

25th Biennial Conference on Chemical Education

Special International Grant from the DivCHED International Activities Committee

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REPORT OF PARTICIPATION

A generous grant from the DivCHED International Activities Committee, IAC, significantly supported attendance of a small delegation of scholars from the University of Costa Rica, UCR, to the 25th Biennial Conference on Chemical Education at the University of Notre Dame, South Bend, IN. The grant particularly made possible travel for two undergraduate students who are double majors in Chemistry and Secondary Education: Giovanni Loria-Cambronero and Dayanna Jinesta-Chaves. Dr. Santiago Sandi-Urena accompanied these students as their research mentor. In addition, a second member of the faculty at the School of Chemistry, professor Bryan Fernandez-Solano was in attendance and provided assistance to the students. Giovanni and Dayanna are outstanding students who have actively participated in research with Dr. Sandi-Urena and have completed their student teaching at public schools in Costa Rica. In addition, they both have experience as undergraduate teaching assistants in chemistry laboratories. Their selection for this distinction was based on their academic excellence, their research contributions, and their projection as potential leaders within the local chemistry education community. This was their first international event and it was especially meaningful since it was their first contact with research and practice as it is understood and done in the US. Giovanni and Dayanna successfully presented an oral talk and a poster entitled *“Characterization of conceptualization and use of Lewis structures by novices and experts”* and *“Principles of semiotics applied to the analysis of use and interpretation of Lewis structures by chemistry majors”*, respectively. They each attended four workshops and five symposia sessions. The workshops directly informed their pedagogical practice and equipped them with new pedagogical tools and ideas, such as demonstrations, that they have begun to implement in their classrooms. The symposia gave them exposure to the ways education research from the disciplinary perspective is conceptualized and carried out in the US. This has been an outmost

relevant aspect of their visit since this field is underdeveloped in Costa Rica (and many Latin American countries). Thus, the experience enriches their horizons and potentially catalyzes development of Chemical Education Research, CER, in Costa Rica. Besides their commitment to put their learning and new knowledge into practice, Dayanna and Giovanni are eager to disseminate learning and gains from this experience amongst their peers.

Another substantial component of their participation was the opportunity to network with US-based and international scholars. Through the workshops and symposia, as well as in the social events, Giovanni and Dayanna met attendees from several countries, amongst them Mexico and Ireland. During the reception organized by the IAC for international attendees and throughout the event they visited with members of the IAC, particularly with Dr. Resa Kelly and Dr. Sachel Villafañe-García. Among many other colleagues, they also met Dr. Adrian Villalta-Cerdas (University Sam Houston), Dr. Edgar Arriaga (University of Minnesota), professor Norb Pienta (Editor-in-Chief, Journal of Chemical Education), and Dr. Melanie M. Cooper (Michigan State University). As direct consequence of their participation in the BCCE, Giovanni and Dayanna plan to join professional groups and collaborative platforms based in the US, such as ChemEdX, and are already planning attendance to the forthcoming Chemical Education Conference in Illinois in 2019 and the next BCCE in Oregon in 2020.

It is worth mentioning that the IAC financial support for the undergraduate students also encouraged the attendance by the two faculty members from the UCR. The opportunity to bring undergraduate researchers made the conference even more attractive. The presence of this small delegation from the UCR strengthens the interest of both the IAC and the UCR to find ways to collaborate and build a stronger international network. We strongly believe this first foray will be followed by sustained participation of Costa Rican chemistry educators in events in the US, especially ACS national meetings, and will eventually lead to concrete collaborations between chemistry educators of both countries.

Dayanna Jinesta-Chaves, Giovanni Loria-Cambronero, and Dr. Santiago Sandi-Urena are very deeply thankful to the DivCHED-IAC, especially to its chair, Dr. Resa

Kelly for facilitating the grant, and to professor Dr. Conrad Bergo for his kind generosity, which made this travel grant possible.

We all will be very pleased to answer any questions or address any comments from those interested in knowing more about Chemical Education Research and Practice in Costa Rica and those who are willing to explore future collaboration.

Following we include a few pictures from the event.



Costa Rican delegation at the BCCE inaugural plenary.



Giovanni and Dayanna with Dr. Resa Kelly at the IAC international reception.



Giovanni and Dayanna with Dr. Norb Pienta.



Dr. Sandi-Urena and prof. Bryan Fernandez-Solano visit with Dr. Norb Pienta.