



The neuroscience global village

Young investigator program for students from countries with limited resources on the occasion of the 8th IBRO World Congress

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Why young scientists from developing countries need help

Young investigators in developing countries face a number of problems that limit their opportunity to participate in cutting edge science. They often have to work with outdated technology, and lack exposure to state-of-the-art techniques. They have very few avenues to develop collaborations with leading scientists and laboratories. Language, too, can be a barrier. All these problems were considered when the International Brain Research Organization (IBRO) [1] designed its newly initiated Young Investigator Program (YIP) [2].

International workshops and conferences are the engines of modern science. However for most international meetings, scientists and students alike have to pay

for their registration, travel, accommodation and other expenses. As a student in a developing country, one feels helpless if one's research supervisor does not have the funds to cover these costs. There are few organisations that offer funding to students for this purpose, and the competition is fierce. Many will grant only partial fellowships, and given the cost of international travel and high registration fees, partial funding may be little better than none at all. Applications often end in frustration and failure. Even the best young scientists with high potential and innovative ideas lose hope, and may even decide to abandon a research career.

New initiative: The first young investigator program of its kind

A special initiative associated with the recently held IBRO World Congress of

Neuroscience is the newly instituted YIP [1]. The YIP was established by a small and very active ad hoc Committee [3], comprising Micaela Morelli (chairperson), Marina Pizzi and Laurent Fagni. Its purpose was to create the opportunity for young investigators from developing countries to be hosted for a short period of time (usually a month) in laboratories in Western Europe, and to attend the World Congress.

The YIP Committee raised funds from public and private institutions, enabling 83 young investigators from low and middle income countries to spend time in the best European neuroscience laboratories. Young investigators (31 from Asia, 29 from Latin America, 19 from Africa and 4 from Eastern Europe) were selected from a large group of applicants [4]. Support was given in the true spirit of the word; all expenses were covered including international travel (sponsored by IBRO special travel fellowships), accommodation and meals during their stay at the host laboratories, and registration for the IBRO World Congress. Through excellent planning and organization on the part of the Committee, assistance was provided at every stage, including establishing contact with host laboratories and the cumbersome task of coordinating with different embassies to get visas. This program has made exposure to state-of-the-art facilities a thrilling reality, instead of a distant dream, for aspiring neuroscience researchers all over the world.

Keywords:

■ international collaboration; low and middle income countries; neuroscience research; young investigator program

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Abbreviations:

IBRO, International Brain Research Organization; **SINS**, Italian Society of Neuroscience; **YIP**, Young Investigator Program.

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Group photo of YIP participants and YIP committee members at the IBRO Congress in Florence, 18 July 2011.

Personal experiences of the young investigators

In addition to the scientific experience, the YIP provided an outstanding opportunity to experience new cultural environments, and to establish collaborations. A young investigator from India described her experience: 'Before coming here I was anxious about my post-doc training, as I did not have any publications from my PhD. But my host lab has offered me a post-doc position within six months, which I will accept'. Many of the young investigators secured a future position or the possibility of research collaboration. A second year PhD student said: 'What I have been trying to do for the last two years for my PhD, I completed in just a couple of months, due to fast networking between the European researchers and the availability of the right resources and technology'. Another young investigator said: 'I had the best scores in my studies, based on theoretical knowledge of research tools, but due to the limitations I was never actually able to use these tools. It is like a dream come true for me. For sure, my ability to think scientifically has improved, and I will be able to plan my future experiments more efficiently. I learnt many troubleshooting skills too'. Finally, another young investigator reported: 'I will be co-authoring my first international publication, as I used my

previous experience to complete an ongoing project in my host lab'.

Reaching the heights: Full support multiplies the chances of positive and enthusiastic participation

As stated above, most international societies provide only reduced registration fees to young participants or offer partial support for travel or accommodation, which in reality still leaves young researchers, especially those from developing countries, with limited scope to participate in conferences. We have witnessed many cases of non-participation due to receiving only partial or late financial support. Many funding agencies require an accepted abstract before they will consider an application and then take several months to give their decision, making the procedure complex and uncertain. The IBRO program removes these hurdles, thus offering a new level of encouragement and support.

Adding yet further to the value of the program for young investigators, a number of workshops were organised devoted to topics relating to education and career development, including funding opportunities, communication of research results, graduate and post-doctoral training, how to establish a

new laboratory, ethical issues and the use of animals in research. These are often neglected in 'conventional' University courses in developing countries, but a lack of knowledge about these crucial topics can be as much of a hindrance to career development as a lack of scientific resources.

Sparing the environment: Beneficiaries one and all

As a side note, the IBRO World Congress organizing committee made diligent efforts to be environmentally friendly, saving paper by using e-mail to communicate with the participants and providing abstracts on a CD, promoting the use of reusable and recyclable material, saving electricity and banning toxic chemicals [5]. This World Congress had been an eye-opener for many of us and set an excellent example of how to organize a big conference without compromising the environment.

Past activities and future perspectives

Since the 1990s, IBRO has emerged as a world federation of neuroscience societies and associations, devoted to the promotion of neuroscience in countries with limited resources, and with a focus on young investigators. In 2011, which marks the 50th anniversary of IBRO, the 8th IBRO World Congress was hosted by the Italian Society of Neuroscience (SINS) [6] and held in Florence, Italy (July 14–18). Convened every four years, the World Congress is a unique global event symbolizing IBRO's primary objectives of promoting neuroscience research, and facilitating



YIP participants with Prof. Marina Bentivoglio, IBRO Secretary-General (past).

international collaboration and exchange of scientific information in all areas of brain research. The 8th Congress saw the participation of scientists from 86 countries, with 4,200 participants, 1,500 of whom were from economically disadvantaged countries [4].

Although science has no borders, countries do. Electronic communication breaks these down, but large amounts of dedication, vision and creativity are still needed. The Young Investigator Program has these qualities in abundance, and has translated them into an outstanding programme that recognises the practical steps needed to bring young scientists from developing countries 'in from the cold'. By facilitating short stays in cutting edge laboratories, and arranging

participation in a prominent international conference, it has transformed the scenario for these young investigators and enabled them to truly experience and fully join the global community of neuroscience. As participants in the YIP, many PhD students and post-docs have greatly profited from this, and we solicit similar initiatives from the many other international societies and research organizations in other fields of science.

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