

May 2017

Hebrew University Center for Research on Pain

Review of Center activities for the academic year 2015-2016

Submitted by Prof. Michael Tal, Director

The Center

The Hebrew University Center for Research on Pain is a roof organization uniting a number of research laboratories and clinics on the various campuses of the Hebrew University and the Hadassah-University Medical Center. The Center includes faculty members of the Hebrew University Faculties of Medicine, Dental Medicine, Natural Sciences, and Social Sciences. All share a common interest in understanding mechanisms of acute and chronic pain, and ultimately providing better pain relief options. Our programs emphasize academic educational activities, public education, scientific exchanges at professional symposia, and, most importantly, the promotion of quality scientific research, basic and clinical, on the subject of pain.

The Director and the Academic Committee of the Center are:

Director: Prof. Michael Tal (Medical Neurobiology)

Academic Committee:

Prof. Udi Shavit (Psychology) Chair

Prof. Marshall Devor (Neuroscience) Treasurer

Dr. Elyad Davidson (Anesthesiology)

Prof. Yair Sharav (Oral Medicine)

Prof. Michael Tal (Medical Neurobiology, ex officio)

Academic and professional activities

The Academic year 2015-2016 was active and rich in professional and educational exchanges and in scientific progress.

Members of the Pain Center were also active in this year's annual meeting of the Israel Pain Association that was held near the Dead Sea.

Our long-standing series of Clinical Case Presentation meetings under the aegis of Dr. Elyad Davidson of the Hadassah-University Medical Center's Pain Clinic brings Center members together on a regular basis. In addition to providing an opportunity to discuss interesting clinical cases in depth at an interdisciplinary forum, the clinical pain

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sessions provide the University's basic science investigators, and their students, with a valuable opportunity to see the human face of pain. A central tenet of the Center's work is to create bonds between basic and clinical investigators in an attempt to bridge the communication chasm which exists in many biomedical fields. The patients presented had complex chronic pain problems, including post-traumatic neuropathic pain syndromes. Referral of patients to the forum is mainly by the Hadassah Medical Center's Pain Clinic and by the Orofacial Pain Clinic of the Hadassah-University School of Dental Medicine.

In parallel, the various pain research groups hold a series of joint "Lab Meetings" every few weeks at which students and faculty members present and discuss their ongoing research projects.

Educational activities are an important part of the work of most members of the Pain Center. Lectures, clinical training and seminars are provided on clinical as well as basic science topics. Teaching includes aspects of acute and chronic pain, neuropathy and other pathologies of the somatosensory system, in courses designed for undergraduate students, postgraduates and clinical specialists. Dr. Alex Binshtok again this year offered his unique advanced pain course for undergraduate and M.Sc./Ph.D. students titled "Mechanisms of pain perception and perpetuation" which was attended by more than 20 students. A full semester course on "Orofacial Pain", unavailable in most other dental schools in the world, is offered to Hebrew University undergraduate dental students. Likewise, a lecture series on pain as an example of systems physiology is offered to undergraduate students in the Institute of Life Sciences within the framework of the 2nd year course "Advanced Physiology".

Educational activities of Center members extend beyond the boundaries of Israel. For example, Prof. Devor serves as a director of the European Pain School based at the University of Siena, Italy. The Pain School provides outstanding Ph.D. and postdoctoral students from across Europe (including Israel) and the world with an intensive week of instruction and discussions on a variety of pain related topics with a faculty of internationally known pain research scientists. The School program includes lectures and seminars by faculty as well as by students, along with plenty of time for informal exchanges and "networking" on diverse facets of pain science and medicine. In addition to the European Pain School, members of the Center participated this

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year in a variety of professional educational activities across the globe. One of our graduate students participated in the School this year.

Communication and public awareness

The website of the Hebrew University Center for Research on Pain, access able at: <http://paincenter.huji.ac.il/index.htm> or through the main Hebrew University portal, is constantly updated and made more easily accessible to Israeli users through the addition of Hebrew links. On the website, one can find information on the academic and research activities of the Center, a short biographical sketch of its faculty members and a summary of research activities and recent publications of members of the Center. The Center website enables scientists and physicians, as well as members of the public at large, to obtain information, communicate with and consult with members of the Center.

Support for students and affiliated laboratories

Among its activities, the Center offers help to qualified research students and postdoctoral fellows to attend national and international scientific meetings on pain, and other pain-related educational activities. During the academic year 2015-16 the Center sponsored a scholarship for Shai-lee Yatziv , a Ph.D. candidate studying with Prof. Marshall Devor, to present her study at the IASP World Congress of Pain that took place in Yokohama, Japan in September 2016.^[10]. Our graduate students are our future young pain scientists.

The Center also provides targeted help for research projects, including an ongoing commitment towards the long-term maintenance of genetically defined, pain-reactive lines of rodents. These animals are crucially important for front-line research on genetic contributions to acute and chronic pain, and a unique resource of the Center. Several laboratories within the Center contribute additional funds for this purpose.

Research and publications

Increased knowledge of pain, and improved quality of life for pain sufferers, are the ultimate goals of our efforts. The milestones along this path usually take the form of specific research projects with specific research outcomes. As every year, the Center's most important activity in the past year was the promotion of novel, high-

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quality research on pain within the Hebrew University. Research activities are the responsibility of the individual laboratories that make up the Center. For the most part, this work is designed and funded through the efforts of the individual research groups. In 2015-16, members of the Center made an impressive contribution of research reports on the neuroscience of pain and pain medicine, much of which was published in prestigious international scientific journals and books. An updated list of publications can be found on the Center's website. In the long term, research is our only hope of improving the lot of people whose lives are ruined by chronic pain.

Continued support

Let me close by reminding our supporters that modern biomedical research is a demanding and expensive affair. More than ever before, the continued productivity of the Hebrew University Center for Research on Pain depends on the continued support of interested friends such as you. I hope that you will keep this in mind throughout a healthy, happy and hopefully pain-free 2017.

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