More Than Data: How a Travel Grant Reignited My Science and Community

Matias Barrionuevo

Vineyards and the Cordillera in Mendoza

In April 2024, I was struggling with my samples at the Thermochronology Lab at the University of Chile when I received an email from GSA announcing that I had been selected as an International Travel Grant awardee to attend GSA Connects 2024 in Anaheim. It was such wonderful news! It felt like a breath of fresh air, balancing the discouraging results I was getting from my samples. At that moment, when every grain mount and every measurement for fission tracks seemed to be failing, this message felt like a reminder that science moves forward in more ways than just producing good data.

I felt both excited and nervous. It was going to be my first time attending GSA Connects, and I recognized the magnitude of the opportunity: the chance to learn from leading geoscientists, to present my research to an international audience, and to build connections that could shape future collaborations.

However, I carried a sense of frustration. I had high expectations for the thermochronology samples I was working on, but none of them were yielding interpretable results. These samples came from my study area in the Southern Central Andes, where I investigate the tectonic evolution of the Andean orogen since the Late Cretaceous.

The area lies in southern Mendoza, a province in Argentina famous for its Malbec wines and its landscape dominated by the Andes. I moved to Mendoza ten years ago, not only for the excellent wines but also for the opportunity to join an excellent research group focused on Andean tectonics. Here, I had the opportunity to learn on this subject and completed my PhD using two complementary tools: traditional structural geology based on detailed fieldwork, and geodynamic modeling to test conceptual hypotheses about the orogen's evolution.

After completing my PhD, I continued as a researcher at CONICET, our National Research Council, trying to incorporate new techniques, such as thermochronology, into my work to investigate the exhumation of the different ranges that compose the Andes.

At the Thermochronology Lab at the University of Chile, after reading the email about the GSA grant.

Although the Central Andes, at this latitude, had its main deformation and uplift phase during the Neogene, there is some discussion about the onset of the orogeny, back in Late Cretaceous. The main debate is related to the magnitude of that earlier phase, or in other words, how big the Andes were at that time. By means of thermochronology, my group and I were trying to evaluate this. That was part of the work I was doing at the University of Chile. But, as I mentioned before, my samples weren't good enough for this.

Thankfully, we had other data, from the structural fieldwork that allowed us to address parts of our hypothesis. Those were the results I presented at GSA Connects 2024.

The meeting was incredible for me! I took a field trip to the San Andreas fault, one of the legendary fault systems I had read about but never seen. And the landscape was so similar to Mendoza! It was sunny, hot and dry, and surprisingly the vegetation even resembled the "jarillas" (*Larrea divaricata*) we have there.

Plant found in California, similar to the jarilla tree we have in Mendoza.

Field trip to the San Andreas fault.

During the meeting, I attended talks on Andean tectonics, orogenic systems, structural geology, and thermochronology.

Some sessions gave me new ideas and helped contextualize my research within broader global questions. When the day of my own presentation arrived, I was a little bit nervous but I finally enjoyed it! Afterward, I had enriching conversations with colleagues who were also studying the early stages of the orogeny. We discussed possible collaborations and even the potential of future joint fieldwork.

I also met the team behind GSA International Programs. They had been so helpful when I was preparing everything for my trip. I knew that people from several countries were able to attend the meeting thanks to the grants.

Recipients of the grants and awards at Connects 2024 in Anaheim.

One thing that surprised me was finding out that three Argentine geologists (myself included) had been selected as International Travel Grant awardees that year. This felt deeply meaningful. Since 2023, Argentina has experienced severe cuts in science funding, and the national research system has faced significant challenges. Many scientists have left the country to continue their careers elsewhere, and those of us who stay feel the weight of uncertainty and frustration. In this context, receiving recognition and support from the international scientific community felt not only like personal encouragement, but also like a reminder that our work has value beyond our borders.

Another highlight was gathering and spending time with some people I had met at previous conferences and meetings. We enjoyed a barbecue, or like we say in Argentina "hicimos un asado" looking at the Pacific coast.

I came back to Argentina and in January I received an email from the Argentine Geological Association, inviting some people to be part of an international project aimed at updating the classic chart *The Geology of Plate Tectonics*, originally created by Greg Wessel in 1985. One of the people involved and leading the project was Ester Sztein, director of GSA International Programs, whom I had met in Anaheim.

The project took some months, in which we met by video call with colleagues from the U.S., Mexico and Chile. We discussed how to update the chart, the text, modernize the figures, and finally produce a Spanish translation. This last step was particularly meaningful to me. I truly believe the Spanish version will widen access for students and professionals across Latin America. I can already envision the chart hanging on the walls of the National University of Cuyo, where I teach.

Fieldwork with some of my colleagues of the Grupo de Tectónica in Mendoza.

Somehow, I feel like participating in the tectonic chart project was one of the doors that opened thanks to receiving the travel grant to attend GSA Connects.

Among the things I enjoy in my career, communicating geoscience is one of my favorites. I remember taking some notes about science communication in related talks at GSA Connects. Living in Mendoza, where the Andes form part of the daily landscape, people naturally ask questions about their origin and if there is a link between the earthquakes we feel in Mendoza and the mountains. I enjoy talking about these questions and helping others see Earth as a system of ongoing processes that produce beautiful landscapes such as the Andes.

This year, a colleague received the travel grant to attend GSA Connects in San Antonio. I was so happy that she also had that opportunity. For anyone considering applying for a travel grant, my message is simple: go for it. The experience extends far beyond the conference itself. These meetings are not only about presenting research; they are about becoming part of a community. They are moments to exchange ideas, build friendships, share concerns about science in our home countries, and imagine new ways to collaborate. And of course, to enjoy an "asado" with new friends.