



## 3.7.5 Pediatric Systemic Infections; HIV, Tuberculosis, Imported and Emergent Diseases Group

Publications: 30

Q1: 13

### COMPOSITION

**Talía Sainz Costa.** Facultativo Especialista de Área en Pediatría. Hospital Universitario La Paz. Profesora Asociada. Universidad Autónoma de Madrid

**Jorge Atucha Margolles.** Técnico de Laboratorio. FIBHULP

**Fernando Baquero Artigao.** Facultativo Especialista de Área de Pediatría. Hospital Universitario La Paz. Profesor Colaborador. Universidad Complutense de Madrid

**Jorge Bustamante Amador.** Investigador Predoctoral. Hospital Universitario La Paz

**Francisco José Climent Alcalá.** Facultativo Especialista de Área de Pediatría. Unidad de Patología Compleja. Hospital Universitario La Paz. Colaborador docente. Universidad Autónoma de Madrid

**Lucía Escolano Taravillo.** Investigador Predoctoral. Hospital Universitario La Paz

**Luis Escosa García.** Facultativo Especialista de Área en Pediatría. Hospital Universitario La Paz

**Jaime Delgado Pérez.** Investigador Predoctoral. Hospital Universitario La Paz

**Miguel García Boyano.** Investigador Predoctoral. Hospital Universitario La Paz

**Marta García Fernández de Villalta.** Facultativo Especialista de Área de Pediatría. Hospital Universitario La Paz. Colaborador Clínico Docente. Universidad Autónoma de Madrid

**María Milagros García López de Hortelano.** Médico Adjunto de Pediatría Hospitalaria y Enfermedades Infecciosas y Tropicales. Hospital Universitario La Paz. Colaborador Clínico Docente. Universidad Autónoma de Madrid

**Isabel Mellado Solo.** Médico Interno Residente. Hospital Universitario La Paz

**Roi Piñeiro Pérez.** Jefe Asociado del Servicio de Pediatría. Hospital General de Villalba

**Paula Rodríguez Molino.** Contrato Río Hortega. Hospital Universitario La Paz





## STRATEGIC OBJECTIVE

Vertically acquired HIV infection in children: Comorbidities, biomarkers, HIV reservoir, new therapeutic approaches.

Epidemiology of Paediatric Tuberculosis in Spain: molecular epidemiology of drug resistant strains, new diagnostic tools and new drugs for TB: Pharmacodynamics in children and TB-drugs Off-label use in paediatrics.

Congenital infections: burden of disease, prompt diagnosis and in-utero and postnatal management, host immune response.

Immunization strategies in children: immune response in high risk patient's vaccine effectiveness and barriers.

Epidemiology of imported and emergent diseases in children: Identification and management of emergent outbreaks. Immuno-pathogenesis, preventive measures and management. Covid-19 in children.

Social Determinants of Health in Pediatrics.

Infection and immunity: microbiome at the crossroad of immunity and allergy.

Health-care associated Infections. Resistant bacteria and antimicrobial stewardship / Infecciones asociadas con la asistencia sanitaria. Resistencias a antimicrobianos y programas de optimización de antimicrobianos.

## RESEARCH LINES

### Vertically acquired HIV infection in children.

- Immuno-pathogenesis: Immune-activation, inflammation and biomarkers.
- Epidemiology, immuno-virological factors.
- Comorbidities, long term follow-up, cardiovascular risk, bone disorders, metabolic abnormalities, neurocognitive impairment, renal dysfunction.
- Antiretroviral treatment: new drugs, resistances, dosage, toxicity in children, simplification strategies.
- HIV eradication: barriers, HIV reservoir, new antiretroviral drugs and other strategies to achieve HIV replication control.
- Gut Microbiota and bacterial translocation intestinal as modulating factors for inflammation and Immune-activation in HIV-infected children.
- Transition to adult care: barriers, strategies to maintain adherence to care.

### Epidemiology of paediatric Tuberculosis (TB)

- Epidemiology of paediatric TB. paediatric cases as a sentinel for burden of diseases.
- Molecular Epidemiology of paediatric TB: resistant strains.
- Immuno-pathogenesis: New diagnostic tools in special Populations: HIV-infected, ID patients.
- Management of critical situations. Neonatal TB, multidrug resistant and extra-pulmonary TB.

### Omnics for the diagnosis of pediatric TB

- New fixed-dosed combinations. Off label drugs in children. Pharmacodynamic and pharmacokinetic.

### Congenital infectious diseases

- Congenital Cytomegalovirus and Toxoplasma infections: diagnostic barriers, prognostic factors, new therapeutic approaches.

- CHAGAS disease and congenital TB: diagnostic barriers, prognostic factors, pharmacokinetics in newborns and new drugs.

### Epidemiology of imported and emergent diseases in children

- Paediatric International Outbreaks: Epidemiology and public health impact: Zika. Rabies. Dengue. Chikungunya. Haemorrhagic fevers, Mers-co.
- Imported diseases in Spain: epidemiology and special populations: adopted, migrant, refugees, travelers and ID children. Tropical and parasitic infections in children.
- COVID-19 disease in children: epidemiology, diagnostic markers, treatment.

### Immunization strategies in children, including high risk patients

- Immunization and vaccine response in special populations: immunocompromised children, transplant recipients, chronic patients, HIV-infected, migrants.
- Vaccine immunogenicity: barriers in paediatric populations.
- New challenges in vaccinology.

### Microbiome in pediatric infectious diseases

- Microbiome-related biomarkers in food allergy and intolerances.
- Microbiome-related biomarkers in childhood TB and other respiratory infections.
- Social Determinants of Health in Pediatrics.
- The burden of chronic disease in childhood.
- Health-care associated Infections.
- The burden of antimicrobial resistance.
- Antimicrobial stewardship in pediatrics.



## RESEARCH ACTIVITY

### ● Doctoral theses

**Carrasco García I.** Enfermedad hepática en niños y jóvenes que viven con infección vertical por el Virus de la Inmunodeficiencia Humana (VIH)[dissertation]. Madrid: UCM: 2022(19/07/2022).

**Director:** Sainz Costa T.

**Bustamante Amador J.** Parasitosis importadas en Pediatría[dissertation]. Madrid: UAM: 2022(10/10/2027).

**Directors:** Mellado Peña MJ,  
Sainz Costa T.

### ● Master Theses

**Crespo C.** Factores de transmisión vertical del VIH en embarazadas de 15 a 24 años. [dissertation]. Madrid: UAM: 2022.

**Director:** Sainz Costa T.

**Jalón Flores G.** Incidencia de mujeres embarazadas con VIH en el hospital General del Norte de Guayaquil IEES los Ceibos en el año 2021[dissertation]. Madrid: UAM: 2022.

**Director:** Sainz Costa T.

### ● Degree Final Theses

**Andrés Blanco L.** Efecto de la pandemia COVID-19 en el abuso sexual infantil[dissertation]. Madrid: UAM: 2022.

**Director:** Sainz Costa T.

### ● Publications

- Agud M, de Medrano I, Méndez-Echevarría A, Sainz T, Román F, Carrascoso GR, Escosa-García L, Amores CM, Climent FJ, Rodríguez A, de Villalta MGF, Calvo C. Risk factors for antibiotic-resistant bacteria colonisation in children with chronic complex conditions. *Sci Rep-Uk*. 2022; 12(1): 7223. Article. IF: 4.6; Q2
- Aguilera-Alonso D, Campos LM, Llamazares CMF, Calvo C, Baquero-Artigao F. New antibiotic

susceptibility testing definitions: I no longer means intermediate susceptibility. *An Pediatr*. 2022; 96(2): 157-8. Letter. IF: 2.1; Q3

- Aguilera-Alonso D, Nieto SK, Montojo MFA, Santaefemia FJS, Saavedra-Lozano J, Soto B, Caminoa MB, Berzosa A, Tato LP, Cercenado E, Tagarro A, Arana DM, Sanz MA, Gómez MPR, Sánchez FC, Baquero-Artigao F. Staphylococcus aureus community-acquired pneumonia in children after 13-valent pneumococcal vaccination (2008-2018): epidemiology, clinical characteristics and outcomes. *Pediatr Infect Dis J*. 2022; 41(5): E235-42. Article. IF: 3.6; Q1
- Aguilera-Alonso D, Solis-García G, Noguera-Julian A, González-Martin J, Cobena AR, Baquero-Artigao F, Rueda CT, Rodríguez-Molino P, Sánchez IB, Vallmanya T, Bernet-Sánchez A, Domingo LM, Rubio A, Saavedra-Lozano J, Ruiz-Serrano MJ, Blázquez-Gamero D, López-Roa P, Gómez-Pastrana D, Prieto MDL, Medina EML, Gil-Brusola A, Nalda AM, Soriano-Aranda A, Tortola T, Falcon-Neyra L, Galan VG, Tebruegge M, Santiago-García B. Accuracy of Xpert Ultra for the diagnosis of paediatric tuberculosis in a low TB burden country: a prospective multicentre study. *Thorax*. 2022; 77(10): 1023-9. Article. IF: 10; D1
- Bustamante J, López-Hortelano MG, Barcia C, Almirón MD, Subirats M, Vega DM, Mellado MJ, Sainz T. Eosinophilia in migrant children how should we proceed? *Pediatr Infect Dis J*. 2022; 41(2): 102-7. Article. IF: 3.6; Q1
- Bustamante J, Sainz T, Ara-Montojo MF, Almirón MD, Subirats M, Vega DM, Mellado MJ, López-Hortelano MG. Screening for parasites in migrant children. *Travel Med Infect Di*. 2022; 47: 102287. Article. IF: 12; D1
- Bustamante J, Sainz T, Pérez S, Rodríguez-Molino P, Vega DM, Mellado MJ, López-Hortelano MG. Toxocaríasis in migrant children: A 6 years' experience in a reference pediatric unit in Spain. *Travel Med Infect Di*. 2022; 47: 102288. Article. IF: 12; D1
- Bustamante-Amador J, Mellado-Sola I, Romero-Gómez MP, Cabrera-Lafuente M, de la Calle-Fernández-Miranda M, Sainz-Costa T, Mellado-Pena MJ, Escosa-García L. Congenital cytomegalovirus infection, is more prevalent in our country in newborns exposed to HIV?. *Rev Esp Quim*. 2022; 35(5): 482-91. Article. IF: 1.9; Q4

- Carrasco I, Oliveira A, Lancharro A, Escosa L, Mellado MJ, Busca C, Montes ML, Díez C, Alcolea-Ruiz S, Navarro ML, Sainz T. Fatty liver disease in children living with HIV: a ghostly iceberg. *AIDS*. 2022; 36(10): 1471-2. Letter. IF: 3.8; Q3
- Carrasco I, Oliveira A, Lancharro A, Escosa L, Mellado MJ, Busca C, Montes ML, Díez C, Alcolea-Ruiz S, Navarro ML, Sainz T. Prevalence of nonalcoholic fatty liver disease using noninvasive techniques among children, adolescents, and youths living with HIV. *AIDS*. 2022; 36(6): 805-14. Article. IF: 3.8; Q3
- del Valle R, Ballesteros A, Calvo C, Sainz T, Méndez A, Grasa C, Molina PR, Mellado MJ, Sanz-Santaefemia FJ, Herrero B, Calleja L, Soriano-Aranda A, Melendo S, Rincón-López E, Hernanz A, Epalza C, García-Baeza C, Rupérez-García E, Berzosa A, Ocaña A, Villarroya-Villalba A, Barrios A, Otheo E, Galán JC, Rodríguez MJ, Mesa JM, Domínguez-Rodríguez S, Moraleda C, Tagarro A. Comparison of pneumonia features in children caused by SARS-CoV-2 and other viral respiratory pathogens. *Pediatr Pulm*. 2022; 57(10): 2374-82. Article. IF: 3.1; Q2
- Epalza C, Domínguez-Rodríguez S, Cervantes E, de Ory SJ, Frick MA, Fortuny C, Soler-Palacin P, Prieto-Tato L, Sainz T, Carreras-Abad C, Alonso MM, Fernández MAD, Ocampo A, Rojo P, Navarro ML. Factors associated with late presentation for HIV care in adolescents in Spain. *HIV Med*. 2022; 23(11): 1195-201. Article. IF: 3; Q3
- Escosa-García L, Sainz T. Editorial: HIV and ART in children. *Front Pediatr*. 2022; 10: 1074684. Editorial Material. IF: 2.6; Q2
- Falces-Romero I, Román-Hernández C, Schuffelmann-Gutiérrez C, Laplaza-González M, Escosa-García L, Bloise I, Romero-Gómez MP, Verdú-Sánchez C, Calderon-Llopis B, Amores-Hernández I, Gómez-Zamora A, Río-García M, Menendez-Suso JJ, Rodríguez-Álvarez D, Pérez-Acosta E, Rodríguez-Rubio M, Álvarez-Rojas E, de la Oliva P, Mingorance J, Martínez-Romillo PD, García-Rodríguez J, Cendejas-Bueno E. Molecular diagnosis of bacteremia in a pediatric intensive care unit: a step forward. *Future Microbiol*. 2022; 17(7): 505-10. Article. IF: 3.1; Q3
- García-Boyano M, Baquero-Artigao F, Toro C, Alguacil-Guillén M, Lázaro-Perona F, Calvo C. Mycobacterium mageritense lymphadenitis in

child. *Emerg Infect Dis*. 2022; 28(3): 752-3. Letter. IF: 11.8; D1

- Goycochea-Valdivia WA, Pérez SM, Aguilera-Alonso D, Escosa-García L, Campos LM, Baquero-Artigao F. Position statement of the Spanish Society of Paediatric Infectious Diseases on the introduction, implementation and assessment of antimicrobial stewardship programmes in hospital paediatrics. *An Pediatr*. 2022; 97(5): 351. Article. IF: 2.1; Q3
- Grasa C, Ochoa B, Baquero-Artigao F, San Román S, Galan-Gómez V, del Rosal T, Calvo C, Pérez-Martínez A. Disseminated tuberculosis infection in a CAR T-cell recipient. *Pediatr Blood Cancer*. 2022; 69(7): e29615. Letter. IF: 3.2; Q2
- Hernández-Ainsa C, López-Gallardo E, García-Jiménez MC, Climent-Alcalá FJ, Rodríguez-Vigil C, de Villalta MGF, Artuch R, Montoya J, Ruiz-Pesini E, Emperador S. Development and characterization of cell models harbouring mtDNA deletions for *In vitro* study of Pearson syndrome. *Dis Model Mech*. 2022; 15(3): dmm049083. Article. IF: 4.3; Q2
- Jiménez D, Martínez-Sanz J, Sainz T, Calvo C, Méndez-Echevarría A, Moreno E, Blázquez-Gamero D, Vizcarra P, Rodríguez M, Jenkins R, Sánchez-Conde M, Ron R, Norman F, Moreno S, Ferrer M, Serrano-Villar S. Differences in saliva ACE2 activity among infected and non-infected adult and pediatric population exposed to SARS-CoV-2. *J Infection*. 2022; 85(1): 86-9. Article. IF: 28.2; D1
- López JN, Prieto-Tato L, Escosa-García L, Bernardino JI, Muñoz E, Díez C, Carrasco I, Ryan P, Guillén-Martín S, Ramos-Amador JT, Navarro ML, Holguín A, Sainz T. Pregnancy outcomes among perinatally hiv-infected women in Spain. *JAIDS-J Acq Imm Def*. 2022; 91(4): 373-80. Article. IF: 3.6; Q3
- Pérez RP, Cuadros EN, García LC, López ID, Fernández RE, Lemus MAG, Blanco SM, Marrodan BR, Calvo C. Results of a national survey on knowledge and use of complementary and alternative medicine by paediatricians. *An Pediatr*. 2022; 96(1): 25-34. Article. IF: 2.1; Q3
- Piñeiro-Pérez R, Ochoa-Sangrador C, López-Martín D, Martínez-Campos L, Calvo-Rey C, Nievas-Soriano BJ. Adherence to Spanish pediatricians to do not do guidelines to avoid low-value care in



## 1 Introduction

## 2 Executive Summary

## 3 Information Groups by Area

## 4 Associated Clinicians

pediatrics. *Eur J Pediatr.* 2022; 181(11): 3965-75. Article. IF: 3.6; Q1

- Platero L, García-Sánchez P, Sainz T, Calvo C, Iglesias I, Esperón F, de la Fuente R, Frauca E, Pérez-Martínez A, Méndez-Echevarría A. Pets for pediatric transplant recipients: To have or not to have. *Front Vet Sci.* 2022; 9: 974665. Article. IF: 3.2; D1
- Ramos MI, Tato LMP, Martín SG, Gómez MLN, García LE, Francia MAR, Mosquera JB, Arnal IO, Galligo EM, Beneitez MCV, Saez FJR, Orellana DM, Ferrer MF, Sánchez AB, Caballero IC, Amador JTR. Clinical and epidemiologic characteristics of a cohort of hiv-infected mother-infant pairs during 21 years. *JAIDS-J Acq Imm Def.* 2022; 91(5): 479-84. Article. IF: 3.6; Q3
- Sainz T, Casas I, González-Esguevillas M, Escosa-García L, Muñoz-Fernández MA, Prieto L, Gosalbes MJ, Jiménez-Hernández N, Ramos JT, Navarro ML, Mellado MJ, Serrano-Villar S, Calvo C. Nutritional supplementation to increase influenza vaccine response in children living with hiv: a pilot clinical trial. *Front Pediatr.* 2022; 10: 919753. Article. IF: 2.6; Q2
- Sainz T, Díaz L, Rojo D, Clemente MI, Barbas C, Gosalbes MJ, Jiménez-Hernández N, Escosa L, Guillén S, Ramos JT, Muñoz-Fernández MA, Navarro ML, Mellado MJ, Serrano-Villar S. Targeting the gut microbiota of vertically hiv-infected children to decrease inflammation and immunoactivation: a pilot clinical trial. *Nutrients.* 2022; 14(5): 992. Article. IF: 5.9; Q1
- Sánchez AB, Epalza C, Navarro ML, Alcolea S, García LE, Martín SG, Ramos MI, Tato LMP, Carrasco I, Sainz T, Amador JTR. SARS-CoV-2 infection in children and adolescents living with HIV in Madrid. *Pediatr Infect Dis J.* 2022; 41(10): 824-6. Article. IF: 3.6; Q1
- Serrano-Villar S, Wu KL, Hunt PW, Lok JJ, Ron R, Sainz T, Moreno S, Deeks SG, Bosch RJ. Predictive value of CD8+ T cell and CD4/CD8 ratio at two years of successful ART in the risk of AIDS and non-AIDS events. *Ebiomedicine.* 2022; 80: 104072. Article. IF: 11.1; D1

- Torres-Fernández D, de Ory SJ, Fortuny C, Sainz T, Falcón D, Bernal E, Jiménez MC, Vilasaro MN, Epalza C, Navarro M, Ramos JT, Holguin A, Prieto L. Integrase inhibitors in children and adolescents: clinical use and resistance. *J Antimicrob Chemoth.* 2022; 77(10): 2784-92. Article. IF: 5.2; Q2
- Villaverde S, Esquivel E, Baquero-Artigao F, Noguera-Julian A, Frick MA, Rojo P, Blázquez-Gamero D. Impact of the COVID-19 pandemic on the diagnosis of congenital cytomegalovirus infection in Spain. *Pediatr Infect Dis J.* 2022; 41(7): 590-2. Article. IF: 3.6; Q1

### ● Research projects

**Escosa García L.** Estudio de infecciones por bacterias resistentes a carbapenémicos en pediatría. Fundación SEIP. 2022-Ongoing.

Management centre: FIBHULP

**Rodríguez Molino P.** Contrato Río Hortega (CM21/00174). ISCIII. 2022-2024.

Management centre: FIBHLP

**Rodríguez Molino P.** Estudio de la respuesta vacunal en muestras de sangre seca en población pediátrica (DRIVE study (PI4888)). European Society of Pediatric Infectious Diseases. 2021-ongoing.

Management centre: FIBHLP

**Rodríguez Molino P.** Impacto del covid-19 materno en la respuesta inmune de los niños. Fundación de la Asociación Española de Pediatría. 2021-Ongoing.

Management centre: FIBHULP

**Sainz Costa T.** Aplicación de técnicas ómicas para el diagnóstico de tuberculosis en niños y adolescentes: CHILD-TB OMICS

(PI20/01490). ISCIII. 2021-2023.

Management centre: FIBHULP

**Sainz Costa T.** Capacitación de personal sanitario en VIH y ETS en adolescentes (GLD17/0135). Gilead S.A. 2017-ongoing.

Management centre: SEIMC-Gesida

**Sainz Costa T.** Hígado graso no alcohólico y esteatohepatitis en niños y adolescentes infectados por el VIH (PI17/01283). ISCIII. 2018-2022.

Management centre: FIBHULP

**Sainz Costa T.** Torquetenovirus como marcador inmunológico en niños con infección por el vih (GLD/00090). Gilead Sciences S.L. 2022-Ongoing.

Management centre: FIBHULP

**Sainz Costa T.** Utilidad de la ecografía torácica en la indicación de ventilación no invasiva en la bronquiolitis aguda del lactante hospitalizado. Estudio de cohorte (PI2525). European Society of Pediatric Infectious Diseases. 2017-Ongoing.

Management centre: FIBHULP

### ● Clinical trials

**Baquero Artigao F.** Estudio fase II, aleatorizado y parcialmente ciego, para evaluar la seguridad, reactogenicidad e inmunogenicidad de la vacuna antimeningocócica combinada abcwy tras su administración a lactantes sanos.

Type: Clinical Trials, phase II. 2022.564.

Sponsored by: Glaxosmithkline, S.A.

Signed date: 19/10/2022

**Baquero Artigao F.** Estudio fase II, aleatorizado y parcialmente ciego, para evaluar la seguridad, reactogenicidad e inmunogenicidad de la vacuna antimeningocócica combinada abcwy tras su administración a lactantes sanos.

Type: Clinical Trials, phase II. 5932 217043 (MenACWY=MEN7B-003).

Sponsored by: Glaxosmithkline, S.A.

Signed date: 31/01/2022

**Escosa García L.** Estudio para evaluar la aceptabilidad del comprimido de combinación en dosis fija (cdf) de darunavir/cobicistat (drv/cobi) en niños infectados por el virus de la inmunodeficiencia humana de tipo 1 (vih-1) de  $\geq 3$  años de edad y con un peso entre  $\geq 15$  kg y.

Type: Clinical Trials, phase I. 6108.

Sponsored by: Janssen Cilag International Nv.

Signed date: 06/04/2022

**Sainz Costa T.** Inmunogenicidad de la vacuna 9-valente contra el virus del papiloma humano (vph) en niños y adolescentes inmunodeprimidos.

Type: Clinical Trials, phase IV. 2022.264.

Sponsored by: Sainz Costa, Talía.

Signed date: 02/12/2022

### ● Patents and trademarks

**Mellado MJ, Piñero R,** authors; ASOCIACION ESPAÑOLA DE PEDIATRÍA (AEPED), assignee. Brand name: PEDIAMÉCUM; ESM 3079824; 2013 June13.