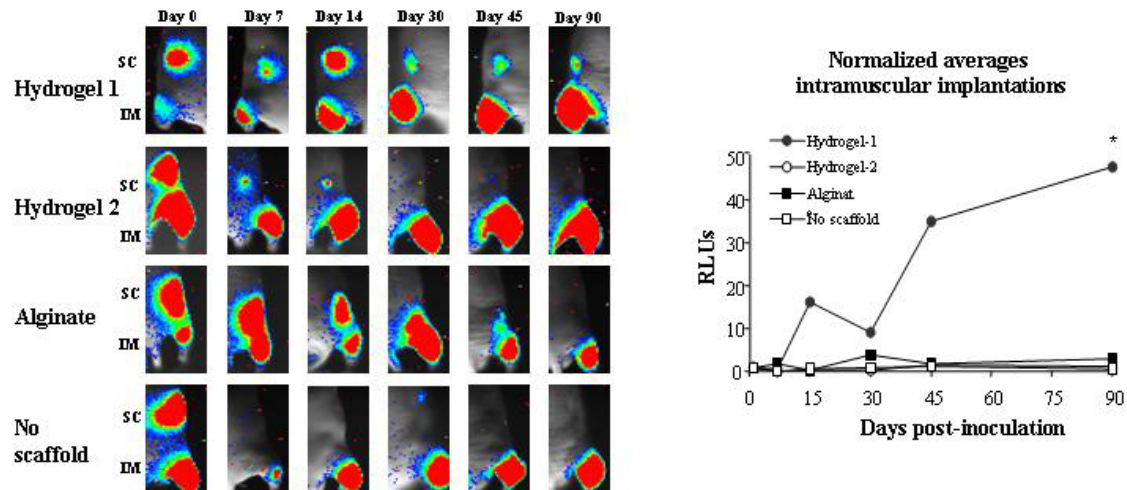




Jerónimo Blanco
Científico Titular
Cardiovascular Research Centre CSIC-ICCC
Hospital de la Santa Cruz y San Pablo
Av. San Antonio M^a Claret 167
08025 Barcelona
Tel: +34 93 556 59 05
Fax: +34 93 556 55 59
E-mail: jblancof@csic-iccc.org

Jerónimo Blanco is Doctor in Chemistry by the University of Barcelona and Ph.D. in Oncology by the University of Wisconsin, Mc Ardle Laboratory for Cancer Research (Madison, Wisconsin). J. Blanco has been a Post-Doctoral fellow at the Department of Medical Biochemistry, Universidad de Calgary (Alberta, Canada), Research Associate at the Department of Molecular Biology, Scripps Clinic Research Centre (La Jolla, California) and at the Department of Molecular Biology, Biomedical Research Institute (La Jolla, California). In Spain he has worked at the Cancer Research Institute (IRO). Currently, J. Blanco is Científico Titular of Spanish National Research Council (CSIC) and he works at the Cardiovascular Research Center (CSIC-ICCC), created by association of CSIC and the Catalan Cardiovascular Science Institute (ICCC).

At CSIC-ICCC, J. Blanco leads a group interested in the study of stem cells, their application to cell therapy and the relationship between stem cells and cancer. The group has developed non invasive photonic imaging procedures that allow the study of behaviour, proliferation and differentiation of small populations of cells in live animals. The strategy of this procedures is based on a) the generation of viral vectors for photoprotein reporter expression (fluorescent proteins and luciferases) under the control of constitutive and/or tissue specific promoters in the cells of interest, b) the implantation of said cells in animal models of disease and c) time sequence monitoring of biodistribution, proliferation and differentiation of the cells in live animals.



The images show the evolution of 100.000 mesenchymal stem cells seeded in each of the indicated biomaterials, subcutaneous (SC) and intramuscularly (IM) implanted in the back and in the thigh of immunodepressed mice. Depending on the biomaterial, cell proliferation was monitored for 90 days or more. The images are easily quantified from the recorded photon events. The graph shows the behaviour difference between biomaterials. Cell growth in Hydrogel 1 is 40X superior to that of the other materials analyzed. The results shown are the average of 6 mice (*I.Roman et al., Biomaterials 2007*)