

Intensive Medicine

Group leader

Subirà Cuyàs, Carles (FGS)
Morán Chorro, Indalecio (until 31/07/2024)

Researchers

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Baldira Martínez De Irujo, Jaume (FGS)
Bellés Casas, Ariadna (FGS)
Betbese Roig, Antoni Jorge (FGS)
Cordón Abalde, Alejandra (FGS)
Díaz Tormo, Carmen (FGS)
Flores Orella, Matías Nicolas (FGS)
García Nogales, Xaime (FGS)
Gomila Sintes, Carme (FGS)
Izura Gómez, Marta (FGS)
Mas Serra, Arantxa (FGS)
Morán Chorro, Indalecio (FGS)
Nievas, María Verónica (FGS)
Rodríguez Farré, Núria (FGS)
Santos Rodríguez, José Alberto (FGS)
Suárez Montero, Juan Carlos (FGS)
Torrens Sonet, Maria (FGS)
Vera Artazcoz, Paula (FGS)
Zapata Fenor, Luis (FGS)

Research technicians

Serrano García, María Ángeles (FGS)



DESCRIPTION

Our research group in Critical Care Medicine focuses on clinical and physiological studies related to respiratory failure, ventilatory support, invasive and non-invasive hemodynamic monitoring, including ultrasound, sepsis, and acute kidney injury biomarkers, as well as the management of critically ill oncologic and hematologic patients.

In 2024, we participated in healthcare innovation programs including Innopau and HealthTech.

MAIN LINES OF RESEARCH

- Respiratory Failure and Ventilatory Support: Consolidated research line focused on non-invasive monitoring of respiratory patterns, optimal PEEP titration, and weaning from mechanical ventilation. (Mas Serra, Arantxa; Moran Chorro, Indalecio; Subira Cuyas, Carles; Rodríguez Farré, Nuria).
- Invasive and Non-Invasive Hemodynamic Monitoring: Established national research network mainly focused on ultrasound-based monitoring. (Zapata Fenor, Luis).
- Sepsis and Acute Kidney Injury Biomarkers: Collaborative work in national and international trials focused on sepsis management and biomarker evaluation. (Betbese Roig, Antoni Jorge; Baldira Martínez De Irujo, Jaume; Vera Artazcoz, Paula).
- Critically Ill Oncohematologic Patients: An emerging research line within the group, with both in-hospital and national collaborations. (Gomila Sintes, Carme; Nievas, Maria Veronica).

SCIENTIFIC CHALLENGES

- Our main challenge for 2025 is to secure competitive research funding. We have applied for two major grants: the "Proyectos de I+D+I en Salud 2025" from the Instituto de Salud Carlos III and a call from Fundació La Marató de TV3. We also anticipate the publication of results from the largest randomised clinical trial to date on weaning from mechanical ventilation, led by our principal investigator, Carles Subirà. Strengthening our collaborations and consolidating emerging research lines are also key objectives for this year.
- Throughout 2025, we aim to develop novel healthcare innovation tools in connection with the HealthTech and Innopau programs, leveraging the experience and collaborations established in 2024.

ACTIVE & AWARDED GRANTS

- Mas Serra, Arantxa. Monitorització del patró respiratori dels pacients amb pneumònia greu per COVID-19 mitjançant un nou dispositiu no invasiu. MARATO 202122-30. Fundació La Marató de TV3. Duration: 2024-2024. 41.242,79 €
- Torrens Sonet, Maria. Cuantificación de la congestión sistémica mediante ultrasonografía como predictor del fracaso del weaning de la ventilación mecánica. BECASEMICYUC2024/001. Sociedad Española de Medicina Intensiva, Crítica y Unidades Coronarias (SEMICYC). Duration: 2024-2027. 10.000,00 €

DOCTORAL THESES DEFENDED

- Baldira Martínez de Irujo, Jaume. Medicina de precisió en la sèpsia: ús de biomarcadors. 30/10/2024. Universitat Autònoma de Barcelona. Supervisors: Ferrer Roca, Ricard; Ruiz Rodríguez, Juan Carlos; Fonollosa Pla, Vicente. <https://hdl.handle.net/10803/692811>.

SCIENTIFIC PRODUCTION

- Angeles D, Izura M, Barguilla A, Sierra A, Moran I. Lance-Adams Syndrome in the Intensive Care Unit: A Case Report. CUREUS JOURNAL OF MEDICAL SCIENCE. 2024; 16(4):e58241. DOI:10.7759/cureus.58241. PMID:38745818. Document type: Article.
- Angeles D, Morán I, Morales L, Bjørn Ibsen: What Made Intensive Care So Critical?. CUREUS JOURNAL OF MEDICAL SCIENCE. 2024; 16(8):e67281. DOI:10.7759/cureus.67281. PMID:39301333. Document type: Review.
- Ferrer R, Castro P, Lorenzo C, Monclou J, Marcos P, Ochagavía A, Ruíz JC, Trenado J, Villavicencio C, Yébenes JC, Zapata L, trabajo sepsis SOCMIC GRP. Ten take-home messages on vasopressin use in critically ill patients. Medicina Intensiva. 2024; 48(12). DOI:10.1016/j.medin.2024.07.008. PMID:39438184. IF:2,700 (Q2/5D). Document type: Article.
- Gras L, Plaza A, Zarate B, Vera P, Torres OH, Bastida C, Soy D, Ruiz J. Risk Factors Associated with Antibiotic Exposure Variability in Critically Ill Patients: A Systematic Review. Antibiotics-Basel. 2024; 13(9):801. DOI:10.3390/antibiotics13090801. PMID:39334976. IF:4,300 (Q1/2D). Document type: Review.
- Gutiérrez VF, Fenor LZ, Ortiz AB, Mier MG, Calvo AO. Right ventricular dysfunction in the critically ill. Echocardiographic evaluation. Medicina Intensiva. 2024; 48(9). DOI:10.1016/j.medin.2024.05.008. PMID:39079775. IF:2,700 (Q2/5D). Document type: Article.
- Koyner JL, Arndt C, de Irujo JBM, Coelho S, de la Peña MGM, di L, Joannidis M, Jorge P, Koch C, Lobaz S, Meyer A, Ostermann M, Pertica N, Prowle JR, Silversides J, Zarbock A, Echeverri J, Harenski K, Forni LG. Assessing the role of Chemokine (C-C motif) ligand 14 in AKI: a European consensus meeting. RENAL FAILURE. 2024; 46(1):2345747. DOI:10.1080/0886022X.2024.2345747. PMID:38666354. IF:3,000 (Q1/3D). Document type: Article.

- Luján M, Gómez CC, Peñuelas O, Ferrando C, Heili SB, Perales JMC, Mas A, Catalán JS, Mediano O, Roca O, Fernández JG, Varela AG, Montes GS, Cervera GR, Hernández G, Millán T, Monreal MF, Santaolalla CE. Multidisciplinary Consensus on the Management of Non-Invasive Respiratory Support in the COVID-19 Patient. ARCHIVOS DE BRONCONEUMOLOGIA. 2024; 60(5). DOI:10.1016/j.arbres.2024.02.017. PMID:38521646. IF:8,700 (Q1/1D). Document type: Article.
- Ochagavía A, Palomo N, Fraile V, Zapata L. Hemodynamic monitoring and echocardiographic evaluation in cardiogenic shock. Medicina Intensiva. 2024; 48(10). DOI:10.1016/j.medin.2024.05.011. PMID:39097480. IF:2,700 (Q2/5D). Document type: Article.
- Parrilla FJ, Roche F, Italiano S, Parrilla A, Morán I, Mancebo J, Maraffi T. Time course of electrical activity of the diaphragm (EAdi) in the peri extubation period and its role as predictor of extubation failure in difficult to wean patients. CRITICAL CARE. 2024; 28(1):308. DOI:10.1186/s13054-024-05092-x. PMID:39289731. IF:8,800 (Q1/1D). Document type: Article.
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- Zapata L, Gómez R, Llanos C, Duerto J, Martín L. Cardiogenic shock as a health issue: Physiology, classification, and detection. Medicina Intensiva. 2024; 48(5). DOI:10.1016/j.medin.2023.12.012. PMID:38458914. IF:2,700 (Q2/5D). Document type: Article.