

## Clinical Research in Transfusion Medicine

### Group leader

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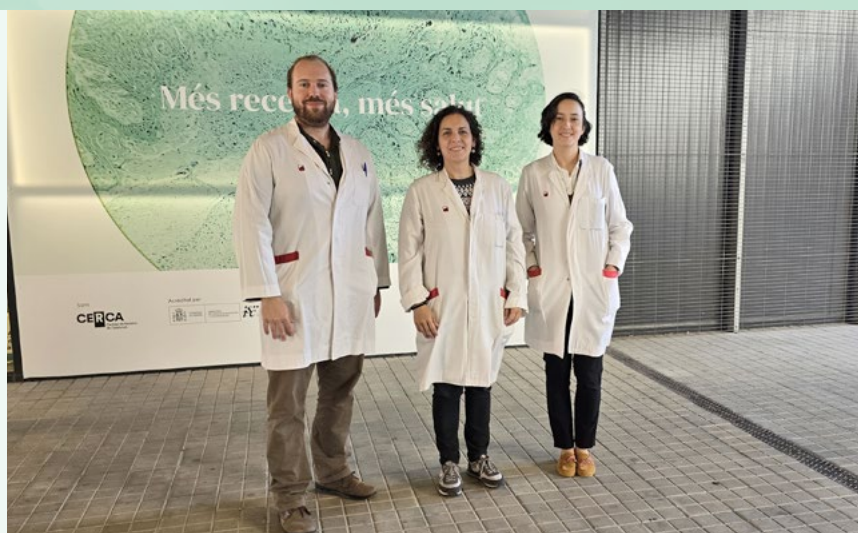
### Researchers

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### DESCRIPTION

Regarding cellular apheresis, our main aim is to take part in the ongoing CART clinical trials in the haematology field. Nowadays, this is our primary focus as a research group. Not only being involved in academic CARTs manufactured by our own Research Institute, but also in every new CART that is upcoming from other services, such as neurology or rheumatology.

In the apheresis field, an unipuncture ecoguided programme has been developed, which has reduced central venous access requirements before collection. This project is now focused on including not only patients or donor candidates for cellular collections but also for therapeutic procedures.

In the transfusion area, another edition of Transfusion Indications Audit is being developed by the Transfusion Hospital Committee (a platelet audit has been performed in 2023, but next one will include red blood cells which were audited last time in 2019). In this regard, a massive transfusion interhospital audit has been taking place in 2024, with results to be analysed shortly. In the transfusion field, a new outpatient transfusion programme should also be taken into account, in coordination with the haematology service, which has been working since February 2024.

Two projects are underway in the donation area. The first one relates to the re-enrollment of excluded patients for total blood donation, but they are acceptable as plasma donors. The second one, with a planned kick-off in July, will include ferritin controls in regular donors.

## MAIN LINES OF RESEARCH

- CART: novel clinical trials upcoming in the field of neurology and rheumatology. (Sanz Linares, Gabriela; Medina Marrero, Laura).
- Transfusion: hospital transfusion audit as a starting point for the patient blood management program. (Ferrer Garrido, Gonzalo José; Bosch Llobet, Maria Alba).
- Ferritin follow-up in regular donors. (Sanz Linares, Gabriela; Medina Marrero, Laura).
- Therapeutic erythrocyte exchange with red blood cells reduction programme. (Ferrer Garrido, Gonzalo José; Sanz Linares, Gabriela).

## SCIENTIFIC CHALLENGES

- Novel CART clinical trials upcoming: RNAC-MG-002; Descartes: neurology (for myasthenia gravis), IM060-0001: rheumatology (for lupus, arthritis, myositis and systemic sclerosis), CYTB323K12201: rheumatology (for systemic sclerosis).
- Comparative study between therapeutic erythrocyte exchanges with red blood cells reduction versus only exchange—interhospital study in collaboration with the haematology service.
- Patient blood management protocol in outdoor patients, previous to admission for surgery (in collaboration with anesthesia service). According to this project, a transfusion audit will be developed by the Hospital Transfusion Committee in 2025.
- Comparative study between therapeutic plasma exchanges (TPE) alone versus TPE in combination with immunoglobulins in immune-mediated neurologic pathology, in collaboration with the neurology service.
- Immunotherapy pharmacokinetic (especially with novel agents: ruxolitinib, abatacept, etc), in patients undergoing therapeutic plasma exchange (TPE), in collaboration with the neurology service.

## SCIENTIFIC PRODUCTION

- Muñoz NG, Ortega S, Solanich X, Cid J, Díaz M, Moreno AB, Ancochea Á, Santos M, Hernández I, Sánchez JM, Luaña A, García J, Escoda L, Medina L, Ferrer GJ, López J, Céspedes R, Díaz JA, Pons V, Valcárcel D, Grifols JR. Diagnosis and clinical management of thrombotic thrombocytopenic purpura (TTP): a consensus statement from the TTP Catalan group. *Blood Transfusion*. 2024; 22(2). DOI:10.2450/BloodTransfus.522. PMID:37677097. IF:2,400 (Q2/5D). Document type: Article.
- Romera Martínez I, Avendaño-Solá C, Villegas Da Ros C, Bosch Llobet A, García Erce JA, González Fraile MI, Guerra Domínguez L, Vicuña Andrés I, Anguita Velasco J, González Rodríguez VP, Contreras E, Urcelay Uranga S, Pajares Herraiz ÁL, Jiménez-Marco T, Ojea Pérez AM, Arroyo Rodríguez JL, Pérez-Olmeda M, Ramos-Martínez A, Velasco-Iglesias A, Bueno Cabrera JL, Duarte RF. Factors related to the development of high antibody titres against SARS-CoV-2 in convalescent plasma donors from the ConPlas-19 trial. *Vox Sang*. 2024; 119(1):27-33. DOI:10.1111/vox.13561. PMID:37986640. IF:1,800 (Q3/7D). Document type: Article.