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CIC biomaGUNE

MEMBER OF BASQUE RESEARCH
& TECHNOLOGY ALLIANCE

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Cima Universidad de Navarra.

Host. Dorleta Jiménez de Aberasturi

Cardiac Tissue Engineering - Building human myocardium in the lab through unravelling nature´s design specifications.



**Wednesday, 17th April
12.00 p.m.**

CIC biomaGUNE - Seminar Room

The fabrication of human cardiac tissue in the lab is a pressing necessity. On the one hand, myocardial infarction is the first single cause of death worldwide. It is mainly due to the death of a portion of the organ, which cannot be regenerated endogenously. On the other, cardiotoxicity is amongst the most prevalent drug side effects. This stems from the inadequacy of the preclinical testing systems used, mainly based on animals and irrelevant cell lines. Both problems can be addressed generating cardiac tissue in the lab. Two recent technological advances now bring these objectives closer to reality than ever: cellular reprogramming and biofabrication. In our lab, we try to develop and employ these and other technologies to advance towards these highly impacting goals. In this talk I will highlight some examples of the research carried out in my group to push towards achieving these aims, from the use of micro- and mini-tissues in cardiotoxicity testing, to our efforts in developing large-scale efficient therapeutic tissues, and other cardiac-related applications.