

### Dr. Francisco Matus

Professor - Agronomist  
Carbon Sequestration and Soil  
Nutrient Cycles



### Dr. Carolina Merino

Researcher - Biologist  
Geomicrobiology and Soil  
Organic Matter mineralization.



### Dr. Ignacio Jofré

Postdoctoral researcher -  
Biotechnologist  
Bacterial physiology and Redox  
Biology.



### Dalia López

PhDStudent - Forestry Engineer  
Doctoral Program in Natural  
Resources Sciences



### Rodrigo Castro

PhD Student - Bachelor in Geology  
Doctoral Program in Natural  
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### José Parada

MSc. Student - Biotechnologist  
Master degree in Natural  
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### Daniela Mendoza

Biotechnologist  
Technical Laboratory Manager



### Diego Mendoza

Agronomist  
Analyst of Soil Chemistry



### Undergraduate students

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LABORATORY OF CONSERVATION  
OF DYNAMICS OF VOLCANIC SOIL



# SOIL SCIENCES

- INTERACTION OF MICROORGANISMS,  
MINERALS, NUTRIENTS AND SOIL  
ORGANIC MATTER -



**TORRES DEL PAINE - CHILE**

Much of our work is in pristine ecosystems, as a natural laboratory without much human influence, since this way, we can study the original processes how they are affected as the world warms. Our main line of research is related to carbon sequestration and microbial interactions in extreme areas. The impact of the microbiome and its relationship with the biogeochemical cycles in soils helps us to understand the formation of soil. We are interested in how microorganisms can tolerate the climate change in aerobic and anaerobic environments, and their mechanisms of mineral transformation in soil.

## RESEARCH LINES



We belong to Universidad de La Frontera interested in soil science, addressing topics such as soil carbon sequestration related with soil formation, biogeochemical cycles, geomicrobiology, redox biology in extreme environments. We study different soils type formation and their interaction with the climatic conditions in arid, temperate, polar and subpolar environments under forests, grassland, steppes, and agricultural crops. These studies allow us to detect characteristic patterns that are influenced by global warming affecting the mineralization processes in the soil.



**KNOWS  
OUR WORK**

