



The Zuckerberg Institute for
Water Research

The First Water Summit
and the Roy Zuckerberg Prize

Desalination, water treatment, hydrology, and aquatic microbiology

May 22-23, 2022

The Jacob Blaustein
Institutes for Desert Research
Sde Boker Campus

Program



BGU


Ben-Gurion University
of the Negev



BIDR

The Jacob Blaustein
Institutes for
Desert Research





Sunday
May 22, 2022

08:00-10:00

Registration

10:00-10:30

Opening ceremony

Moderator: Mr. Aviad Avraham

Mr. Isaac Herzog, President of the
State of Israel

Prof. Alon Tal, Member of the Knesset

Prof. Raz Jelinek, Vice President & Dean
R&D, BGU

Prof. Noam Weisbrod, BIDR Director

Prof. Amit Gross, ZIWR Director

Session A **New perspectives in hydrology**

Chair: Prof. Alon Tal

10:30-11:00

A critical role of trans-generational teams in
advancing hydrological measurements

Prof. John Selker

11:00-11:30

Floods in a warming climate: what are the
missing puzzle pieces?

Prof. Efrat Morin

11:30-12:00

Global-scale quantification of drought
hazards

Prof. Petra Doell

12:00-13:00

Lunch

Session B **Frontiers in applied and aquatic microbiology**

Chair: Prof. Osnat Gillor

13:00-13:30

From polio to COVID: environmental virology
at its best

Prof. Joan Rose

13:30-14:00

Biology of emerging contaminants: do they
really eventually emerge?

Prof. Lisa Alvarez Cohen

14:00-14:30

Macro and micro-plastic litter and increased
COVID-19-based plastic pollution in the
aquatic environment and landfills: treatment,
environmental risks and policy solutions

Prof. Damia Barcelo

14:30-15:30

Roundtable

Dr. Eddie Cytryn, Dr. Karen Villholth

15:30-16:30

Poster session and coffee break

19:00

**The Zuckerberg Water Prize Ceremony
and Gala Dinner**

2022 Laureate: Prof. Ashok Gadgil

Moderator: Dr. Maya Benami





Monday
May 23, 2022

Session C

Desalination: old concepts, new horizons

Chair: Dr. Avner Ronen

09:00-09:30

The evolution of modern membrane desalination
Prof. Jack Gilron

09:30-10:00

Next-generation desalination and water purification membranes: where are we now?
Prof. Menachem Elimelech

10:00-10:30

Resource recovery from seawater: emphasis on selective separation of Mg(II) salts
Prof. Ori Lahav

10:30-11:00

Autonomous optimal operation of distributed membrane-based water treatment and desalination systems
Prof. Yoram Cohen

11:00-11:30

Coffee break

Session D

Water treatment and sanitation

Chair: Dr. Oded Nir

11:30-12:00

Israel, water, and the world: how a small, dry country serves as an inspiration to nations around the globe
Mr. Seth Siegel

12:00-12:30

A renaissance for phage-based bacterial control
Prof. Pedro Alvarez

12:30-14:00

Poster session and lunch

14:00-14:30

Risk assessment and mitigation of legionellosis powered by genomics
Prof. Jacob Moran-Gilad

14:30-15:00

Opportunities for greywater reuse at different scales
Prof. Eberhard Morgenroth

15:00-15:30

Overcoming the barriers to achieving the environmental Sustainable Development Goals (SDGs)
Prof. Janet Hering

15:30-16:45

Roundtable
Prof. Sharon Walker

16:45-17:00

Closing remarks



The Zuckerberg Institute for Water Research (ZIWR) was founded in January 2002 within the Jacob Blaustein Institutes for Desert Research at Ben-Gurion University of the Negev's Sde Boker Campus.

ZIWR scientists use experimental and theoretical approaches to conduct fundamental water research to understand wide-ranging phenomena. Their broad-based research encompasses nanoscience and pore-scale phenomena and extends to pilot projects and field studies.

Research topics in the ZIWR are dynamic and fine-tuned to constantly remain responsive to evolving needs and challenges, resulting in a unique scientific environment in which researchers investigate environmental challenges and develop engineering solutions for water-related problems. The ZIWR's interdisciplinary team includes hydrologists, soil scientists, geologists, chemists, microbiologists, and engineers.

As a crucial part of Ben-Gurion University of the Negev, the ZIWR remains mindful of the university's founding mission to spearhead the development of Israel's southern region while attaining excellence within the global scientific community. ZIWR members are actively engaged in research projects within Israel, while also collaborating with scientists worldwide. Particular emphasis is placed on research and development of water resources in drylands, in general, and on the local conditions of the Negev Desert, in particular.



The Jacob Blaustein Institutes for Desert Research (BIDR) were established in 1974. Today, the BIDR is a global leader in research on desertification and sustainable development of the drylands. BIDR researchers and students investigate ways to meet global challenges related to food security, water scarcity, and clean energy, using innovative science and cutting-edge technology.

The BIDR is located at Ben-Gurion University of the Negev's Sde Boker Campus, in the heart of the Negev Desert, which covers some 60% of Israel's total area, constituting the country's last open frontier for sustainable development. BIDR scientists dwell in the desert – in physical and intellectual interaction with their living laboratory.

The knowledge gained here is shared worldwide, where the rapid expansion of drylands, water scarcity, food security problems, and energy crises affect billions of people living in more than 100 countries.

The BIDR comprises three institutes, each with its own mission and vision: The French Associates Institute for Agriculture and Biotechnology of Drylands, the Zuckerberg Institute for Water Research, and the Swiss Institute for Dryland Environmental Research.

