

- **Complete denomination:** Unidad de Gestión Clínica de Reumatología Hospital Clínico San Carlos
- **Location (city, country):** Madrid (Spain)
- **Director:** Benjamín Fernández-Gutiérrez
- **Contact person in NEWGEN:** Benjamín Fernández-Gutiérrez
- **Working Group involvement:** WG4 Vice-Leader: *In vitro* Evaluation of the Performance

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MC substitute

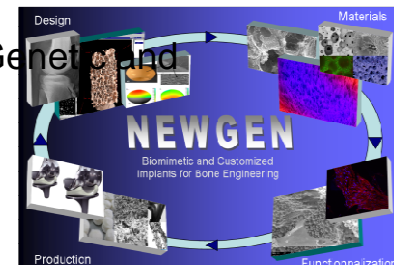
- **Staff:** B. Fernández-Gutierrez MD.PhD, L. Rodríguez-Rodríguez MD.PhD, P. Tornero PhD, JR. Lamas PhD, Fernando Marco MDPHD

➤ **Research topics:**

- Cell signaling pathways in MSCs during differentiation. Assessment of regenerative potential *in vivo*. Immunomodulatory potential *in vitro*

➤ **Researchers expertises:**

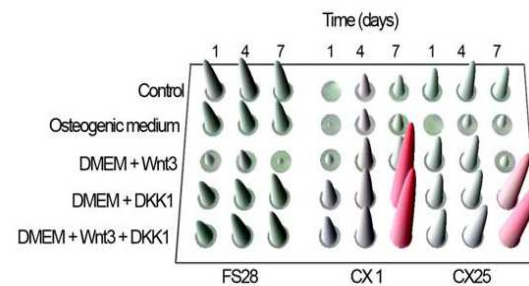
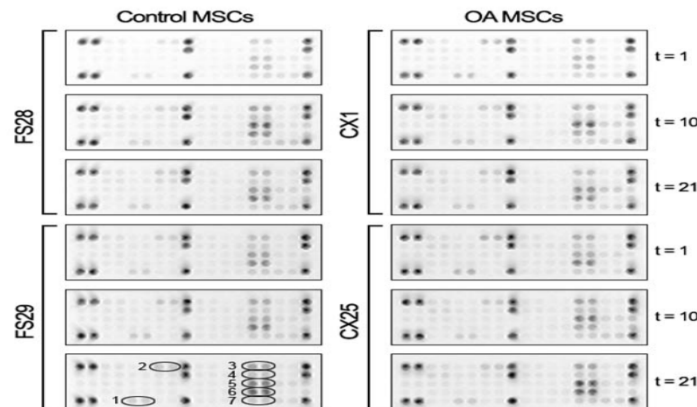
- Biologists: Cell Isolation, characterization, culture and differentiation, Proteomic, Genetic and Transcriptional studies.
- Physicians: Clinical management of musculoskeletal diseases.

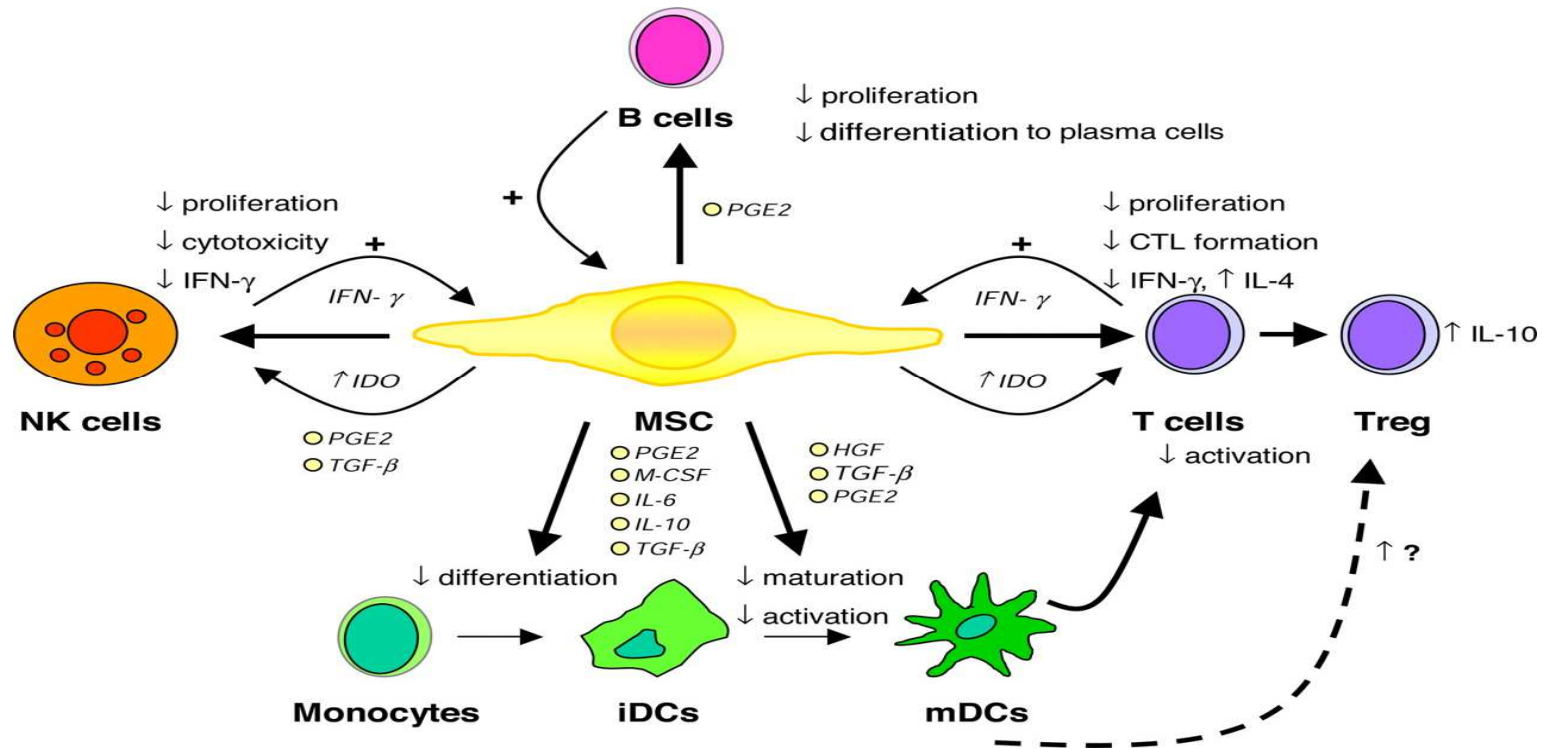


COST Action MP1301

Mechanisms involved in osteogenic and chondrogenic differentiation

- Wnt function during osteogenesis and chondrogenesis
- Role of miRNAs, over osteogenic differentiation





Study of Immunomodulatory potential of MSCs

Rotator cuff regeneration using MSCs and collagen scaffolds in a Sprague-Dawley rat model



Rat shoulder

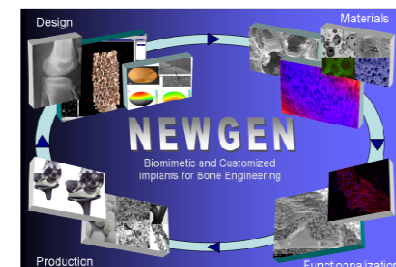
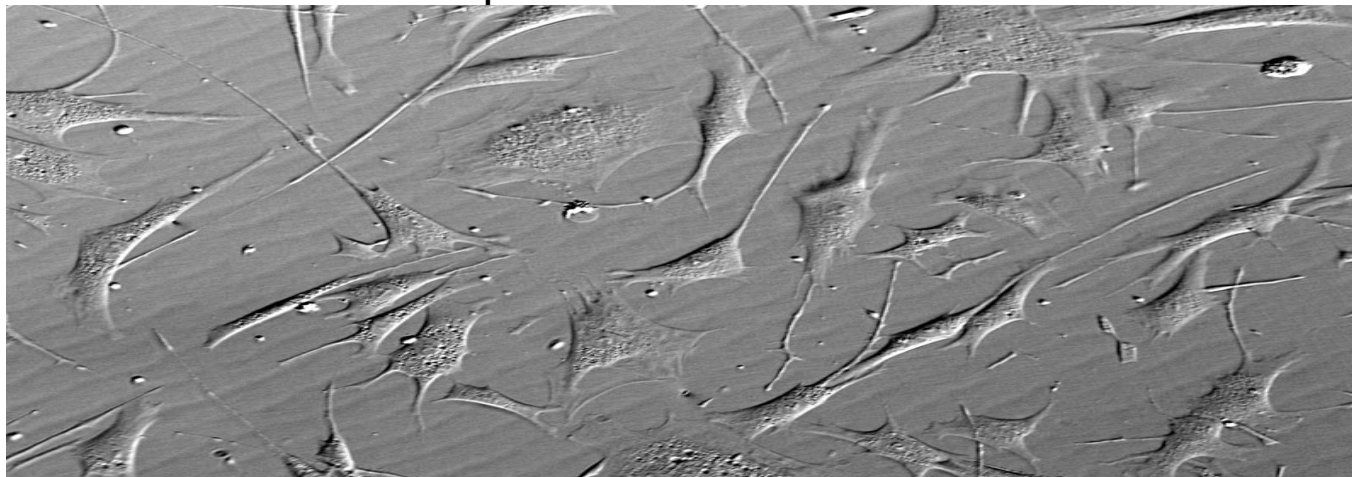


Human shoulder





Treatment of human rotator cuff injuries using autologous mesenchymal stem cells from bone marrow aspirates.



Big Tertiary Hospital (750 beds)

Two research laboratories, both equipped for cell culture.

Animal experimentation Facility.

Biobank for cells, tissues etc.

Clean room (accreditation pending)

