2020-2023 DYRK protein kinases in health and disease
Ministerio de Ciencia e Innovación (PID2019-107185GB-I00) 242.000 €

2020-2021 Organization of the DYRK1A interactome through docking domains: searching for novel targeting approaches
Foundation Lejeune Scientific Grants 40.000 €

2020-2023 DYRK1A inhibition to remodel tumor stroma and sensitize immune checkpoint blockade therapies in pancreatic cancer
Co-PI: Cristina Fillat (IDIBAPS, Barcelona)
Fundació La Marató de TV3 300.000 €

2017-2019 DYRK protein kinases and disease
Grups de Recerca Consolidats (2017 SGR 1163)

As member of networks:

2006-2021 CIBERER "CIBER of Rare Diseases" (Unidad 716)
ISCIII, Ministerio de Sanidad (CB06/07/0089)
Co-PIs: Cristina Fillat (IDIBELL, Barcelona), María L. Arbones (IBMB, Barcelona), Mara Dierssen (CRG, Barcelona)

Completed research support

As principal investigator:

2017-2019 Identification of regulatory mechanisms and functional activities for the DYRK1A protein kinase
Ministerio de Economía y Competitividad (BFU2016-76141-P) 242.000 €

2017-2018 Pathogenic mechanisms of the syndrome caused by mutations in the DYRK1A gene
Co-PI: Maria L. Arbones (IBMB, Barcelona)
Fundación Alicia Koplowitz 50.000 €

2014-2016 Regulatory mechanisms in DYRK protein kinases and their role as regulators of transcription
Ministerio de de Economía y Competitividad (BFU2013-44513-P) 190.000 €

2014-2016 Neurodevelopment and aneuploidies of chromosome 21
Grups de Recerca Consolidats (2014 SGR 674) 18.000 €

2013-2016 Cell therapy approaches in transplantation by promoting anti-inflammatory and tolerogenic innate immunity: roles of calcineurin and NFAT5
Co-PIs: Jose Aramburu (UPF, Barcelona) and Sara Martinez-Martinez (CNIC, Madrid)
Fundació La Marató de TV3 (Nº expediente 122531) 400.000 €

2011-2013 Nuclear activities of DYRK1A and other DYRK protein kinases
Ministerio de Ciencia e Innovación (BFU2010-15347) 240.000 €

2009-2013 Cellular and molecular basis underlying neurodevelopmental processes regulated for protein kinases and their involvement in chromosome 21 aneuploidies
co-PI: Maria L. Arbones (IBMB, Barcelona)
Grups de Recerca Consolidats (2009SGR1464) 42.640 €

2009-2011 Networking human chromosome 21 genes in Down syndrome
Fondation Jerome Lejeune Research Grants 40.000 €

2007-2010 Analysis of DYRK1A protein complexes: studies on DYRK1A as a regulator of intracellular signaling pathways
Ministerio de Educación y Ciencia (BFU2007-6143/BMC) 139.000 €

2009-2010 DYRK1A involvement in the development of neural connections depending on Wnt and Shh signaling pathways
Co-PI: Paola Bovolenta (Instituo Cajal, Madrid)
Proyecto Intramural CIBERER 12.000 €

2006-2008 Analysis of the alternatively spliced isoforms of human intersectin 1 and 2: characterization of their expression patterns in normal and tumour tissues
Coordinator: Susana de la Luna. PIs: Lyudmila Tsyba (Kiev, Ukraine), Gosta Wingberg (Stockholm, Sweden), Lyudmila Drobot (Lyev, Ukraine)
INTAS (Ref. No: 05-1000004-7762) 150.000 €

2004-2007 Characterization of DYRK1A involvement in cell cycle progression and intracellular signaling in mammals: subcellular localization as a regulatory factor
Ministerio de Educación y Ciencia (BFU2004-01768) 110.000 €

2004-2006 Analysis of the role of Dyrk1A, a candidate gene for mental retardation in Down syndrome, in neurogenesis
Coordinator: Maria L. Arbonés. co-PI: Isabel Fariñas
Foundation Lejeune Scientific Grants 40.000 €

2001-2004 Identification of signal transduction pathways for the protein kinase DYRK1A
Ministerio de Ciencia y Tecnología (BMC2001-1580) 80.990 €

As member of networks:

2006-2009 Grupo consolidado “Genes y Enfermedad”
Catalán Government, DURSI (2005SGR00008)
Coordinator*:* Xavier Estivill. PIs: M. Dierssen, M.L. Arbonés, C. Fillat, S. de la Luna

2002-2005 Medical and Molecular Genetics Network
Catalan Government, DURSI (2001/SGR/00399)
Coordinator*:* Xavier Estivill

As collaborator:

2006-2010 AnEUploidy: understanding gene dosage imbalance in human health using genetics, functional genomics and systems biology
European Commission (FP6-2005-LIFESCIHEALTH-6: AnEUploidy)
Coordinator*:* Stylianos E. Antonarakis

2002-2005 Understanding the chronic neurological alterations of Down syndrome and their associated phenotypes and development of molecular targets for their correction
European Commission (QLG1-CT-2002-00816)
Coordinator*:* Jean Delabar

2000-2003 Characterization of BACE2, a putative APP ß-secretase: generation of transgenic mice as a model of Alzheimer disease
Fundación "La Caixa" (4a Convocatoria de Ayudas a la Investigación en Enfermedades Neurodegenerativas)
PI*:* Xavier Estivill

1999-2002 Genetic, molecular and functional studies on Down syndrome and panic/anxiety disorder
Ministerio de Educación y Ciencia (SAF99-0092-C02)
PI*:* Xavier Estivill

1996-1999 The role of the E2F/DP genes in control of cell proliferation and oncogenesis
European Commission (BIOMED2: PL951529)
Coordinator*:* Pidder Janssen-Dürr

1994-1998 Molecular and functional characterization of the cell cycle-regulating transcription factor DRTF1/E2F
Cancer Research Campaign
PI*:* Nicholas B. La Thangue

1992-1993 Structural and functional analysis of the influenza virus transcriptase/replicase
Comunidad Autónoma de Madrid (063A/92)
PI*:* Juan Ortín

1992-1995 Regulation of the transcription and replication of the influenza virus RNA: structure of the viral transcriptase/replicase
Ministerio de Educación y Ciencia (BIO 1044/92)
PI*:* Juan Ortín

1992-1994 Structural and functional analysis of influenza virus replicase
European Commission (SCI*CT91-0688)
Coordinator*:* Juan Ortín

1992-1994 Transcription and replication of influenza virus: consequences for its genetic variability
Ministerio de Educación y Ciencia (BIO 88-0191)
PI*:* Juan Ortín

Personnel funding/short stages

2019-2022 PhD fellowship FPI Program (BES-2017-081395) to Borja Balbastre
2019 Erasmus short stay to Marianna Dallastella
2016-2019 PhD fellowship Severo Ochoa (BES-2015-072815) to Rianne Cort
2016-2019 PhD fellowship FPI Program (BES-2014-069983) to Jacopo Boni
2015-2018 PhD fellowship FPU Program (FPU13/02400) to Laura Barba
2016 Mobility Program for PhD Students (Chile) to Karen Alejandra Vander Stelt
2012-2015 PhD fellowship FPI Program (BES-2011-045867) to Julia M. Rowenstrunk
2013 Program IFARHU-SENACYT for Master Students (Panama) to Orlando Serrano
2009-2012 PhD fellowship FPI Program (BES-2008-002751) to Chiara Di Vona
2007-2010 PhD fellowship FPU Program (AP2005-4558) to Krisztina Arato
2005-2008 PhD fellowship FPI Program (BES-2005-10136) to Eulalia Salichs
2008 Program INTAS for short stays to Olekseii Nikolaienko
2004-2007 PhD fellowship FI Program (2003-FI00068) to Sergi Aranda
2006 Posdoctoral contract “Fundación Francisco Cobos” to Eulalia Genesca
2002-2005 PhD fellowship BEFI-FIS Program to Monica Alvarez

Contracts

2011-2013 Involvement of DYRK1A in intracellular cell signaling pathways
PI: S. de la Luna
Research Collaborative contract with SERVIER Pharmaceuticals 240.000 €

2003-2003 C21orf7 ORFs: a novel gene coding for a possible intracellular antagonist of the inflammatory response mediated by IL-1
PI: S. de la Luna
Research Collaborative contract with Almirall Prodesfarma, S.A. 46.000 €

Publications

Nº JCR articles: 62**;** **in Q1:** 48 (77%); in **D1:** 28 (44%)
Other publications: 4 book chapters, 4 articles in non-indexed journals.
Nº citations: 3402 (WoS); 3489 (Scopus); 5151 (Google Scholar)
***h*-index:** 37 (WoS); 39 (Scopus); 42 (Google Scholar)

As group leader: *, co-1st authors; #, senior co-authors & co-corresponding

62. Boni J, Rubio-Perez C, Lopez-Bigas N, Fillat C, **de la Luna S**. The DYRK family of kinases in cancer: molecular functions and therapeutic opportunities. *Cancers*, 12: 2106 (2020).

61. Ferrari R, de Llobet-Cucalon LI, Di Vona C, Le Dilly F, Vidal E, Lioutas A, Quilez-Oliete J, Jochem L, Cutts E, Dieci G, Vannini A, Teichmann M, **de la Luna S**, Beato M. TFIIIC binding to Alu elements controls gene expression via chromatin looping and histone acetylation. *Mol Cell,* 77:475-487 (2020).

    Recommended by Faculty of 1000*: https://f1000.com/prime/736940217*

60. Roewenstrunk J*, Di Vona C*, Chen J, Borras E, Dong C, Arató K, Sabidó E, Huen MSY, **de la Luna S**. A comprehensive proteomics-based interaction screen that links DYRK1A to RNF169 and to the DNA damage response. *Sci Rep,* 9: 6014 (2019).

59. Arranz J*, Balducci E*, Arató K*, Sánchez-Elexpuru G, Najas S, Parras A, Rebollo E, Pijuan I, Erb I, Verde G, Sahun I, Barallobre MJ, Lucas JJ, Sánchez MP, **de la Luna S#,** Arbonés ML#. Impaired development of neocortical circuits contributes to the neurological alterations in DYRK1A haploinsufficiency syndrome. *Neurobiol Dis,* 127: 210-222 (2019).

58. Luna J*, Boni J*, Cuatrecasas M, Bofill-De Ros X, Núñez-Manchó E, Gironella M, Vaquero E, Arbones ML, **de la Luna S#,** Fillat C#**.** DYRK1A modulates c-MET in pancreatic ductal adenocarcinoma to drive tumour growth. *Gut,* 68: 1465-1476 (2019).

57. Rozen EJ*, Roewenstrunk J*, Barallobre MJ*, Di Vona C*, Jung C, Figueiredo AF, Luna J, Fillat C, Arbonés ML, Graupera M, Valverde MA, **de la Luna S.** DYRK1A kinase positively regulates angiogenic responses in endothelial cells. *Cell Rep,* 23: 1867-1878 (2018).

56. Radó-Trilla N*, Arató K*, Pegueroles C, Raya A, **de la Luna S#,** Albà MM#. Key role of amino acid repeat expansions in the functional diversification of duplicated transcription factors. *Mol Biol Evol,* 32: 2263-2272 (2015).

55. Di Vona C, Bezdan D, Islam AB, Salichs E, Lopez-Bigas N, Ossowski S, **de la Luna S**. Chromatin-wide profiling of DYRK1A reveals a role as a gene-specific RNA polymerase II CTD kinase. *Mol Cell*, 57: 506-520 (2015).

    Research Highlight in: *DYRK1A targets Pol II. Andrea Du Toit. Nat Rev Mol Cell Biol, 16,127 (2015).*

54. Grau C*, Arato K*, Fernandez-Fernandez JM, Valderrama A, Sindreu C, Fillat C, Ferrer I, **de la Luna S,** Altafaj X. DYRK1A-mediated phosphorylation of GluN2A at Ser(1048) regulates the surface expression and channel activity of GluN1/GluN2A receptors. *Front Cell Neurosci,* 8: 331-337 (2014).

53. Papadopoulos C, Arato K, Lilienthal E, Zerweck J, Schutkowski M, Chatain N, Muller-Newen G, Becker W, **de la Luna S.** Splice variants of the dual specificity tyrosine phosphorylation-regulated kinase 4 (DYRK4) differ in their subcellular localization and catalytic activity. *J Biol Chem*, 286: 5494-5505 (2011).

52. Arbones ML, **de la Luna S.** DYRK1A (dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 1A). *Atlas Genetics Cytogenetics Oncol Haematol,* 15: 443-449 (2011).

51. Aranda S, Laguna A, **de la Luna S**. DYRK family of protein kinases: evolutionary relationships, biochemical properties, and functional roles. *FASEB J,* 25: 449-462 (2011).

50. Ferrón RS, Pozo N*, Laguna A*, Aranda S*, Moreno M, Fillat C, **de la Luna S**, Sánchez P, Arbonés ML#, Fariñas I#. Regulated segregation of kinase Dyrk1A during asymmetric neural stem cell division is critical for EGFR-mediated biased signaling. *Cell Stem Cell,* 7: 367-379 (2010).

***Recommended by Faculty of 1000**: http://f1000.com/prime/6262956*

49. Azkona G, Amador-Arjona A, Obradors-Tarrago C, Varea E, Arque G, Pinacho R, Fillat C, **de la Luna S**, Estivill X, Dierssen M. Characterization of a mouse model overexpressing beta-site APP-cleaving enzyme 2 reveals a new role for BACE2. *Genes Brain & Behavior,* 9: 160-172 (2010).

48. Martínez-Martínez S*, Genescà L*, Rodríguez A, Raya A, Salichs E, Were F, López-Maderuelo MD, Redondo JM, **de la Luna S**. The RCAN carboxyl-end mediates calcineurin docking-dependent inhibition via a site that dictates binding to substrates and regulators. *Proc Natl Acad Sci USA,* 106: 6117-6122 (2009).

47. Salichs E, Ledda A, Mularoni L, Albà MM, **de la Luna S**. Genome-wide analysis of histidine repeats reveals their role in the localization of human proteins to the nuclear speckles compartment. *PLoS Genet*, 5: e1000397 (2009).

46. Nikolaienko O, Skrypkina I, Tsyba L, Fedyshyn Y, Morderer D, Buchman V, **de la Luna S**, Drobot L, Rynditch A. Intersectin 1 forms a complex with adaptor protein Ruk/CIN85 *in vivo* independently of epidermal growth factor stimulation**.** *Cell Signal,* 21: 753-759 (2009).

45. Laguna A, Aranda S, Barallobre MJ, Barhoum R, Fernandez E, Fotaki V, Delabar JM, **de la Luna S**, de la Villa P, Arbonés ML. The protein kinase DYRK1A regulates caspase-9 mediated apoptosis during retina development**.** *Dev Cell,* 15: 841-853 (2008).

44. Aranda S, Alvarez M, Turró S, Laguna A, **de la Luna S**. Sprouty2-mediated inhibition of fibroblast growth factor signaling is modulated by the protein kinase DYRK1A. *Mol Cell Biol,* 28: 5899-5911 (2008).

***Recommended by Faculty of 1000:** http://f1000.com/prime/1124837*

43. Alvarez M, Altafaj X, Aranda S, **de la Luna S**. DYRK1A autophosphorylation in serine residue 520 modulates its kinase activity via 14-3-3ß binding. *Mol Biol Cell,* 18: 1167-1178 (2007).

42. Porta S, Martí E, **de la Luna S,** Arbonés ML. Differential expression of members of the RCAN family of calcineurin regulators suggests selective functions for these proteins in brain. *Eur J Neurosci,* 26: 1213-1226 (2007).

41. Scheller N, Resa P, **de la Luna S**, Galao RP, Albrecht M, Kaestner L, Lengauer T, Meyerhans A, Diez J. Identification of PatL1, a human homolog to yeast P body component Pat1. *BBA-Mol Cell Res,* 1773: 1786-1792 (2007).

40. Davies KJ, Ermak G, Rothermel BA, Pritchard M**,** Heitman J, Ahnn J, Henrique-Silva F, Crawford D, Canaider S, Strippoli P, Carinci P, Min KT, Fox DS, Cunningham KW, Bassel-Duby R, Olson EN, Zhang Z, Williams RS, Gerber HP, Pérez-Riba M**,** Seo H, Cao X, Klee CB, Redondo JM**,** Maltais LJ**,** Bruford EA, Povey S, Molkentin JD, McKeon FD, Duh EJ, Crabtree GR, Cyert MS, **de la Luna S,** Estivill X. Renaming the *DSCR1* /*Adapt78* gene gamily as *RCAN:* regulators of calcineurin. *FASEB J,* 21: 3023-3028 (2007).

39. **de la Luna S,** Estivill X. Cooperation to amplify gene-dosage-imbalance effects. *Trends Mol Med*, 12: 451-454 (2006).

38. Alvárez M, Estivill X, **de la Luna S**. DYRK1A accumulates in splicing speckles through a novel targeting signal and induces speckle disassembly. *J Cell Sci*, 116: 3099-3107 (2003).

37. Martí E, Altafaj X, Dierssen M, **de la Luna S**, Fotaki V, Perez-Riba M, Ferrer I, Estivill X. Dyrk1A expression pattern supports specific roles of this kinase in the adult central nervous system. *Brain Res*, 964: 250-263 (2003).

36. Genescà L, Aubareda A, Fuentes JJ, Estivill X, **de la Luna S,** Perez-Riba M. Phosphorylation of the FLISPP motif of calcipressin 1 affects calcineurin inhibition and calcipressin stabilization. *Biochem J*, 374: 1-9 (2003).

As postdoctoral researcher

Research articles (IRO, Barcelona)

35. Hilton JF, Christensen KE, Watkins D, Raby BA, Renaud Y, **de la Luna S**, Estivill X, MacKenzie RE, Hudson TJ, Rosenblatt DS. The molecular basis of glutamate formiminotransferase deficiency. *Human Mutation*, 22: 67-73 (2003).

34. Melman YF, Domènech A, **de la Luna S**, McDonald TV. Structural determinants of KvLqT1 control by the KCNE family of proteins. *J Biol Chem,* 88: 43-49 (2001).

33. Pucharcós C, Casas C, Nadal M, Estivill X, **de la Luna S**. 2001. The human intersectin genes and their spliced variants are differentially expressed. *Biochim Biophys Acta,* 1521: 1-11 (2001).

32. Fuentes JJ, Genescà L, Kingsbury TJ, Cunningham KW, Pérez-Riba M, Estivill X, **de la Luna S**. DSCR1, overexpressed in Down syndrome, is an inhibitor of calcineurin mediated signaling pathways. *Hum Mol Genet,* 9: 1681-1690 (2000).

31. Pucharcós C, Estivill X, **de la Luna S**. Intersectin 2, a new multimodular protein involved in clathrin-mediated endocytosis. *FEBS Lett,* 478: 43-51 (2000).

30. Solans A, Estivill X, **de la Luna S**. A new aspartyl protease on 21q22.3, BACE2, highly similar to Alzheimer's amyloid precursor protein ß-secretase. *Cytogenet Cell Genet,* 89: 177-184 (2000).

29. Solans A, Estivill X, **de la Luna S**. Cloning and characterization of human *FTCD*, a gene on 21q22.3, candidate for the glutamate formiminotransferase deficiency. *Cytogenet Cell Genet,* 88: 43-49 (2000).

28. Ars E, Serra E, **de la Luna S**, Estivill X, Lázaro C. Cold shock induces the insertion of a cryptic exon in the neurofibromatosis type 1 (NF1) mRNA. *Nucleic Acids Res,* 28: 1307-1312 (2000).

27. Pucharcós C, Fuentes JJ, Casas C, **de la Luna S**, Alcántara S, Arbonés ML, Soriano E, Estivill X, Pritchard M. *Alu*-splice cloning of human *Intersectin* (*ITSN*), a putative multivalent binding protein expressed in proliferating and differentiating neurons and overexpressed in Down syndrome. *Eur J Hum Genet*, 7: 704-712 (1999).

Research articles (UK)

26. **de la Luna S,** Allen KE, Mason S, La Thangue NB. Integration of a growth-suppressing BTB/POZ domain protein with the DP component of the E2F transcription factor. *EMBO J*, 18: 212-228 (1999).

25. Allen KE, **de la Luna S**, Kerkhoven RM, Bernards R, La Thangue NB. Distinct mechanisms of nuclear accumulation regulate the functional consequence of E2F transcription factors. *J Cell Sci*, 110: 2819-2831 (1997).

24. **de la Luna S,** Burden M, Lee CW, La Thangue NB. Nuclear accumulation of the E2F heterodimer regulated by subunit composition and alternative splicing of a nuclear localization signal. *J Cell Sci*, 109: 2443-2452 (1996).

23. Ormondroyd E*, **de la Luna S***, La Thangue NB. A new member of the DP family, DP-3, with distinct protein products suggests a regulatory role for alternative splicing in the cell cycle transcription factor DRTF1/E2F. *Oncogene*, 11: 1437-1446 (1995).

Research articles (CNB, Madrid)

22. Aragón T, **de la Luna S**, Novoa I, Carrasco L, Ortín J, Nieto A. Translation factor eIF4GI is a cellular target for NS1 protein, the specific translational activator of influenza virus. *Mol Cell Biol,* 20: 6259-6268 (2000).

21. Marion RM, Zürcher T, **de la Luna S,** Ortín J. Influenza virus NS1 protein interacts with viral transcription-replication complexes *in vivo. J Gen Virol*, 78: 2447-2451 (1997).

20. Perales B, **de la Luna S**, Palacios I, Ortín J. Mutational analysis identifies functional domains in the Influenza A Virus PB2 Polymerase subunit. *J Virol*, 70: 1678-1686 (1996).

19. Sanz-Ezquerro JJ, Zürcher T, **de la Luna S**, Ortín J, Nieto A. The amino-terminal one-3rd of the influenza-virus PA protein is responsible for the induction of proteolysis. *J Virol*, 70: 1905-1911 (1996).

18. Zürcher T, **de la Luna S**, Sanz-Ezquerro JJ, Nieto A, Ortín J. Mutational analysis of influenza virus A/Victoria/3/75 PA protein: identification of a dominant negative mutant. *J Gen Virol*, 77: 1745-1749 (1996).

17. **de la Luna S,** Fortes P, Beloso A, Ortín J. Influenza virus NS1 protein enhances the rate of translation initiation of viral mRNAs. *J Virol*, 69: 2427-2433 (1995).

16. Ochoa M, Bárcena J, **de la Luna S**, Melero JA, Douglas AR, Nieto A, Ortín J, Skehel JJ, Portela A. Epitope mapping of cross-reactive monoclonal antibodies specific for the influenza A virus PA and PB2 polypeptides. *Virus Res*, 37: 305-315 (1995).

15 Sanz-Ezquerro JJ, **de la Luna S**, Ortín J, Nieto A. Individual expression of influenza virus PA protein induces degradation of coexpressed proteins. *J Virol*, 69: 2420-2426 (1995).

14. Bárcena J, Ochoa M, **de la Luna S**, Melero JA, Nieto A, Ortín J, Portela A. Monoclonal antibodies against Influenza Virus PB2 and NP polypeptides interfere with the initiation step of viral mRNA synthesis *in vitro*. *J Virol*, 68: 6900-6909 (1994).

13. Mena I, **de la Luna S**, Albó C, Martín J, Nieto A, Ortín J, Portela A. Synthesis of biologically active influenza virus core proteins using a vaccinia virus-T7 RNA polymerase expression system. *J Gen Virol*, 75: 2109-2114 (1994).

12. Nieto A, **de la Luna S**, Bárcena J, Portela A, Ortín J. Complex structure of the nuclear translocation signal of influenza virus polymerase PA subunit. *J Gen Virol*, 75: 29-36 (1994).

11. Montejo de Garcini E, **de la Luna S**, Domínguez JE, Avila J. Overexpression of tau protein in Cos-1 cells results in the stabilization of centrosome-independent microtubules and extension of cytoplasmic processes. *Mol Cell Biochemi*, 130: 187-196 (1994).

As graduate student

10. **de la Luna S,** Martín J, Portela A, Ortín J. Influenza virus naked RNA can be expressed upon transfection into cells co-expressing the three subunits of the polymerase and the nucleoprotein from simian virus 40 recombinant viruses. *J Gen Virol*, 74: 535-539 (1993).

9 Nieto A, **de la Luna S**, Bárcena J, Portela A, Valcárcel J, Melero JA, Ortín J. Nuclear transport of influenza virus polymerase PA protein. *Virus Res,* 24: 65-75 (1992).

8. **de la Luna S,** Martínez C, Ortín J. Molecular cloning and sequencing of influenza virus A/Victoria/3/75 polymerase genes: Sequence evolution and prediction of possible functional domains. *Virus Res*, 13: 143-156 (1989).

7. **de la Luna S,** Ortín J. *pac* gene as an efficient dominant marker and reporter gene in mammalian cells. *Methods Enzymol*, 16: 376-385 (1992).

6. Martínez C, **de la Luna S**, Peláez F, López de Turiso JA, Valcárcel J, de Haro C, Ortín J. Permanent cell lines showing temperature-dependent expression of Adenovirus-Associated RNA. *J Virol*, 63: 5445-5450 (1989).

5. de la Torre JC, **de la Luna S**, Díez J, Domingo E. Resistance to foot-and-mouth disease virus mediated by trans-acting cellular products. *J Virol*, 63: 2385-2387 (1989).

4. **de la Luna S,** Soria I, Pulido D, Ortín J, Jiménez A. Efficient transformation of mammalian cells with constructs containing a puromycin resistance marker. *Gene*, 62: 121-126 (1988).

3. **de la Luna S,** Portela A, Martínez C, Ortín J. Permanent cell lines established from ts-COS cells that regulate by temperature the amplification and expression of cloned genes. *Nucleic Acids Res*, 15: 6117-6123 (1987).

2. Portela A, Melero JA, **de la Luna S,** Ortín J. Construction of cell lines that regulate by temperature the amplification and expression of influenza virus non-structural protein genes. *EMBO J,* 5: 2387-2392 (1986).

1. Portela A, **de la Luna S**, Melero JA, Vara J, Jiménez A, Ortín J. Regulation of gene amplification and expression in cells that constitutively express a temperature sensitive SV40 T-antigen. *Nucleic Acids Res*, 13: 7913-7927 (1985).

Non-peer reviewed articles

Boni J, **de la Luna S**. DYRK kinase family in cancer. Scholarly Community Encyclopedia. https://encyclopedia.pub/2298

Estivill X, Arbonés ML, **de la Luna S**, Fuentes JJ, Fillat C, Guimerá J, Arán JM, Pérez-Riba M, Pritchard M, Dierssen M. Disección molecular del cromosoma 21 y modelos murinos del syndrome de Down. *Progresos en Diagnóstico Prenatal*, 11: 162-166 (1999).

de la Luna S, Ortín J. pPUR – a novel mammalian vector encoding puromycin acetyltransferase, a dominant selectable marker. *CLONTECHniques,* 12-14 April (1994).

Ortín J, **de la Luna S**. Genética antisentido. Transcripción y replicación de virus con RNA de cadena negativa. *Investigación y Ciencia*. Abril (1992).

Books

I. Mena, **S. de la Luna**, J. Martín, C. Albó, B. Perales, A. Nieto, A. Portela and J. Ortín. Systems to express recombinant RNA molecules by the influenza A virus polymerase *in vivo*. In Methods in Molecular Genetics. Molecular Virology Techniques, Part B. K.W. Adolph, (ed.). Academic Press, Orlando (FL), USA (1995).

S. de la Luna and J. Ortín. Pac gene as an efficient dominant marker and reporter gene in mammalian cells. pp. 456-465. In Recombinant DNA Methodology II. R Wu (ed.). Cold Spring Harbour Laboratory Press. Cold Spring Harbor, USA (1995).

A. Nieto, **S. de la Luna**, J. Bárcena, J. Martín, P. Fortes, J.J. Sanz, P. Suárez, A. Portela and J. Ortín. Studies on the transcription and replication of influenza virus RNA. pp. 275-279. In Options for the control of influenza II. Elsevier Science Publishers, Netherlands (1993).

J. Ortín, J.A. López de Turiso, **S. de la Luna**, J. Valcárcel, C. Martínez, P. Suárez. Control de la transcripción y replicación del ARN del virus de la gripe. En Biotecnología de aplicación farmaceútica, Vol. 10, pag. 41-49. Monografías Dr. A. Esteve (ed. R. González-Duarte), Madrid, Spain (1991).

Patents and Utility Models

A. Portela, **S. de la Luna** y J. Ortín
Regulable COS cells expression systems
CSIC, GB2196985 *Priority date:* 22/10/1986

S. de la Luna y J. Ortín
pPUR, a novel mammalian vector encoding puromycin acetyltransferase, a dominant selectable marker
CLONTECH Laboratories, Inc. Catalogue number 6156-1

N.B. La Thangue and **S. de la Luna**
DP and E2F protein nuclear localisation signals and their use
Medical Research Council
GB 97/01324 *Date:* 15/05/1997
WO 97/43647 *Date:* 20/11/1997

N.B. La Thangue and **S. de la Luna**
Transcription factor DP-3 and isoforms thereof
PROLIFIX LIMITED
PCT/GB97/01324 *Date:* 15/05/1996
US 5859199 *Date:* 12/01/1999

N.B. La Thangue and **S. de la Luna**
DP transcription factor-interacting protein and its use
WO9927091 *Date:* 21/11/1997

N.B. La Thangue and **S. de la Luna**
Assay for a putative regulator of cell cycle progression
PROLIFIX LIMITED
US 6159691 *Date:* 12/12/2000
US 6387649 *Date:* 14/05/2002

N.B. La Thangue and **S. de la Luna**
New DP transcription factor-interacting protein designated DIP
University of Glasgow
WO9927091-A1 AU9912484-A *Date:* 14/11/1999

Presentations in Congresses (5 last years)

B. Balbastre and **S. de la Luna**
A protein is known by the company it keeps: defining the DYRKs interactome
Oral presentation
XIII CRG PhD Symposium. Barcelona (Spain), November 2019

S. de la Luna
El estado actual de las investigaciones sobre el Síndrome DYRK1A
Invited speaker
I Jornada sobre el Síndrome de DYRK1A. Torre Pacheco (Spain), November, 2019

J. Boni, K. Arato and **S. de la Luna**
Biochemical characterization of DYRK1A missense variants in DYRK1A haploinsufficiency syndrome
Poster presentation
3rd International Conference of the Trisomy 21 Research Society. Barcelona (Spain), June 2019

C. Di Vona, J. Roewenstrunk, B. Balbastre, J. Chen, E. Borras, M.J. Barallobre, C. Dong, E. Sabidó, M.L. Arbonés, M.S.Y. Huen and **S. de la Luna**
A comprehensive proteomics-based interaction screen links DYRK1A to RNF169 and to the DNA damage response
Oral presentation
3rd International Conference of the Trisomy 21 Research Society. Barcelona (Spain), June 2019

L. Barba, C. Di Vona, R. Cort and **S. de la Luna**
DYRK1A protein kinase as a chromatin-associated transcriptional regulator
Poster presentation
3rd International Conference of the Trisomy 21 Research Society. Barcelona (Spain), June 2019

J. Boni, C. Rubio Peréz, G. Raimondi, C. Di Vona, K. Arató, C. Fillat, N. Lopez Bigas and **S. de la Luna**
The dual-specificity kinase DYRK1A is a potential new tumour suppressor in endometrial cancer
Poster presentation
Genes and Cancer 2019. Cambridge (UK), April 2019

L. Barba, C. Di Vona, R. Cort and **S. de la Luna**
Dynamics of DYRK1A-dependent BRCA1 chromatin occupancy
Oral presentation
IX SCB Chromatin and Epigenetics Meeting. Barcelona (Spain), March 2019

B. Balbastre and **S. de la Luna**
Defining the DYRKs functional networks: chemical genetics and proximity-dependent labelling approaches for the identification of substrates and interacting protein partners
Poster presentation
XII CRG PhD Symposium. Barcelona (Spain), November 2019

J. Boni, C. Rubio Peréz, K. Arató, N. Lopez Bigas and **S. de la Luna**
A new role for the kinase DYRK1A as tumor suppressor in endometrial cancer
Poster presentation
EU-LIFE Scientific Meeting: Precision Medicine. Institute Curie, Paris (France), May 2018

M.J. Barallobre, J. Arranz, K. Arató, G. Sánchez-Elexpuru, S. Najas, I. Sahún, E. Rebollo, M.P. Sánchez, **S. de la Luna**, M.L. Arbonés
A mouse model for *DYRK1A*-related intellectual disability syndrome presents autistic-like behaviours, epilepsy and altered brain cytoarchitecture
Poster presentation
Annual Meeting CIBERER. Castelldefells (Spain), March 2018

R. Cort, C. Di Vona and **S. de la Luna**
Investigating the role of DYRK1A in tRNA biogenesis
Oral presentation
XI CRG PhD Symposium. Barcelona (Spain), November 2017

K. Vander Stelt, K. Arato, C. Di Vona, J. Slebe, **S. de la Luna** and I. Concha
Role of DYRK1A and DYRK1B in the regulation of Muscle Glycogen Synthase in cell components of seminiferous epithelium
Poster presentation
XL Congreso de la Sociedad Española de Bioquimica y Biologia Molecular (SEBBM), Barcelona (Spain), October 2017

L. Barba, C. Di Vona and **S. de la Luna**
Regulation of ribosomal protein gene expression by DYRK1A
Poster presentation
EMBO Workshop on "Protein Synthesis and Translational Control". EMBL, Heidelberg (Germany), September 2017

S. de la Luna
The DYRK1A kinase positively regulates angiogenic responses in endothelial cells
Invited Talk
International Conference on "DYRK1A, related kinases & human disease". Saint Malo (France), March 2017

J. Roewenstrunk, C. Di Vona, E. Borras, E. Sabido and **S. de la Luna**
DYRK1A Interaction of the protein kinase DYRK1A with RNF169 suggests a role for this kinase in DNA repair
Oral presentation
Intnal Conference on "DYRK1A, related kinases & human disease". Saint Malo (France), March 2017

C. Di Vona, L. Barba and **S. de la Luna**
DYRK1A as a gene-specific RNA polymerase II CTD kinase
Oral presentation
Intnal Conference on "DYRK1A, related kinases & human disease". Saint Malo (France), March 2017

L. Barba, C. Di Vona and **S. de la Luna**
Regulation of ribosomal protein gene expression by DYRK1A
Poster presentation
X CRG PhD Symposium. Barcelona (Spain), December 2016

J. Boni and **S. de la Luna**
Investigating DYRK protein kinases as potential molecular drivers in cancer
Oral presentation
X CRG PhD Symposium. Barcelona (Spain), December 2016

L. Barba, C. Di Vona and **S. de la Luna**
Chromatin bound-DYRK1A: recruitment and regulatory mechanisms
Poster presentation
XXXIX Congreso de la Sociedad Española de Bioquímica y Biología Molecular (SEBBM). Salamanca (Spain), September 2016

M. Gómez de Salazar Honrubia, C. Grau, K. Arató, **S. de la Luna**, F. Ciruela and X. Altafaj
DYRK1A, a novel regulator of NMDA receptors: implications for Down syndrome and Alzheimer's disease
Poster presentation
10th FENS Forum of Neuroscience. Copenhagen (Denmark), July 2016

J. Boni, C. Rubio-Pérez, N. Lopéz-Bigas and **S. de la Luna**

Investigating DYRK protein kinases as potential molecular drivers in cancer
Poster presentation
AMeeGuS IGC-CRG International PhD Students Retreat. Setubal (Portugal), May 2016

L. Barba and **S. de la Luna**
Molecular mechanisms and functions of chromatin associated-DYRK1A
Oral presentation
IX CRG PhD Symposium. Barcelona (Spain), November 2015

L. Barba, C. Di Vona and **S. de la Luna**
Molecular mechanisms and functions of chromatin associated-DYRK1A
Poster presentation
B·Debate International Symposium “Coding and Non-Coding Functions of the Genome”. Barcelona (Spain), October 2015

J. Roewenstrunk, C. Di Vona, E. Borras, E. Sabido and **S. de la Luna**
Interaction of the protein kinase DYRK1A with RNF168 and RNF169 suggests a role for this kinase in DNA repair
Poster presentation
EMBO Conference "The DNA damage response in cell physiology and disease". Cape Sounio (Greece), October 2015

E.J. Rozen, C. Jung, J. Roewenstrunk, M.J. Barallobre, M.L. Arbonés, M.A. Valverde and **S. de la Luna**
The protein kinase DYRK1A is a critical regulator of VEGF/calcium/NFAT signaling in angiogenesis
Oral presentation
XXXVIII Congreso de la Sociedad Española de Bioquímica y Biología Molecular (SEBBM). Valencia (Spain), September 2015

C. Di Vona, L. Barba and **S. de la Luna**
A novel role for the DYRK1A protein kinase as a chromatin-associated transcriptional regulator
Poster presentation
Cold Spring Harbor Laboratory Meeting: Mechanisms of Eukaryotic Transcription 2015. Cold Spring Harbor, NY (USA), August 2015

E.J. Rozen, C. Jung, J. Röwenstrunk, M.L. Arbonés, M.A. Valverde and **S. de la Luna**
DYRK1A regulates VEGF/calcium/NFAT signaling and endothelial cell function via Sprouty2 phosphorylation
Poster presentation
Gordon Research Conferences: New Mechanisms in Vascular Patterning and Specialization: From Cells to Functional Networks. Salve Regina University, Newport, RI (USA), August 2015

J. Luna, X. Bofill-De Ros, C. Di Vona, M. Gironella, M. Cuatrecasas, **S. de la Luna** and C. Fillat
DYRK1A overexpression in pancreatic ductal adenocarcinoma contributes to tumor growth
Oral presentation
47th Annual Meeting of the European Pancreatic Club. Toledo (Spain), June 2015

C. Di Vona, D. Bezdan, A.B.M.M.K. Islam, N. López-Bigas, S. Ossowski and **S. de la Luna**
A novel role for the DYRK1A protein kinase as a gene-specific RNA polymerase II CTD kinase
Invited talk
1st International Conference of the Trisomy 21 Research Society. Paris (France), June 2015

L. Barba, C. Di Vona and **S. de la Luna**
Chromatin bound-DYRK1A: recruitment and regulatory mechanisms
Poster presentation
Young Researchers in Life Sciences Symposia. Institute Pasteur, Paris (France), May 2015

Student Supervision

PhD Thesis

- **Sushmita Varhadi,** PhD Program in Biomedicine. University Pompeu Fabra, Barcelona.
  On-going.
- **Borja Balbastre,** PhD Program in Biomedicine. University Pompeu Fabra, Barcelona.
  On-going.
- **Rianne Cort,** *Exploring the role of DYRK1A in RNA polymerase III transcription: DYRK1A as a potential regulator of TFIIIC.* Co-supervisor: Chiara Di Vona. PhD Program in Biomedicine. University Pompeu Fabra, Barcelona. Excellent Cum Laude. December, 2019.
  Publications: in preparation.
- **Jacopo Boni**, *DYRK1A in cancer: good or evil?. Defining properties of DYRK1A kinase as a novel tumor driver.* PhD Program in Biomedicine. University Pompeu Fabra, Barcelona. Excellent Cum Laude. June, 2019.
  Publications: #58, in preparation.
- **Laura Barba**, *Chromatin-bound DYRK1A: promoter occupancy and implications in the regulation of ribosomal protein gene expression.* PhD Program in Biomedicine. University Pompeu Fabra, Barcelona. Excellent Cum Laude. June, 2018.
  Publications: in preparation.
- **Julia M. Röwenstrunk**, *RNF169 and RNF168 novel substrates of DYRK1A: connecting DYRK1A to DNA-damage repair.* PhD Program in Biomedicine. University Pompeu Fabra, Barcelona. Excellent Cum Laude. December, 2016.
  Publications: #57, #60.
- **Chiara Di Vona**, *Nuclear DYRK1A: new insights into its role within the nucleus.* School of Biology. University Pompeu Fabra. Excellent Cum Laude. September, 2013.
  Publications: #55, #57, #60, #61.
- **Krisztina Arató**, *Regulation of the stability of the protein kinase DYRK1A: establishing connections with the Wnt signaling pathway.* University Pompeu Fabra. Excellent Cum Laude. December, 2010.
  Publications: #53, #54, #56, #59.
- **Eulàlia Salichs**, *Polyhistidine repeats and DYRK1A: from the localization to the function.* University Pompeu Fabra. Excellent Cum Laude. December, 2008.
  Publications: #47, #48, #55.
- **Sergi Aranda**, *DYRK1A role in signal transduction pathways*. University of Barcelona. PhD Excellent Cum Laude. July, 2007.
  Publications: #43, #44, #45, #50, #51.
- **Mónica Alvarez**, *Subcellular localization of the protein kinase DYRK1A: compartments, signals and regulation.* University of Barcelona. Excellent Cum laude. December, 2004.
  Publications: #38, #43, #44.
- **Eulàlia Genescà**, *DSCR1 (Down syndrome candidate region 1): from gen to function.* Co-supervisor: Dr. M. Pérez-Riba. University of Barcelona. PhD Excellent Cum laude. July, 2003.
  Publications: #32, #36, #48.
- **Anna Domènech**, *Identification of novel genes in the human chromosome 21q22. Molecular characterization of KCNE2 and KNCE3.* Co-supervisors: Dr. X. Estivill, Dr. M. Pritchard. University of Barcelona. Excellent Cum laude. December, 2001.
  Publications: #34.
- **María Asunción Solans**, *Genetic and molecular analysis of human chromosome 21. Cloning of genes from the long arm.* Co-supervisors: Dr. X. Estivill, Dr. M. Pritchard. University of Barcelona. Excellent Cum laude. October, 2000.
  Publications: #29, #30.

Master Thesis

- **Marianna Dallastella,** *The transcriptional repressor EMSY as a potential functional partner of DYRK1A protein kinase.* Co-supervisor: Laura Barba. Master Program in Biomedical Sciences. University of Applied Sciences (H-BRS), Bonn, Germany. June, 2019.
  Followed by: PhD at FIOCRUZ - Fundação Oswaldo Cruz (Brasil).
- **Ana Dorrego-Rivas**, *Analysis of the interaction of DYRK1A with the deubiquitinase USP7.* Master in Translational Medicine. University of Barcelona. January-June, 2016.
  Followed by: PhD at the Institute of Health and Medical Research, Neurocentre Magendie U862, Bordeaux Neurocampus (France).
- **Edurne García Vidal**, *Analysis of the dimerization of the protein kinases DYRK.* Co-supervisor: Krisztina Arato. Master in Genetics and Genomics, University of Barcelona. February-September, 2014.
  Followed by: PhD at IRSI Caixa, Research Institute on VIH, Barcelona (Spain).
- **Orlando Serrano Garrido**, *Study of the contribution of the cysteine residues within the activation segment of DYRK1A to its enzymatic activity.* Master in Genetics and Genomics, University of Barcelona. January-September, 2013.
  Followed by: PhD at GENyO. Pfizer-University of Granada-Junta de Andalucia Center for Genomics and Oncological Research (Granada, Spain).
- **Julia Röwenstrunk**, *Characterization of the WD-repeat Protein DCAF7 and identification of binding partners.* Master in Medical Biology, Universität Duisburg-Essen, Germany. January-September, 2011.
  Followed by: PhD at CRG in my group.
- **Chrisovalentis Papadopoulus**, *Molecular characterization of DYRK4: a novel member of the DYRK family of protein kinases.* Master in Molecular and Applied Biotechnology. RWTHA - Rheinisch-Westfälische Technische Hochschule Aachen, Germany. September-February, 2007.
  Followed by: PhD at Rheinisch-Westfälische Technische Hochschule Aachen (Germany).

Final Degree Projects

- **Noemi Castelluccio,** *Generating tools to study the role of the Dyrk kinases during mitosis in Xenopus egg extracts and in vitro.* Co-supervisor: Isabelle Vernos. School of Medicine, Medical Sciences and Nutrition, University of Aberdeen, UK. January-March, 2019.
  Followed by: MsC in Reproductive Biology and Assisted Human Reproduction Techniques, Universidad Autónoma de Barcelona..
- **Edurne León Sánchez**, *Estudio de la interacción entre las proteínas DYRK1A y USP7.* School of Biotechnology. University of Lleida (Spain). March-June, 2014.
  Followed by: Master in Genetics and Cellular Biology, University of Alcala de Henares (Spain).
- **Hector Anta Rodriguez**, *Validation of DYRK1A putative partners: TARDBP AND API5*. School of Biology. University of Leon (Spain). June-August, 2008.
  Followed by: PhD at Institute of Biomedical Research-IRB, Barcelona (Spain).
