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## DAVID SANCHO , Ph.D.

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<http://www.cnic.es/en/inflamacion/inmunobiologia/index.php>

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## CURRENT POSITIONS

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- Oct 2020* **President of Biomedicine Area**, State Agency for Research, Ministry of Science and Innovation.
- Oct 2016* **Associate Professor and Group Leader**, Immunobiology lab, Myocardial Pathophysiology Area, CNIC.

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## EDUCATION

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- Nov 2003* **Ph.D. degree in Sciences**  
Thesis: "Role of CD69 in immune and inflammatory response"  
Grade: Sobresaliente "cum laude" by unanimity, highest honours  
Advisor: Dr. Francisco Sánchez-Madrid. Department of Molecular Biology, Madrid Autonomous University.  
Awards: - Extraordinary Prize to doctoral thesis by Madrid Autonomous University  
- Prize to best doctoral thesis (2003-2004) by the Centre of Molecular Biology "Severo Ochoa", Madrid Autonomous University.  
- "Ramón Areces" prize from the National Royal Academy of Doctors to the best doctoral thesis.
- May 2000* **Clinical Specialization in Immunology.**  
Spanish Health and Education Ministries. Immunology Service, La Princesa Hospital, Madrid.
- July 1995* **BSc degree**  
School of Biology. Murcia University (GPA 4/4).  
Awards: - Extraordinary Prize by Murcia University.  
- First National Prize in Biology to the best academic performance at the National level during the complete degree, Spanish Education Ministry (1995).

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## PREVIOUS POSITIONS

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- Aug 2017-Sep2020*  
**Coordinator Immunity, Infection and New Therapies**, subarea of the Biomedicine Area, State Agency for Research, Ministry of Science and Innovation.
- Sept 2010-Sep2016*  
**Assistant Professor and Group Leader**, Immunobiology lab, Myocardial Pathophysiology Area, CNIC.

Sep 2015-Jun2017

**Honorary Professor** at Biochemistry Department of Universidad Autónoma de Madrid.

Sept 2009-Aug 2010

**Junior I Group Leader** at the CNIC, Spanish National Centre for Cardiovascular Research. Ranked 1<sup>st</sup> in the Biomedicine group of the International "Ramón y Cajal Programme" by the Spanish Ministry of Science and Innovation.

Sept 2004 – Aug 2009

Post-doctoral fellow at London Research Institute, Cancer Research UK, London, UK. Line of research: Characterisation of a new C-type lectin.

Advisor: Dr. Caetano Reis e Sousa.

Funding during this period from: 1) Long-term Fellowship from European Molecular Biology Organization (EMBO) (ALTF 336-2004); 2) Marie Curie Intra-European Contract within the 6<sup>th</sup> European Community Framework Programme (MEIF-CT-2005-009205); 3) Cancer Research UK Fellowship and Extension Contract.

Nov 2001 – Aug 2004

Research fellowship from the Instituto de Salud Carlos III (Spanish Health Ministry, fellowship for research training for both PhD students and post-docs).

Advisor: Dr. Francisco Sánchez-Madrid.

Line of research: *In vivo* function of CD69.

May 2000 – Oct 2001

"Severo Ochoa" predoctoral fellowship from Ferrer Foundation for Biomedical Research.

Advisor: Dr. Francisco Sánchez-Madrid

Line of research: cellular compartmentalization and functional role of the protein tyrosine kinase Pyk2 during specific immune interactions.

Apr 1996 – Apr 2000

Post-graduate clinical training grant from the Spanish Ministry of Health. Specialization in Immunology via B.I.R. (Internship). Servicio de Inmunología, Hospital de la Princesa.

Advisor: Dr. Francisco Sánchez-Madrid.

Line of research: analysis of the expression and function of the early activation antigen CD69.

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## CONTRACTS AND FELLOWSHIPS

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Sept 2004 – Aug 2009

Cancer Research UK Fellowship, London, UK.

June 2006 – May 2008

Marie Curie Intra-European Contract within the 6<sup>th</sup> European Community Framework Programme (MEIF-CT-2005-009205).

Sept 2004 – May 2006

Long-term Fellowship from European Molecular Biology Organization

(EMBO) (ALTF 336-2004).

*Nov 2001 – Aug 2004*

Research PhD fellowship from the Instituto de Salud Carlos III (BEFI).

*May 2000 – Oct 2001*

“Severo Ochoa” predoctoral fellowship from Ferrer Foundation for Biomedical Research.

*Apr 1996 – Apr 2000*

Post-graduate clinical training grant from the Spanish Ministry of Health. Specialization in Immunology via B.I.R. (Internship). Servicio de Inmunología, Hospital de la Princesa.

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## GRANT SUPPORT AS PRINCIPAL INVESTIGATOR

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### Active

1. Title: Molecular Regulation of macrophage and dendritic cell function. Participant Institution: Fundación Centro Nacional de Investigaciones Cardiovasculares Carlos III. PI: David Sancho Madrid. Funding Institution: **Ministerio de Ciencia e Innovación. Agencia Estatal de Investigación. PID2019-108157RB**. From: 01/06/2020 To: 31/05/2023 Total Amount: 435,600€ + 1 pre-doctoral fellowship.
2. Title: Inmunidad Tumoral e Inmunoterapia del Cáncer (IMMUNOTHERCAN-CM); Ref: **B2017/BMD-3733**. Participant Institution: Consortium with node in the Fundación Centro Nacional de Investigaciones Cardiovasculares Carlos III. PI of the IMMUNOBIOL group at CNIC: David Sancho Madrid. Funding Institution: Ayudas para la realización de Programas de Actividades de I+D entre Grupos de Investigación de la **Comunidad de Madrid** en Tecnologías y en Biomedicina, cofinanciado con Fondos Estructurales. Comunidad de Madrid. From: 01/01/2018 To: 31/12/2021 Total Amount for consortium (9 groups): 952.472,28€
3. Title: Brain-gut cross-talk in stroke: targeting gut barrier dysfunction and immune responses to improve stroke outcome (Exp: 130/C/2017). Participant Institution: Collaborative project with the Fundación Centro Nacional de Investigaciones Cardiovasculares Carlos III. PI CNIC node: David Sancho Madrid. Funding Institution: Ayudas a la investigación en ictus y lesiones medulares y cerebrales traumáticas. Fundación **La Marató de TV3**. From: 2018 To: 2021. Total Amount for CNIC node: 86.250 €
4. Title: Functional characterisation of mitochondrial metabolic adaptations to innate sensing in dendritic cell subsets. **H2020-ERC-2016-CONSOLIDATOR GRANT 725091-MITOMAD**. Participant Institution: Fundación Centro Nacional de Investigaciones Cardiovasculares Carlos III. PI: David Sancho Madrid. Funding Institution: European Commission, H2020. From: 01/12/2017 To: 30/11/2022 Total Amount: 1,995,000€
5. Title: “PROCROP-Professional cross-priming for ovary and prostate cancer”. H2020 personalising Health and Care (**635122-PROCROP H2020**). Coordinator: Ignacio Melero (CIMA, Pamplona). Consortium with 7 international Institutions as partners. *PI CNIC node: David Sancho*. Funding Institution: EU Framework Programme for Research and Innovation H2020 Date: 01/09/2015 to 28/02/2021. Funding CNIC node: 655.000€.

## a) Finished

1. Title: Caracterización Funcional de la Regulación de la Inmunidad Innata y Adaptativa por las Células Dendríticas. Participant Institution: Fundación Centro Nacional de Investigaciones Cardiovasculares Carlos III. PI: David Sancho Madrid. Funding Institution: Ministerio de Economía, Industria y Competitividad. SAF2016-79040-R. From: 01/12/2016 To: 30/11/2019 Total Amount: 290,000€ + 1 pre-doctoral fellowship.
2. Title: Immunotherapy by targeting dendritic cells with nanoparticles. Participant Institution: Fundación Centro Nacional de Investigaciones Cardiovasculares Carlos III. PI: David Sancho Madrid. Funding Institution: **Fondation Acteria**. From: 2017 To: 2019 Total amount: 150,000€
3. Title: “Efectos funcionales de la detección de infección y muerte celular por células mieloides”. *PI: David Sancho*. Funding Institution: Ministry of Economy and Competitivity : **SAF2013-42920-R**. Participant Institution: CNIC. Date: 2014- December 2016. Funding: 278,300 € + 1 predoctoral fellowship.
4. Title: Red de inmunoterapia del Cáncer (REINCA). Funding Institution: Ministerio de economía y Competitividad. **SAF 2014-53563-REDT**. Consortium with 10 participant institutions coordinated by J. J. Lasarte (CIMA, Pamplona). CNIC is partner and *David Sancho is PI at CNIC node*. Date: 2014 – 2016. Funding: 32.000€
5. Title: Sensing necrosis by C-type lectin receptors in inflammation models in vivo. PI: David Sancho. Funding Institution: **Research Cooperation Agreement with Medimmune (Cambridge)**. Participant Institution: CNIC. Date 2011-2013 (extended until 30/06/2017). Funding: 263,254.71€.
6. Title: Immune functions of myeloid Syk-coupled C-type lectin receptors sensing necrosis. *PI: David Sancho*. Funding Institution: European Research Commission. **ERC-2010 StG 260414** Starting Grant. Participant Institution: CNIC. Date: 12/2010-08/2016. Funding: 1,297,671.98 €.
7. Title: Immune functions of myeloid Syk-coupled C-type lectin receptors sensing necrosis. *PI: David Sancho*. Funding Institution: Ministry of Science and Innovation. **SAF2010-15120**. Participant Institution: CNIC. Date: 01/01/2011- 31/12/2013. Funding: 193,600 € + 1 predoctoral fellowship.
8. Title: Contribución del subgrupo de células dendríticas CD8+ y de la quinasa Syk al desarrollo de respuestas adaptativas durante procesos patológicos que generan necrosis in vivo. *PI: David Sancho*. Funding Institution: MICINN. Programa Ramón y Cajal. **RyC 2009-04235**. Participant Institution: CNIC. Date: 15/11/2009 - 14/11/2014. Funding: 192,480 €

## **FUNDING FOR LAB PERSONNEL. FELLOWSHIPS AND CONTRACTS**

- 2021-07. EU/MSCA-IF Postdoc Research Fellowship to Gillian Dunphy (2 years)
- 2020-09. “La Caixa” Postdoctoral Junior Leader to Stefanie Wculek (3 years)
- 2020-01. EMBO long-term fellowship to Dieke van Dinther (2 years)
- 2019-10. FPU2018 PhD fellowship to Irene Adán (4 years)
- 2019-07. EMBO long-term fellowship to Gillian Dunphy (2 years)
- 2019-03. Juan de la Cierva-F postdoc contract to Stefanie Wculek (2 years)
- 2018-07. FPI PhD fellowship to Elena Priego (4 years)

- 2018-01. Caixa PhD fellowship to Ignacio Heras (4 years)
- 2017-10. FPU PhD fellowship to Sofía C. Khouili (4 years)
- 2017-08. AECC postdoc contract to Carlos del Fresno (4 years)
- 2016-07- EMBO Long Term Fellowship to Stefanie K. Wculek (2 years)
- 2016-01- FPI PhD fellowship to Paula Saz (4 years)
- 2015-05- FPI PhD fellowship to Paola Brandi (4 years)
- 2014-11- Caixa PhD fellowship to Francisco J. Cueto (4 years)
- 2014-09- RESPIRE2 postdoc contract to Laura Conejero (2 years)
- 2014-09- CNIC master fellowship to Paula Saz (1 year).
- 2013-10- Caixa PhD fellowship to Neris Michel Enamorado (4 years).
- 2013-09- CNIC master fellowship to Francisco J. Cueto (1 year)
- 2012-11 - Juan de la Cierva postdoc contract to Johan Garaude (3 years).
- 2012-09 - CNIC master fellowship to Neris Michel Enamorado (1 year)
- 2012-04 - EMBO short term fellowship to Johan Garaude (3 months).
- 2012-01 - FPU PhD fellowship to María Martínez López (4 years).
- 2011-09 - CNIC master fellowship to Jaime Fernández Barrera (1 year)
- 2011-09 - FPI PhD fellowship to Helena M. Izquierdo (4 years).

## PUBLICATIONS IN PEER-REVIEWED INTERNATIONAL JOURNALS

**INDICATORS OF SCIENTIFIC PRODUCTION** (ISI-WoS, Journal of Citations Reports)

**Bibliometric report** Data obtained from Clarivate's Web of Science, Journal Citation Reports and Essential Science Indicators (september 2020)

SCIENTIFIC CAREER			
		Articles and reviews in WOS	Articles and reviews in WOS as main author [1]
<i>Production</i>	Articles and reviews in IF journals	95	36
<i>IF related data</i>	% art/rev in Q1 journals	84%	88%
	% art/rev in D1 journals	58%	59%
	% art/rev in TOP3 journals	30%	32%
<i>Citations related data</i>	Citation received (until September 2020)	6425	2690
	Mean citations per document	67,63	76,86
	Crown Indicator (2010-2020) [2]	3,89	4,15
	Publication in the 10% percentile (2010-2020) [3]	29	12
	Publication in the 1% percentile (2010-2020) [3]	6	4
<i>h-index</i>	h-index whole scientific career	42	

[1] Those in which David Sancho appears as first, last or corresponding author.

[2] This indicator normalizes citation values and corresponds to the number of citations received during an analyzed time span, compared to the world average of citations to publications of the same document types, ages and subject areas. The indicator decimal number shows the relation of the indicator to the world average (As an example, 0.9 means that the unit's publications are cited 10% below average and 1.5 that they are cited 50%

above average). The world average is calculated with Clarivate's Essential Science Indicators. Source: Bibliometric Handbook by Karolinska Institutet.

[3] This indicator shows the number of publications that are among the 10% (or 1%) of the most cited publications for their category and year

### General indices of total scientific production quality (Scopus)

<p>- Total publications: 102; main author in 40%. 86 in 1st quartile, Q1 (84%); 59 in 1st decile, D1 (58%); 31 (30%) in TOP3 of the category. &gt; 6700 citations (Scopus) or &gt;9900 citations (Google Scholar). Over 600 (Scopus) or 850 (Scholar) citations/year average in the last 4 years. H-index: 44 (Scopus) or 50 (Google Scholar).</p>		
Researcher codes	WoS Researcher ID	<a href="http://www.researcherid.com/rid/D-3433-2009">http://www.researcherid.com/rid/D-3433-2009</a>
	ORCID code	<a href="http://orcid.org/0000-0003-2890-3984">http://orcid.org/0000-0003-2890-3984</a>
	Scopus identifier	<a href="https://orcid.org/7004139218">7004139218</a>

### PUBLICATIONS AS MAIN AUTHOR: (First or last & corresponding author)

**Keys:** §: corresponding author. \*: Equal contribution. **NC:** Citations **IF:** Impact Factor in publication year (ISI-JCR)

41: Acín-Pérez R \*, Iborra S \*, Martí-Mateos Y, Cook ECL, Conde-Garrosa R, Petcherski A, Muñoz MDM, Martínez de Mena R, Krishnan KC, Jiménez C, Bolaños JP, Laakso M, Lusic AJ, Shirihai OS, **Sancho D**§, \*, Enríquez JA§, \*. Fgr kinase is required for proinflammatory macrophage activation during diet-induced obesity. *Nat Metab.* 2020 Sep;2(9):974-988. doi: 10.1038/s42255-020-00273-8. Epub 2020 Sep 17. PMID: 32943786.

40: Cueto FJ, Del Fresno C, **Sancho D**§. DNGR-1, a Dendritic Cell-Specific Sensor of Tissue Damage That Dually Modulates Immunity and Inflammation. *Front Immunol.* 2020 Feb 7;10:3146. doi: 10.3389/fimmu.2019.03146. PMID: 32117205; PMCID: PMC7018937. IF: 5.085

39: Del Fresno C, Cueto FJ, **Sancho D**§. Sensing Tissue Damage by Myeloid C-Type Lectin Receptors. *Curr Top Microbiol Immunol.* 2020 Jan 24. doi: 10.1007/82\_2019\_194. Epub ahead of print. PMID: 31974758. IF: 3.095

38: Del Fresno C, **Sancho D**§. Clec2d Joins the Cell Death Sensor Ranks. *Immunity.* 2020 Jan 14;52(1):6-8. doi: 10.1016/j.immuni.2019.12.015. PMID: 31951550. Editorial. IF: 22.553

37: Del Fresno C, Cueto FJ, **Sancho D**§. A Proposal for Nomenclature in Myeloid C-Type Lectin Receptors. *Front Immunol.* 2019 Sep 6;10:2098. doi: 10.3389/fimmu.2019.02098. PMID: 31555291; PMCID: PMC6743258. IF: 5.085

36: Wculek SK, **Sancho D**§. LKB1 restrains dendritic cell function. *Cell Res.* 2019;29(6):429-31. Epub 2019/04/27. doi: 10.1038/s41422-019-0169-0. PubMed PMID: 31024168. Editorial. IF:20.507

35: Wculek SK, Cueto FJ, Mujal AM, Melero I, Krummel MF, **Sancho D**§. Dendritic cells in cancer immunology and immunotherapy. *Nat Rev Immunol.* 2020 Jan;20(1):7-24. doi: 10.1038/s41577-019-0210-z. Epub 2019 Aug 29. PMID: 31467405. IF: 40.358

- 34: Del Fresno C, **Sancho D<sup>§</sup>**. cDC1s: New Orchestrators of Tissue Innate Immunity. *Trends Immunol.* 2019 Jul;40(7):559-561. doi: 10.1016/j.it.2019.05.002. Epub 2019 May 24. PMID: 31133464. *IF: 13.422*
- 33: Wculek SK, Khouili SC, Priego E, Heras-Murillo I, **Sancho D<sup>§</sup>**. Metabolic Control of Dendritic Cell Functions: Digesting Information. *Front Immunol.* 2019 Apr 25;10:775. doi: 10.3389/fimmu.2019.00775. PMID: 31073300; PMCID: PMC6496459. *IF: 5.085*
- 32: Wculek SK, Amores-Iniesta J, Conde-Garrosa R, Khouili SC, Melero I, **Sancho D<sup>§</sup>**. Effective cancer immunotherapy by natural mouse conventional type-1 dendritic cells bearing dead tumor antigen. *J Immunother Cancer.* 2019 Apr 8;7(1):100. doi: 10.1186/s40425-019-0565-5. PMID: 30961656; PMCID: PMC6454603. *IF: 9.913*
- 31: Martínez-López M\*, Iborra S\* <sup>§</sup>, Conde-Garrosa R, Mastrangelo A, Danne C, Mann ER, Reid DM, Gaboriau-Routhiau V, Chaparro M, Lorenzo MP, Minnerup L, Saz-Leal P, Slack E, Kemp B, Gisbert JP, Dzionek A, Robinson MJ, Rupérez FJ, Cerf-Bensussan N, Brown GD, Bernardo D, LeibundGut-Landmann S, **Sancho D<sup>§</sup>**. Microbiota Sensing by Mincle-Syk Axis in Dendritic Cells Regulates Interleukin-17 and -22 Production and Promotes Intestinal Barrier Integrity. *Immunity.* 2019 Feb 19;50(2):446-461.e9. doi: 10.1016/j.immuni.2018.12.020. Epub 2019 Jan 29. PMID: 30709742; PMCID: PMC6382412. *IF: 22.553*
- 30: Saz-Leal P, Del Fresno C, Brandi P, Martínez-Cano S, Dungan OM, Chisholm JD, Kerr WG, **Sancho D<sup>§</sup>**. Targeting SHIP-1 in Myeloid Cells Enhances Trained Immunity and Boosts Response to Infection. *Cell Rep.* 2018 Oct 30;25(5):1118-1126. doi: 10.1016/j.celrep.2018.09.092. PMID: 30380404; PMCID: PMC6226423. *12; IF: 7.815*
- 29: Del Fresno C<sup>§</sup>, Saz-Leal P, Enamorado M, Wculek SK, Martínez-Cano S, Blanco-Menéndez N, Schulz O, Gallizioli M, Miró-Mur F, Cano E, Planas A, **Sancho D<sup>§</sup>**. DNGR-1 in dendritic cells limits tissue damage by dampening neutrophil recruitment. *Science.* 2018 Oct 19;362(6412):351-356. doi: 10.1126/science.aan8423. PMID: 30337411. *IF: 41.037*
- 28: Izquierdo HM, Brandi P, Gómez MJ, Conde-Garrosa R, Priego E, Enamorado M, Martínez-Cano S, Sánchez I, Conejero L, Jimenez-Carretero D, Martín-Puig S, Williams M, **Sancho D<sup>§</sup>**. Von Hippel-Lindau Protein Is Required for Optimal Alveolar Macrophage Terminal Differentiation, Self-Renewal, and Function. *Cell Rep.* 2018 Aug 14;24(7):1738-1746. doi: 10.1016/j.celrep.2018.07.034. PMID: 30110631; PMCID: PMC6113928. *IF: 7.815*
- 27: Enamorado M, Khouili SC, Iborra S, **Sancho D<sup>§</sup>**. Genealogy, Dendritic Cell Priming, and Differentiation of Tissue-Resident Memory CD8+ T Cells. *Front Immunol.* 2018 Jul 31;9:1751. doi: 10.3389/fimmu.2018.01751. PMID:30108585; PMCID: PMC6079237. *IF: 4.716*
- 26: Martínez-López M, Soto M, Iborra S, **Sancho D<sup>§</sup>**. Leishmania Hijacks Myeloid Cells for Immune Escape. *Front Microbiol.* 2018 May 7;9:883. doi: 10.3389/fmicb.2018.00883. PMID: 29867798; PMCID: PMC5949370. *IF: 4.259*
- 17: Del Fresno C, Iborra S, Saz-Leal P, Martínez-López M, **Sancho D<sup>§</sup>**. Flexible Signaling of Myeloid C-Type Lectin Receptors in Immunity and Inflammation. *Front Immunol.* 2018 Apr 26;9:804. doi: 10.3389/fimmu.2018.00804. PMID: 29755458; PMCID: PMC5932189. *IF: 4.716*

- 25: Enamorado M, Iborra S, Priego E, Cueto FJ, Quintana JA, Martínez-Cano S, Mejías-Pérez E, Esteban M, Melero I, Hidalgo A, **Sancho D**<sup>§</sup>. Enhanced anti-tumour immunity requires the interplay between resident and circulating memory CD8+ T cells. *Nat Commun*. 2017 Jul 17;8:16073. doi: 10.1038/ncomms16073. PMID: 28714465; PMCID: PMC5520051. *IF*: 12.353
- 24: Conejero L<sup>§</sup>, Khouili SC, Martínez-Cano S, Izquierdo HM, Brandi P, **Sancho D**<sup>§</sup>. Lung CD103+ dendritic cells restrain allergic airway inflammation through IL-12 production. *JCI Insight*. 2017 May 18;2(10):e90420. doi: 10.1172/jci.insight.90420. PMID: 28515363; PMCID: PMC5436540. *IF*: 6.014
- 23: **Sancho D**<sup>§</sup>, Enamorado M, Garaude J<sup>§</sup>. Innate Immune Function of Mitochondrial Metabolism. *Front Immunol*. 2017 May 8;8:527. doi: 10.3389/fimmu.2017.00527. PMID: 28533780; PMCID: PMC5420559. *IF*: 5.511
- 22: Iborra S<sup>§</sup>, Martínez-López M, Cueto FJ, Conde-Garrosa R, Del Fresno C, Izquierdo HM, Abram CL, Mori D, Campos-Martín Y, Reguera RM, Kemp B, Yamasaki S, Robinson MJ, Soto M, Lowell CA, **Sancho D**<sup>§</sup>. Leishmania Uses Mincle to Target an Inhibitory ITAM Signaling Pathway in Dendritic Cells that Dampens Adaptive Immunity to Infection. *Immunity*. 2016 Oct 18;45(4):788-801. doi: 10.1016/j.immuni.2016.09.012. Epub 2016 Oct 11. PMID: 27742545; PMCID: PMC5074365. *IF*: 22.845
- 21: Iborra S<sup>§</sup>, Martínez-López M, Khouili SC, Enamorado M, Cueto FJ, Conde-Garrosa R, Del Fresno C, **Sancho D**<sup>§</sup>. Optimal Generation of Tissue-Resident but Not Circulating Memory T Cells during Viral Infection Requires Crosspriming by DNGR-1+ Dendritic Cells. *Immunity*. 2016 Oct 18;45(4):847-860. doi: 10.1016/j.immuni.2016.08.019. Epub 2016 Sep 27. PMID: 27692611; PMCID: PMC5074364. *IF*: 22.845
- 20.- Garaude J\*, §, Acín-Pérez R\*, Martínez-Cano S, Enamorado M, Ugolini M, Nistal-Villán E, Hervás-Stubbs S, Pelegrín P, Sander LE, Enríquez JA<sup>§</sup> & **Sancho D**<sup>§</sup>. Mitochondrial respiratory-chain adaptations in macrophages contribute to antibacterial host defense. *Nat. Immunol*. 2016, doi: 10.1038/ni.3509. *IF*: 20.004.
- 19.- Sanchez-Paulete AR, Cueto FJ, Martinez-Lopez M, Labiano S, Morales-Kastresana A, Rodriguez-Ruiz ME, Jure-Kunkel M, Azpilikueta A, Aznar MA, Quetglas JI, **Sancho D**<sup>\*.§</sup>, Melero I<sup>\*.§</sup>. Cancer immunotherapy with immunomodulatory anti-CD137 and anti-PD-1 monoclonal Abs requires Batf3-dependent DCs. *Cancer Discov*. 2016 6(1):71-9. NC: 11. *IF*: 19.45.
- 18.- Blanco-Menéndez N, Del Fresno C, Fernandes S, Calvo E, Conde-Garrosa R, Kerr WG, **Sancho D**<sup>§</sup>. SHIP-1 Couples to the Dectin-1 hemITAM and Selectively Modulates Reactive Oxygen Species Production in Dendritic Cells in Response to *Candida albicans*. *J. Immunol*. 2015 Nov 1;195(9):4466-78. NC: 6. *IF*: 5.362
- 17.- **Sancho D**, Villar LM, Regueiro JR, de Andres B. Spanish Immunology on the move. *Eur J Immunol*. 2015. 45:1580-3. *IF*: 4.03
- 16.- Martinez-Lopez M, Iborra S, Conde-Garrosa R, **Sancho D**<sup>§</sup>. Batf3-dependent CD103 dendritic cells are major producers of IL-12 that drive local Th1 immunity against *L. major* infection in mice. *Eur J Immunol*. 2015. 45:119-29. NC: 9. *IF*: 4.03.



- 15.- Iborra S, **Sancho D<sup>s</sup>**. Signaling versatility following self and non-self sensing by myeloid C-type lectin receptors. *Immunobiology*. 2015. 220:175-84. NC: 9. IF: 3.04.
- 14.- **Sancho D<sup>s</sup>**, Reis E Sousa C<sup>s</sup>. Sensing of cell death by myeloid C-type lectin receptors. *Curr Opin Immunol*. 2013 25: 46-52. NC: 33. IF: 8.77.
- 13.- Iborra S, Izquierdo HM, Martínez-López M, Blanco-Menéndez N, Reis e Sousa C, **Sancho D<sup>s</sup>**. The DC receptor DNGR-1 mediates cross-priming of CTLs during vaccinia virus infection in mice. *J Clin Invest*. 2012 May 1;122(5):1628-43. NC: 68. IF: 12.81.
- 12.- **Sancho D<sup>s</sup>**, Reis e Sousa C<sup>s</sup>. Signaling by myeloid C-type lectin receptors in immunity and homeostasis. *Annu Rev Immunol*. 2012; 30:491-529. NC: 213. IF: 36.55
- 11.- **Sancho D\***, Joffre OP\*, Keller AM, Rogers NC, Martínez D, Hernanz P, Rosewell I, Reis e Sousa C. Identification of a DC receptor that couples sensing of necrosis to immunity. *Nature*. 2009 Apr 16;458(7240):899-903. NC: 288. IF:34.48
- 10.- **Sancho D**, Mourão-Sá D, Joffre OP, Schulz O, Rogers NC, Pennington DJ, Carlyle JR, Reis e Sousa C. Tumor therapy in mice via antigen targeting to a novel, DC-restricted C-type lectin. *J Clin Invest*. 2008.118(6):2098-110. NC: 230. IF:16.55.
- 9.- **Sancho D\***, Gómez M\*, Martínez G, Lamana A, Esplugues E, Lauzurica P, Martínez-A C, Sánchez-Madrid F. CD69 targeting differentially affects the course of collagen-induced arthritis. *J Leukoc Biol*. 2006;80(6):1233-41. NC: 11. IF:4.57
- 8.- Martín-Cófreces NB\*, **Sancho D\***, Fernández E, Vicente-Manzanares M, Gordón-Alonso M, Montoya MC, Michel F, Acuto O, Alarcón B, Sánchez-Madrid F. Role of Fyn in the rearrangement of tubulin cytoskeleton induced through TCR. *J Immunol*. 2006 Apr 1;176(7):4201-7. NC: 38. IF:6.29
- 7.- **Sancho D**, Gómez M, Sánchez-Madrid F. CD69 is an immunoregulatory molecule induced following activation. *Trends Immunol*. 2005 Mar;26(3):136-40. NC: 229. IF:10.17
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2.- Nieto M, Frade JM, **Sancho D**, Mellado M, Martínez-A C, Sánchez-Madrid F. Polarization of chemokine receptors to the leading edge during lymphocyte chemotaxis. *J Exp Med.* 1997;186(1):153-8. NC:157. IF: 14.38

1.- Hernández-Caselles T, Martínez-Esparza M, **Sancho D**, Rubio G, Aparicio P. Interleukin-7 rescues human activated T lymphocytes from apoptosis induced by glucocorticosteroids and regulates bcl-2 and CD25 expression. *Hum Immunol.* 1995 Jul;43(3):181-9. NC: 37. IF: 2.96

## PATENTS

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1. Title: Enhanced trained immunity in myeloid cells by SHIP-1 inhibition. Inventors: **Sancho D**, Saz-Leal P, Del Fresno C, Kerr WG, Chisholm JD. Holder entity CNIC,



Syracuse University and SUNY Upstate University. Priority number: EP18382404.4. Priority country: EU. Date: 06/06/2018.

2. Title: Immune modulation via C-type lectin. Inventors (in order of contribution): **Sancho D**, Reis e Sousa C, Joffre OP, Rogers N, Schulz O, Pennington D. Holder Entity: Cancer Research UK. Company licensing: Cancer Research technology limited. PCT/GB2008/002504 Filed on 21/07/2008. Publication n<sup>o</sup>: WO/2009/013484 (29/01/2009)
3. Title: Use of compounds that regulate HDAC6 tubulin deacetylase activity. Inventors (in order of contribution): Serrador J, Cabrero JR, **Sancho D**, Mittelbrunn M, Urzainqui A, Sanchez-Madrid F. PCT/ES2005/000019. Filed on 17/01/2005. Publication n<sup>o</sup>: WO/2005/078081 (25/08/2005).
4. Title: Immune regulation based on the targeting of early activation molecules. Inventors (in order of contribution): **Sancho D**, Esplugues E, Vega-Ramos J, Engel P, Martínez-A C, Lauzurica P, and Sánchez-Madrid F. Holder Entity: Madrid Autonomous University. Company licensing: Albor Biologics Inc. PCT/US2004/002864. Filed on 02/02/2004. Publication n<sup>o</sup>: WO/2004/069183 (19/08/2004)

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## **DOCTORAL THESES SUPERVISED AND TRAINING OF PERSONNEL**

### ***DOCTORAL THESES DIRECTED***

1. Francisco Javier Cueto Rodríguez. Department: Biochemistry UAM. Title: DNCR-1 Acts as a cDC1-specific Checkpoint during Flt3L-based Cancer Immunotherapy. Date: 14/07/2020. Grade: Sobresaliente cum laude.
2. Paola Brandi. Department: Biochemistry UAM. Title: Una vacuna polibacteriana a través de mucosas protege contra infecciones virales respiratorias e índice inmunidad entrenada. Date: 08/07/2020. Grade: Sobresaliente cum laude.
3. María Martínez-López. Department: Biochemistry UAM. Title: The myeloid C-type lectin receptor Mincle is a multifunctional sensor in immunity and homeostasis. Date: 22/02/2019. Grade: Sobresaliente cum laude with European mention.
4. Paula Saz-Leal. Department: Biochemistry UAM. Title: Role of SHIP-1 phosphatase in trained immunity modulation. Date: 14/12/2018. Grade: Sobresaliente cum laude.
5. Helena M. Izquierdo Fernández. Department: Biochemistry UAM. Title: Role of hypoxia inducible factors in alveolar macrophage physiology. Date: 18/07/2018. Grade: Sobresaliente cum laude with European mention.
6. Neris Michel Enamorado Escalona. Department: Biochemistry UAM. Title: La colaboración entre los linfocitos T CD8+ de memoria residente y circulante mejora la inmunidad antitumoral. Date: 20/09/2017. Grade: Sobresaliente cum laude.
7. Noelia Blanco Menéndez. Department: Biochemistry UAM. Title: La fosfatasa SHIP-1 se asocia al hemITAM de Dectin-1 y modula respuestas funcionales frente a Candida albicans en células dendríticas. Date: 14/11/2020. Grade: Sobresaliente cum laude.

## **ONGOING SUPERVISION OF DOCTORAL THESES**

1. Sofía Chayeb Khouili. Estimated defence date: 2022.
2. Elena Priego. Estimated defence date: 2022.
3. Ignacio Heras. Estimated defence date: 2022.
4. Irene Adán. Estimated defence date: 2023.

## **TRAINING OF RESEARCH PERSONNEL**

### **Undergraduate students**

Irene Adán (summer 2019)  
Aitor Jarit (summer 2018)  
Juan Francisco Rodríguez-Vidal (summer 2018 and 2019)  
Andrés París (summer 2017)  
Miguel Ángel Jiménez-Muñoz (Summer 2017)  
Andrea de la Fuente (summer 2016)  
Elena Priego (summer 2015 & 2016)  
Sofía Chayeb (summer 2014 & 2015)  
Jesús Lavado (summer 2014)  
Paula Saz (summer 2013 & 2014)  
Carlos Martí (summer 2013)  
Inmaculada Martos Folgado (summer 2012)  
Francisco J. Cueto Rodríguez (summer 2012)  
Inmaculada Hernández-Delso (summer 2011)  
Jaime Fernández Barrera (summer 2011)  
María Martínez López (summer 2010)  
Helena M. Izquierdo Fernández (summer 2010)

### **Master Students**

Aitor Jarit (2018-2019)  
Elena Priego (2017-2018)  
Sofía Chayeb (2015.09/2016.06)  
Paula Saz (2014-09/2015.08)  
Francisco Javier Cueto Rodríguez (2013-09/2014-08)  
Neris Michel Enamorado Escalona (2012-09/2013-08)  
Jaime Fernández Barrera (2011-09/2012-08)  
María Martínez López (2010-09/2011-08)  
Helena M. Izquierdo Fernández (2010-09/2011-08)

### **PhD Students**

Irene Adán: 2019  
Ignacio Heras: 2018  
Elena Priego: 2017  
Sofía Chayeb: 2017  
Brandi, Paola: 2016 (PhD 2020)  
Cueto Rodríguez, Francisco Javier: 2016 (PhD 2020)  
Saz Leal, Paula: 2015 (PhD 2018) Medical liason in pharma company.  
Enamorado Escalona, Neris Michel : 2013-2018. Postdoc in international lab.  
Martínez López, María: 2012-2019. Postdoc in international lab.  
Izquierdo Fernández, Helena María: 2011-2018. Postdoc in international lab  
Noelia Blanco Menéndez (2010-01/2014-11). Postdoc in national lab.

### **Laboratory Technician**

Carmen Contreras Puente (2016.01/2016.06)  
Roberto Moreno Vellisca (2015.01/2015.06)

David Peco Campillo (2014-01/2014-06)  
Sarai Martínez Cano (2013-01)  
Ruth Conde Garrosa (2012-2018)  
Marta Pérez Serrano (2011-01/2011-06)

#### **Postdoctoral Researchers**

Dr. Dieke van Dinther (2019)  
Dr. Gillian Dunphy (2019)  
Dr. Annalaura Mastrangelo (2017)  
Dr. Stefanie K. Wculek (2016)  
Dr. Noelia Blanco Menéndez (2014-11/2015.11) Postdoc in national lab.  
Dr. Laura Conejero (2013-2017) Medical liason in pharma Company.  
Dr. Carlos del Fresno (2013)  
Dr. Johan Garaude (2012.11/2016.06) PI in INSERM, France.  
Dr. Salvador Iborra (2011-2018) PI in Universidad Complutense, Madrid.  
Dr. Gonzalo de la Rosa (2011.01/2012.08) Postdoc in national lab.

#### ***MASTER THESES DIRECTED***

Aitor Jarit. Title: "new mechanisms on trained immunity" Jun 2019. UAM, Madrid.

Elena Priego. Title: "Analysis of Complex I in dendritic cells" Jun 2018. UAM, Madrid.

Sofía Chayeb. Title: "Batf3-dependent dendritic cells are dispensable for tolerance to house dust mite" Jun 2016. UAM, Madrid.

Paula Saz. Title: Involvement of the C-type lectin receptor DNGR-1 in immunity to *Candida albicans*. Defence date: Jun 2015. UAM, Madrid.

Francisco Javier Cueto Rodríguez. Title: Mincle regulates VACV infection. Defence date: Jun 2014. UAM, Madrid.

Michel Enamorado Escalona. Title: Myeloid cell metabolism impacts on antigen presentation. Defence date: Jun 2013. UAM, Madrid.

Jaime Fernández Barrera. Title: New functions for the necrosis receptor Clec9a. Defence date: Jun 2012. UCM, Madrid.

Helena M. Izquierdo. Title: Sensing necrosis couples to NFAT activation in dendritic cells. Defence date: June 2011. UAM, Madrid.

María Martínez López. Title: Screening for Syk-coupled receptors in myeloid cells involved in necrosis recognition. Defence date: June 2011. UAM, Madrid.

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#### **OTHER PROFESSIONAL ACTIVITIES**

##### ***SCIENCE MANAGEMENT AT THE SPANISH STATE AGENCY FOR RESEARCH***

09/2020-

Appointed Chair for Biomedicine Area in the Spanish State Agency of Research, responsible for coordinating a team of 31 scientific collaborators of different Biomedicine subareas overseeing around 6,000 research projects and human resources applications per year.

08/2017-09/2020

Appointed Chair for Immunity, Infection and new therapies (IIT) subarea within Biomedicine Area in the Spanish State Agency of Research, responsible for coordinating a team of 4 scientific collaborators of the subarea of IIT, overseeing around 1,200 research projects and human resources applications per year.

These collaborations imply chairing several project evaluation committees per year for projects and human resources (Juan de la Cierva formación, Juan de la Cierva incorporación, Ramón y Cajal) and organizing the evaluation and tracking of financed projects and human resources.

**Executive Editor** for *Immunología*, Official Scientific Journal of the Spanish Society for Immunology (2013-2017).

### **PARTICIPATION IN PEER REVIEW ACTIVITIES**

#### **2.2.1 International Grant Reviewer:**

ERC Starting Grant

ERC Consolidator Grant

French ANR (Agence Nationale de la Recherche).

Wellcome Trust

Worldwide Cancer Research

Uruguayan ANII (Agencia Nacional de Investigación e Innovación)

Portuguese FCT (Fundação para a Ciência e a Tecnologia).

#### **2.2.2. National Grant Reviewer:**

Member of the Evaluation Committee for Juan de la Cierva Program

Member of the Committee for Evaluation of the Ramón y Cajal Program

FIS (Fondo de Investigaciones Sanitarias, Health Ministry), expert reviewer

ANEP (Agencia Nacional de Evaluación y Prospectiva), Programa Plan Nacional I+D, Biomedicine Area, expert reviewer

Evaluator of national and international fellowships “La Caixa”

Mobility program for Researchers

Evaluator of “Programas de La Caixa: Doctorado en España”

#### **2.2.3. Ad hoc reviewer for scientific journals**

Reviewer for journals including *Cell*, *Science*, *Nature*, *Immunity*, *The Journal of Experimental Medicine*, *The Journal of Clinical Investigation*, *Nature Metabolism*, *Cell Reports*, *Science Signalling*, *Science Immunology*, *Science Translational Medicine*, *Nature Immunology*, *Cardiovascular Research*, *Journal of the American College of Cardiology*, *EMBO Reports*, *Nature Cancer*, *eLIFE*, *Nature Reviews Immunology*, *Frontiers in Immunology*, *Plos Pathogens*, *Cell Research*, *Cancer Research*, *Clinical Cancer Research*, *The Journal for Immunotherapy of Cancer*, *The Journal of Immunology*, *European Journal of Immunology*, *iScience*, *Journal of Biological Chemistry*, *Trends in Cancer*, *Trends in Immunology*, *Glycoconjugate Journal*, *Vaccine*, *Expert Reviews on Vaccines*, *Immunology Letters*, *Febs Open Bio*.

**PhD Evaluator** in >30 PhD Thesis Committees, and **tutor** for 14 PhD students.

**Active Participation at CNIC organization**, since 2009:

- Member of the Scientific Activities committee (2020-)
- Member of the Transgenesis working group (2020-)
- **Coordinator of Myocardial Pathophysiology Area (2017-2020)**
- Active participation in the Committee Advisory Group of CNIC (2017-2020)

- President of the Biosecurity committee (2015-2017)
- Member of the Animal House committee (2015-2017)
- President of the Viral Vectors working group (2013-2014)
- President of the Cellomics working group (2014-2015)
- Member of the Ethical Committee for Animal Welfare (2009-2012)
- Member of the Biosecurity Committee (2010)
- Member of the Cell Culture subcommittee (2011)
- Member of the Library subcommittee (2010-2012)

### **Scientific Meetings Organization**

- Organizer of Immunometabolism Symposium at Spanish National Immunology meeting (Alicante, 2016): Attendance >500 people
- Organizer of CNIC Inflammation and Immunity day International symposium (2014 & 2016) Attendance: More than 150 people
- Symposia within the 40th (2017) Spanish immunology meetings (>400 att.).
- 31st European Macrophage and Dendritic Cell Society meeting. Madrid, September 2017. International meeting (>220 att.).
- "CNIC inflammation and immunity day" 2018 at CNIC, Madrid. International symposium (>100 att.).

### **TEACHING**

- **Honorary Professor** at Departamento de Bioquímica, UAM. 2015-17.
- Participation as lecturer in the BMM9, Cardiovascular diseases module of the Master's degree in Molecular Biomedicine from Universidad Autónoma de Madrid (since 2010).
- Participation as lecturer in the Immunology Master from Universidad Complutense de Madrid (since 2011).
- Participation as lecturer in the Cellular Biology Master from Universidad de Murcia (2012).
- Master's Thesis María Martínez López (Master's degree in Molecular Biomedicine, UAM, 2011).
- Master's Thesis Helena M. Izquierdo (Master's degree in Molecular Biomedicine, UAM, 2011).
- Master's Thesis Jaime Fernández Barrera (Master's degree in Immunology, UCM, 2012).
- Master's Thesis Neris Michel Enamorado (Master's degree in Molecular Biomedicine, UAM, 2013).
- Master's Thesis Francisco J. Cueto Rodríguez (Master's degree in Molecular Biomedicine, UAM, 2014).
- Master Thesis Paula Saz
- Master Thesis Sofía Chayeb

### **Animal Handling**

2010	Course on Category C for experimental design and project applications involving animal procedures and category B for animal handling. Organized by CNIO and Animalaria, Madrid, Spain.
2004	<b>Personal Licence Holder</b> PIL70/19244 to carry out procedures in living animals. Issued by the Home Office, United Kingdom.

### **MEMBERSHIP OF SCIENTIFIC SOCIETIES**

Since 1996 Spanish Society for Immunology (SEI).  
 2014 - 2018 Elected member of the Directive Board of Spanish Society for

Immunology.

Since 2014 Member of the European Macrophage and DC Society

### **ACADEMIC HONORS and AWARDS**

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2017	“Constantes y Vitales” Prize to best young Biomedical Researcher, Atres media.
2016	ERC Consolidator Grant award, European Research Council.
2010	ERC starting Grant Award. European Research Council.
2010	Hardiman-Redon Prize. Awarded for best Cancer Research UK, London Research Institute publication in 2009.
2009	Ranked 1 <sup>st</sup> (Biomedicine) in “Ramón y Cajal” Programme for international recruitment of Group Leaders. Spanish Ministry of Science and Innovation.
2005	“Ramón Areces” prize for best doctoral thesis. Royal National Academy of Doctors.
2004	Prize for best doctoral thesis. Severo Ochoa Molecular Biology Centre, Madrid Autonomous University (2004).
2004	Pfizer Foundation Basic Research Prize for the article Sancho et al. J. Clin. Invest. 2003. 112: 872-82.
2004	Extraordinary Prize for Ph.D thesis. Madrid Autonomous University.
1996	Ranked 1 <sup>st</sup> in National Exam for access to specialist clinical training for Biologists. Spanish Ministry of Health.
1995	First National Prize for University Graduation. Spanish Ministry of Education.
1995	Extraordinary Prize for University Graduation. University of Murcia. Spain.

### **LECTURES IN INTERNATIONAL SCIENTIFIC EVENTS**

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- Norwegian Society for Immunology Annual meeting (Oslo, 29/11/2019)
  - Irish Society for Immunology Annual meeting (Dublin, 19-20/10/2019)
  - 33rd Meeting of the European Macrophage and Dendritic cell Society (EMDS) (Marseille, 12-14/9/2019)
  - Swiss Society for Allergology and Immunology Annual meeting (Lugano, 4-6/9/2019)
  - Portuguese Society for Immunology Annual meeting (Coimbra, 15-17/5/2019)
  - Stony Brook University international symposium in inflammation (New York, 29/4/2019)
  - Skin Trm in homeostasis, infection and disease (NIH, Rockville, MD, 22-23/4/2019)
  - EMBO workshop on Pathogen immunity and signaling (Oxford, 1-4/4/2019)
  - European Congress of Immunology (Amsterdam, 1-5/9/2018)
  - Cell symposium in translational immunometabolism (Basel, 23-26/6/2018)
  - International DC conference (Aachen, 9-14/6/2018)
  - Microbes, Immunity and metabolism international conference (Paris, 15-17/11/2017)
  - Development of tissue and pathogen-specific cellular innate immunity (Freiburg, 27-29/9/2017)
  - 5<sup>th</sup> Focus Immunology Basel Symposium, Basel, Switzerland (8/2017).
  - 4th multiple sclerosis meeting, Madrid, 9-10/6/2017.
  - Invited speaker Meeting IMMUNOTHERCAM, Madrid. (3-4 Dec 2015)
  - Selected speaker at European Congress of Immunology. Vienna (6-9 September

- 2015)
- Invited speaker ZIBI summer symposium, Berlin. (29-30 June, 2015)
  - Invited speaker at New Frontiers in Immunology symposium (Murcia, 8th May, 2015)
  - Invited speaker at 28th International Conference of of the EMDS, Viena (2-4, Oct 2014)
  - Selected speaker at International symposium of dendritic cell, Tours (14-19, Sept 2014)
  - Invited speaker at EMDS 2013 conference, Erlangen (10-12, Oct 2013)
  - Invited speaker at Dendritic Cells MACS Day 2013 Symposium, Madrid (4, Jul 2013)
  - Selected speaker at Keystone meeting in the Innate Immune response in the pathogenesis of infectious disease (10-15, May 2013)
  - Invited speaker at Advances in Vaccine Development, Pamplona (25-26, Oct 2012).
  - Invited speaker and Chair: European Congress of Immunology, Glasgow (5-8, Sep 2012).
  - Annual European Academy of Tumor Immunology meeting, Paris. (31 May-1 Jun 2012).
  - Invited speaker at Madrid meeting on DCs and Macrophages, Madrid. (28-29, May 2012).
  - Keystone meeting on Innate Immunity: Sensing the microbes and damage signals. Keystone, CO (3-8, Mar 2012).
  - Keynote Lecture at the London Research Institute Retreat, Oxford (Apr 2010).
  - Invited speaker at International meeting from the Rheumatic Diseases and Inflammation Network, Madrid (Dec 2009).
  - Invited speaker at the International Symposium "Critical Frontiers between Immunity and Gene Therapy", Pamplona (Oct 2009).
  - Invited speaker at Meeting on Dendritic Cells and Macrophages, Madrid (Sep 2009).
  - Invited speaker at Keystone symposium in dendritic cells, Alberta, Canada (29 March - 3 April 2009). Awarded with scholarship.
  - Invited speaker First Immunotherapy meeting, Institut Curie (Paris, 17-18 October 2008). Awarded with scholarship.
  - J. March Foundation Workshop on "Stimulatory and Inhibitory receptors of the innate immune system" (Madrid, 19-21 January 2004).
  - Invited speaker at: EFIS 15th European immunology congress (Rhodes, Greece; 8-12 June 2003).
  - J. March Foundation Workshop on Molecular and Genetic basis of autoimmune diseases: SLE and RA (Lisbon, 7-9 April 2003).
  - J. March Foundation Workshop on Regulation and Functional Insights in cellular polarity (Madrid, 3-5 June 2002).
  - J. March Foundation Workshop on Molecular Basis of Human Congenital Lymphocyte Disorders (Madrid, 3-5 December 2001).
  - Leukocyte Typing VII, Harrogate, U.K, June 2000.
  - European Network of Immunology Institutes (ENII) Conference. Molecular regulation of lymphocyte behaviour. Ile Les Embiez, France. May 17-21 2000.
  - Keystone Symposia on Joint Regulation of signaling pathways by Integrins and growth factors. March 25-31, 2000. Breckenridge, Colorado, USA.
  - Invited speaker: Fundación Barceló Workshop: Selection of immune repertoire in autoimmune diseases. Palma de Mallorca. 24-26 May, 1999.
  - Institute Pasteur Euroconferences: Chemokines and their receptors: from basic research to therapeutic intervention. 1999.

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### **SEMINARS IN INSTITUTES AS INVITED SPEAKER**

- El Escorial, Madrid (July 2019)
- CNIO, Madrid (June 2019)
- CIC Biomagune, San Sebastián (March 2019)

- La Paz Hospital, Madrid (March 2019)
- University of Manchester (March 2019)
- Ramón y Cajal Hospital, Madrid (March 2019)
- IPBLN, Granada (Feb 2019)
- UIMP, Santander (Aug 2018)
- IMIB, Murcia (April 2018)
- CIML, Marseille (March 2018)
- University of Laussane (Jan 2018)
- Boehringer Ingelheim, Vienna (July 2017)
- Miltenyi day, Barcelona (July 2017)
- Karolinska Institute, Stockholm (June 2017)
- in Sclerosis Multiple network, Madrid (June 2017)
- IDIBAPS, Barcelona (Jan 2017)
- National Biotechnology Center, Madrid (June 2016).
- Universidad Autónoma de Madrid (Feb 2016)
- Majadahonda, Centro Nacional de Microbiología (Apr 2015)
- Clinical University of Erlangen (Jan 2015)
- Hospital Vall d'Hebron, Barcelona (Mar 2015)
- Catalan Society for Immunology. Barcelona (Feb 2013).
- Immunology Department, Universidad Complutense de Madrid (Dic 2012).
- La Princesa Hospital, Madrid (May 2012).
- Institute of Microbiology (ETH), Zürich (Apr 2012).
- Cellular Biology Department, Universidad de Murcia (Mar 2012).
- Centro de Biología Molecular (C.S.I.C.), Madrid (Feb 2012).
- Immunology Department, Universidad Complutense de Madrid (Dic 2011).
- Instituto de Biología y Genética Molecular (C.S.I.C.), Valladolid (Nov 2011).
- Medimmune, Cambridge (Apr 2010).
- Centro de Investigaciones Biológicas (C.S.I.C.), Madrid (Nov 2009).
- Institute of Child Health, London (Oct 2009).

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### **LECTURES IN NATIONAL SCIENTIFIC EVENTS**

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- Spanish Society for Immunology Annual meeting (Seville, 30/5-1/6/2019)
- Spanish Society for Immunology, Annual meeting. Zaragoza 25-27/5/2017.
- Invited speaker at Spanish National Immunology meeting. Alicante, 2016.
- Invited speaker at 2<sup>nd</sup> Scientific meeting of Immunotherapy Group, Zaragoza, 2015.
- Invited speaker at Spanish National Immunology Meeting, San Sebastián, 2010.
- Invited speaker at XVII Workshop “Advances in Molecular Biology by young researchers abroad”, CNB, UAM, Madrid, 2008.
- Invited speaker at XVI Workshop “Advances in Molecular Biology by young researchers abroad”, CNB, UAM, Madrid, 2007.
- Selected speaker at XXIX Spanish Immunology Meeting, Cádiz, 2003.
- Selected speaker at XXVIII Spanish Immunology Meeting, Valladolid, 2002.
- Selected speaker at XXVI Spanish Immunology Meeting, Seville, 2000.
- Selected speaker at XXV Spanish Immunology Meeting, Torremolinos, 1999.
- Selected speaker at XXIV Spanish Immunology Meeting, Murcia, 1998.
- Selected speaker at XXIII Spanish Immunology Meeting, Barcelona, 1997.