

SCIENTIFIC AND TECHNOLOGICAL PROFILE OF THE GROUP

		RICORS Code RD21/0012/0001
Thematic area:	Primary care, chronicity and health promotion	
Programme name:	Primary care promotion of maternal, child and women's health for prevention of adult chronic diseases.	
Group leader:	Elisa Llurba Olivé	
Applicant Institution:	Institut d'Investigació Biomèdica Sant Pau (IIB-Sant Pau)	
Working Institution:	Hospital de la Santa Creu i Sant Pau	
PI Work Institution:	Hospital de la Santa Creu i Sant Pau	

Participants

Researcher	Family Name (s)	First Name (s)	Work Institution	Position
1	Llurba Olivé	Elisa	Hospital de la Santa Creu i Sant Pau	Statutory staff
2	Cruz-Lemini	Mónica	Hospital de la Santa Creu i Sant Pau	Contracted
3	Polo Ramos	Ana	Hospital de la Santa Creu i Sant Pau-Fundació Puigvert	Statutory staff
4	Mora Brugués	Josefina	Hospital de la Santa Creu i Sant Pau	Statutory staff
5	Moliner Calderon	Elisenda	Hospital de la Santa Creu i Sant Pau	Statutory staff
6	Fraga Rodríguez	Gloria M ^a	Hospital de la Santa Creu i Sant Pau	Statutory staff
7	Garrido Giménez	Carmen	Hospital de la Santa Creu i Sant Pau	Statutory staff
8	Trilla Solà	Cristina	Hospital de la Santa Creu i Sant Pau	Statutory staff
9	Céspedes Navarro	M ^a Virtudes	Institut d'Investigació Biomèdica Sant Pau (IIB-Sant Pau)	Contracted
10	Josa Eritja	Maria	Hospital de la Santa Creu i Sant Pau	Statutory staff
11	López Bernal	Esther	Hospital de la Santa Creu i Sant Pau	Statutory staff

PUBLICATIONS

Up to twenty selected publications related to the RICORS's Thematic Area (published in the last five years)

1. **Cruz-Lemini M**, Vázquez JC, Ullmo J, **LLurba E**. Low-molecular-weight heparin for prevention of preeclampsia and other placenta mediated complications: a systematic review and meta-analysis. *AJOG*. <https://doi.org/10.1016/j.ajog.2020.11.006> (Article). 2021. IF: 6.502, 0 times cited.
2. Saura C, Sánchez O, Martínez S, Domínguez C, Dienstmann R, Ruíz-Pace F, Céspedes MC, Peñuelas Á, Cortés J, **Llurba E**, Córdoba O. Evolution of Angiogenic Factors in Pregnant Patients with Breast Cancer Treated with Chemotherapy. *Cancers (Basel)*. PMID: 33672114 (Article). 2021. IF: 6.126 (JCR), 0 times cited.
3. **Cruz-Lemini M**, Ferriols Perez E, de la Cruz Conty ML, Caño Aguilar A, Encinas Pardilla MB, Prats Rodríguez P, Muner Hernando M, Forcen Acebal L, Pintado Recarte P, Medina Mallen MDC, Perez Perez N, Canet Rodríguez J, Villalba Yarza A, Nieto Velasco O, Del Barrio Fernandez PG, Orizales Lago CM, Marcos Puig B, Muñoz Abellana B, Fuentes Ricoy L, Rodríguez Vicente A, Janeiro Freire MJ, Alferez Alvarez-Mallo M, Casanova Pedraz C, Alomar Mateu O, Lesmes Heredia C, Wizner de Alva JC, Posadas San Juan A, Macia Badia M, Alvarez Colomo C, Sanchez Muñoz A, Pratcorona Alicart L, Alonso Saiz R, Lopez Rodriguez M, Barbancho Lopez MC, Meca Casbas MR, Vaquerizo Ruiz O, Moran Antolin E, Nuñez Valera MJ, Fernandez Fernandez C, Tubau Navarra A, Cano Garcia AM, Soldevilla Perez S, Gattaca Abasolo I, Adanez Garcia J, Puertas Prieto A, Ostos Serna R, Guadix Martin MDP, Catalina Coello M, Espuelas Malon S, Sainz Bueno JA, Granell Escobar MR, Cruz Melguizo S, Martinez Perez O, On Behalf Of The Spanish Obstetric Emergency Group. *Obstetric Outcomes of SARS-CoV-2 Infection in Asymptomatic Pregnant Women*. *Viruses*. PMID: 33467629 (Article) 2021. IF: 3.816 (JCR), 0 times cited.
4. Crovetto F, Crispi F, **Llurba E**, Pascal R, Larroya M, **Trilla C**, Camacho M, Medina C, Dobaño C, Gomez-Roig MD, Figueras F, Gratacos E; KidsCorona Pregnancy COVID-19 group (**Josefina Mora**). Impact of SARS-CoV-2 Infection on Pregnancy Outcomes: A Population-Based Study. *Clin Infect Dis*. PMID: 33556958 (Article). 2021. IF: 8.313 (JCR), 3 times cited.
5. Mesa MD, Loureiro B, Iglesia I, Fernandez Gonzalez S, **Llurba Olivé E**, García Algar O, Solana MJ, Cabero Perez MJ, Sainz T, Martinez L, Escuder-Vieco D, Parra-Llorca A, Sánchez-Campillo M, Rodriguez Martinez G, Gómez Roig D, Perez Gruz M, Andreu-Fernández V, Clotet J, Sailer S, Iglesias-Platas I, López-Herce J, Aras R, Pallás-Alonso C, de Pipaon MS, Vento M, Gormaz M, Larqué Daza E, Calvo C, Cabañas F. The Evolving Microbiome from Pregnancy to Early Infancy: A Comprehensive Review. *Nutrients*. (Review). PMID: 31906588. 2020. IF: 4.546 (JCR), 20 times cited.
6. Luzarraga Aznar A, Delgado-Morell A, Rovira Negre R, Fernandez-Oliva A, **Llurba Olive E**. Ovarian cancer as an imitator of severe pre-eclampsia: role of angiogenic factors. *Ultrasound Obstet Gynecol*. PMID: 33314427 (Article). 2020. IF: 5.571 (JCR), 0 times cited.
7. **Garrido-Gimenez C**, Mendoza M, **Cruz-Lemini M**, Galian-Gay L, Sanchez-Garcia O, Granato C, Rodriguez-Sureda V, Rodriguez-Palomares J, Carreras-Moratonas E, Cabero-Roura L, **Llurba E**, Alijotas-Reig J. Angiogenic Factors and Long-Term Cardiovascular Risk in Women That Developed Preeclampsia During Pregnancy. *Hypertension*. PMID: 33012203 (Article). 2020. IF: 7.713, 0 times cited.

8. Zanini MJ, Domínguez C, Fernández-Oliva T, Sánchez O, Toda MT, Foraster M, Dadvand P, **Llurba E**. Urban-Related Environmental Exposures during Pregnancy and Placental Development and Preeclampsia: a Review. *Curr Hypertens Rep*. PMID: 32880755 (Review). 2020. IF: 3.856 (JCR), 0 times cited.
9. Boll LM, Khamirchi R, Alonso L, **Llurba E**, Pozo ÓJ, Miri M, Dadvand P. Prenatal greenspace exposure and cord blood cortisol levels: A cross-sectional study in a middle-income country. *Environ Int*. PMID: 32822928 (Article). 2020. IF: 8.170 (JCR), 0 times cited.
10. Crovetto F, Crispi F, **Llurba E**, Figueras F, Gómez-Roig MD, Gratacós E. Seroprevalence and presentation of SARS-CoV-2 in pregnancy. *Lancet*. PMID: 32771084 (Correspondence). 2020. IF: 60.392, 31 times cited.
11. Panchaud A, Favre G, Pomar L, Vouga M, Aebi-Popp K, Baud D; COVI-Preg group (**Mónica Cruz-Lemini**, M Carmen Medina). An international registry for emergent pathogens and pregnancy. *Lancet*. PMID: 32353329 (Correspondence). 2020. IF: 60.392, 13 times cited.
12. Alijotas-Reig J, Esteve-Valverde E, Ferrer-Oliveras R, Sáez-Comet L, Lefkou E, Mekinian A, Belizna C, Ruffatti A, Hoxha A, Tincani A, Nalli C, Marozio L, Maina A, Espinosa G, Ríos-Garcés R, Cervera R, Carolis S, Monteleone G, Latino O, Udry S, **LLlurba E**, **Garrido-Gimenez C**, Trespidi L, Gerosa M, Chighizola CB, Rovere-Querini P, Canti V, Mayer-Pickel K, Tabacco S, Arnau A, Trapé J, Ruiz-Hidalgo D, Sos L, Farran-Codina I; EUROAPS Study Group. Comparative study of obstetric antiphospholipid syndrome (OAPS) and non-criteria obstetric APS (NC-OAPS): report of 1640 cases from the EUROAPS registry. *Rheumatology (Oxford)*. PMID: 31580459 (Article). 2020. IF: 5.606, 13 times cited.
13. **Céspedes MV**, Cano-Garrido O, Álamo P, Sala R, Gallardo A, Serna N, Falgàs A, Voltà-Durán E, Casanova I, Sánchez-Chardi A, López-Laguna H, Sánchez-García L, Sánchez JM, Unzueta U, Vázquez E, Mangues R, Villaverde A. Engineering Secretary Amyloids for Remote and Highly Selective Destruction of Metastatic Foci. *Adv Mater*. PMID: 31879981 (Article). 2020. IF: 24.410, 12 times cited.
14. Luca Basile, Pilar Ciruela, Ana Requena-Méndez, M^a José Vidal, Eva Dopico, Andrea Martín-Nalda, Elena Sulleiro, Joaquim Gascon, Mireia Jané, The Working Group Of Congenital Chagas Disease In Catalonia (**Elisa Llurba**, **Carmen Garrido**, **Elisenda Moliner**). Epidemiology of congenital Chagas disease 6 years after implementation of a public health surveillance system, Catalonia, 2010 to 2015. *Euro Surveill*. PMID: 31266591 (Article). 2019. IF: 7.400, 9 times cited.
15. Carme Merced, Maria Goya, Laia Pratcorona, Carlota Rodó, **Elisa Llurba**, Teresa Higuera, Luis Cabero, Elena Carreras, PECEP-RETARD Trial Group. Cervical pessary for preventing preterm birth in twin pregnancies with maternal short cervix after an episode of threatened preterm labor: randomised controlled trial. *Am J Obstet Gynecol*. PMID: 30826339 (Article). 2019. IF: 6.120 (JCR), 10 times cited.
16. H Zeisler, **E Llurba**, F J Chantraine, M Vatish, A C Staff, M Sennström, M Olovsson, S P Brennecke, H Stepan, D Allegranza, M Schoedl, S Grill, M Hund, S Verlohren. Soluble fms-like tyrosine kinase-1 to placental growth factor ratio: ruling out pre-eclampsia for up to 4 weeks and value of retesting. *Ultrasound Obstet Gynecol*. PMID: 30014562 (Article). 2019. IF: 5.595

(JCR), 38 times cited.

17. **Herraiz I, Llurba E**, Verlohren S, **Galindo A**; Spanish Group for the Study of Angiogenic Markers in Preeclampsia. Update on the Diagnosis and Prognosis of Preeclampsia with the Aid of the sFlt-1/ PIGF Ratio in Singleton Pregnancies. Fetal Diagn Ther. PMID: 28719896 (Review). 2018. IF: 2.04 (JCR), 34 times cited.

18. **María Virtudes Céspedes**, Ugutz Unzueta, Anna Aviñó, Alberto Gallardo, Patricia Álamo, Rita Sala, Alejandro Sánchez-Chardi, Isolda Casanova, María Antònia Manges, Antonio Lopez-Pousa, Ramón Eritja, Antonio Villaverde, Esther Vázquez, Ramón Manges. Selective depletion of metastatic stem cells as therapy for human colorectal cancer. EMBO Mol Med. PMID: 30190334 (Article).2018. IF: 10.624, 38 times cited.

19. Zeisler H, **Llurba E**, Chantraine F, Vatish M, Staff AC, Sennström M, Olovsson M, Brennecke SP, Stepan H, Allegranza D, Dinkel C, Schoedl M, Dilba P, Hund M, Verlohren S. Soluble fms-Like Tyrosine Kinase-1-to-Placental Growth Factor Ratio and Time to Delivery in Women With Suspected Preeclampsia. Obstet Gynecol. PMID: 27399996 (Article). 2016. IF: 5.215 (JCR), 62 times cited.

20. Zeisler H, **Llurba E**, Chantraine F, Vatish M, Staff AC, Sennström M, Olovsson M, Brennecke SP, Stepan H, Allegranza D, Dilba P, Schoedl M, Hund M, Verlohren S. Predictive Value of the sFlt-1:PIGF Ratio in Women with Suspected Preeclampsia. N Engl J Med. PMID: 26735990 (Article). 2016. IF: 72.406 (JCR), 855 times cited.

RICORS Code RD21/0012/0001

INTERNATIONAL AND NATIONAL RESEARCH PROJECTS

(Funded in the last five years)

INTERNATIONAL PROJECTS.

Project ID: NHS 17/EE/0040; **PI:** Asma Khalil; Rogelio Cruz-Martínez; Monica Cruz-Lemini; **Title:** "Cerclaje de emergencia en embarazos gemelares con riesgo inminente de parto pretérmino: un ensayo abierto aleatorizado controlado"; **Funding Agency:** Institutos de Salud de Reino Unido - St George's University Hospital; **Duración:** 01/01/2018-31/12/2021.

Project ID: FRONTIER; **PI (Co-PI):** Davvand, Payam and Jordi Sunyer; **Title:** "Traffic-related air pollution and birth weight: the roles of noise, placental function, green space, physical activity, and socioeconomic status (FRONTIER)"; **Funding Agency:** The Health Effects Institute (HEI), 17-1 Assessing Adverse Health Effects of Exposure to Traffic-Related Air Pollution, Noise, and Their Interactions With Socio-Economic Status. **Duración:** 01/05/2018 - 31/10/2022.

Collaborators: Elisa Llurba Olivé; Carmen Garrido Giménez.

Project ID: AIR-NB; **PI:** Jordi Sunyer; **Title:** "Pre-natal exposure to urban AIR pollution and pre- and post-Natal Brain development (AIR-NB)"; **Funding Agency:** Europea Research Council (ERC); **Duración:** 01/01/2018 - 31/12/2022

Collaborators: Elisa Llurba Olivé; Carmen Garrido Giménez.

NATIONAL PROJECTS.

Project ID: PI20/01504; **PI (and Co-PI):** Mónica Cruz-Lemini y Ana Polo Ramos; **Title:** "Impacto del Ejercicio y la dieta Mediterránea vs Aspirina en la tasa de nacimientos vivos y programación cardiovascular en la fertilización in vitro: un Estudio Aleatorizado". **Funding Agency:** Instituto de Salud Carlos III. **Amount of funding:** 183.920,00 euros. **Duración:** 01/01/2021-31/12/2023.

Project ID: PI20/00623; **PI:** M Virtudes Céspedes Navarro; **Title:** "Innovative nanotherapy for highly-metastatic peritoneal cancers: activating neuroreceptors to kill cancer stem cells". **Funding Agency:** Instituto de Salud Carlos III. **Amount of funding:** 175,000,00 euros. **Duración:** 01/01/2021-31/12/2023.

Project ID: PI19/00702. **PI:** Elisa Llurba Olivé; **Title:** "Remodelado y disfunción cardíaca en pacientes con preeclampsia regulado por el ambiente anti-angiogénico: estudio clínico y experimental"; **Funding Agency:** Instituto de Salud Carlos III. **Amount of funding:** 146.410,00 euros. **Duración:** 01/01/2020-31/12/2022.

Project ID: 76/550 La Marató TV3; **PI:** M Virtudes Céspedes (Sant Pau group); María Macías (IRB group); **Title:** "Indicadors genòmics per a la predicció de la recurrència i la metastasi en càncer endometrial". **Funding Agency:** Fundació La Marató TV3. **Amount of funding:** 300,000,00 euros. **Duration:** 01/01/2020-31/12/2022.

Project ID: PI19/00692; **PI:** Daniel Oros López; **Title:** "Cribado secuencial de preeclampsia mediante el uso de marcadores angiogénicos en el primer trimestre"; **Funding Agency:** Instituto de Salud Carlos III; **Amount of funding:** 97.707,50 euros; **Duración:** 01/01/2020-31/12/2022.

Collaborators: Josefina Mora Brugés; Cristina Trilla Solà.

Project ID: PI19/01633; **PI:** Elisabet Ars Criach; **Title:** "Heterogeneidad clínica, genética y alélica de las enfermedades renales hereditarias de debut temprano: nuevas causas moleculares de anomalías congénitas del riñón y el tracto urinario."; **Funding Agency:** Instituto de Salud Carlos III.; **Amount of funding:** 93.170,00 euros; **Duración:** 01/01/2020-31/12/2022.

Collaborators: M Gloria Fraga Rodríguez

Project ID: PI18/00685; **PI:** A Antón Paragolas; **Title:** "Virus Respiratorio Sincitial (VRS). Estudio de las características del virus, del huésped, y los factores ambientales como determinantes de la epidemia y su gravedad clínica"; **Funding Agency:** Instituto de Salud Carlos III; **Amount of funding:** 93.170,00 euros; **Duración:** 01/01/2019-31/12/2021.

Collaborators: Elisenda Moliner Calderón.

Project ID: PI17/00565; **PI:** JI Pijoán Zubizarreta; **Title:** "Evaluación de una intervención basada en la evidencia para reducir la

bacteriemia asociada a catéter vascular central en recién nacidos de muy bajo peso. INBERBAC-Neo"; **Funding Agency:** Instituto de Salud Carlos III.; **Amount of funding:** 146.107,50 euros; **Duración:** 01/01/2018-31/12/2020.

Collaborators: Elisenda Moliner Calderón; Esther López Bernal.

Project ID: PI17/00150; **PI:** M Virtudes Céspedes Muñoz; **Title:** "Nanoterapia dirigida y radioterapia SBRT combinada para la eliminación selectiva de células madre tumorales en cáncer de páncreas"; **Funding Agency:** Instituto de Salud Carlos III; **Amount of funding:** 148.830,00 euros; **Duración:** 01/01/2018-31/12/2020.

Project ID: PI16/00139; **PI:** Juan Carlos Escolà Gil; **Title:** "Estudio de las alteraciones del metabolismo intracelular del colesterol en el cáncer de mama y carcinoma epitelial de tiroides: Evaluación de estrategias terapéuticas basadas en la HDL"; **Funding Agency:** Instituto de Salud Carlos III; **Amount of funding:** 86.515,00 €; **Duración:** 01/01/2017-31/12/2019.

Collaborators: Josefina Mora Brugués.

Project ID: PI16/01998; **PI:** Elisabet Ars Criach; **Title:** "Estudio genómico de nefropatías de inicio temprano"; **Funding Agency:** Instituto de Salud Carlos III; **Amount of funding:** 130.075,00 euros.; **Duración:** 01/01/2017-31/12/2019.;

Collaborators: Gloria M Fraga Rodríguez.

Project ID: PI16/01997; **PI:** Lluís Cabero Roura; **Title:** "Factores angiogénicos durante la gestación y riesgo cardiovascular a medio-largo plazo en las pacientes con preeclampsia. Abordaje clínico y experimental". **Funding Agency:** Instituto de Salud Carlos III; **Amount of funding:** 71.995,00 euros; **Duración:** 01/01/2017-31/12/2019.

Collaborators: Carmen Garrido Giménez.

Project ID: PI16/00375; **PI:** Elisa Llorba Olivé; **Title:** "Incorporación del ratio sFlt1/PlGF en el diagnóstico y clasificación de preeclampsia: Ensayo clínico randomizado (EuroPE estudio)"; **Funding Agency:** Instituto de Salud Carlos III.; **Amount of funding:** 111.925,00 euros; **Duración:** 01/01/2017-31/12/2019.

Project ID: PI15/01825; **PI:** Roser Torra Balcells and Gloria M^a Fraga; **Title:** "Nefropatías familiares no filiadas: genes implicados en sus causas y su variabilidad fenotípica"; **Funding Agency:** Instituto de Salud Carlos III.; **Amount of funding:** 115.500,00 euros; **Duración:** 01/01/2016-31/12/2018.

Project ID: CP15/00167; **PI:** M Virtudes Céspedes Muñoz; **Title:** "Nanoconjugates for targeted therapy against CXCR4+ cancer stem cells in pancreatic cancer."; **Funding Agency:** Instituto de Salud Carlos III.; **Amount of funding:** 120.000,00 euros; **Duración:** 01/01/2016-31/12/2018.

Project ID: PI13/01449; **PI:** Elisa Llorba Olivé; **Title:** "Desarrollo de métodos predictivos basados en la integración de factores prenatales y postnatales para la detección de neurodesarrollo anómalo en cardiopatías congénitas"; **Funding Agency:** Instituto de Salud Carlos III.; **Amount of funding:** 106.722,00 euros; **Duración:** 01/01/2014-31/12/2016.

RICORS Code RD21/0012/0001

PATENTS

(Granted and licensed patents in the last five years. Include also licensed know-how)

Applicant: IND Number 15881

Title: A phase III double-bind, randomised study to evaluate the longterm efficacy and safety of Oxabact in patients with primary hyperoxaluria.

Inventors: Gloria María Fraga Rodríguez; Gema Ariceta Iraola

Patent office: OxThera Intellectual Property AB

Date of application number: 28/03/2018 (Sweden)

Applicant: IND Number 128367

Title: A phase 3, open-label, multicenter study of ALXN1210 in children and adolescents with atypical hemolytic-uremic syndrome

Inventors: Gema Ariceta Iraola; Gloria María Fraga Rodríguez

Patent office: Alexion Pharma GmbH

Date of application number: 23/01/2017 (EEUU)

Applicant; Centro de investigación biomédica en red

WO2018202921A2 WIPO (PCT)

Title: Nanostructured proteins and uses thereof.

Inventors: Vazquez E, Unzueta U, Serna N, Sanchez L, Villaverde AP, Céspedes MV, Casanova I, Mangués R.

Patent Office; Worldwide patent

Date of application number; 5.05.17. Application No/ 17169722.0-1401,

Date of grant 13-12-2018

Entity-Organization Exploiting the Patent. UAB, CIBER-BBN, IR Sant Pau

Applicant; Consorcio Centro de investigación biomédica en red

PCT/EP2018/069303

Title: Therapeutic nanoconjugates and uses thereof.

Inventors: Vazquez E, Unzueta U, Serna N, Sanchez L, Villaverde AP, Céspedes MV, Casanova I, Mangués R.

Patent Office; European patent


Date of application number; 14.07.17. Application No/17382461.6-1453,


Date of grant 16.01.2019

Entity-Organization Exploiting the Patent: UAB, CIBER-BBN, IR Sant PAu

RICORS Call: Scientific and Technological Profile of the Participating Groups

Aim: describe the major contributions of the different participating groups in terms of papers, funding and patents.

 The structure of this template has been designed to ensure that the important aspects of your scientific and technological profile are presented in a way that will enable experts to make an effective assessment against the evaluation criteria.

 The font type and size recommended is Arial 9 points. Please respect the page limits and do not take it as a target either! It is in your interest to keep your text as concise as possible, since experts rarely view unnecessarily long documents in a positive light.

Section 1. List of Participating Groups. PI participants.

 Remember

PI's Family Name | PI's First name(s) | PI's Work Institution | Position *

*Position: officer, statutory staff; contracted; fellow

Section 2. Papers

Indicate: Authors; Title; Journal; PMID; Type of paper; Publication year; Impact Factor (JCR Thomson Reuters) and times cited.

Section 3. International and National Research Projects

 Do not include regional or privately funded projects.

Indicate: Project ID; Name of the PI; Title; Funding Agency; Amount of Funding & Duration.

Section 4. Patents

Indicate: Applicant; Title; Inventors; Patent Office; Date of application number; Date of grant and Entity-Organization Exploiting the Patent.