

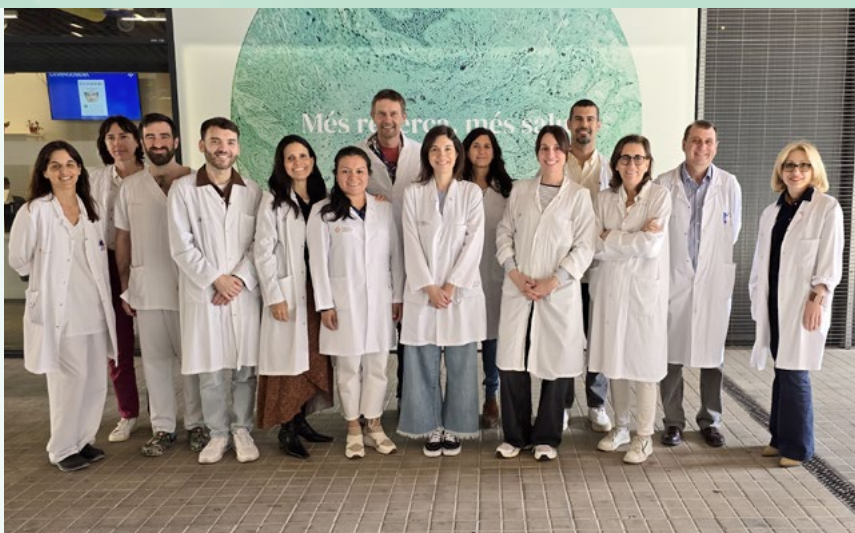
Anaesthesiology

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DESCRIPTION

The anesthesiology research team at the “Hospital de la Santa Creu i Sant Pau (HSCSP)” in Barcelona has extensive experience in both clinical and research fields.

About research activities, Dr. Pilar Paniagua and her colleagues are actively involved in an internationally recognised line of research in the field of Perioperative Medicine: (Integrated medical care provided to patients before, during, and after surgery). It focuses on risk assessment, clinical optimisation, and complication prevention to improve surgical outcomes and recovery.

This research line is coordinated by the Population Health Research Institute (PHRI) at McMaster University (Canada). It promotes collaborative projects aimed at optimising diagnosis, risk prediction, prevention, and/or treatment strategies in high-risk surgical patients.

Within this framework, HSCSP has participated in several major projects, some of which have received competitive funding and been published in high-impact journals.

This research activity reflects the team's commitment to improving outcomes in surgical patients through both international collaboration and locally driven innovation.

MAIN LINES OF RESEARCH

- ASPIRE: Detection of postoperative atrial fibrillation and evaluation of the need for anticoagulation (Investigators: Villamizar, Martín, Giné).

- DELPO: Identification of postoperative delirium and its association with postoperative complications (Investigators: Giné, Martín, Paz, Mur; REA Group).
- INVIBLADE: Comparison of different laryngoscope blades for postoperative intubation using video laryngoscopy (Investigators: Giné, G. Bartolo, Nuñez; REA + UCIPO Groups).
- VASOPRESS: Use of vasopressin during intra- and postoperative periods in patients with shock (Investigators: Giné, M. Castela, Cegarra; REA + UCIPO Groups).
- FENICE II (Pending IRB approval): Fluid therapy in critically ill postoperative patients (Investigators: Gutierrez, Giné; REA Group).
- NUTSARC: Malnutrition and its relationship with postoperative complications in patients undergoing surgery for retroperitoneal sarcoma (Investigators: Giné, Gutierrez).
- NUTOVA: Malnutrition and postoperative complications in patients undergoing surgery for advanced ovarian cancer (Investigator: Giné).
- Detect-POAF (Pending IRB approval): Detection of postoperative atrial fibrillation using a wearable monitoring device (Investigators: M. Castela, Martín, Gutierrez).
- EUpreCHO (Pending IRB approval). European study on perioperative management and outcome following perioperative transthoracic echocardiography in noncardiac surgery patients.
- FGW: Fibrinogen substitution in cardiac surgery
- TRICS IV: Transfusion trigger in cardiac surgery
- MONACOD: Direct oral anticoagulation in non-cardiac surgery
- FvW in MAD: Von Willebrand factor in mechanical-assisted devices.
- End Growth study: Endovascular treatment in intracerebral bleeding.
- SAVE study: Sevoflurane vs propofol in patients with acute ischemic stroke.
- The field of anesthesiology is currently undergoing significant transformation, driven by advances in technology, increasing patient complexity, and a growing emphasis on perioperative outcomes. As such, anaesthesia departments face a range of evolving scientific challenges that necessitate robust clinical research, innovation, and interdisciplinary collaboration. The following are key areas where current and future scientific efforts are particularly relevant:
 - Personalised Anaesthesia and Precision Medicine
 - Postoperative Delirium and Cognitive Dysfunction
 - Advanced Hemodynamic Monitoring and Management
 - Perioperative Pain Management and Opioid-Sparing Strategies
 - Influence of Anaesthetic Techniques on Oncologic Outcomes
 - Artificial Intelligence and Clinical Decision Support
 - Anaesthesia Delivery in Non-Operating Room Environments
 - Environmental Sustainability in Anaesthetic Practice
 - Patient Safety and Quality Improvement
 - Simulation-Based Education and Competency Assessment.

SCIENTIFIC CHALLENGES

ACTIVE & AWARDED GRANTS

- Martínez Gonzalez, José. El enzima lisil oxidasa (LOX) en la aterosclerosis y la calcificación: estudio en un modelo de aterosclerosis experimental y en válvulas aórticas humanas calcificadas. Fundación Española de Arteriosclerosis (FEA)- Sociedad Española de Arteriosclerosis (SEA). Duration: 2022-2025. 15.000,00 €

DOCTORAL THESES DEFENDED

- Mases Fernández, Anna. Validació dels predictors de risc de complicacions cardiovasculars majors perioperatòries.

- Predicció de la lesió miocardiàica aguda perioperatòria. 21/03/2024. Universitat Autònoma de Barcelona. Supervisors: Sabaté Tenas, Sergi; Gallart Gallego, Lluís. <https://hdl.handle.net/10803/691694>
- Moreno Garijo, Jacobo. Correlating three-dimensional left ventricular outflow tract Area with post-myectomy gradients in hypertrophic obstructive cardiomyopathy. 26/06/2024. Universitat Autònoma de Barcelona. Supervisors: Artigas Raventos, Vicens; Maestre Hittinger, Maria Luz. <https://hdl.handle.net/10803/692028>
 - Popova Sherozia, Ekaterine. Evaluación de la lesión miocárdica perioperatoria en cirugía no cardíaca con troponina T cardíaca de alta sensibilidad e imagen cardíaca avanzada. Resultados y coste efectividad de su evaluación sistemática. 14/06/2024. Universitat Autònoma de Barcelona. Supervisors: Paniagua Iglesias, Pilar; Alonso Coello, Pablo Ignacio; Bonfill Cosp, Xavier. <https://hdl.handle.net/10803/692033>
 - Prieto Butillé, Mercè. Estudi fragilitat, anestèsia i complicacions (Estudi FRAC). 05/04/2024. Universitat Autònoma de Barcelona. Supervisors: Gallart Gallego, Lluís; Sabaté Tenas, Sergi. <https://hdl.handle.net/10803/691703>
 - Student survey after ten years of continuous blended teaching of echocardiography. Revista Espanola De Anestesiologia Y Reanimacion. 2024; 71(1). DOI:10.1016/j.redare.2023.05.004. PMID:37683971. Document type: Article.
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