

UC|Chile Network of Research Centers and Field Stations

Unique infrastructure or laboratory

- I. Atacama Desert Research Station, Alto Patache
- II. Loa Rivermouth Station, Tarapacá and Antofagasta regional frontier
- III. Coastal Marine Research Station, Las Cruces
- IV. Center for Local Development, Villarrica
- V. Patagonia Station for Interdisciplinary Research, Bahía Exploradores
- VI. Center of Excellence of Biomedicine in Magallanes

I.Section 1

1. Atacama Desert Research Station
2. Pontificia Universidad Católica de Chile (UC|Chile)
3. Chile
4. Alto Patache, off campus, 56 km. south from Iquique, Tarapacá Region, 1,140 ha. of state land concession.

I.Section 2

5. 5 domes and field workshop with tools: office, classroom and kitchen dome; 3 dorms (12 people), and bathroom dome. Drinking water, electricity and limited WIFI. Fog collectors provide water to the facilities and weather stations connected to fog measuring devices have been installed to study fog. This year a new dome is being installed for educational purposes and a camp area will be set up to host an additional 25 students.
6. Fog, dessert, water, biodiversity, energy, architecture, paleoenvironment
7. The station charges a fee per night stay per person of 37.50 usd. Logistics assistance will be provided, cost of transportation, food and a guide/ faculty (airplane fares + per diem) must be covered by visitors.
8. Publications
 - a. Marcus A. Koch, Clara Stock, Dorothea Kleinpeter, Camilo del Río, Pablo Osses, Felix F. Merklinger, Dietmar Quandt, Alexander Siegmund, Vegetation growth and landscape genetics of Tillandsia lomas at their dry limits in the Atacama Desert show fine-scale response to environmental parameters on Ecology and Evolution, Vol. 10 Issue 23, <https://doi.org/10.1002/ece3.6924>
 - b. Camilo del Río, Felipe Lobos, Alexander Siegmund, Cristian TejosPablo OssesZeidy Huaman, Juan Pablo Meneses, Juan-Luis García, GOFOS, ground optical fog observation system for monitoring the vertical stratocumulus-fog cloud distribution in the coast of the Atacama Desert, Chile on Journal of Hydrology Vol. 597: 126190 <https://doi.org/10.1016/j.jhydrol.2021.126190>
 - c. OSSES, Pablo et al. El Clima desértico costero con nublados abundantes del desierto de Atacama y su relación con los recursos naturales energía solar y agua de niebla. Caso de estudio Alto Patache (20,5°S), región de Tarapacá, Chile. Rev. geogr. Norte Gd. [online]. 2017, n.68, pp.33-48. ISSN 0718-3402. <http://dx.doi.org/10.4067/S0718-34022017000300033>.
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II.Section 1

1. Loa Rivermouth Station
2. Pontificia Universidad Católica de Chile (UC|Chile)
3. Chile
4. Tarapacá and Antofagasta state frontier, off campus, 146 km. south from Iquique, 508 ha. of state land concession.

II. Section 2

5. Construction of the station will initiate this year. For the moment, we have installed containers that works as a storage facility for camping and archaeological equipment.
6. Archaeology, Ecological History, Coastal Wetland, Perfect Conservation
7. In progress
8. Publications
 - a. Gallardo, F., B. Ballester y N. Fuenzalida 2017. Monumentos funerarios de la costa del desierto de Atacama: Contribuciones al intercambio de bienes e información entre cazadores- recolectores marinos (norte de Chile). Serie Monográfica de la Sociedad Chilena de Arqueología, Número 7, Santiago.
[https://www.academia.edu/92281683/Monumentos funerarios de la costa del desierto de Atacama Los cazadores recolectores marinos y sus intercambios 500 a C 700 d C](https://www.academia.edu/92281683/Monumentos_funerarios_de_la_costa_del_desierto_de_Atacama_Los_cazadores_recolectores_marinos_y_sus_intercambios_500_a_C_700_d_C)
 - b. Núñez, L. 1971. Secuencia y cambio en los asentamientos humanos de la desembocadura del río Loa, en el norte de Chile. Boletín de la Universidad de Chile 112: 2-25. <https://bibliotecadigital.ciren.cl/handle/20.500.13082/19869>
 - c. Spahni, J. 1967. Recherches archéologiques à l'embouchure du rio Loa (Côte du Pacifique- Chili). Journal de la Société des Americanistes 56(1): 181-239.
https://www.persee.fr/doc/jsa_0037-9174_1967_num_56_1_2276
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10. Not yet available

III. Section 1

1. Coastal Marine Research Station
2. Pontificia Universidad Católica de Chile (UC|Chile)
3. Chile
4. Las Cruces, off campus, 117 km. west from Santiago, includes a marine protected area of 17 ha.

III. Section 2

5. Marine Laboratories with access to sea water and oxygen, multi-purpose rooms, classroom with access to sea water and oxygen special for workshops and experiments, offices and workspace, meeting room for 18 people, auditorium for 80 people, multipurpose room for 35 people, dorms for 30 people, outreach and library space. Oceanographic and nitrox diving equipment, 9-meter-long vessel, optical and epifluorescence microscopes, Open Sea Lab observation system (PB3 powerbouy), radar and weather station.
6. Ocean, Coastal Marine Sustainability, Energy, Marine Protected Area, Marine Science, Ecology, Sustainable Fisheries

7. From 35 USD to 51.25 USD per night depending on accommodations, 100 USD daily for meeting, auditorium or multipurpose room and fee for use of Marine Laboratory subject to requirements.
8. Publications
 - a. GV Ashton, AL Freestone, JE Duffy, ME Torchin, BJ Sewall, B Tracy, M Albano, AH Altieri, L Altvater, R Bastida-Zavala, A Bortolus, A Brante, V Bravo, N Brown, AH Buschmann, E Buskey, RC Barrera, B Cheng, R Collin, R Coutinho, L De Gracia, GM Dias, C DiBacco, AV Flores, MA Haddad, Z Hoffman, BI Erquiaga, D Janiak, AJ Campeán, I Keith, JC Leclerc, OP Lecompte-Pérez, GO Longo, H Matthews-Cascon, CH McKenzie, J Miller, M Munizaga, LPD Naval-Xavier, SA Navarrete, C Otálora, LA Palomino-Alvarez, MG Palomo, C Patrick, C Pegau, SV Pereda, RM Rocha, C Rumbold, C Sánchez, A Sanjuan-Muñoz, C Schlöder, E Schwindt, J Seemann, A Shanks, N Simoes, L Skinner, NY Suárez-Mozo, M Thiel, N Valdivia, X Velez-Zuazo, EA Vieira, B Vildoso, IS Wehrtmann, M Whalen, L Wilbur, GM Ruiz 2022. Predator control of marine communities increases with temperature across 115 degrees of latitude. *Science* 376:1215–1219. [DOI: 10.1126/science.abc4916](https://doi.org/10.1126/science.abc4916)
 - b. H Earp, D Smale, A Pérez-Matus, A Gouraguine, P Shaw, PJ Moore. 2022. A quantitative synthesis of approaches, biases, successes and failures in marine forest restoration with considerations for future work. *Journal Aquatic Conservation: Marine and Freshwater Ecosystems* 32(11):1717-1731. <https://doi.org/10.1002/aqc.3880>
 - c. S Wilson, C Fulton, N Graham, R Abesamis, C Berkström, D Coker, M Depczynski, R Evans, R Fisher, J Goetze, A Hoey, T Holmes, M Kulbicki, M Noble, J Robinson, M Bradley, C Åkerlund, L Barrett, M Birt, A Bucol, D Chacin, K Chong-Seng, L Eggertsen, M Eggertsen, D Ellis, P Leung, P Lam, J van Lier, P Matis, A Pérez-Matus, C Piggott, B Radford, S Tano, P Tinkler. 2022. The contribution of macroalgal associated fishes to small-scale tropical reef fisheries. *Fish and Fisheries*. 23:847-861. <https://doi.org/10.1111/faf.12653>
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IV.Section 1

1. Center for Local Development
2. Pontificia Universidad Católica de Chile (UC|Chile)
3. Chile
4. Villarrica, Campus Villarrica, Araucanía Region

IV.Section 2

5. Office space for 7 PIs and their teams, meeting and multi-purpose room, classrooms, auditorium for 220 people, open air museum on socio ecological sustainability.
6. Education for Sustainable Development, Socio Ecological Systems Sustainability, Local Development, Sustainable Tourism, Planning.
7. There is a cost set for the use of space that will be calculated depending on the duration of the stay and requirements. The center has developed educational programs with collaborators in the region to interact with local communities and ecosystems.
8. Publications

- a. Land use intensification coupled with free-roaming dogs as potential defaunation drivers of mesocarnivores in agricultural landscapes Gálvez, N. 2021 Artículo Journal of Applied Ecology <https://doi.org/10.1111/1365-2664.14026>
 - b. Key Aspects of Leisure Experiences in Protected Wilderness Areas: Notions of Nature, Senses of Place and Perceived Benefits. Ried, A. Sustainability. 2020; (1):1-18. <https://doi.org/10.3390/su12083211>
 - c. Social ecological filters drive the functional diversity of beetles in homegardens of campesinos and migrants in the southern And Ibarra, J.T. 2021 Scientific Reports 11, 12462 (2021). <https://doi.org/10.1038/s41598-021-91185-4>
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V.Section 1

1. Patagonia Station for Interdisciplinary Research
2. Pontificia Universidad Católica de Chile (UC|Chile)
3. Chile
4. Bahía Exploradores, off campus, 80 km. north west from Puerto Río Tranquilo, Aysén Region, 5,014 ha. of state land concession.

V.Section 2

5. Shelter with kitchen, dorm and bathroom, 2 multi-purpose domes and covered open-air laboratory (15 people). Water and electricity. Hydrometric sensors, Thies II weather station, CO2 sensor, magnifying glass for dendrochronological analysis and trail cameras.
6. Patagonia, Sustainability, Interdisciplinary Research, Human Environment Observatory – Bahía Exploradores, Laguna San Rafael Biosphere Reserve, Biodiversity, Glaciology, Geography.
7. The station charges a fee per night stay per person of 50 USD. Logistics assistance will be provided, cost of transportation (land/ water), food and a guide or faculty (airplane fares + per diem) must be covered by visitors.
8. Publications
 - a. Rodrigo L. Soteres, Fabián M. Riquelme, Esteban A. Sagredo, Michael R. Kaplan, (Paleo)glacier studies in Patagonia over the past decades (1976–2020): A bibliometric perspective based on the Web of Science, Journal of South American Earth Sciences, Volume 122, 2023, 104173, ISSN 0895-9811, <https://doi.org/10.1016/j.jsames.2022.104173>
 - b. Olea-Penalosa, Jorge, Salazar-Burrows, Alejandro, & Jorquera-Guajardo, Felipe. (2021). THE PATAGONIA AS A CIENTIFIC FRONTIER: CONTEMPORAREAN EXPLORATIONS FROM A GLOBAL SCIENCE. Diálogo andino, (66), 95-105. <https://dx.doi.org/10.4067/S0719-26812021000300095>
 - c. Fernando D. Alfaro, Alejandro Salazar-Burrows, Camila Bañales-Seguel, Juan-Luis García, Marlene Manzano, Pablo A. Marquet, Kriss Ruz & Aurora Gaxiola (2020) Soil microbial abundance and activity across forefield glacier chronosequence in the Northern Patagonian Ice Field, Chile, Arctic, Antarctic, and Alpine Research, 52:1, 553-562, DOI: [10.1080/15230430.2020.1820124](https://doi.org/10.1080/15230430.2020.1820124)
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VI. Section 1

1. Center of Excellence of Biomedicine in Magallanes
2. Universidad de Magallanes and Pontificia Universidad Católica de Chile (UC|Chile)
3. Chile
4. Punta Arenas, Magallanes and Antarctica Region

VI. Section 2

5. 2,000 m² building, laboratories, meeting rooms and offices, auditorium for 200 people, vivarium, library. Equipment for cell cultures, sample storage (-80 and -150 °C), biochemistry (histology, immunoblot, qPCR), electrophysiology (patch clamp and field), C.elegans platform (microscopy and automated measurements).
6. Biomedicine, Sub-Antarctic and Antarctic extracts (flora, algae, fungus), Degenerative diseases: Alzheimer's, Diabetes, Metabolic Syndrome and Cancer.
7. The facilities are ideal for 10 research teams of about 10 people each, there's a monthly fee of USD \$600.- per researcher plus charges for use of specific equipment. Housing and per diem are not included.
8. Publications
 - a. Francisca J. Allendes, Hugo S. Díaz, Fernando C. Ortiz, Noah J. Marcus, Rodrigo Quintanilla, Nibaldo C. Inestrosa and Rodrigo Del Rio, Cardiovascular and autonomic dysfunction in long-COVID syndrome and the potential role of non-invasive therapeutic strategies on cardiovascular outcomes-, *Frontiers in Medicine* Vol. 9, 2023
<https://www.frontiersin.org/articles/10.3389/fmed.2022.1095249/full>
 - b. Christian Bonansco, Waldo Cerpa and Nibaldo C. Inestrosa, How Are Synapses Born? A Functional and Molecular View of the Role of the Wnt Signaling Pathway, *International Journal of Molecular Science* 2023, 24, 708.
<https://doi.org/10.3390/ijms24010708>
 - c. Novoa et al. Inflammation context in Alzheimer's disease, a relationship intricate to define, *Biological Research* (2022) 55:39, <https://doi.org/10.1186/s40659-022-00404-3>
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