

BIO J-L Balligand

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Assistant Professor of Medicine '95, Harvard Medical School

J-L Balligand developed the core of his research on the biochemistry and cellular biology of nitric oxide synthases (NOS) including their regulation in cardiovascular tissues. He initiated the research on the role of NOS in cardiomyocyte contractility, currently extended in the context of myocardial remodelling, e.g. in response to catecholamines and beta-adrenoreceptors. His group also provided seminal observations on the mechanism of endothelial dysfunction by LDL-cholesterol and pleiotropic effects of hypolipemiant drugs (e.g. statins) on the endothelium. JL Balligand and his group developed these research directions as associated partner of a Leducq Foundation-funded transatlantic network of excellence in cardiovascular sciences (<http://www.leducq-transatlantic-network.org>) and of the FP6-EUGeneHeart consortium (<http://www.eugeneheart.eu>) that laid the ground for innovative research in therapeutics for heart failure. He also coordinated several collaborative programmes (Concerted Actions, Interuniversity Attraction Pole) funded by the Politique Scientifique Fédérale. He coordinated the Clinical Trial "Beta3\_LVH" ([www.beta3lvh.eu](http://www.beta3lvh.eu)) that tested the repurposing of the beta3-adrenergic agonist, mirabegron for the prevention of heart failure with preserved ejection fraction (funded by a European Commission Horizon2020 grant). Recently, he developed initiatives towards the application of systems biology approaches for complex medical diseases, such as long COVID syndrome (funded by the SOFINA Solidarity Fund), currently extended in Wallonia through FEDER funds and internationally through collaboration with the "Network Medicine Alliance and Institute" (<https://www.network-medicine.org/>). He is Principal Investigator within the Walloon Excellence Research Institute (WEL-RI; Welbio section; [https://welri.org/cms/c\\_11740011/en/welri](https://welri.org/cms/c_11740011/en/welri)). He is past-President of the Institut de Recherche Expérimentale et Clinique (IREC), Faculty of Medicine, UCLouvain. He also is practicing Physician at the Cliniques Universitaires Saint-Luc and teaches cardiovascular physiology and pharmacology at the Faculty of Medicine. He is "Membre Titulaire" of the Royal Academy of Medicine of Belgium and was Vice-President of the Health competitiveness cluster of the Wallonia Region, BioWin. He is President of the AstraZeneca Foundation and Chair of the Scientific Committee of the Princess Lilian Cardiology Foundation.