

International
Collaboration
Fund

TOGETHER
WE WILL COLLABORATE
TO SOLVE SOCIO-ECONOMIC CHALLENGES

RESEARCH IS TO APPLY STATE OF ART
TECHNOLOGIES

CONCENTRATE ON NATIONAL PRIORITIES

6 FIELDS OF RESEARCH

4 GRAND CHALLENGES

Fields of Interest

priority research fields within the Kingdom's R&D ecosystem

SAR 1.8M (= \$ 480K) maximum

Grand Challenges

multidisciplinary teams to improve a socioeconomic challenge

SAR 7.5M (= \$ 2M) maximum

Research proposal with clear justification of budget

careful evaluation by panel of experts

annual installment basis over three years

$\frac{2}{3}$ of the total grant to be spent within KSA university

FOCUS R&D FIELDS

1

LIFE SCIENCES & HEALTH

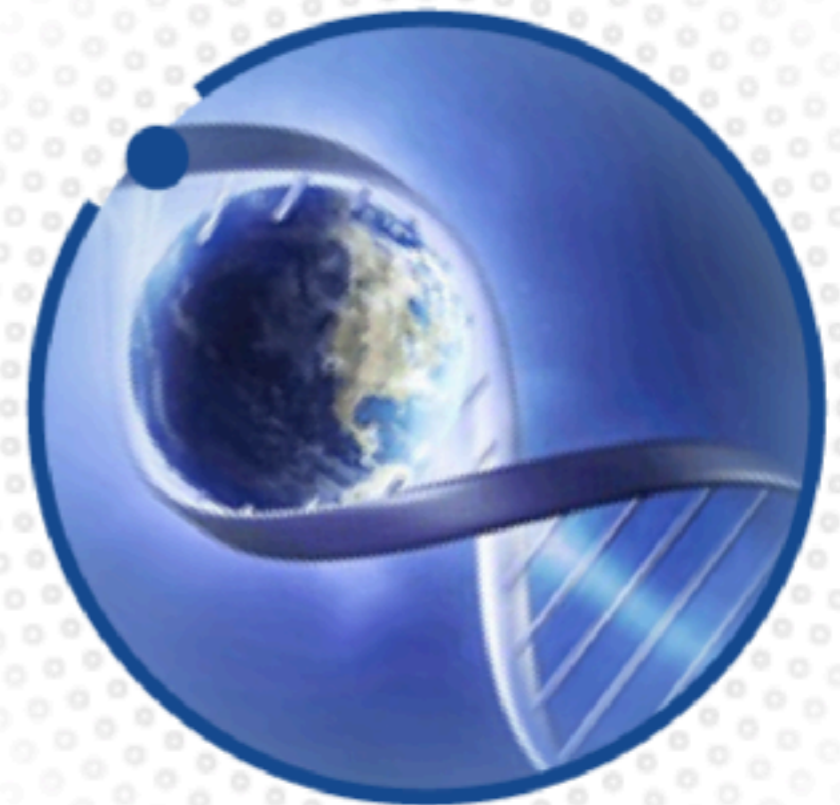
BIOGENOMICS - NANOBIOLOGY

Bio-genomics

Nano-biology

Life Sciences & Health Biogenomics and Nanobiology

Biogenomics and Nanobiology are key topics associated with the improvement of the health sector, to which 35% of Saudi local expenditure goes to each year. There is a local and global push to reduce the burden of disease and increase public health by developing technologies to improve patient outcomes and reduce costs. This field has been designed a Conference 'grand challenge' to **reduce the threat posed by emerging infectious disease through prediction, pandemic detection, and vaccine development.**



FOCUS R&D FIELDS

2

Catalysis & Polymers

PETROCHEMICALS

POLYMERS - CATALYSIS



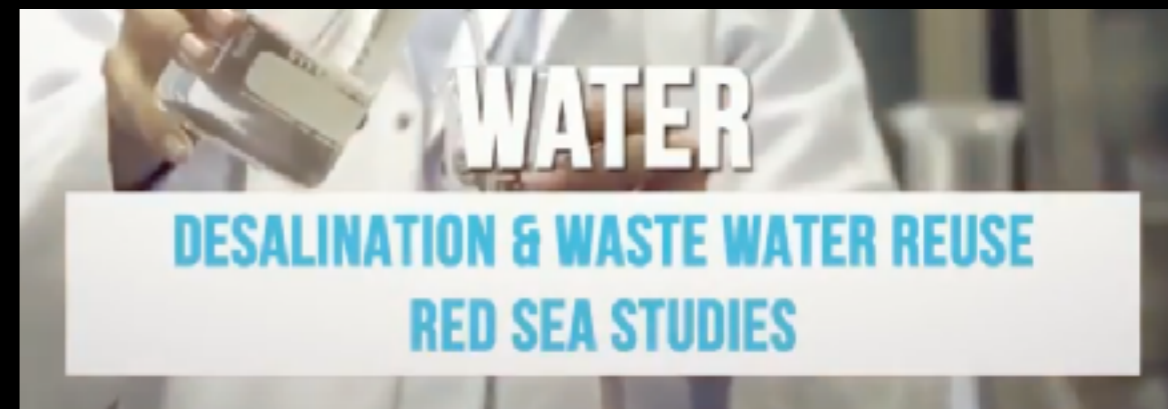
Petrochemicals Catalysis and Polymers

Catalysis and Polymers present a significant opportunity for Saudi Arabia, given the strength of the local oil & gas industry and the national emphasis on increasing downstream value-add of the sector. New catalytic processes and advanced polymers can drive local and global progress in industrial, agricultural and consumer sectors and increase resource and energy efficiencies.

FOCUS R&D FIELDS

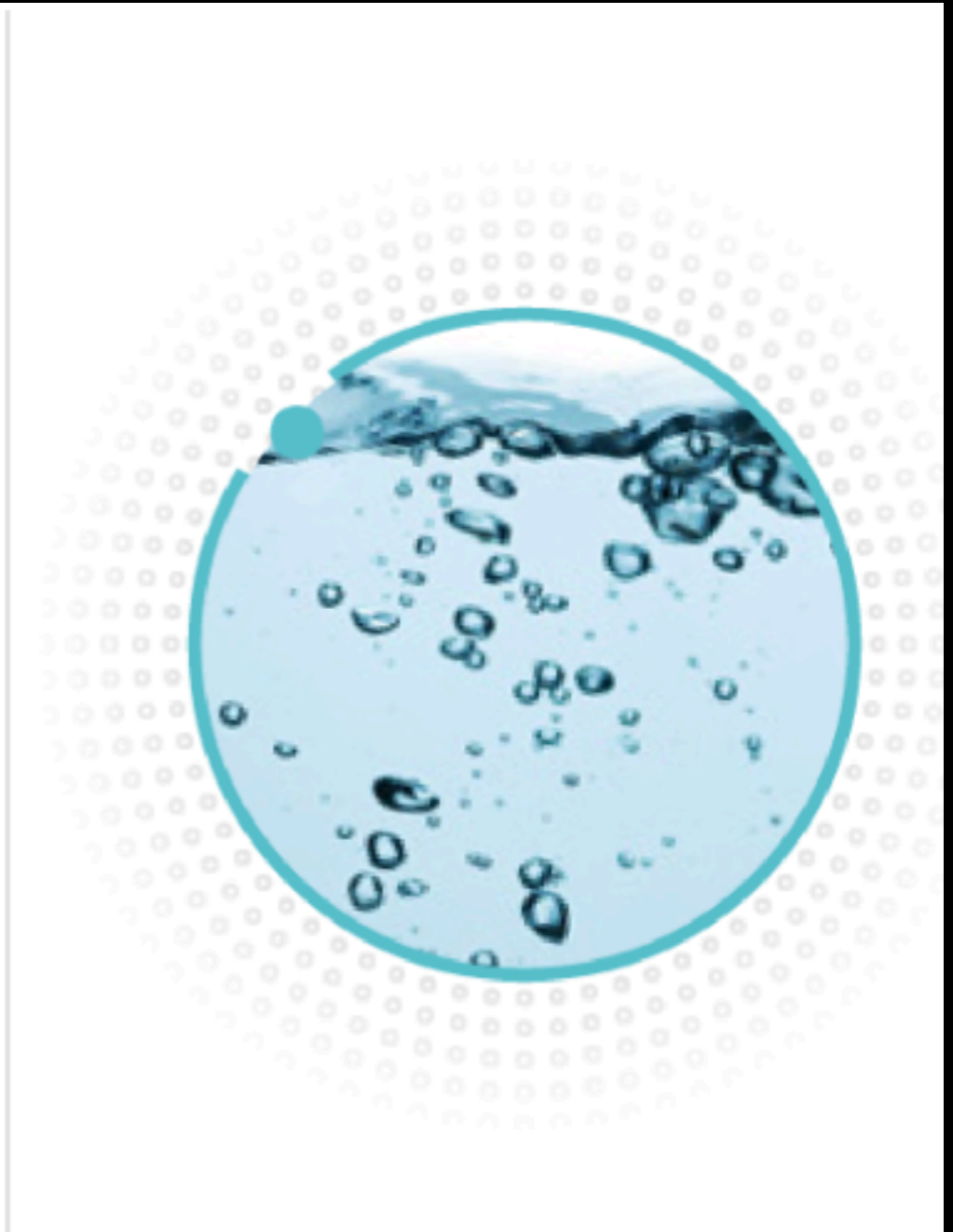
3

Red Sea & Marine Studies
Desalination & Water Reuse



Water **Desalination & Water** **Reuse and Red Sea studies**

Desalination & Water Reuse and Red Sea studies are at the core of R&D in Saudi Arabia, given the Kingdom's large proportion of desert area and its rich natural ecosystems in the Red Sea. The push to develop and commercialize innovative water and water treatment technologies is key toward water security for the Kingdom and for countries around the world, and better understanding of the Red Sea will advance its sustainable economic and tourism opportunities. Desalination has been designed a Conference 'grand challenge' **to achieve a 50% increase of total available capacity of desalinated water.**



FOCUS R&D FIELDS

4

Renewable Energy

Oil & Gas

ENERGY

RENEWABLES - OIL & GAS



Energy Renewable Energy and Oil & Gas

Oil & Gas as well as **Renewable Energy** present different opportunities to solidify and advance Saudi Arabia's position as a global energy leader. Enhancing oil recovery and exploration of new sources allows Saudi Arabia to support local and international efforts around efficiency in the sector, while advancing the viability of renewable energy sources allow Saudi Arabia to contribute to shared global efforts toward clean energy. Renewable energy has been designated a Conference 'grand challenge' to **achieve reliable transmission & storage of renewable energy to account for 4% of total energy use.**

FOCUS R&D FIELDS

5



Pollution Management

Crowd Management

Climate Change



Environment Crowd Management, Pollution Management, and Climate Change

Crowd Management, Pollution Management, and Climate Change are at the top of national agendas worldwide, but are of a priority within the Kingdom given local considerations. Saudi Arabia's custodianship of the Holy Mosques presents a particularly interesting case study in crowd management and pollution management, which is applicable to other large areas of population concentration. Addressing the challenges of climate change respond to the human and moral duty Saudi Arabia shares to preserve the planet's environmental and natural resources. Crowd management has been designed a Conference 'grand challenge' to **develop a real-time simulation and monitoring for Massive Crowd Movement with early warning capability.**

Machine Learning

Cyber Security

Information Technology Cyber Security and Machine Learning

Cyber Security and Machine Learning are two overlapping sub-fields as Saudi Arabia increases its capabilities in IT as an enabler for other technologies. While Machine Learning is seen as a key element in developing a digital society and enhancing national productivity, Cyber Security is a fundamental element in protecting local and global IT infrastructures.



GRAND CHALLENGE

Desalination & Water Reuse

A background image showing a laboratory or industrial setting with various pieces of equipment, including what appears to be a large white container with a blue handle on the right, and other machinery and pipes in the background.

INCREASE

**THE TOTAL AVAILABLE CAPACITY OF
DESALINATED WATER IN KSA BY 50%**

GRAND CHALLENGE

RENEWABLE ENERGY

ACHIEVE

**RELIABLE TRANSMISSION & STORAGE
OF RENEWABLE ENERGY TO ACCOUNT
FOR 4% OF TOTAL ENERGY USE**

GRAND CHALLENGE

Bio-genomics & Nano-biology

REDUCE

**THE THREAT POSED BY EMERGING INFECTIOUS
DISEASE THROUGH PREDICTION, PANDEMIC
DETECTION, AND VACCINE DEVELOPMENT**

GRAND CHALLENGE

CROWD MANAGEMENT



DEVELOP

**REAL-TIME SIMULATION AND MONITORING
FOR MASSIVE CROWD MOVEMENT WITH
EARLY WARNING CAPABILITY**

IMAGE PROCESSING

ARTIFICIAL INTELLIGENCE

PREDICTION AND PREVENTION OF STEPPING

The Small Print

A project team consists of at least:

1 PI from Saudi Univ. & 1 CI from collaborating Univ.

a researcher may be PI in only one proposal

s/he may be named CI in only one another

A CI may take part in a max of two proposals

Collaboration is necessarily to bring together:

capabilities, expertise and resources

NEW REGULATIONS:

MOU & COLLABORATION AGREEMENTS

NO GENERAL
AGREEMENTS!

ONLY
SERVICE
CONTRACTS:

FIXED PERIOD
FIXED SCOPE
FIXED COST

To apply for a research grant:
There is no need for prior agreements!
researchers write proposals together,
Service contracts may follow as needed.

For more information about MOE R&D
international Collaboration program,
please visit:

<https://rdo.moe.gov.sa/en/Pages/RDICC.aspx>

For further information,
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Thank you