

2009 SGP Travelling Scholars Award Program Report

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1. The focus of the visit (i.e., reasons for inviting the selected speaker) and specific benefits of the program to the department.

Focus of the visit: I invited Dr. Zagotta as one of the world leading experts on ion channel research. His contributions are crucial for the understanding of the structural basis of ion channel function, especially voltage-gated potassium channels and cyclic-nucleotide gated ion channels. Moreover, he has developed innovative techniques to tackle cutting-edge questions on the field. In addition, he has an excellent and inspiring track record on mentoring young scientists who later have moved on to build successful careers as independent researchers. Adding to his scientific excellence, his personal qualities make him an ideal individual for the SGP Traveling Scholar Program. He is well known for his keen interest in interacting with young scientists and his ability to encourage them to continue pursuing the best possible research.

During his visit, Dr. Zagotta proved all qualities stated above to be absolutely true.

Specific Benefits of the Program to the Department: The University of La Laguna (ULL) is a large institution with approximately 25,000 undergraduate and graduate students in all areas of the arts and sciences, plus professional schools such as Medicine and Engineering. Astrophysics, Organic Chemistry and Physiology, which have traditionally been strong research areas in the University. However, the physical isolation of the Canary Islands, away from the main European research hubs, is one of the most prominent obstacles for the development of highly competitive science and Ph.D. training programs. The ULL is now making a large effort toward improving its biomedical research programs. An important part of this effort has been funneled through the recent creation of the ITB (*Instituto de Tecnologías Biomédicas*), which now groups the leading biomedical researchers in the University together with two teaching hospitals. ITB is also in charge of providing high-quality education and scientific training at post-graduate level in the biomedical sciences. During the 2010-2011 academic year, we have started a new training program in Biomedicine. Nevertheless, the current economic climate in Spain precludes the availability of extra funding to overcome the geographical isolation of our University. Thanks to the SGP-TSAP we have had the unique opportunity to bring to our students and young scientists a world-renowned researcher such as WN Zagotta. Apart from the students of our PhD program, Bill had a meeting with young investigators in the Pharmacology Department and they all benefitted from his experience. In our new Ph.D. program, academic and scientific support and expertise are needed. During the meeting with our Program Director, Prof. Guadalberto Hernández, an interesting discussion was raised about our current selection criteria. Bill pointed out several issues regarding our evaluation process and we all agreed this should be changed. He gave us some ideas to optimize students' performance in the program. The Director compiled Bill's suggestions and they

will be raised and discussed with the Academic Committee next June so they are applied in academic years to come.

Additionally, from 2-4 Feb 2011 HUNSC/ITB/ULL organized, for the first time in Tenerife, the third bi-annual meeting of the Spanish ion channel network (RECI). This is a small meeting that brings together, in an informal setting similar to a Gordon Conference, the main groups in the field of physiology and biophysics of ion channels in Spain. All our PhD Program students attended the meeting and they were identified with green dots in the badges so they were encouraged by other participants to ask questions. Coordinating Dr. Zagotta's visit with the RECI meeting has allowed not only Canarian but also students from all over Spain to profit from interacting with him. We sincerely believe that this combination has made the most out of the SGP Traveling Scholar Award!

2. The audience.

a. Lecture (chalk-talk) at the PhD Program: 21 students, 6 professors.

b. Formal Lecture (coordinated with the RECI meeting): approx. 140 students (including the 21 students from the ULL PhD program mentioned above), postdocs and young investigators, 70 senior investigators.

3. The title of the formal seminar: "Molecular mechanisms for the regulation of ion channels by cyclic nucleotides"

4. The topic of the chalk-talk: Fluorescence applications in molecular neurobiology

5. Meetings with junior scientists.

1 February 2011: Various meetings with Diego Alvarez de la Rosa, Agustín Valenzuela, J. D. Machado, Teresa Giraldez.

6. Social activities (e.g., receptions, poster session, repasts, etc.).

1 Feb. 2011: Reception by Prof Guadalberto Hernandez, Director of the PhD program. Meeting to explain and discuss the PhD program academic organization and scientific contents with Dr Zagotta.

1 Feb. 2011: Lunch with Manuel Feria (Prof Pharmacology), Diego Alvarez de la Rosa (Prof Physiology), Teresa Giraldez (Investigator at HUNSC), Miguel Holmgren (visiting scientist, NIH/NINDS), Claudia Colina (visiting scientist, NIH/NINDS).

1 Feb. 2011: Reception from "The Spanish Ion Channel Initiative", a Coordinated Project Grant of 26 independent research groups studying ion channels. At the reception there were about 35 Spanish investigators and about 5 visiting scientists from other countries.

2-4 Feb. 2011: Poster sessions at the RECI meeting (approx. 50 posters presented mainly by students and postdocs).

2 Feb. 2011: Dinner with Diego Alvarez de la Rosa, Teresa Giraldez, Miguel Homgren, Claudia Colina, George Chandy (visiting scientist, UCI), Walter Sthümer (visiting scientist, MPI), Cecilia Canessa (visiting scientist, Yale), Luis A. Pardo (visiting scientist, MPI)

3 Feb 2011: Gala Dinner with a concert by a local artist (Benito Cabrera)

4 Feb. 2011: Game Show with postdocs and students (aprox. 50), organized by WN Zagotta, Kenton Swartz, Ramon Latorre, Alessio Accardi and Miguel Holmgren. The aim was to revise the concepts about ion channels learnt during the last three days, with a big dose of humour. It was a complete success and we all had a great time!

SUMMARY

William N. Zagotta was invited to the University of La Laguna (Tenerife, Spain) to participate during four days in our PhD Program. In the morning of the first day of his visit, he was received by the Director of the PhD Program, Professor Guadalberto Hernandez, at the Department of Physiology of the Medical School. Also attending this meeting were Diego Alvarez de la Rosa, Teresa Giraldez (both Professors of the ULL PhD Program), Miguel Holmgren and Claudia Colina (both visiting scientists from the NIH/NINDS). We discussed different issues regarding the academic structure and curriculum of our newly created PhD program. After this highly useful meeting, Zagotta met junior scientists in the Department of Pharmacology that are implementing imaging techniques in their labs, Agustin Valenzuela and J. D. Machado, who showed him their latest work on cellular biology using the TIRF approach. A lunch was offered that day at the School cantina, where Zagotta was joined by Manuel Feria (Professor of Pharmacology), Diego Alvarez de la Rosa, Miguel Holmgren, Claudia Colina and Teresa Giraldez. In the afternoon he met Raquel Marin, coordinator of the PhD Program course "Discussions in Biomedicine". As part of this course, Zagotta gave an interesting chalk-talk lecture to the students on fluorescence applications in molecular neurobiology. The students participated actively in the class with several questions. In the evening, he attended a Reception by "The Spanish Ion Channel Initiative (SICI)" at the Hotel Las Aguilas (El Puerto de la Cruz). The SICI is a Coordinated Project Grant of 26 research groups working on ion channels, so Zagotta had the opportunity to meet researchers from other parts of Spain.

During the following three days (2-4 February 2011) Zagotta participated in the Third Meeting of the Spanish Ion Channel Network that took part at the Hotel Las Aguilas. Apart of the 21 students from our PhD program, another 130 students and postdocs from Spain enjoyed a fantastic Plenary Lecture that Zagotta entitled "Molecular mechanisms for the regulation of ion channels by cyclic nucleotides". There were poster sessions with about 50 posters presented by young researchers. At the end of the meeting, while enjoying some wine and cheese, and helped by Kenton Swartz, Ramon Latorre, Miguel Holmgren and Alessio Accardi, Zagotta organized a Game Show to test students and postdocs for their excellence on ion channel knowledge with a high dose of humour. This was the perfect finishing touch for a unique experience that has undoubtedly made a difference.

PICTURES LEGEND

Zagotta_pic0: lunch at the Medical School Cantina. In the picture: Manuel Feria (Professor of Pharmacology), Teresa Giraldez, WN Zagotta, Miguel Holmgren, Claudia Colina.

Zagotta_pic1: Bill's chalk-talk lecture at the School of Biology.

Zagotta_pic2: students attending Bill's lecture

Zagotta_pic3: Students and Professors from the ULL PhD Program with Bill and Miguel Holmgren

Zagotta_pic4: Bill during the plenary lecture

Zagotta_pic5: Dinner after the formal lecture. In the picture: WN Zagotta, Diego Alvarez de la Rosa, Teresa Giraldez, Miguel Homgren, Claudia Colina, George Chandy (UCI), Walter Sthümer (MPI), Cecilia Canessa (Yale), Luis A. Pardo (MPI)

Zagotta_pic6: A participant took a picture of Zagotta during the Gala Dinner

Zagotta_pic7: a moment during the meeting, with Kenton Swartz

Zagotta_pic8 and pic 9: The organizers of the Game Show

Zagotta_pic10: A student from the ULL PhD program (note the green dot in the identification badge) talks to Bill during the meeting.