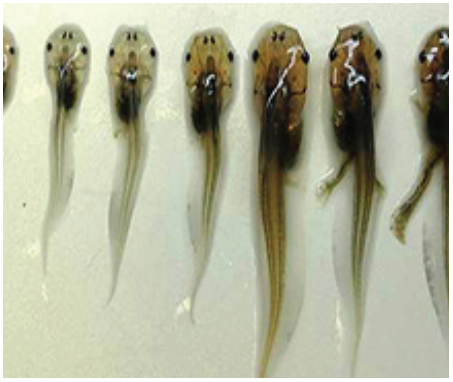
MILLENNIUM NUCLEUS OF NATURAL SCIENCES

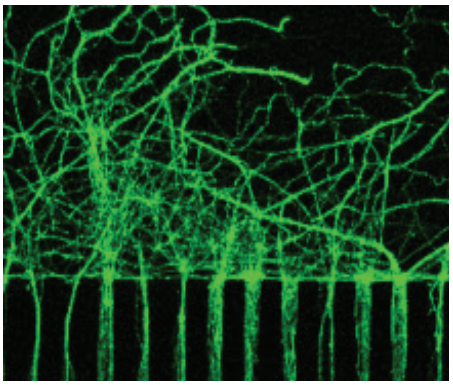
MILLENNIUM NUCLEUS CENTER OF REGENERATIVE BIOLOGY - **Minreb**

Area of Impact: Health
Specialty: Nervous System

MINREB scientists are dedicated to find answers to a common question: Why is neuronal regeneration in mammals ineffective? In order to succeed, the experience of its investigators in different areas such as neurotropic factors and traffic of membrane, neurogenesis and early development of vertebrates, degeneration and axonal regeneration, glia-axon relationship, and cellular mechanisms of connectivity between motor neurons and muscle, should allow new approaches to answer this question.

We envision that basic research in regenerative biology is necessary for the progress of Regenerative Medicine, a field aimed at developing new therapies to restore function of tissues in diseases of high social impact.





MAIN ACHIEVEMENTS

- Development of biological models for the study of the regenerative biology of the nervous system and development of biomedical applications.
- Magazine publications of international prestige with domestic and foreign partners.
- Formation of advanced human capital in regenerative biology.
- Creation of international networks.
- Undergraduate and graduate teaching.
- Joining editorial boards of journals in the field.

CONTACT INFORMATION

DIRECTOR: **Francisca Bronfman**

ACTING DIRECTOR: **Felipe Court**

Francisca Bronfman

Felipe Court

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RESEARCHERS

Principal Researcher:
Francisca Bronfman

Acting Principal Researcher:
Felipe Court

Associate Researchers:
María Paz Marzolo
Juan Pablo Henríquez
Juan Larraín

RESEARCH TOPICS

- **Role of growth factors and transcriptional regulators in functional recovery after stroke.**
- **Cellular and molecular mechanism mediated by neurotropic receptors, which allows axonal and dendritic growth in normal and injured neurons.**
- **Role of glial cells in degenerative and regenerative processes in the nervous system.**
- **The regeneration of the spinal cord in Xenopus laevis.**
- **Metamorphosis of Xenopus laevis.**
- **Role of Reelin in the regeneration of the SNP.**
- **Role of morphogens in embryonic development of the neuromuscular union.**

NOTED OUTREACH ACTIVITIES

- **Microscopy Workshop on Regenerative Biology for high school students.** More than 500 students from different schools and colleges in the country have participated in this intensive one-day course where participants discuss and display samples of the central and peripheral nervous system in normal conditions and on different days after injury. These demonstrations are performed in the laboratories of MINREB group.

PRODUCTIVITY PUBLICATIONS (2010-2015)

ISI: 91 | PATENTS: 1 (PENDING) | INTELLECTUAL PROPERTY COPYRIGHTS: 1

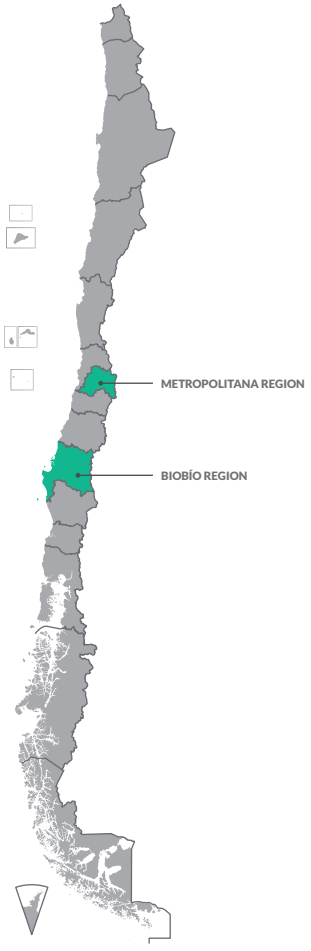
ACTIVE MILLENNIUM NUCLEUS CENTER

From 2010 to 2016

The Millennium Nucleus Centers can be renewed after 3 years, reaching a maximum of 6 years.

PRESENCE

METROPOLITANA REGION
BIOBÍO REGION



HOST INSTITUTIONS:

Universidad de Concepción

Pontificia Universidad Católica de Chile