



An Introduction to ICGEB

Wendy Craig

Group Leader - Biosafety

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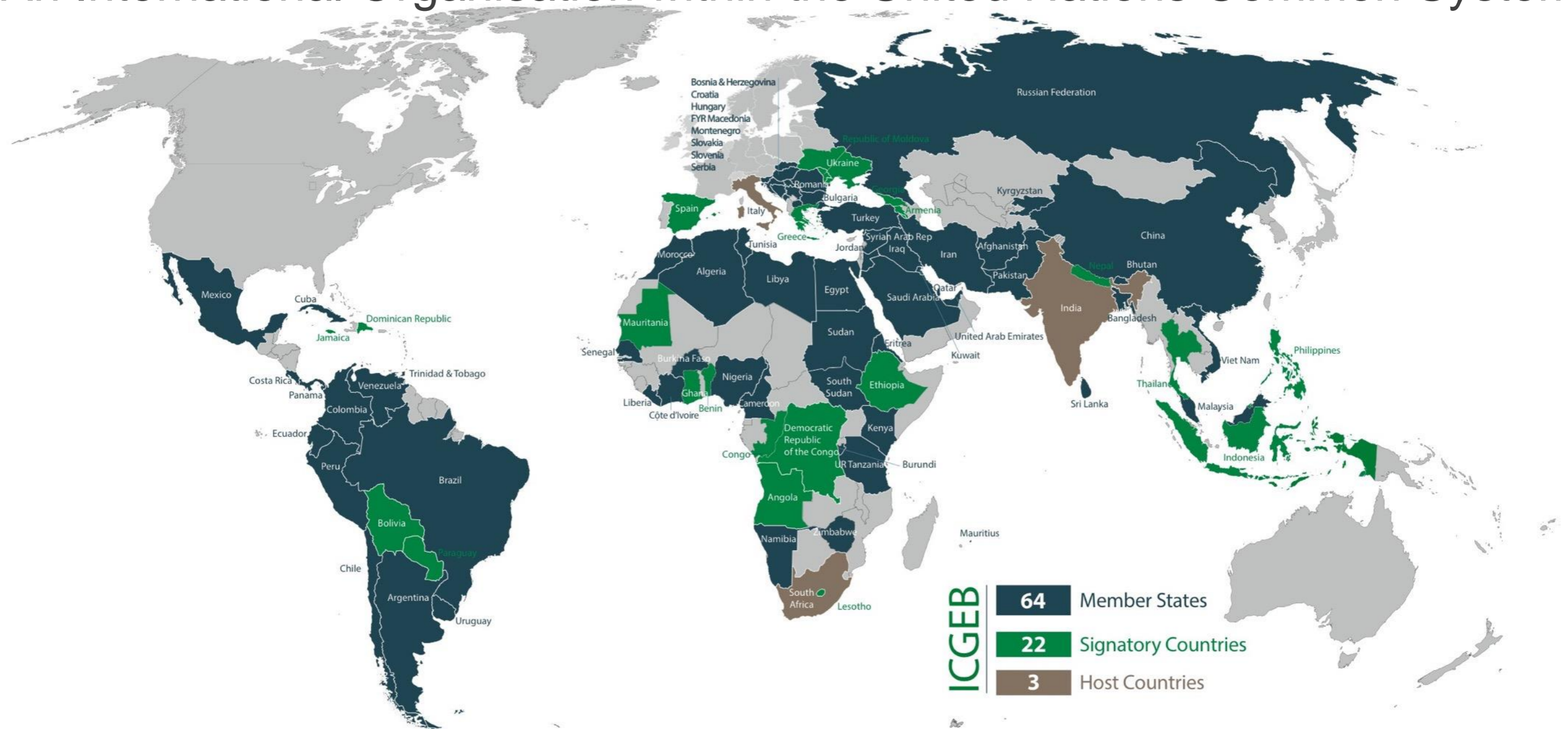


ICGEB

International Centre for Genetic
Engineering and Biotechnology

Developing
Knowledge

An International Organisation within the United Nations Common System



80+ Signatory Countries, 60+ Member States, 3 Components:
Trieste (Italy) - New Delhi (India) – Cape Town (South Africa)



The early days in ICGEB history

- Late '70s : Very successful biotech companies are born in the US (Genentech, 1976; Biogen, 1978; Amgen, 1980; Immunex, 1981; Chiron, 1981; Genzyme 1981)
- Early '80s: UNIDO functionaries in Vienna conceive the idea of a biotech Centre for developing countries
- 1982: First meeting organised by UNIDO in Belgrade, Serbia
- 1983: Foundation meeting in Madrid, Spain; Italy puts forward its candidature to host the Centre
- 1984: Vienna Conference: the ICGEB is founded with two seats, one in Trieste, Italy and one in New Delhi, India
- 1987: Activity begins



1987-1995
a special project
of UNIDO



1995-today
An independent
international
organisation

The ICGEB mandate

An International
Organisation for research,
training and technology
transfer in Life Sciences to
promote sustainable global
development



ICGEB Director, Arturo Falaschi with UNIDO Director General,
Mauricio de Maria y Campos, 20 February 1996, Transfer of Assets
UNIDO-ICGEB

Developing Knowledge



Biotechnology for global development

Health

Biopharmaceuticals

Vaccines

Diagnostics for viral and genetic disease

Agriculture

Enhance productivity

Pest protection

Herbicide tolerance

Environmental adaptation

Improve nutritional composition of foods

Reduce allergenicity

Environment

Sanitation

Clean water

Bioremediation

Energy

Synthetic biology and biofuels

Research: Macro-Areas and Groups

1. Infectious Diseases (11 Groups)

VIROLOGY

Alessandro Marcello (TS)
Sujatha Sunil (ND)
Anmole Chandele (ND)
Oscar Burrone (TS)



PARASITIC DISEASES

Frank Brombacher (CT)
Pawan Malhotra (ND)
Asif Mohammed (ND)
Renu Tuteja (ND)
Dinkar Sahal (ND)
Amit Sharma (ND)
Neel Sarovar Bhavesh (ND)



CARDIOVASCULAR DISORDERS

Mauro Giacca (TS)
Serena Zacchigna (TS)
Francesco Loffredo (TS)



NEUROBIOLOGY

Emanuele Buratti (TS)
Fabian Feiguin (TS)



2. Non-Communicable Diseases (16 Groups)

IMMUNOLOGY

Dinakar Salunke (ND)
Federica Benvenuti (TS)
Dhiraj Kumar (ND)



MOLECULAR GENETICS

Francisco Baralle (TS)
Andrés Muro (TS)
Franco Pagani (TS)



CANCER

Lawrence Banks (TS)
Luiz Zerbini (CT)
Dimitar Efremov (TS)
Mike Myers (TS)



Research: Macro-Areas and Groups

3. Medical Biotechnology (3)

BIOSIMILAR DRUGS

Nataša Skoko (TS)



RECOMBINANT DIAGNOSTICS AND VACCINES

Navin Khanna (ND)
Ranjan Nanda (ND)



4. Industrial Biotechnology (7)

BIOFUELS AND INDUSTRIAL BIOTECHNOLOGY

Syed Shams Yazdani (ND)
Naseem Gaur (ND)
Pavan Jutur (ND)
Shireesh Srivastava (ND)
Shashi Kumar Rhode (ND)
Dinesh Gupta (ND)
Giuliano Degrassi (Buenos Aires)



5. Plant Biology & Biotechnology (8)

CROP IMPROVEMENT

M.K. Reddy (ND)
Tanushri Kaul (ND)
S. Leelavathi (ND)
Vittorio Venturi (TS)



BIOTIC AND ABIOTIC STRESS

Suresh Nair (ND)
Neeti Sanan-Mishra (ND)
Sneh Lata Singla-Pareek (ND)
Denis Obonyo Ndolo (CT)





The ICGEB instruments of action

Cutting-edge **research** in its laboratories in Trieste, New Delhi and Cape Town

- Advanced education supported by long- and short-term **fellowships** for PhD students and post-docs
- Organisation of **meetings, courses and workshops** at the international level
- Competitive **grants** for scientists in Member Countries, including Early Career Return Grants
- **Technology transfer** to industry for the production of biotherapeutics and diagnostics
- Provision of **technical assistance** and capacity enhancement in the regulation of biotechnology and its products





The Arturo Falaschi Fellowship Programme

PhD Fellowships

Hendrina Shipanga, former Student, ICGEB Cape Town

Trieste **New Delhi** **Cape Town**
ITALY **INDIA** **SOUTH AFRICA**

ICGEB offers competitive **PhD Fellowships** in **Life Sciences** to highly motivated scientists wishing to pursue PhD research studies in a **world-class scientific environment**.

Fellowships include:

- Participation in a competitive research programme
- Access to state-of-the-art facilities
- Participation in ICGEB Meetings, Seminars and Journal Clubs
- A competitive stipend, travel provision plus full coverage of tuition fees and health insurance

Closing date for application:

31 March 2019

Nationals from **ICGEB Member States** are encouraged to apply

Afghanistan, Algeria, Argentina, Bangladesh, Bhutan, Bosnia and Herzegovina, Brazil, Bulgaria, Burkina Faso, Burundi, Cameroon, Chile, China, Colombia, Costa Rica, Côte D'Ivoire, Croatia, Cuba, Ecuador, Egypt, Eritrea, FYR Macedonia, Hungary, India, Iran, Iraq, Italy, Jordan, Kenya, Kuwait, Kyrgyzstan, Liberia, Libya, Malaysia, Mauritius, Mexico, Montenegro, Morocco, Namibia, Nigeria, Pakistan, Panama, Peru, Qatar, Romania, Russian Federation, Saudi Arabia, Senegal, Serbia, Slovakia, Slovenia, South Africa, Sri Lanka, Sudan, Syrian Arab Republic, Trinidad and Tobago, Tunisia, Turkey, United Arab Emirates, United Republic of Tanzania, Uruguay, Venezuela, Viet Nam, Zimbabwe

www.icgeb.org/fellowships.html



Information and Applications:

ICGEB CRP & Fellowships Unit
Loc. Padriciano, 99 - 34149 Trieste, ITALY
Tel: +39-040-3757382/7347

Email: Fellowships@icgeb.org | www.icgeb.org



The Arturo Falaschi Fellowship Programme

Postdoctoral Fellowships

Mohammad Khalid ZAKARIA, Postdoc - ICGEB Trieste

Trieste **New Delhi** **Cape Town**
ITALY **INDIA** **SOUTH AFRICA**

ICGEB offers competitive **Postdoctoral Fellowships** in **Life Sciences** to highly motivated scientists wishing to pursue post-doctoral research in a **world-class scientific environment**.

The Fellowships comprise a very **competitive** package including stipend, travel provision, health insurance and additional benefits.

The most successful fellows will also be eligible to apply for ICGEB **Early Career Research Grants** to support their **own research** programmes as young PIs upon return to an ICGEB Member State.

Closing dates for applications:

31 March and 30 September 2019

Nationals from **ICGEB Member States** are encouraged to apply

Afghanistan, Algeria, Argentina, Bangladesh, Bhutan, Bosnia and Herzegovina, Brazil, Bulgaria, Burkina Faso, Burundi, Cameroon, Chile, China, Colombia, Costa Rica, Côte D'Ivoire, Croatia, Cuba, Ecuador, Egypt, Eritrea, FYR Macedonia, Hungary, India, Iran, Iraq, Italy, Jordan, Kenya, Kuwait, Kyrgyzstan, Liberia, Libya, Malaysia, Mauritius, Mexico, Montenegro, Morocco, Namibia, Nigeria, Pakistan, Panama, Peru, Qatar, Romania, Russian Federation, Saudi Arabia, Senegal, Serbia, Slovakia, Slovenia, South Africa, Sri Lanka, Sudan, Syrian Arab Republic, Trinidad and Tobago, Tunisia, Turkey, United Arab Emirates, United Republic of Tanzania, Uruguay, Venezuela, Viet Nam, Zimbabwe

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Information and Applications:

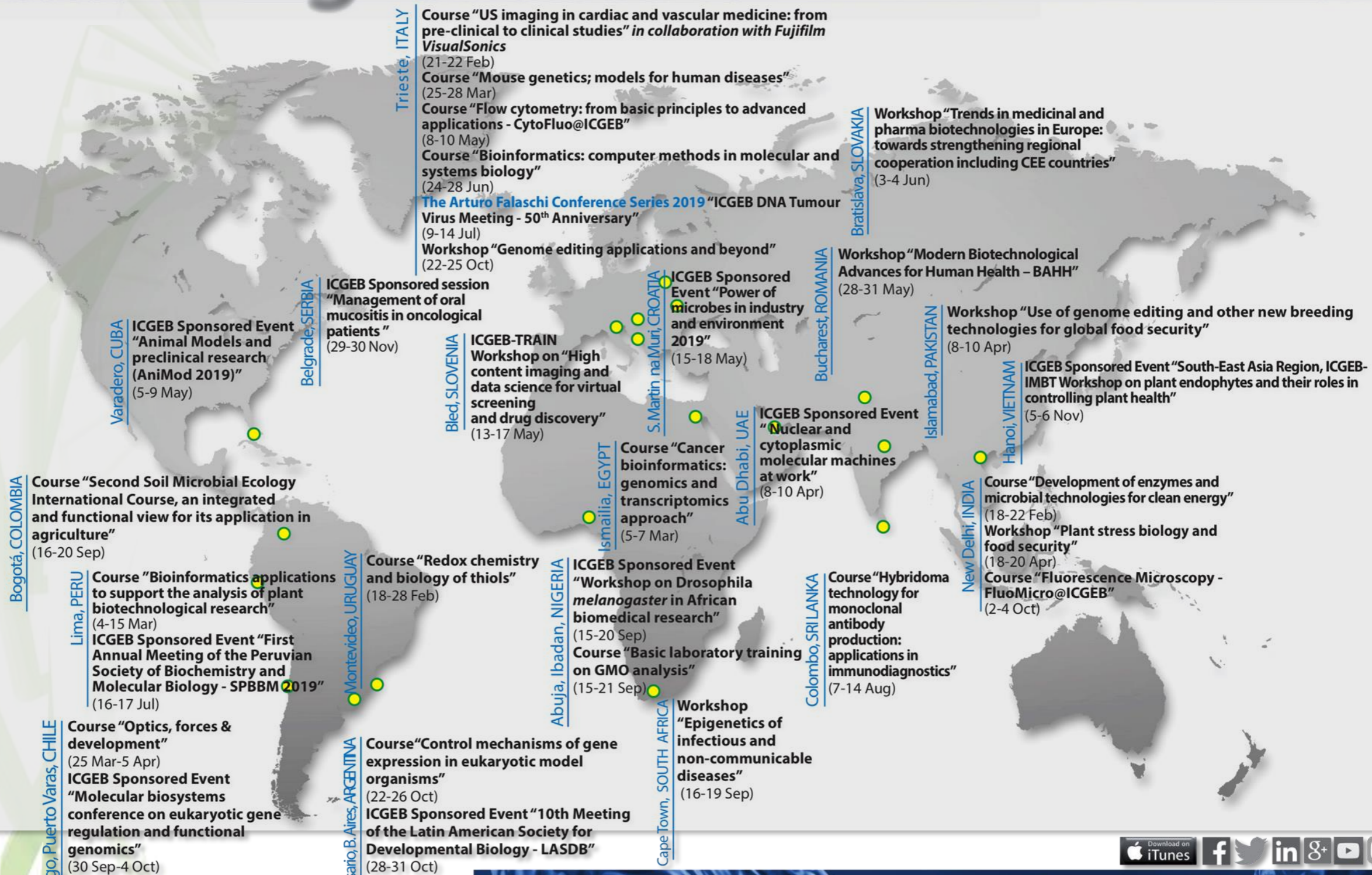
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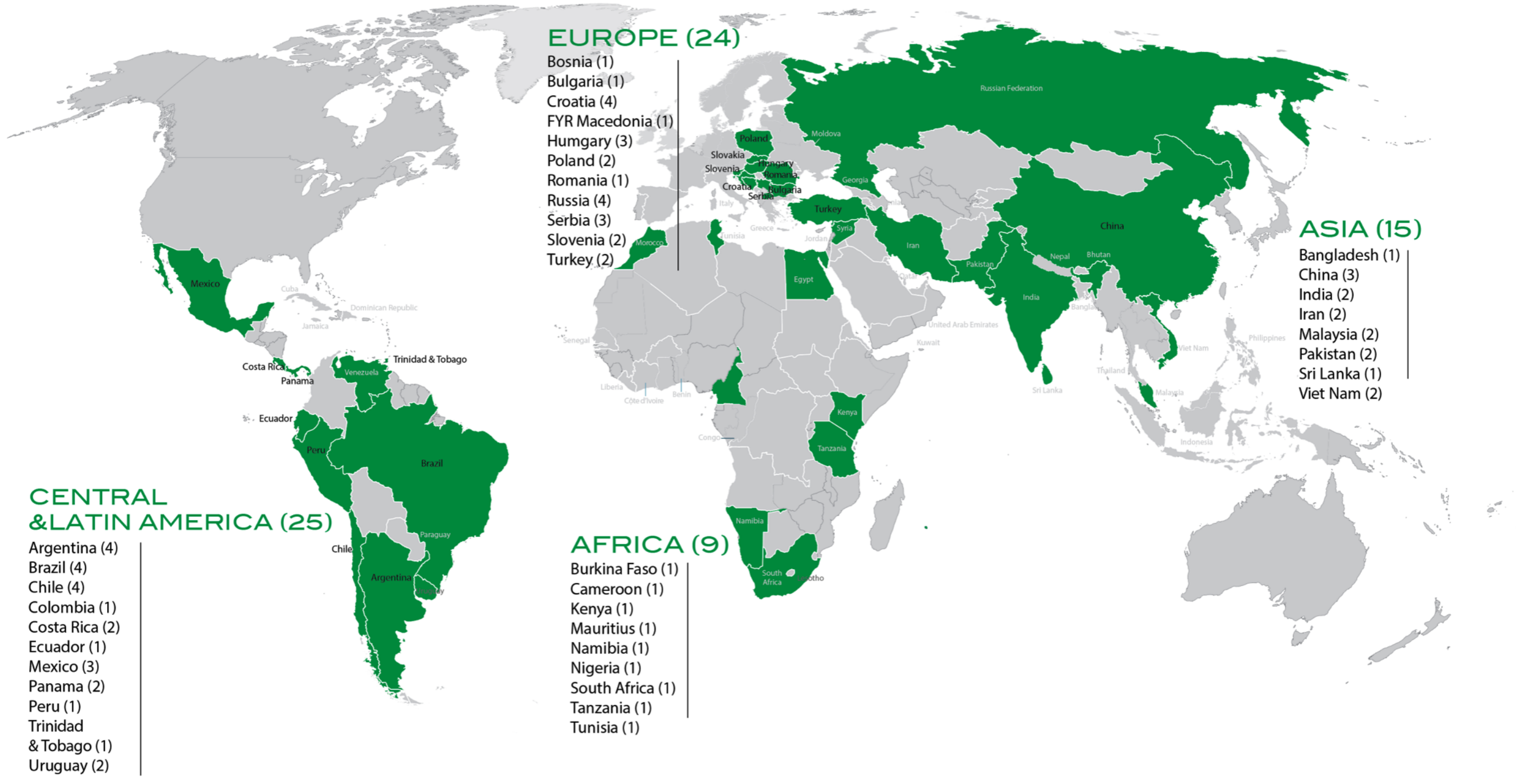
Meetings and Courses 2019





CRP – ICGEB Research Grants

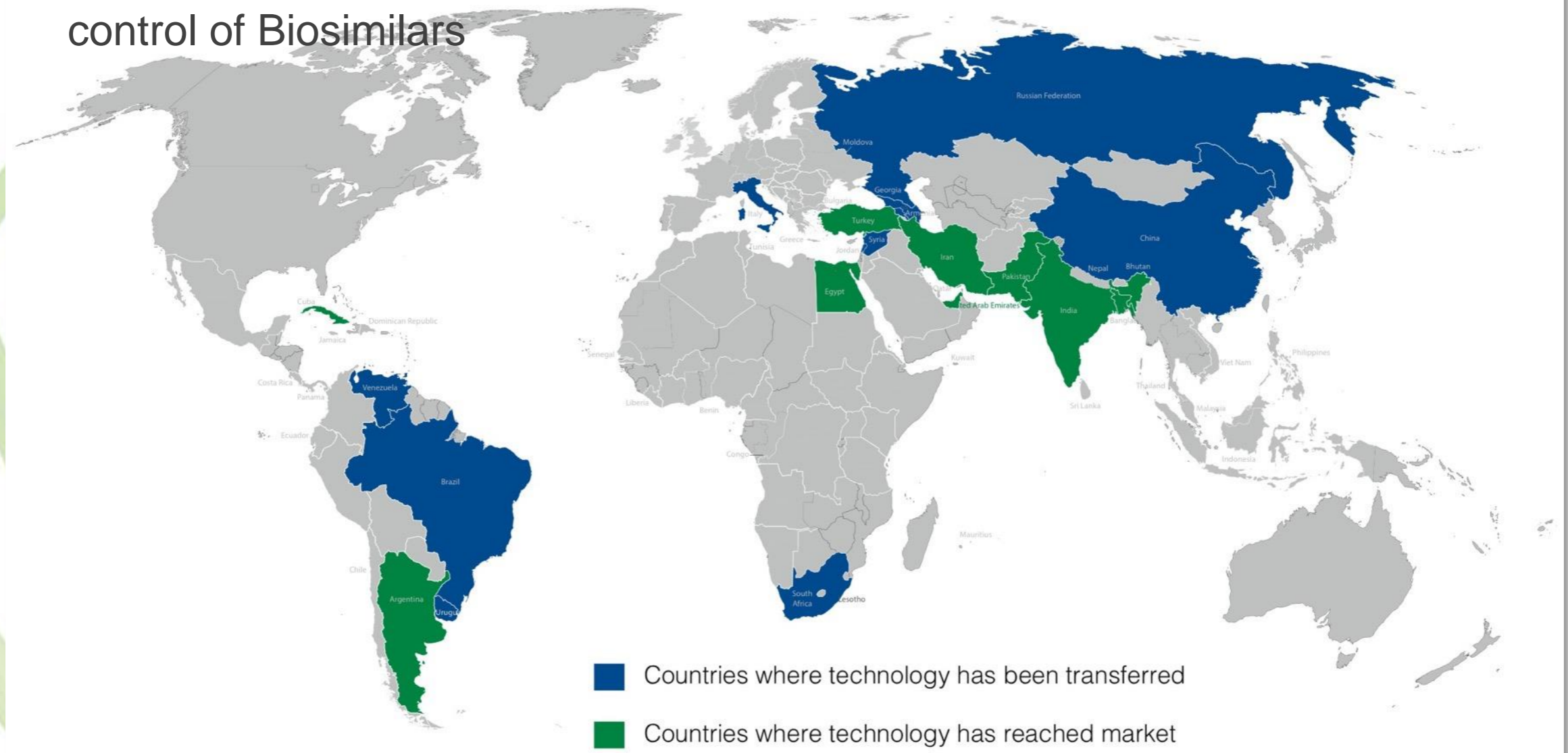
Ongoing Projects (73)





R&D collaborations and technology transfers from 2005 to date

- 70 collaboration agreements
- 20 different countries: Argentina, Bangladesh, Brazil, China, Cuba, Egypt, India, Iran, Italy, Jordan, Pakistan, Russia, South Africa, Sri Lanka, Switzerland, Syria, Turkey, United Arab Emirates, Uruguay, Venezuela
- >100 Scientists trained in our labs in the pharmaceutical production and quality control of Biosimilars



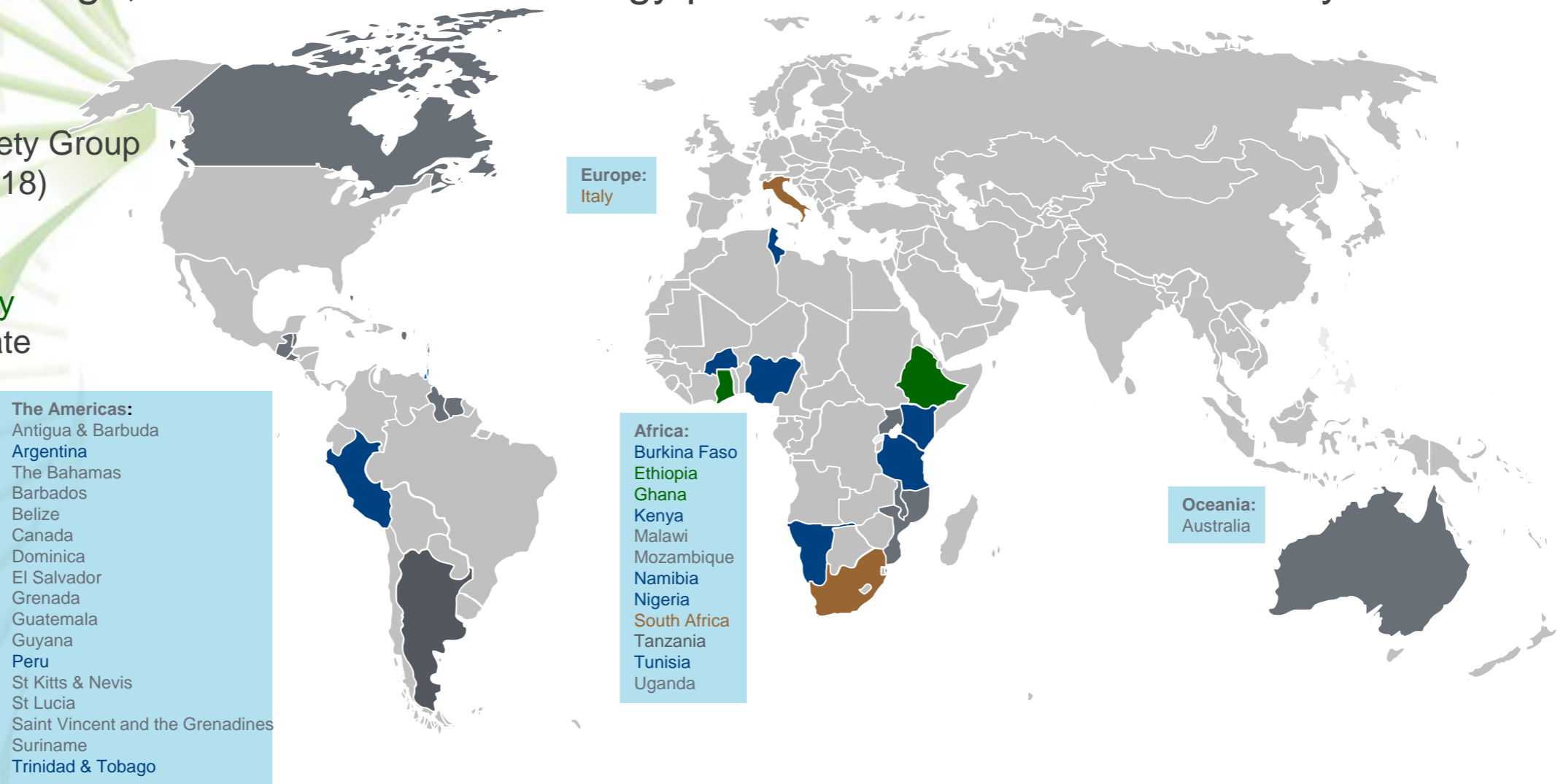


The role of the Biosafety Group

Enhancing the capacity of ICGEB Member States to identify, regulate, manage, and monitor biotechnology products within their own territory

Location of Biosafety Group activities (2012-2018)

- Member State
- Signatory Country
- Non-Member State



- **Biosafety legislation and administrative systems**

In-country working partnerships, mentored fora

- **Communication strategy and tools**

Devising tailored public education and outreach strategies and technical content, e.g. radio spots, brochures, videos

- **Training, both academic and vocational, in all aspects of GMO regulation**

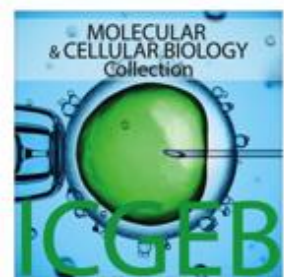
Regulatory experience exchange opportunities, in-country working partnerships, Masters in Biosafety fellowships, eLearning modules, mentored fora



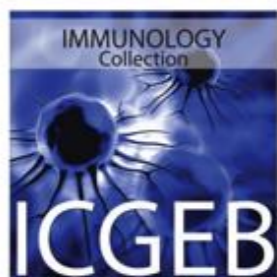


ICGEB Scientific Collections on iTunes and YouTube

Podcasts



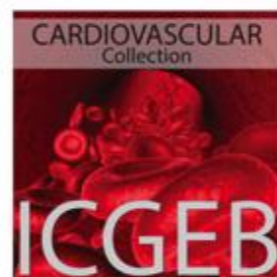
Molecular and Cellular Biology
ICGEB - Trieste, Italy



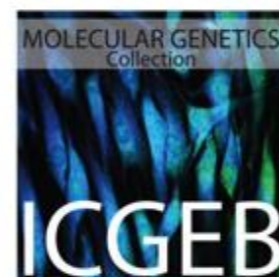
Immunology
ICGEB - Trieste, Italy



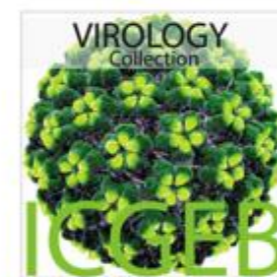
Biotechnology
ICGEB - Trieste, Italy



Cardiovascular
ICGEB - Trieste, Italy



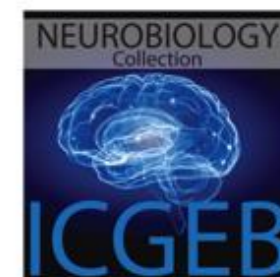
Molecular Genetics
ICGEB - Trieste, Italy



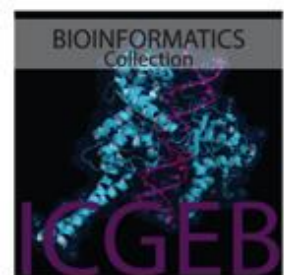
Virology
ICGEB - Trieste, Italy



Cancer
ICGEB - Trieste, Italy



Neurobiology
ICGEB - Trieste, Italy



Bioinformatics
ICGEB - Trieste, Italy



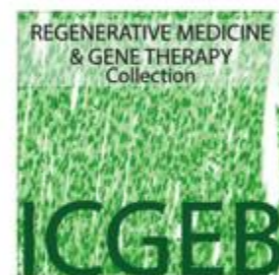
Lezioni di Cellule Staminali 2014
ICGEB, Trieste



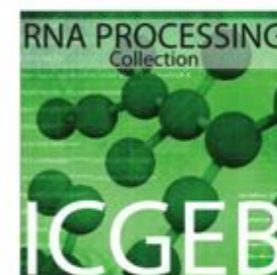
Plant Biology
ICGEB - Trieste, Italy



Lezioni di Terapia Genica 2014
ICGEB, Trieste



Regenerative Medicine and Gene Therapy
ICGEB - Trieste, Italy



Rna Processing
ICGEB - Trieste, Italy



Microbiology
ICGEB - Trieste, Italy



FluoMicro@ICGEB
ICGEB, Trieste - Italy

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ICGEB for the lay public



#Scienza a #Trieste per il pubblico
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