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I-CORE second wave to be launched:

Steering Committee decides to establish 11 additional Centers of Excellence

Minister of Education and Chairman of the Council for Higher Education, **Gideon Sa'ar**, and Chairman of the Planning and Budgeting Committee (PBC), Prof. **Manuel Trajtenberg** announced, today the groups that were selected to establish **11** Centers of Excellence (I-CORES) in the second wave of the program. An additional number of requests for the establishment of Centers of Excellence are still in discussion and will be decided in the near future.

Of the **11** new Centers, **4** will engage in research in the Social Sciences and Humanities and **7** in Exact Sciences, Engineering, Life Sciences and Medicine. The centers will be established during this year (2013), and the inauguration date of each center will be determined shortly. In addition, the establishment of additional centers, whose proposals are still under assessment, may be announced later this year.

The second wave represents another major step in the Centers of Excellence program and is a main pillar in the Multi-Year Reform Plan in Higher Education - a program aimed at fundamentally strengthening the long term positioning of Israel's academic research and its stature among leading researchers in Israel and abroad. I-CORE was endorsed by the Government of Israel and adopted by Israel's Council of Higher Education in March **2010** (Government Resolution No. **1503, 03.14.2010**). The first four I-CORES began operating in October 2011 (first wave) in the fields of: Cognitive Science, Algorithms, Solar Energy and the Genetic Basis of Human Disease.

26 full proposals were submitted as part of the second wave in **17** fields of research, and evaluated by international assessment committees, a process run by the Israel Science Foundation. The high quality of all the proposals, particularly of the winning proposals, as reflected in the reports and testimony of the assessment committees, is a certificate of honor for research and researchers in Israel.



The **15** Centers of Excellence that were selected until now – those established in the first wave and those that will be established in the second one – promote innovative and groundbreaking research in a range of fields, promote national and international research collaborations, assist in the recruitment of new excellent researchers and pave the way for nurturing the future generation of outstanding researchers in the country by establishing inter-institutional Joint Graduate Schools.

The following **11** groups and their research fields were selected by the Steering Committee at this stage:

1. **Study of Modern Jewish Culture** – a group under the scientific management of Prof. **Richard Cohen** of the Hebrew University, consisting of researchers from the Hebrew University, Bar-Ilan University, Ben-Gurion University of the Negev and Tel-Aviv University.
2. **Education and the New Information Society** – a group under the scientific management of Prof. **Yael Kali** of the University of Haifa, consisting of researchers from the University of Haifa, Ben-Gurion University of the Negev, Technion and the Interdisciplinary Center Herzliya.
3. **Empirical Legal Studies** – a group under the scientific management of Prof. **Ilana Ritov** of the Hebrew University, consisting of researchers from the Hebrew University and the Technion.
4. **Mass Trauma Research** - a group under the scientific management of Prof. **Zahava Solomon** of the Tel-Aviv University, consisting of researchers from the Tel-Aviv University, Bar-Ilan University, the Hebrew University, the Weizmann Institute of Science and the Interdisciplinary Center Herzliya.
5. **The Quantum Universe: Particles and Astro-particles** - a group under the scientific management of Prof. **Yosef Nir** of the Weizmann Institute of Science, consisting of researchers from the Weizmann Institute of Science, the Hebrew University, Tel-Aviv University and the Technion.
6. **Light and Matter** - a group under the scientific management of Prof. **Mordechai Segev** of the Technion, consisting of researchers from the Technion and the Weizmann Institute of Science.
7. **Astrophysics: from the Big Bang to the Stars** - a group under the scientific management of Prof. **Tsvi Piran** of the Hebrew University consisting of



researchers from the Hebrew University, Tel-Aviv University, the Technion and the Weizmann Institute of Science.

8. **Chromatin and RNA Gene Regulation** - a group under the scientific management group of Prof. **Nir Friedman** of the Hebrew University consisting of researchers from the Hebrew University, Bar-Ilan University, the Technion, the Weizmann Institute and Sheba Medical Center.
9. **Structural Biology of the Cell - Biophysics and medical technology** - a group under the scientific management of Prof. **Gideon Schreiber** of the Weizmann Institute of Science consisting of researchers from the Weizmann Institute of Science, Tel-Aviv University and the Technion.
10. **Plant Adaptation to Changing Environment** - a group under the scientific management group of Prof. **Hillel Fromm** of the Tel-Aviv University consisting of researchers from the Tel-Aviv University, Ben-Gurion University of the Negev, the Hebrew University and the Weizmann Institute of Science.
11. **Physical Approaches to Dynamic Processes in Living Systems** - a group under the scientific management of Prof. **Amit Meller** of the Technion consisting of researchers from the Technion, Bar-Ilan University, the Hebrew University, Tel-Aviv University and the Weizmann Institute of Science.

The Call for proposals for the establishment of Centers of Excellence in the second wave of the program was published by the Steering Committee, chaired by PBC member Prof. **Shimon Yankielowicz**, in September **2011**, and was disseminated to groups of researchers in Israel and abroad. The Call for proposals enabled researchers to submit proposals in **18** selected research fields in the Humanities, Social Sciences, Education, Law, Exact Sciences, Engineering, Life Sciences and Medicine. The list of research fields was composed by the Steering Committee of the program, after examining all suggestions submitted by more than **1,200** Israeli researchers from Israel and abroad.

The assessment and evaluation processes were carried out by the Israel Science Foundation via international evaluation committees, which examined the proposals on a competitive basis. Assessment and evaluation processes were carried out in two stages – in the first stage **67** competing preliminary proposals were submitted, of which **26** were asked to submit full proposals in the second stage.



The assessment process, as well as communication with the Chairman of the assessment committees and its members, the transfer of information necessary for the committee's work and the working procedures of the assessment committees and steering committee, was carried out by the Israel Science Foundation, while maintaining the standard procedures of the Foundation.

The reports received by the assessment committees were presented to the steering committee by members of the coordinating committee. The steering committee discussed their recommendations, studied the rules of the assessment process's procedure and the various aspects raised in the reports, strengths and weaknesses of each preliminary proposal and its accordance to the policy of the Centers of Excellence program. Following the discussions of the Steering Committee, 11 groups out of the 26 full proposals, were invited to establish the next centers.

The Governmental budget dedicated to the program, allocated by the PBC, is **450** million NIS over the years of operation, according to the government's decision from March **2010** (Government Resolution No. **1503**.) The PBC strives to recruit strategic partners for the program, and partner institutions must also fund an amount equal to half of the total budget contributed by the PBC and the strategic partners.

Operation model of the Centers of Excellence in the Second Wave

Lessons and insights gained from the establishment of the first four I-COREs (the "pilot stage") served the steering committee when designing the program's second wave. In order to increase flexibility, the new centers allow the creation of associations of leading researchers in the specific research field, regardless their institutional affiliation. In addition, in order to enable larger synergy between researchers, the number of researchers in each center is smaller compared to the first wave, adapted to the type of research center (experimental or theoretical). These modifications were made in order to ensure excellence while maintaining a competitive process.

In order to increase research collaboration between the various researchers in the center coming from various institutions, the program encourages joint mentoring of graduate students by researchers who are members of the center, regardless of their institutional affiliation. In addition, the program supports the I-CORE members in organizing workshops and unique programs of advanced teaching, including



International Graduate programs, in developing partnerships with industry, and in contributing to the community by holding public lectures or programs for high school students.

Excellence Centers Program - Background

The Israeli Centers for Research Excellence (I-CORE) is an initiative designed in the framework of the Higher Education multi-year Reform Plan, and was presented to the government by the Minister of Education and Chairman of the Council for Higher Education Gideon Sa'ar and PBC chairman Prof. Manuel Trajtenberg in its meeting on March 14, 2010. The program is operated jointly by the Planning and Budgeting Committee (PBC) and by the Israel Science Foundation (ISF).

The I-CORE Steering Committee, chaired by Prof. Shimon Yankelevich, a PBC member, is in charge of designing and approving the program's principles and modus operandi, the selection of research fields, reviewing the evaluation committees' reports and declaring the groups selected to establish the I-COREs. The International Scientific Advisory Committee of the program advises to the Steering Committee on the various issues, supplies it with an external professional perspective, and assists the ISF with managing the evaluation process.

The program gradually establishes Centers of Excellence - leading research centers specializing in a range of disciplines. The centers of excellence and the vision that the plan reflects are aimed at fundamentally strengthening the long term positioning of Israel's academic research and its stature among leading researchers in Israel and abroad. A "Center of excellence" is an association of outstanding researchers in a specific research field, who are current staff members of different higher education institutions, aimed at promoting groundbreaking and innovative research. The center serves as an anchor for shared research infrastructure and research groups in this field, and allows optimal utilization of the scientific potential of Israel.

Aside from the research infrastructure that is established and upgraded in the framework of the I-CORE, the members of the center benefit from a significant budget for the center's activities, including international activities, scholarships for research students and postdoctoral fellows, usage of equipment and materials, technical HR, etc.



In addition to the members of the I-CORE who are current faculty of Israeli institutions of higher education, new outstanding researchers also join the center during the first three years of activity. The new researchers join the various higher education institutions where they get a regular tenure-track academic appointment, and also receive annual research grants for a period of five years and equipment grants.

The Program Objectives:

1. Strengthening scientific research in Israel and establishing Israel's standing as a world leader in scientific research;
2. "Brain Return": returning excellent researchers to Israel, as a central means of fortifying the research capabilities and the academic staffs of the institutions of higher education;
3. Creating a critical mass and intensifying the relative advantages in select fields in the different institutions;
4. Improving and upgrading the research infrastructure in the universities;
5. Encouraging academic innovation, including integration between different fields of knowledge (multi-disciplinarity);
6. Maintaining and promoting advanced programs of instruction and training in select fields;
7. Encouraging research collaboration between institutions of higher education, both universities and colleges;
8. Strengthening the scientific research in Israel in disciplines of system-wide and national importance
9. Promoting collaboration with leading researchers and research institutions worldwide.

Four centers of excellence were established during the first wave of the program (October 2011) in the following areas:

1. **I-CORE in Molecular Medicine:** a group under the scientific management of Prof. Howard Cedar of the Hebrew University, consisting of researchers from the Hebrew University, Tel-Aviv University, Bar-Ilan University, Sheba Medical Center and Hadassah Medical Center.



2. **I-CORE in Cognitive Sciences:** a group under the scientific management of Prof. Yadin Dudai of the Weizmann Institute of Science, consisting of researchers from the Weizmann Institute of Science, Bar-Ilan University, Tel-Aviv University, Sourasky Medical Center and the Emek Israel College.
3. **I-CORE in Algorithms:** a group under the scientific management of Prof. Yishay Mansour of the Tel-Aviv University, consisting of researchers from the Tel-Aviv University, Weizmann Institute of Science and the Hebrew University.
4. **I-CORE in the Study of Alternative Energy Sources:** a group under the scientific management of Prof. Gideon Grader of the Technion, consisting of researchers from the Technion, Weizmann Institute of Science and Ben-Gurion University of the Negev.

Additional information about the program and the centers can be found at: www.i-core.org.il and at the CHE site: www.che.org.il