



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



Publications:24 | Q1:8

COMPOSITION

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- **Germán Vallejo Palma.** Investigador Predoctoral. Fundación GESIDA

STRATEGIC OBJECTIVE

1. Vertically acquired HIV infection in children: Comorbidities, biomarkers, HIV reservoir, new therapeutic approaches.
2. 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.
3. Congenital infections: burden of disease, prompt diagnosis and in-utero and postnatal management, host immune response.
4. Epidemiology of imported and emergent diseases in children: Identification and management of emergent outbreaks. Immuno-pathogenesis, preventive measures and management. Covid-19 in children
5. Immunization strategies in children: immune response in high risk patient's vaccine effectiveness and barriers.
6. Social Determinants of Health in Pediatrics
7. Infection and immunity: microbiome at the crossroad of immunity and allergy
8. 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.
- Omics 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.



3. Information groups by area

3.7 Maternal Infant Child and Youth Research Area

- 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

Publications

- Baquero-Artigao F, del Rosal T, Falcón-Neyra L, Ferreras-Antolín L, Gómez-Pastrana D, Hernanz-Lobo A, Méndez-Echevarría A, Noguera-Julian A, Sánchez MTP, Rodríguez-Molino P, Piñero-Pérez R, Santiago-García B, Soriano-Arandes A. Update on the diagnosis and treatment of tuberculosis. *An Pediatr*. 2023; 98(6): 460-9. Article. IF: 1.5; Q2
- Capilla-Miranda A, Plaza-López D, García-Clemente P, Baquero-Artigao F. Intermittent bladder irrigation with liposomal amphotericin B for the treatment of fluconazole-resistant *Candida guilliermondii* cystitis in an immunosuppressed adolescent. *Enferm Infect Microbiol Clin*. 2023; 41(4): 253-4. Letter. IF: 2.6; Q3
- Cercenado E, Rodríguez-Baño J, Alfonso JL, Calvo E, Escosa L, Fernández-Polo A, García-Rodríguez J, Garnacho J, Gil-Navarro MV, Grau S, Gudíol C, Horcajada JP, Larrosa N, Martínez C, Molina J, Nuvials X, Oliver A, Pano-Pardo JR, Pérez-Rodríguez MT, Ramírez P, Rey-Biel P, Vidal P, Retamar-Gentil P. Anti-

microbial stewardship in hospitals: Expert recommendation guidance document for activities in specific populations, syndromes and other aspects (PROA-2) from SEIMC, SEFH, SEMSPGS, SEMICYUC and SEIP. *Enferm Infect Microbiol Clin*. 2023; 41(4): 238-42. Editorial Material. IF: 2.6; Q3

- Cobo-Vázquez E, Aguilera-Alonso D, Carlsbyo T, Figueroa-Ospina LM, Sanz-Santaefemia F, Baquero-Artigao F, Vázquez-Ordoñez C, Carrasco-Colom J, Blázquez-Gamero D, Jiménez-Montero B, Grasa-Lozano C, Cilleruelo MJ, Álvarez A, Comín-Cabrera C, Penín M, Cercenado E, Del Valle R, Roa MA, García-De Diego I, Calvo C, Saavedra-Lozano J. Epidemiology and clinical features of *Streptococcus pyogenes* bloodstream infections in children in Madrid, Spain. *Eur J Pediatr*. 2023; 182(7): 3057-62. Article. IF: 3.0; Q1
- de la Calle M, Rodríguez-Molino P, Gómez MPR, Baquero-Artigao F. Cytomegalovirus seroprevalence in pregnant women in Madrid: First step for a systematic screening. *Enferm Infect Microbiol Clin*. 2023; 41(1): 55-6. Editorial Material. IF: 2.6; Q3

- García-Espinosa L, del Rosal T, Quintana L, Maseda R, Grasa C, Falces-Romero I, Menéndez-Suso JJ, Pérez-Conde I, Méndez-Echevarría A, Santos FJA, Alonso LA, de Lucas R, Calvo C, Baquero-Artigao F. Bloodstream infection in children with epidermolysis bullosa. *Pediatr Infect Dis J*. 2023; 42(6): 510-4. Article. IF: 2.9; Q3
- García-Sánchez P, Aguilar-Valero E, Sainz T, Calvo C, Iglesias I, Bueno D, Frauca E, Ramos-Boluda E, Alcolea-Sánchez A, García-Guereta L, Alonso-Melgar A, Esperón F, Méndez-Echevarría A. Immunocompromised children and young patients living with pets: gaps in knowledge to avoid zoonosis. *Transbound Emerg Dis*. 2023; 2023: 2151761. Article. IF: 3.5; Q2
- Grasa C, Monteagudo-Vilavedra E, Pérez-Arenas E, Falces-Romero I, del Castillo YM, Schüffelmann-Gutiérrez C, del Rosal T, Méndez-Echevarría A, Baquero-Artigao F, Santoveña AZ, Fernández PS, Sainz T, Calvo C. Adenovirus infection in hematopoietic and solid organ paediatric transplant recipients: treatment, outcomes, and use of cidofovir. *Microorganisms*. 2023; 11(7): 1750. Article. IF: 4.1; Q2
- Hernández-Villarreal AC, Ruiz-García A, Manzanaro C, Echevarría-Zubero R, Bote-Gascón P, González-Bertolín I, Sainz T, Bueno-Campaña M, Calvo C. Lung ultrasound: a useful prognostic tool in the management of bronchiolitis in the emergency department. *J Pers Med*. 2023; 13(12): 1624. Article. IF: 3.0; Q2
- Hernanz-Lobo A, Noguera-Julian A, Minguell L, López-Suárez A, Soriano-Arandes A, Espiau M, Gil EC, Medina EML, Bustillo-Alonso M, Aguirre-Pascual E, Baquero-Artigao F, Garsaball OC, Gomez-Pastrana D, Falcón-Neyra L, Santiago-García B. Prevalence and clinical characteristics of children with nonsevere tuberculosis in Spain. *Pediatr Infect Dis J*. 2023; 42(10): 837-43. Article. IF: 2.9; Q3
- Herraiz JL, Freijo C, Camacho J, Muñoz M, González R, Alonso-Roca R, Álvarez-Troncoso J, Beltrán-Romero LM, Bernabeu-Wittel M, Blancas R, Calvo-Cebrián A, Campo-Li-

- nares R, Chehayeb-Morán J, Chorda-Ribelles J, García-Rubio S, García-de-Casasola G, Gil-Rodrigo A, Henríquez-Camacho C, Hernández-Piriz A, Hernández-Quiles C, Llamas-Fuentes R, Luordo D, Marín-Baselga R, Martínez-Díaz MC, Mateos-González M, Méndez-Bailón M, Miralles-Aguilar F, Nogue R, Nogue M, de Urbina-Antia BO, Oviedo-García AA, Porcel JM, Rodríguez S, Rodríguez-Serrano DA, Sainz T, Sánchez-Barrancos IM, Torres-Arrese M, Torres-Macho J, Vicente AT, Villén-Villegas T, Zafra-Sánchez JJ, Tung-Chen Y. Inter-rater variability in the evaluation of lung ultrasound in videos acquired from covid-19 patients. *Appl Sci (Basel)*. 2023; 13(3): 1321. Article. IF: 2.5; Q2
- Lobo AH, Sánchez AB, Escolano L, Muñoz SP, Gerig N, Sainz T, Peña MJM, Hortelano MGL. International adoption of children with special needs in Spain. *Children (Basel)*. 2023; 10(4): 690. Article. IF: 2.0; Q2
- López-Ramos MG, Vinent J, Aarnoutse R, Colbers A, Velasco-Araiz E, Martorell L, Falcón-Neyra L, Neth O, Prieto L, Guillén S, Baquero-Artigao F, Méndez-Echevarría A, Gómez-Pastrana D, Jiménez AB, Lahoz R, Ramos-Amador JT, Soriano-Arandes A, Santiago B, Farré R, Fortuny C, Soy D, Noguera-Julian A. Adequacy of the 10 mg/kg daily dose of anti-tuberculosis drug isoniazid in infants under 6 months of age. *Antibiotics (Basel)*. 2023; 12(2): 272. Article. IF: 4.3; Q1
- Martín DL, Pérez RP, Campos LM, Álvarez JA, Cabrera TD, Huerta IJ, Khodayar-Pardo P, Castellanos PL, Baquero-Artigao F. Update of the consensus document on the aetiology, diagnosis and treatment of acute otitis media and sinusitis. *An Pediatr*. 2023; 98(5): 362-372. Article. IF: 1.5; Q2
- Mellado-Sola I, Rodríguez-Molino P, Armas EA, López JN, Falces-Romero I, Rey CC, Lozano CG, Mellado MJ, López-Hortelano MG, Sainz T. Impact of coronavirus pandemic on tuberculosis and other imported diseases screening among migrant minors in Spain. *Trop Med Infect Dis*. 2023; 8(1): 28. Article. IF: 2.8; Q2



3.7 Maternal Infant Child and Youth Research Area

- **Permuy C, Ruiz-Azcárate J, Sampedro M, Jiménez C, Baquero-Artigao F, Calvo C, Méndez-Echevarría A.** Usefulness of daptomycin lock therapy in children with catheter-related bacteremia after failed vancomycin lock therapy. *Ann Clin Microb Anti.* 2023; 22(1): 48. Article. IF: 4.6; Q1
- **Pintado V, Ruiz-Garbajosa P, Aguilera-Alonso D, Baquero-Artigao F, Boug G, Cantón R, Grau S, Gutiérrez-Gutiérrez B, Larrosa N, Machuca I, Martínez LM, Montero MM, Morte-Romea E, Oliver A, Paño-Pardo JR, Sorlí L.** Executive summary of the consensus document of the Spanish Society of Infectious Diseases and Clinical Microbiology (SEIMC) on the diagnosis and antimicrobial treatment of infections due to carbapenem-resistant Gram-negative bacteria. *Enferm Infec Micr Cl.* 2023; 41(6): 360-70. Editorial Material. IF: 2.6; Q3
- **Rodríguez-Molino P, Sola IM, López JGD, Baquero-Artigao F, Díaz-Almirón M, Moreno-Pérez D, Calvo C, Escosa-García L.** Duration of antibiotic therapy among paediatricians: A national survey of current clinical practice in Spain. *Int J Antimicrob Ag.* 2023; 62(1): 106805. Article. IF: 4.9; Q1
- **Ron R, Moreno E, Martínez-Sanz J, Brañas F, Sainz T, Moreno S, Serrano-Villar S.** CD4/CD8 ratio during human immunodeficiency virus (HIV) treatment: time for routine monitoring? *Clin Infect Dis.* 2023; 76(9): 1688-96. Review. IF: 8.2; D1
- **Sánchez PG, Iglesias I, Falces-Romero I, Serrano-Villar M, Calvo C, Alcolea S, Sainz T, Méndez-Echevarría A.** Balancing the risks and benefits of pet ownership in pediatric transplant recipients. *Transplantation.* 2023; 107(4): 855-66. Review. IF: 5.3; Q1
- **Soriano-Ramos M, Esquivel-De la Fuente E, Vicent EA, de la Calle M, Baquero-Artigao F, Domínguez-Rodríguez S, Cabanes M, Gómez-Montes E, Goncá A, Valdés-Bango M, Viñuela-Benítez MC, Gutiérrez MMC, Saave-**

dra-Lozano J, Pérez IC, Encinas B, Vilella LC, Martínez MD, Tagarro A, Rodríguez-Molino P, Quiles EG, Alcázar DG, Burguillo AG, Folgueira MD, Navarro D, Blázquez-Gamero D. The role of the T-cell mediated immune response to Cytomegalovirus infection in intrauterine transmission. *Plos One.* 2023; 18(2): e0281341. Article. IF: 2.9; Q1

- **Tarancón-Díez L, Peraire J, de Ory SJ, Guirio M, Escosa L, Tato LMP, Antón MP, Piqueras AI, Pérez AV, Gavilán C, Bustillo-Alonso M, Navarro ML, Viladés C, Vidal F, Rull A, Muñoz-Fernández MA.** Transient viral rebound in children with perinatally acquired hiv-1 induces a unique soluble immunometabolic signature associated with decreased CD4/CD8 Ratio. *J Pediatr Infect Dis Soc.* 2023; 12(3): 143-51. Article. IF: 2.5; Q3
- **Úbeda M, Maza MD, Delgado P, Horndler L, Abia D, García-Bermejo L, Serrano-Villar S, Calvo C, Bastolla U, Sainz T, Fresno M.** Diversity of immune responses in children highly exposed to SARS-CoV-2. *Front Immunol.* 2023; 14: 1105237. Article. IF: 5.7; Q1
- **Vázquez-Pérez A, Velo C, Escosa L, García-López T, Bernardino JI, Valencia E, Mican R, Mellado MJ, Sainz T.** Mental health in children, adolescents, and youths living with perinatally acquired hiv: at the crossroads of psychosocial determinants of health. *Children (Basel).* 2023; 10(2): 405. Article. IF: 2.0; Q2

Research projects

- **Escosa García L.** Estudio de infecciones por bacterias resistentes a carbapenémicos en pediatría - CARBA-PED. Fundación SEIP. 2022-Ongoing. *Managment centre: FIBHULP*
- **Mellado Peña MJ.** Efecto de una intervención nutricional inmunomoduladora sobre la microbiota, translocación bacteriana, inflamación/activación inmune y respuesta a vacunas en la infección por el VIH en niños. Estudio piloto Pediabiota (PI13/ 00422). European Society of Pediatric

Infectious Diseases. 2014-Ongoing. *Managment centre: FIBHULP*

- **Rodríguez Molino P.** Contrato Río Hortega (CM21/00174). ISCIII. 2022-2024. *Managment centre: FIBHULP*
- **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. *Managment centre: FIBHULP*
- **Rodríguez Molino P.** Impacto del covid-19 materno en la respuesta inmune de los niños. Fundación de la Asociación Española de Pediatría. 2021-Ongoing. *Managment 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. *Managment centre: FIBHULP*
- **Sainz Costa T.** Capacitación de personal sanitario en VIH y ETS en adolescentes (GLD17/0135). Gilead SA. 2017-ongoing. *Managment centre: SEIMC-Gesida*
- **Sainz Costa T.** Ensayo clínico fase II, randomizado, de quinacina frente a metronidazol en giardiasis resistente en niños: QUIN4kids (ICI22/00065). ISCIII. 2023-2026. *Managment centre: FIBHULP*
- **Sainz Costa T.** Proyecto EPIKIDS: envejecimiento epigenético en niños que viven con el VIH y niños expuestos intraútero al VIH/TAR (GLD23/00074 TALIA SAINZ). Gilead Sciences S.L. 2023-2025. *Managment centre: FIBHULP*
- **Sainz Costa T.** Torquetenovirus como marcador inmunológico en niños con infección por el vih (GLD/00090). Gilead Sciences S.L. 2022-Ongoing. *Managment 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. *Managment centre: FIBHULP*

Clinical trials

- **Baquero Artigao F.** Estudio en fase IIA, multicéntrico, aleatorizado, con enmascaramiento para el observador, de 2 grupos para investigar la farmacocinética, la seguridad, la tolerabilidad y la eficacia de aztreonam-avibactam por vía intravenosa ± metronidazol en comparación con el mejor tratamiento disponible (mtd) en participantes pediátricos de entre 9 meses y 18 años de edad con infecciones graves por bacterias gramnegativas incluidas infecciones intrabdominales complicadas.
Type/Phase: IIA
Sponsored by: Pfizer Inc
Signed date: 25/01/2023
- **Baquero Artigao F.** Estudio de fase 3, aleatorizado y doble ciego para evaluar la seguridad, latolerabilidad y la inmunogenicidad de v116 en niños y adolescentes con un mayor riesgo de enfermedad neumocócica.
Type/Phase: III
Sponsored by: Merck Sharp & Dohme LLC
Signed date: 12/12/2023

Patents and trademarks

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

