CHEMISTRY

Green Chemistry for Life

PHOSAGRO

UNESCO
United Nations
Educational, Scientific and
Cultural Organization

IUPAC
INTERNATIONAL UNION OF
PURE AND APPLIED CHEMISTRY

BACKGROUND

Nowadays **green chemistry** has become a target for cutting-edge research into **sustainable technologies**.

These technologies may reduce or eliminate the production and use of hazardous substances in mining, manufacture and application of chemical products, and may also lead to energy saving and a better environment and health.

Research in **green chemistry** and allied areas in biochemistry, geochemistry, biotechnology, ecology and healthcare give **young scientists** ample opportunity to demonstrate their inventiveness and provide important input to **sustainable development**.

With this in mind, the **Green Chemistry for Life** Project was launched in 2013 by **UNESCO's** International Basic Sciences Programme and **PhosAgro**, the largest producer of phosphate-based fertilizer globally, in close cooperation with the **International Union of Pure and Applied Chemistry (IUPAC)**.

RESEARCH AWARDS

- Generously funded by **PhosAgro**, PJSC, *Moscow, Russia*.
- Scientific support and expertise by **IUPAC**, *Zürich, Switzerland.*
- Administered by **UNESCO**, *Paris, France.*

Programme launched by the three partners as a follow-up to the International Year of Chemistry 2011.

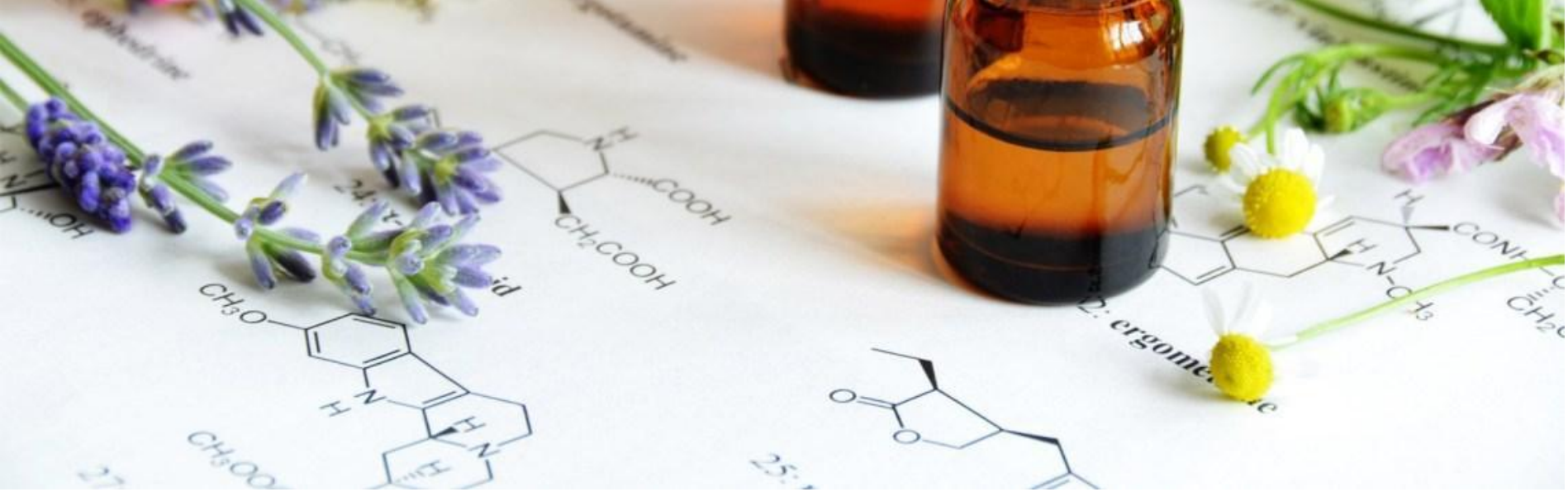
GRANT PROGRAMME

Aim: To support innovative research projects by young scientists that adhere to the 12 principles of green chemistry.

Who is eligible: Young scientists up to age 39 with a PhD degree (or equivalent) in chemistry or similar areas.

Funding: > USD 2.5 million over six years to support annual research grants.

Founding partners: PhosAgro, UNESCO and IUPAC.



TO BE ELIGIBLE FOR A GRANT PROGRAMME A CANDIDATE SHOULD:

(a) be a young scientist aged **39 (thirty-nine)** or less;

(b) hold a **PhD** or equivalent in chemistry or an interdisciplinary allied area;

(c) have at least **3 (three) publications** in recognized scientific journals; **and**

(d) a project proposal should have as its objective innovative research that advances green chemistry and use of the **12** principles of green chemistry.

IMPORTANT **FACTS**

- An International Competition has been held each year **since 2014**.
- **6 General Awards** are made each year.
- **1 Special Award** for work on a project related to phosphogypsum has now been added **since 2017**.
- The **International Jury** meets at UNESCO headquarters in Paris in May each year.

GRANT PROGRAMME

- Grant Programme has been a **prospective** and **successful** project.
- During five years attracted **600 applications** from **around the world**.
- **Extremely high standard** with many applicants from the foremost institutes in their countries.
- **34 awards** made to young scientists from **26 different countries**.

March 2013

PhosAgro and UNESCO signed a partnership agreement founding the Green Chemistry for Life grant programme.

May 2014

An international jury reviewed 110 applications from young scientists around the world, selecting six research projects to receive grants.

June 2015

Second round of grants selected from 119 applications, with six grants awarded to talented young scientists for their innovative projects.

March 2016

PhosAgro, IUPAC and UNESCO launch special grant for research on uses for phosphogypsum, a byproduct of phosphate-based fertilizer production.

March 2017

- An international jury reviewed 151 applications from young scientists around the world.
- Awarding of special grant for phosphogypsum.

September 2018

97 applications had been reviewed. A record number of 9 scholars received grants for their research.

January 2019

During the official Launch Ceremony of the International Year of Periodic Table (IYPT2019) at UNESCO headquarters in Paris an Agreement on the extension of the grant programme until 20022 was signed.






Award Ceremony 2018

- International jury reviewed 97 applications from 72 countries
- 9 Young scientists received grants for innovative research and development in the field of green chemistry
- The fifth round award ceremony was organized within the context of the 8th IUPAC International Conference on Green Chemistry in Bangkok

The International Scientific Jury for Green Chemistry for Life comprises prominent chemistry scientists, teachers and researchers. High level of the International Jury competence ensures an unbiased and thorough examination of the received applications.

JOHN CORISH (Ireland) Prof., Chairman of International Scientific Jury, School of Chemistry, Trinity College, University of Dublin;

SIROJ LOIKOV (Russia) Deputy CEO for International Projects, PhosAgro;

NATALIA TARASOVA (Russia) Prof., Past President of IUPAC, Mendeleyev University of Chemical Technology;

VLADIMIR ZHAROV (France) Prof., Executive Secretary of the ISJ, UNESCO/PhosAgro Expert, Natural Sciences Sector;

BERHANU ABEGAZ MOLLA (Ethiopia) Prof., Member of the African Union Panel on Emerging Technologies, Past Chairperson of the Scientific Board of UNESCO's International Basic Sciences Programme;

SIMEON ANGUELOV (Bulgaria) Dr., Manager South Eastern Europe Network on Phytochemistry and Chemistry of Natural Products;

MICHAEL DROESCHER (Germany) Dr., Manager Cluster CHEMIE.NRW, Vice President German Chemical Society, Chair IUPAC Committee on Chemistry and Industry;

PIETRO ROSARIO TUNDO (Italy) Prof., UNESCO Chair on Green Chemistry, Ca' Foscari University of Venice;

DOGO SECK (Senegal) Dr., Member of Academy of Science and Technology of Senegal;

NICOLE MOREAU (France) Prof., Member of ICSU Executive Board, Chairperson of the Scientific Board of UNESCO's International Basic Sciences Programme;

BORIS LEVIN (Russia) Dr., Deputy of CEO, PhosAgro;

JANUSZ PAWLISZYN (Canada) Prof., Editor, Analytica Chimica Acta, Canada Research Chair, Department of Chemistry, University of Waterloo;

NGUYEN VAN HUNG (Vietnam) Prof., Vice Rector of University of Sciences and Technology of Hanoi, Institute of Marine Biochemistry.

FIRST ROUND WINNERS: 2014

Dr. Thibault Cantat
France

Dr. Ning Yan
Singapore

Dr. Juan Carlos Rodriguez-Reyes
Peru

Dr. Anastasiya Hubina
Ukraine

Dr. Gasser Mohamed Khairy Mostafa
Egypt

Dr. Sharifah Rafidah Wan Alwi
Malaysia

SECOND ROUND WINNERS: 2015

Dr. Alexander Bissember *Australia*

Dr. Daniele Leonori
Italy

Dr. Mehdi Mohammadi
Iran

Dr. Allan Prior
South Africa

Dr. Natalia Quici
Argentina

Dr. Svilen Simeonov
Bulgaria

THIRD ROUND WINNERS: 2016

Dr. Ahmed Shebl Elsayed Sayed
Egypt

Dr. Alsu Akhmetshina
Russia

Dr. Ignacio Carrera
Uruguay

Dr. Muhammad Ismail
Pakistan

Dr. Enrico Ravera
Italy

Dr. Wycliffe Chisutia Wanyonyi
Kenya

FOURTH ROUND WINNERS: 2017

Dr Ariel Marcelo Sarotti
Argentina

Dr Shumaila Kiran
Pakistan

Dr Maja Stanisavljevic
Bosnia and Herzegovina

Dr Maria Ventura Sanchez-Hornero,
Spian

Dr Mohamed Neifar
Tunisie

Dr Damien Debecker
Belgium

Dr Abosede Olufunso Olumide
Nigeria

FIFTH ROUND WINNERS: 2018

Elisa Souza Orth
Brazil

Nadav Amdursky
Israel

Gift Mehlana
Zimbabwe

Yasmin Adam Ali Aburigal
Sudan

Paltu Kumar Dhal
India

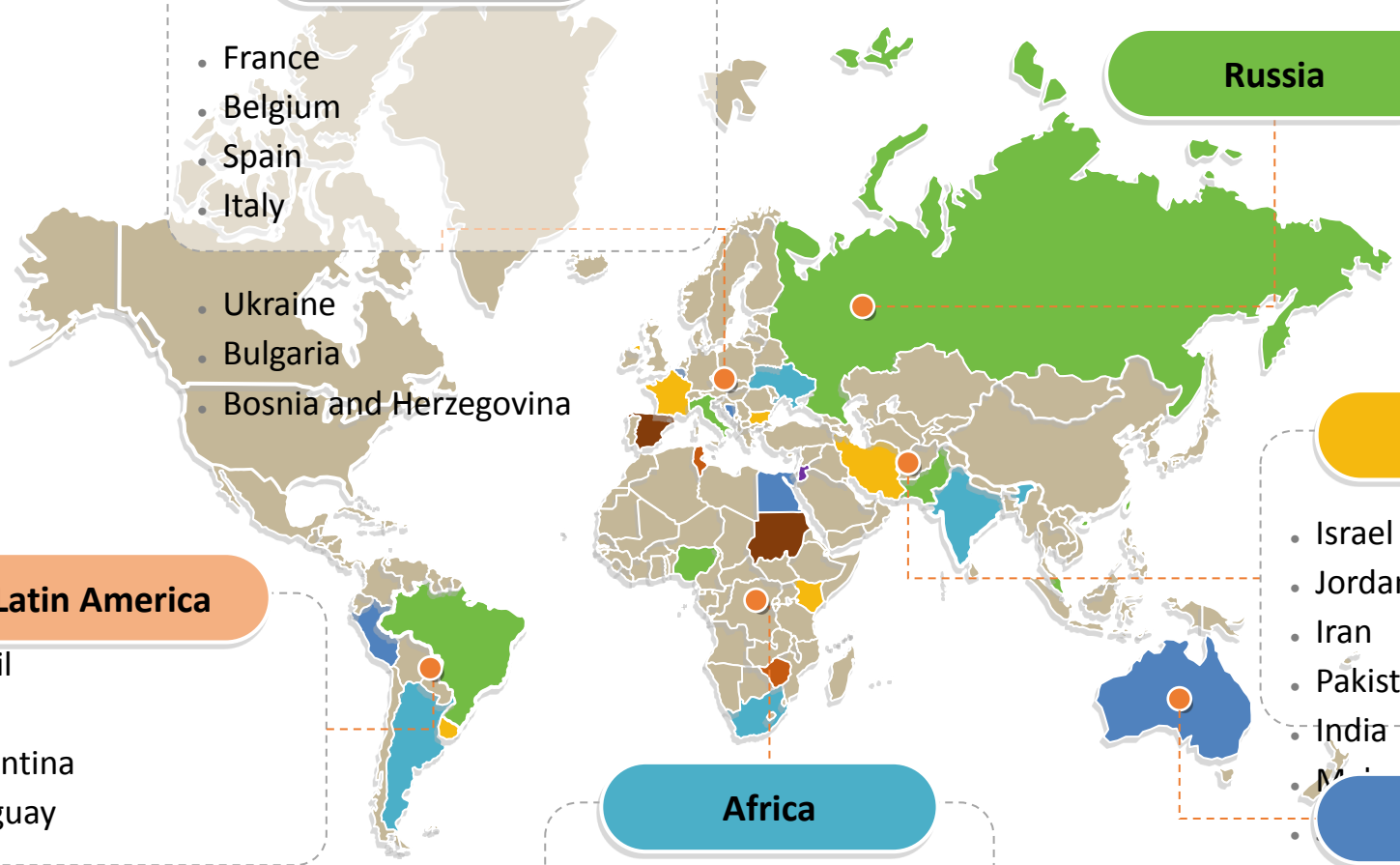
Muhammad Shahid
Pakistan

Suhair Ziad Abed Alhameed Sunoqrot
Jordan

Roya Sedghi
Iran

Joaquín García-Álvarez
Spain

GEOGRAPHY OF GRANT WINNERS OVER 5 YEARS



Europe

- France
- Belgium
- Spain
- Italy
- Ukraine
- Bulgaria
- Bosnia and Herzegovina

Russia

Asia

- Israel
- Jordan
- Iran
- Pakistan
- India

Latin America

- Brazil
- Peru
- Argentina
- Uruguay

Africa

- South Africa
- Egypt
- Kenya
- Tunisia
- Nigeria

Australia

Basic Sciences

International Basic Sciences Programme

Chemistry

- Green Chemistry for Life
- International Year of Chemistry
- Macromolecular Chemistry in Libya

Life Sciences

Mathematics

Physics

Engineering

PhosAgro/ UNESCO/ IUPAC Partnership in Green Chemistry for Life

Chemistry and Energy lab, University of Hong Kong. © V. Durruty & P. Guedj for the L'Oréal Corporation Foundation

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Research in green chemistry and allied areas in biochemistry, geochemistry, biotechnology, ecology and healthcare give young scientists ample opportunity to demonstrate their inventiveness and provide important input to sustainable development. With this in mind, the Green Chemistry for Life Project was launched in 2013 by UNESCO's International Basic Sciences Programme (IBSP) and PhosAgro, the largest producer of phosphate-based fertilizer in Europe, in close cooperation with the International Union of Pure and Applied Chemistry (IUPAC).

Objectives

Over the course of 8 years, the project will offer research grants of up to US$30,000 to scientists aged 39 and under with an innovative research project that respects the 12 principles of green chemistry, to help them implement their project.

In addition to seeking to harness talents of young scientists for the advancement of green chemistry and the use of its fruits, the Project sets out to raise awareness among decision- and policy-makers, industrialists and the public at large of the vast opportunities green chemistry offers to meet pressing societal needs.

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Research grants for young scientists (2019)

The exhibition of PhosAgro/UNESCO/IUPAC Partnership in Green Chemistry at the Opening Ceremony of the International Year of the Periodic Table 2019

PhosAgro/UNESCO/IUPAC Green Chemistry research grants for young scientists
The 6th call is open for young scientists until 31 August 2019.

PhosAgro/UNESCO/IUPAC Green Chemistry special grants for research projects on phosphogypsum
The call for this special grant for green chemistry research project on innovations in the processing and utilization of phosphogypsum is open for young scientists until 31 August 2019.

- Apply
- Previous editions
  2018 | 2017 | 2016 | 2015 | 2014

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RELATED INFORMATION

Calls for applications

- 2019 Research grants in green chemistry (6th call) - open until 31 August 2019
- 2019 Special grants for projects on phosphogypsum (4th call) - open until August 2019
- How to apply

PhosAgro/ UNESCO/ IUPAC Partnership in Green Chemistry for Life

- Previous research grants
  2018 | 2017 | 2016 | 2015 | 2014
- News, announcements
  - 2018 Green Chemistry for Life research grants
  - 2017 Green Chemistry for Life research grants
  - 2016 Green Chemistry for Life research grants
  - 2015 Green Chemistry for Life research grants
  - Six young scientists receive Green Chemistry for Life research grants in 2014
- Twelve Principles of Green Chemistry

International Scientific Jury

- Chair & Members of the ISJ
- Monitoring Bureau

PARTNERS

PHOSAGRO

IUPAC

IUPAC Postgraduate Summer School on Green Chemistry:

This initiative aims to provide support to young scientists working in the field of green chemistry. Every year the Postgraduate Summer School on Green Chemistry creates a platform for promotion of innovative and technologically advanced projects, discussion of topical issues, sharing best practices and experience, networking and establishing scientific cooperation, and creating a solid theoretical and practical base.

Project Information:

- ✔ In 2018, **68 Selected post-graduated attendees and 30 teachers coming from 38 different countries participated** in the Summer School in Venice. took part in the IUPAC Postgraduate Summer School on Green Chemistry at the University of Venice Ca' Foscari.
- ✔ The IUPAC Postgraduate Summer School's academic program focused on the **17 UN sustainable development goals.**

Project status:

- ❖ ***From May 12 to 19, 2019**, the **second educational session** of the Summer School on Green Chemistry was held at the premises of the State University of Dar es Salaam, Tanzania.*
- ❖ *PhosAgro is the official **partner** and **sponsor** of the IUPAC Postgraduate Summer School on Green Chemistry. The **financial contribution** to support the summer school in Tanzania amounted to **$ 10,000**.*
- ❖ *PhosAgro's funds were used to finance projects of promising young scientists from African countries.*

IUPAC FOR AFRICA

Postgraduate Summer School on Green Chemistry

Inspired by IUPAC Centenary and the International Year of the Periodic Table Celebrations

12th - 19th May 2019, Dar es Salaam, Tanzania

ФОСАГРО®

Thank you for your attention!

Aleksander Antonov

www.phosagro.com