Networking activities in Biological Physics and Bioimaging in LAC.

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Physics of Life South American Network - PoLSAN

A venue to connect researchers in South America interested in the Physics of Life. Its aims are to foster collaborations and share information.

The decision to establish the network stemmed from the discussions we had on March 30th, 2025, @ICTP-SAIFR

Let us list the items of the Action Plan established in March and see what we've done so far

1) **List of groups in the region:** Elaborate a list of groups in the region who work on Biological Physics and place it in a dedicated webpage within the ICTP-SAIFR website. This will be combined with inviting the people of these groups to participate in one (or more) of the three thematic networks. To advance with this, we will send an ample call for individuals from the region who work on biological physics to fill out a form giving the following information: research area, institution, position and to choose 1 or more of the 3 thematic networks to be registered with. Pablo De Castro will be in charge of this. **Future?**

2) **Hybrid seminars:** Each network will be in charge of organizing a hybrid seminar within the themes covered by the network. It is expected that there will be a seminar (over all networks) approximately once every two weeks. This means that, on average, each network will have to organize one such seminar once every 1.5 months. A feasible option is to start during the second semester of 2025. **Only online so far. Future?**

3) **Schools, workshops, programs @ITCP-SAIFR:** Future schools and workshops should be more focused than the ones which took place on March 24-30, 2025. Proposals for these activities should undergo the standard application and evaluation processes. Each network should propose the organization of one such activity at least once every 2 years. **Mini-course@ICTP-SAIFR in 2025 & 2026. School and Workshop in 2027 in Ecology**

4) **Funding opportunities including requisites:** Each network is responsible for collecting this information from all its members and share it with the other networks. **Future?**

5) **Scientific project:** Each network is in charge of defining a scientific project (at least one) and also of discussing the possibility of establishing mobility schemes, etc. They are also responsible of seeking funding for these purposes. ICTP-SAIFR will provide support to seek funding opportunities and put the project together. **Future?**

6) Other activities: the networks can organize any other activities or advance with any other initiatives (education, research infrastructure, data sharing, etc) that they think could be useful to establish a better liaison among the scientists working on biological physics in the region. **Future?**

Actions taken vs plan:

-We set up the network with 3 subnetworks, the website and mailing lists, thanks Rafael!
-We connected to many groups but did not include a list on the website.
-We organized online colloquia.
-Pablo, Rafael and Silvina organized mini-course on Fundamentals of Biological Physics (in 2025 and in 2026).
-Useful information was distributed through the mailing lists, including call for positions.
-The subnetworks did not meet by themselves or advanced initiatives on their own.

Physics of Life South American Network - PoLSAN. 2025 actions

The website, https://sites.google.com/view/phys-life-south-america/

Organization and subnetworks:
Rafael listed as Assistant Chair

Chair: Silvina Ponce Dawson (UBA)
Vice-Chair: Pablo de Castro (ICTP-SAIFR/Unesp)
Assistant Chair: Rafael Menezes (ICTP-SAIFR/Unesp)

Ecology and Evolution Subnetwork
Chair: Gabriel Mindlin (UBA)
Vice-Chair: Marcus Aguiar (Unicamp)

Cells and Molecules
Chair: Vitor Leite (Unesp)
Vice-Chair: Hernan Grecco (UBA)

Neuroscience
Chair: Antonio Carlos Roque (USP)
Vice-Chair: Enzo Tagliazucchi (UBA)

Most recent additions to the website: link to the recordings of Past Seminars and link to e-mail address to send suggestions for next seminars!

Some statistics:

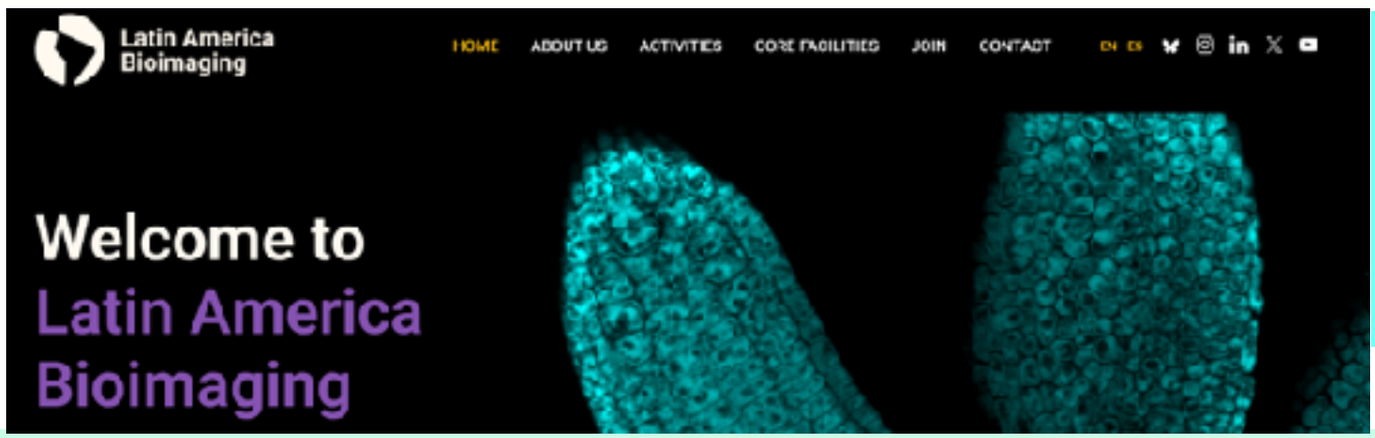
Number of people subscribed per subnetwork (as of 2025/11/29):
Neuroscience: 332; Cells and Molecules: 398; Ecology and Evolution: 322

Countries: we don't have that information. From (a very low % of) the emails: Brazil, Argentina, India, Poland, Mexico, USA, Uruguay.

Several physicists work on photonics and new microscopy techniques, some of them applied to living systems (but not only)

There are global initiatives in bioimaging to share equipment, software, data and experience and help with building the community of users of these techniques.

In Latin America we have: **LABI,** https://labi.lat/



A network of imaging scientists interested in improving training, education, and access to imaging technologies across LAC

Its actions include building community and capacities

- via the organization of:
  - annual meetings, satellite events and working groups,
  - open training and career development program;
- by providing travel grants to users, researchers and technicians to attend courses or to establish collaborations among core bioimaging facilities in LAC;
- by sharing useful tools (and, eventually, equipment).

They drew inspiration from Global Bioimaging, https://globalbioimaging.org/

They had funding from the Chang-Zuckerberg foundation. I don't know how they will continue. Which options do we have?

GLOBAL BIOIMAGING
growing collaboration