

INPhINIT

"la Caixa" Fellowship Programme

Many people form part of history.

Only a few manage to change it.

IBEC participates in
"la Caixa" Fellowship Programme with
a set of **stimulating PhD projects** and
excellent research groups
to host the fellows



Cellular and respiratory biomechanics group

Group leader: Daniel Navajas

3D Bioprinting for vascular replacement: BioPrintVas

Atherotrombotic cardiovascular disease is the foremost cause of premature mortality and disability-adjusted life years in Europe. A major reason for this trend is the on-going epidemic of obesity and type 2 diabetes. Obesity often clusters with other cardiometabolic abnormalities such as hypertension, dyslipidemia, dysglycemia and insulin-resistance, all of which are well-established risk factors for atherosclerosis. Estimates and projections suggest an expansion of epidemic magnitude of diabetes and obesity incidence and prevalence in Europe. There is a clear need for an alternative to treat diabetes-driven vascular diseases that has encouraged the development of new approaches such as those globally termed tissue engineering. Within tissue engineering, 3D bioprinting is emerging as a plausible and real option to develop solid organs and tissues.

We propose the biofabrication of neovessels to treat ischemic tissues caused by diabetes mellitus, a true epidemic of the 21st century.

This is a translational project carried out in collaboration with the group of Prof. Bayés-Genis of Hospital Universitari Germans Trias i Pujol

Job position description

We are seeking highly motivated candidates with a background in physics, engineering or cell biology and a strong interest in tissue engineering and regenerative medicine.