

Promoting peace through science

Scientific exchange and knowledge is not bound by international boundaries; indeed, science can promote interaction and understanding across such boundaries.

Fostering peace between Israelis and Palestinians is a difficult but necessary goal. Conflict between these two societies has raged since the founding of the modern Jewish state in 1948. Several international efforts have been launched in the past decade to promote interaction, collaboration and peace-building through scientific and medical endeavors in the region. These projects include the construction of a particle accelerator in Jordan for studies in the physical sciences (the SESAME project) and an infants' health initiative sponsored by Canada that involves medics from Palestine, Israel and Jordan. A 2005 *Lancet* article (365, 1274–1277) described the latter project's success in establishing a cooperative network, accomplishing immediate health goals and facilitating cross-border professional opportunities and career advancement. Participation in such projects, however, is often shaded by political concerns and activities arising on both sides of the Israeli-Palestinian border that hamper personal interactions and often necessitate third-party intercession to help foster trust and focus on common beneficial goals.

In 2002, a bold initiative—the Israeli-Palestinian Science Organization (IPSO)—was launched to bring together scientists from both sides to pursue common projects. Unlike other ventures, IPSO is administered jointly by Palestinians and Israelis, and grants awarded under its auspices require Palestinian-Israeli partnership. In its mission statement (<http://www.ipso-jerusalem.org>), IPSO proposes to build an infrastructure that creates and sustains development, collaboration and education between the communities through the universal language of science. Scientific research endeavors involving people working together as equal partners would produce practical results and would likewise engender personal trust and friendship between people living in the two communities.

The prime movers behind this IPSO initiative are Torsten Wiesel (president emeritus of Rockefeller University), Sari Nusseibeh (president of Al Quds University, Jerusalem) and Menahem Yaari (president of the Israeli Academy of Sciences). The United Nations Educational and Science Organization and many other national science organizations, including the US National Academy of Science, the British Academy and the Royal Society of London, have endorsed the aims of IPSO and have provided financial resources to fund its efforts. Many influential scientists, including Donald Kennedy (editor-in-chief of *Science*) and Nobel laureates François Jacob (Institut Pasteur) and Robert Curl (Rice University), have also declared support for IPSO. Likewise, many private charities and foundations, such as the Friends of IPSO have contributed financially towards its goals.

In 2004, IPSO issued its first call for proposals. Eleven projects were funded for up to 3 years each, receiving US\$100,000 per year.

These projects included studies of human cytomegalovirus assembly and of targeting proteins involved in leukemia. A second call for proposals was issued in 2006. However, difficulties in securing appropriate funding (estimated to cost US\$5 million) have thus far precluded the announcement of funding for an additional 20 projects approved by the IPSO scientific committee, according to a statement issued by Nusseibeh on 11 June 2007 and posted on the IPSO website. A third call for proposals has not yet been made, presumably because of the lack of financial support that IPSO now faces.

Certainly the political climate and recent flare-ups of violence in the region have contributed to reluctance to support IPSO, but efforts outside the region to boycott interactions with Israeli academics, such as those voiced by some in the UK, have likewise stymied funding efforts. In *Science* (315, 39 (2007)), the IPSO scientific council voiced dismay over hurdles imposed by the Israeli government that impede the movement of Palestinian students and scientists, which essentially block many of the goals espoused by this organization. Some extremists, posting essays on internet pages, have also voiced specific opposition to IPSO and its funding by the United Nations Educational and Science Organization, arguing in an 'all-or-none' tone for Palestinian causes. Such political actions also pose the danger of curbing (or intimidating) potential beneficial interactions for the budding scientists who stand to gain the most by the stated goals of IPSO: young Palestinian students.

It would be a shame if financial difficulties topple this experiment of scientific collaboration underway in the Mideast. The goals expressed by IPSO are laudable. The funds required to support such efforts are miniscule relative to the amounts awarded by the US National Institutes of Health or those spent in foreign aid or military operations by the US government, for example. Others argue, with merit, that because of poor living conditions in Palestinian areas, any available funding or support should go directly to humanitarian efforts aimed at alleviating the lack of food and jobs. Yet backing IPSO should not be seen in an 'either-or' light; instead, support for IPSO should be given in addition to humanitarian relief efforts.

Surprising too is the lack of awareness of institutions such as IPSO and its vision for promoting peace through collaborative interactions between Palestinian and Israeli scientists. By highlighting the cause of IPSO here, we seek to voice our support for its aims. Hopefully with this editorial we can spark discussion aimed at building bridges to peace by fostering scientific exchange. For those who are interested, contact your elected officials to raise their awareness of efforts such as those of IPSO and voice your opinion. We invite our readers to join this support as 'citizen scientists' working for peace. 