CIPF Seminar

Spinal Plasticity and Repair after Cervical Spinal Cord Injury

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Date: 12/12/19- 12:30h
Place: Salón de Actos CIPF

Abstract: There is a growing scientific and clinical interest in the use of neural precursor cells to repair the injured spinal cord. A vast number of studies have shown that neural stem cells (NSCs) or lineage-restricted neural progenitor cells (NPCs) can integrate with the injured spinal cord and facilitate some repair and recovery. Despite extensive preclinical research, it remains unclear as to 1) how and when donor cells differentiate and integrate with host injured circuitry, 2) if integration can be enhanced and/or guided using non-invasive means such as activity-based therapy or 3) what the long-term phenotype of donor cells is once transplanted. With a focus on the phrenic circuit and respiratory dysfunction after cervical spinal cord injury (SCI), this presentation will begin to explore these questions, and test the hypothesis that i) pairing cellular transplantation with activity-based therapy will enhance connectivity, and ii) attention toward the phenotype of cells developed for transplantation can improve outcome.