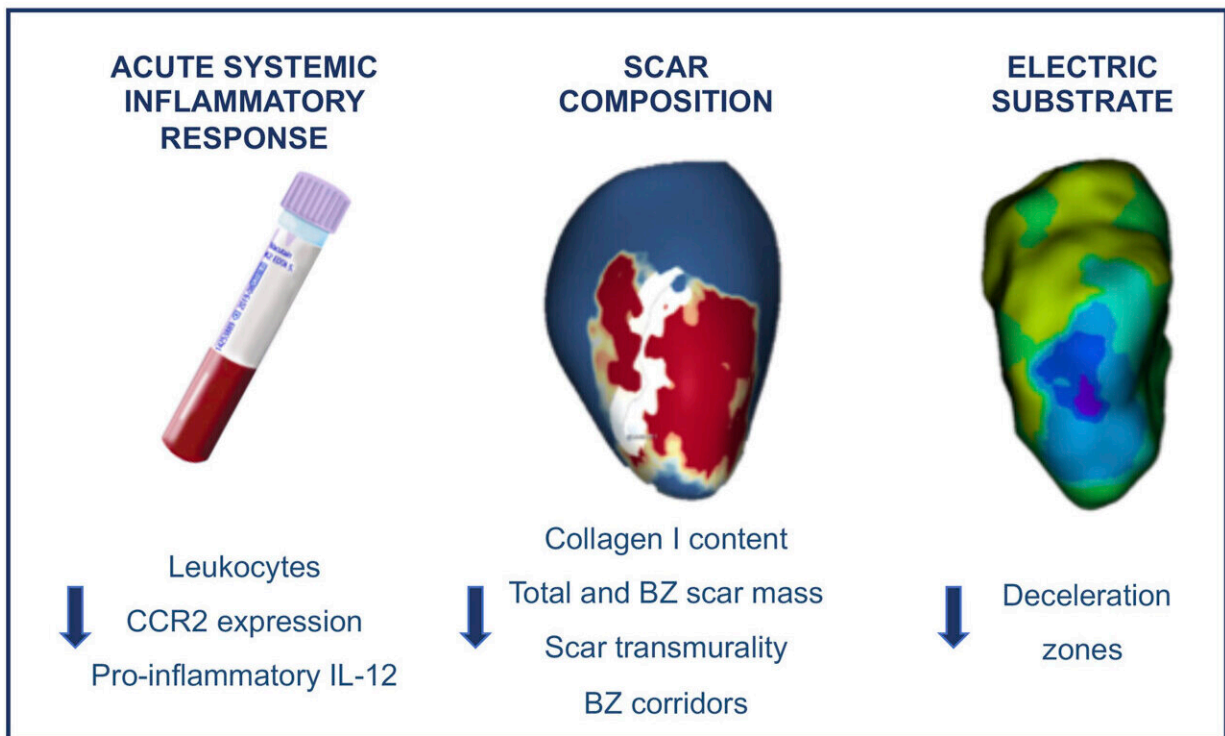


A new drug shows potential benefits in the recovery of patients after a heart attack

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Graphical abstract. Credit: Circulation: Arrhythmia and Electrophysiology

Researchers from the Cardiac Regeneration and Heart Failure Research Group (ICREC) at the Germans Trias i Pujol Research Institute (IGTP) and the Heart Institute of the Germans Trias Hospital (iCor) have found

beneficial effects of the novel drug Sacubitril/Valsartan in the management of myocardial infarction (MI).

Their research, recently [published](#) in the journal *Circulation: Arrhythmia and Electrophysiology*, offers new insights into the drug's ability to reduce inflammation, cardiac fibrosis, and prevent dangerous heart arrhythmias post-MI.

Cardiovascular diseases, especially MI, are a leading cause of global mortality. After such an event, the injured myocardium affected by the ischemia triggers an intense inflammatory reaction to remove dead cells and activate the replacement of necrotic tissue by collagen-based scar tissue.

While the scar maintains the structural integrity of the heart, it does not contribute to the pumping function of the heart and increase the risk of malignant arrhythmias, contributing to the development of heart failure—a [medical condition](#) where the heart is unable to pump blood efficiently enough to meet the body's needs.

In this context, Sacubitril/Valsartan is a [combination drug](#) that has achieved promising results in reducing the rehospitalization rates and cardiovascular deaths in patients with heart failure. While the role of this drug in [heart failure](#) is beginning to be well established, its efficacy on MI management remains largely unexplored. In this regard, the present work aimed to evaluate the effects of early administration of Sacubitril/Valsartan in a preclinical porcine model of MI in terms of inflammation, cardiac fibrosis, and arrhythmogenic properties of the heart.

The drug has shown promise in mitigating these effects, reducing the acute systemic inflammatory response and fatal arrhythmia risk by 55% and promoting healthier scar formation. Drs Felipe Bisbal and Carolina

Gálvez-Montón, who led the study, state that "the effects of Sacubitril/Valsartan in the porcine model of myocardial infarction are very promising and suggest that this novel drug could substantially improve the prognosis and quality of life of patients who suffer from this event."

Future studies for [clinical evaluation](#) in humans will be key to determine the reproducibility of these findings and the clinical benefit of the Sacubitril/Valsartan therapy in a MI scenario.

More information: Daina Martínez-Falguera et al, Antiarrhythmic and Anti-Inflammatory Effects of Sacubitril/Valsartan on Post-Myocardial Infarction Scar, *Circulation: Arrhythmia and Electrophysiology* (2024). [DOI: 10.1161/CIRCEP.123.012517](https://doi.org/10.1161/CIRCEP.123.012517)

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