

Fact Sheet: The Global Research Partnership

King Abdullah University of Science and Technology (KAUST) is being built in Saudi Arabia as an international graduate-level research university. As an independent, merit-based institution, KAUST intends to become a major contributor to the global research community through its Global Research Partnership (GRP). The Partnership enables researchers from around the globe to work together to solve challenging scientific and technological problems. It is also a mechanism through which KAUST recruits students and faculty of exceptional talent.

The Global Research Partnership is also the primary mechanism for KAUST to create a leading research program for its faculty and students and extend scientific knowledge for the benefit of humanity.

The GRP is designed to be a world-class non-profit research funding program. The GRP began with a broad solicitation of proposals from potential partner universities and research organizations. The selection of awardees relied on a competitive, independent peer-review process based on the quality of the research proposed at candidate institutions.

For more information
visit the KAUST

Web site at:

www.kaust.edu.sa

In 2007, the program generated research proposals from 41 universities around the world, in areas as diverse as:

- Genomics of salt-tolerant plants
- Water desalination
- New frontiers in efficient low-cost solar cells
- Innovative construction materials that are more durable and environmentally friendly
- Integrated approaches to next generation energy systems
- New paths in computational science and applied mathematics
- Novel approaches in extending the utility of hydrocarbons
- Basic and applied research in nano-materials
- Studies of marine and soil environments in Saudi Arabia

Five applicants received grants to establish GRP Centers, and three received funding for GRP Centers-in-Development.

The research has direct relevance to global problems and challenges that are of particular interest to Saudi Arabia and the region. It is being performed at the home institution of

the researcher in compliance with all applicable laws of the host country (e.g., safety and protocols with regard to genetically modified organisms or export control laws) or any country in which the GRP-supported work is carried out.

The title to intellectual property generated by the research will be owned by the host institution, with benefits distributed according to the standard policies and practices of the institution. KAUST retains a right for non-exclusive, royalty-free non-commercial use in-Kingdom (e.g., applications that further scientific research, public health, and welfare) and a right to negotiate for commercial rights for applications in-Kingdom.

KAUST hopes to move the world's research agenda to address global problems that are of particular importance to Saudi Arabia and the region. Through the GRP external partnerships and its own research capacity, the University hopes to become a force in the economic transformation of Saudi Arabia and the region.

GRP Details

The solicitation released in August 2007 invited 60 major research universities from around the world to propose work in four general scientific areas through three major programs. The four areas of scientific and engineering focus were:

- *Resources, Energy and Environment* – Interdisciplinary fundamental and problem-driven research and graduate education in energy sources, systems, and uses; environmental quality and improvement; and water and coastal zone resources.
- *Materials Science and Engineering* – Fundamental and problem-driven research and graduate education in materials, including molecular engineering of application-specific materials and developments in nanotechnology to improve environmental quality and industrial processes and contribute to human welfare.
- *Biosciences and Bioengineering* – Fundamental and problem-driven research and graduate education in genomic and molecular biosciences important to regional and global agriculture, aquaculture, biodiversity, industrial bioprocesses, and human health.
- *Applied Mathematics and Computational Sciences* – Research and graduate education in applications of high-performance computing, new computer architectures, advanced computational techniques, and applied mathematics in areas of importance to Saudi Arabia, the region, and the global scientific and engineering research enterprise.

The three programs of the GRP are:

- *KAUST Centers and Centers-in-Development* – KAUST is providing five-year grant support to university-based, multi-investigator Centers, with industry participation possible. In addition, three-year awards for KAUST Centers-in-Development are being provided to smaller groups seeking to assemble the resources for a KAUST Center.

o *GRP Centers:*

- *Cornell University*

- *The University of Oxford*

- *Stanford University*
- *Texas A&M University*
- o *GRP Centers-in-Development*
 - *King Fahd University of Petroleum & Minerals*
 - *National Taiwan University*
 - *Utrecht University*

- *KAUST Investigators* – KAUST is providing five-year grants to accomplished and promising individual scientists or engineers at leading university-based laboratories. Each Investigator is expected to spend a minimum of three weeks per year on the KAUST campus participating in research and academic life.
- *KAUST Research Fellows* – KAUST is providing three-year support to exceptional postdoctoral researchers. It is hoped that many of these post-docs will spend time at and consider launching their faculty careers at KAUST.

The independent peer review selection criteria were the quality of the proposed research; relevance to KAUST’s mission; contribution to KAUST’s development; and track record and potential of the proposed individual or team.

This contribution of research to KAUST’s on-campus development takes many forms, with GRP-supported faculty, graduate students, postdoctoral researchers, and technical staff participating in or leading:

- Setup of a mirror lab or complementary research center at KAUST to create a paired or expanded combined research program. For instance, while a GRP-funded Center tackles the broad issues related to water desalination, it may also help create a lab at KAUST to work on membrane development important to its desalination research program.
- Development of a unique research facility at KAUST to enable new research or to serve as a “user center” for research in the Middle East region.
- Educational activities or exchanges to the advantage of students at both KAUST and the GRP institution. For example, GRP institutions may propose to train a group of technical staff or have their graduate students do a rotation in a KAUST lab in Saudi Arabia as part of their doctoral training.
- Exchange of faculty in both ways for the purpose of training and collaboration. For example, over the five-year duration of a Center award, KAUST faculty can spend time at the GRP-funded Centers to acquire new techniques and develop new research ideas and directions.

As KAUST matures as an institution, research collaborations funded by the GRP will become a lively “two-way street” between the GRP partner and KAUST, leading to a wide variety of exchanges and mutual benefits.