



Dirección de Investigación  
VICERRECTORÍA DE INVESTIGACIÓN Y POSTGRADO

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MIÉRCOLES 29 JULIO, 2020

AÑO V — NÚMERO 11

# Newsletter de I+D+i

## INVESTIGACIÓN, DESARROLLO E INNOVACIÓN



PUBLICACIONES  
CIENTÍFICAS UTEM



CONVOCATORIAS:

FONDOS CONCURSABLES



NOTICIAS

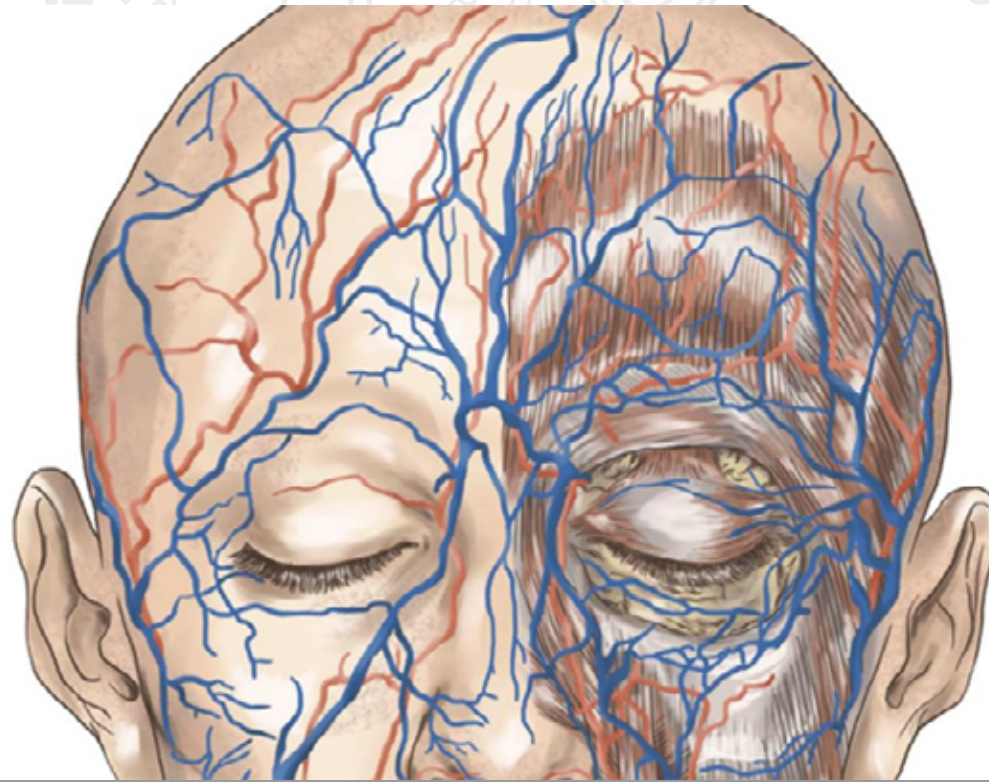
BECAS Y DISTINCIONES



COLABORA

CURSOS

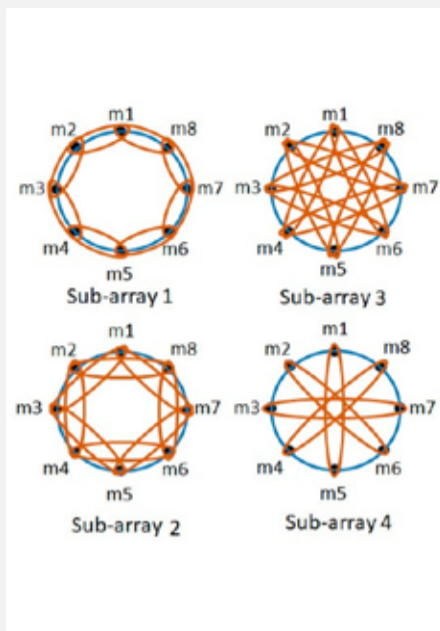




## **CAPITAL HUMANO AVANZADO Y DESARROLLO: UN DESAFÍO DE POLÍTICA PÚBLICA PARA CHILE EN EL TERCER MILENIO**

Chile ha experimentado en las últimas décadas un fuerte y sostenido crecimiento económico, lo cual lo ha llevado a liderar en la región en términos de competitividad o como lugar preferente de inversiones extranjeras. Sin embargo, requiere con urgencia de una política pública de incentivo...

▼ **MÁS NOTICIAS**



### Multiresolution speech enhancement based on proposed circular nested microphone array in combination with sub-band affine projection algorithm

—  
*Ali Dehghan Firoozabadi, Pablo Irarrazaval, Pablo Adasme, David Zabala-Blanco, Hugo Durney, Miguel Sanhueza, Pablo Palacios-Játiva, César Azurdia-Meza.*



### Evaluation of anthropogenic air pollutant emission inventories for South America at national and city scale

—  
*Nicolas Huneus, Hugo Denier van der Gonc, Paula Castesana, Camilo Menares, Claire Granier, Louise Granier, Marcelo Alonso, Maria de Fatima Andrade, Laura Dawidowski, Laura Gallardo, Dario Gomez, Zbigniew Klimont, Greet Janssens-Maenhout, Mauricio Osses, Enrique Puliafito, Nestor Rojas, Odón Sánchez-Ccoyllo, **Sebastián Tolvett**, Rita Yuri Ynoue.*

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### Biodegradable photoresponsive nanoparticles for chemo-, photothermal- and photodynamic therapy of ovarian cancer

*Dante R. Sánchez-Ramírez, Rossina Domínguez-Ríos, Josué Juárez, Miguel Valdés, **Natalia Hassan**, Antonio Quintero-Ramos, Alicia del Toro-Arreola, Silvia Barbosa, Pablo Taboada, Antonio Topete, Adrián Daneri-Navarro.*

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### Treatment of antibiotic cephalixin by heterogeneous electrochemical Fenton-based processes using chalcopyrite as sustainable catalyst

*Constanza Droguett, Ricardo Salazar, Enric Brillas, Ignasi Sirés, Carlos Carlesi, José F. Marco, **Abdoulaye Thiam**.*

---

### Studies on the solvatochromic effect and NLO response in new symmetric bimetallic Rhenium compounds

*Iván González, **Diego Cortés-Arriagada**, Paulina Dreyse, Luis Sanhueza, Irma Crivelli, Hoang Minh Ngo, Isabelle Ledoux-Rak, Alejandro Toro-Labbe, Jerónimo Maze, Bárbara Loeb.*

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### Synthesis and characterization of new spirobisindane-based poly(imide)s: Structure effects on solubility, thermal behavior, and gas transport properties

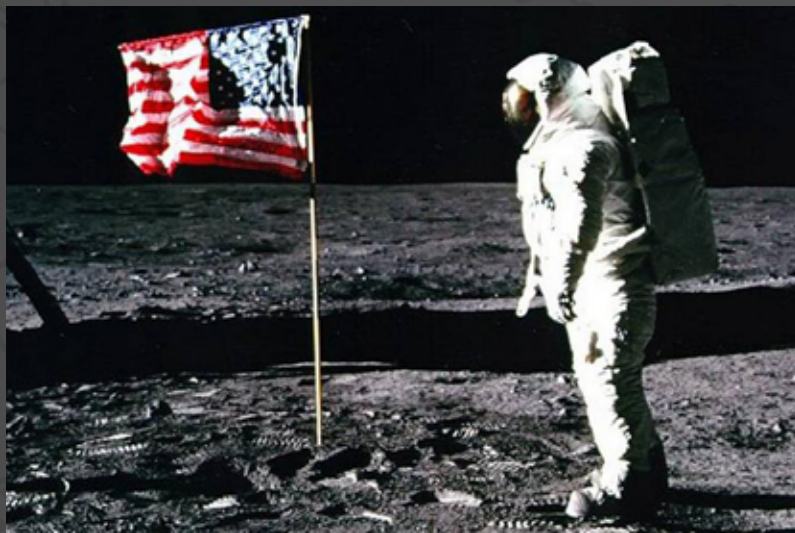
*I. A. Jessop, D. Bravo, E. Durán, F.E. Rodríguez-González, L.H. Tagle, D. Coll, P. Ortiz, Y. Mirabal, M. Aguilar-Vega, **R. Martín-Trasanco**, C.A. Terraza, A. Tundidor-Camba.*

---

### Influence of cryoconcentration on quality attributes of apple juice (*Malus Domestica* cv. Red Fuji)

*Patricio Orellana-Palma, Virgilio Lazo-Mercado, María Pía Gianelli, Eduard Hernández, **Rommy N. Zúñiga**, Guillermo Petzold.*

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### 1969, Y EL HOMBRE LLEGÓ A LA LUNA

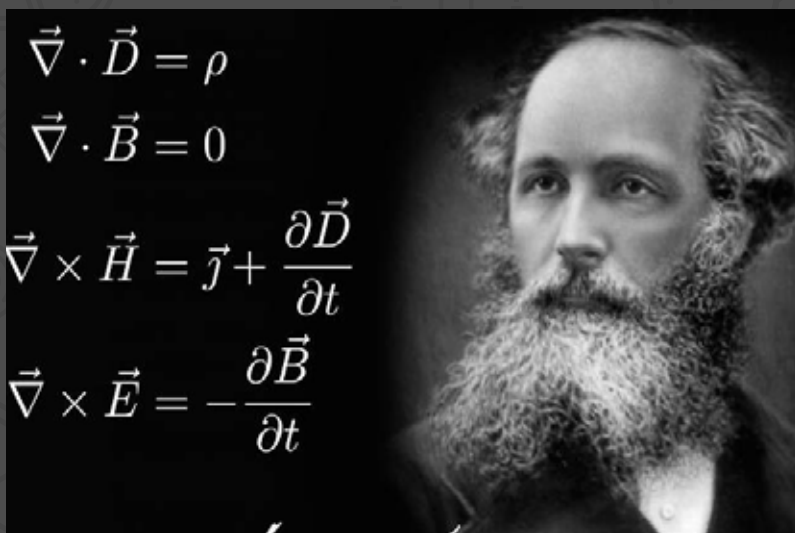
+ LEER



### LA POBLACIÓN MUNDIAL EMPEZARÁ A DESCENDER EN 2060

17 JULIO, 2020

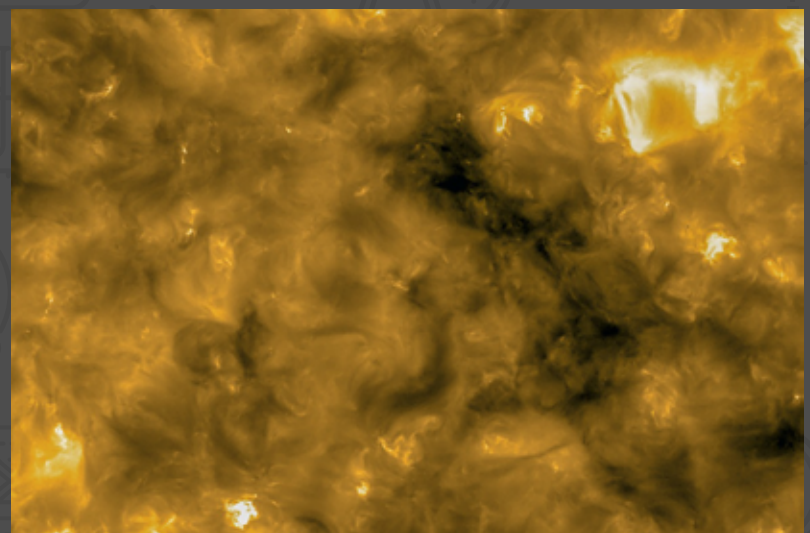
+ LEER



### ¿POR QUÉ LAS LEYES DE MAXWELL NO SE PUEDEN APLICAR EN LA EMPRESA?

18 JULIO, 2020

+ LEER



### THIS PHOTO OF THE SUN IS THE CLOSEST EVER TAKEN

16 JULY, 2020

+ LEER



### ISABEL BEHNCKE, ANTROPÓLOGA EVOLUTIVA: "ESTAMOS SUFRIENDO LAS CONSECUENCIAS DE NUESTRO PROPIO ÉXITO"

25 JUNIO, 2020

+ LEER



### CIENTÍFICOS DESCUBREN POR ACCIDENTE BACTERIAS QUE COMEN METAL

16 JULIO, 2020

+ LEER



## CONVOCATORIAS FONDOS CONCURSABLES



VOLVER AL MENÚ



### • VI CONCURSO DE ACCIÓN REGIONAL MEDIANTE PROYECTOS DE I+D COLABORATIVA CON PYMES (O'HIGGINS Y LA ARAUCANÍA)

#### DESCRIPCIÓN

La Agencia Nacional de Investigación y Desarrollo, ANID, llama a la convocatoria de iniciativas de Acción Regional para el Desarrollo Territorial mediante proyectos de I+D Colaborativa con PyMEs, para las regiones de O'Higgins y La Araucanía, financiados con Provisión Fondo de Innovación para la Competitividad de Asignación Regional (FIC). El objetivo de la convocatoria es contribuir al desarrollo científico, tecnológico y de innovación del sector PyME regional, considerando sus prácticas actuales y sus realidades tecnológicas, culturales y geográficas. En tanto, el propósito es apoyar financieramente proyectos de investigación y desarrollo de alto nivel de excelencia que, a partir de conocimiento y/o de una solución disponible a nivel nacional o internacional, puedan llegar a resultados a nivel de demostración piloto, relevantes para las PyMEs de las regiones ya mencionadas.

[MÁS INFORMACIÓN...](#)

#### FECHA CIERRE POSTULACIONES

13 Agosto 2020, 15:30 h Chile continental (16:30 h para la Región de Magallanes y la Antártica Chilena).

### • IV CONCURSO DE PROYECTOS DE MAGÍSTER EN TEMAS DE CIENCIA, TECNOLOGÍA E INNOVACIÓN

#### DESCRIPCIÓN

La Agencia Nacional de Investigación y Desarrollo, ANID, a través de su Subdirección de Redes, Estrategia y Conocimiento, invita a participar de la convocatoria de proyectos para el desarrollo de propuestas de Magíster en temas de Ciencia, Tecnología e Innovación, para ser ejecutados en la región de La Araucanía. El objetivo de esta convocatoria es apoyar el diseño de un proyecto de formación de postgrado de capital humano vinculado a temas de Ciencia, Tecnología e Innovación, que otorgue el grado académico de magíster con foco en las necesidades y activos de sectores productivos o sociales de cada región participante en la convocatoria, de manera de contar con un programa que considere las necesidades y oportunidades de desarrollo de la misma región.

[MÁS INFORMACIÓN...](#)

#### FECHA CIERRE POSTULACIONES

17 Agosto de 2020, 15:30 horas Chile continental.

### • CONCURSO DE INVESTIGACIÓN CONJUNTA EN BIOTECNOLOGÍA EN COVID-19 CHILE-PERÚ

#### DESCRIPCIÓN

La Agencia Nacional de Investigación y Desarrollo, ANID, y el Consejo Nacional de Ciencia, Tecnología e Innovación Tecnológica, CONCYTEC, del Perú, invitan a participar de este concurso de proyectos de investigación conjunta en el área de Biotecnología relacionada con la pandemia por COVID-19, para investigadores e investigadoras pertenecientes a centros e instituciones de investigación de ambos países. Este concurso se enmarca en el Acuerdo de Cooperación y Plan de Acción suscrito entre ambos países mediante la Resolución Afecta N°057/2017, con el objeto es fomentar y fortalecer sistemáticamente la cooperación científico-tecnológica entre ambos países. En el marco de dicho acuerdo, ANID (entonces CONICYT), a través de su Programa de Cooperación Internacional, PCI, junto con CONCYTEC, realizó durante el año 2019, el Concurso de Apoyo a la Cooperación en Investigación Chile-Perú, en Redes de Investigación en Biotecnología. En esta primera convocatoria conjunta, se financiaron 5 proyectos, en diversas áreas de biotecnología, los cuales se encuentran en ejecución hasta diciembre de 2020. Los objetivos del concurso son:

- Desarrollar la cooperación científica entre Chile y Perú en este tema de interés común, para alcanzar resultados científicos y técnicos de nivel mundial;
- Apoyar el desarrollo de proyectos de investigación conjunta dirigidos por grupos de investigadores en ambos países;
- Promover la movilidad y el desarrollo de la trayectoria de investigadoras e investigadores (jóvenes y senior) de distintas regiones del país, a través de proyectos conjuntos, particularmente, a los becarios y becarias de ANID que han terminado sus postgrados en el extranjero o en Chile.
- Promover la formación de capital humano avanzado, la movilidad y el desarrollo de la trayectoria de personas que realizan investigación en el inicio de sus carreras a través de proyectos conjuntos.

[MÁS INFORMACIÓN...](#)

#### FECHA CIERRE POSTULACIONES

15 Septiembre 2020, a las 16:30 h de Chile continental.

### • CONVOCATORIA PARA INDEXACIÓN DE REVISTAS CIENTÍFICAS EN SCIELO-CHILE

#### DESCRIPCIÓN

La convocatoria tiene como objetivo identificar revistas nacionales con calidad científica en todas las áreas del conocimiento para formar parte de la biblioteca científica electrónica SciELO-Chile.

SciELO-Chile incluye una colección seleccionada de revistas científicas que publican predominantemente artículos originales resultantes de investigaciones científicas y contribuciones originales significativas para el área y disciplina específica de la revista. Las postulaciones se presentan únicamente a través de la plataforma en línea disponible en el Portal de Revista Científicas de ANID.

[MÁS INFORMACIÓN...](#)

#### FECHA CIERRE POSTULACIONES

Ventanilla abierta durante todo el año.

### • 2020 RESEARCH GRANTS

#### DESCRIPTION

The Merck research grants program is open to scientists in all career stages who are affiliated with any research-based institution, university or company. Applicants submit their application for the focus topics containing non-confidential information only. You may apply for more than one focus topic. If your application is successful, you will be invited to submit a full proposal and join a deep-dive workshop with the other finalists in 2020.

In 2020, we are offering a series of research grants to stimulate innovative research in challenging areas of future importance. Grants of 100,000 EUR - 500,000 EUR per year for up to 3 years are available in **the areas of:**

1. Drug discovery
2. Bioreactor design for cultured meat
3. Next generation machine learning
4. Pandemic preparedness / fighting new emerging viral infectious disease

The deep-dive workshop for the Drug discovery, Bioreactor Design, Next generation machine learning topics will take place November 3rd- 5th, 2020 in Darmstadt, Germany. Finalists will work together with Merck managers and scientists to jointly optimize submitted project proposals.

The culmination of the symposia will be the selection of the research grant winners.

[MÁS INFORMACIÓN...](#)

#### APPLICATION DEADLINE

31 August 2020, 23:59 h CEST (Central European Summer Time) for **areas 1, 2 and 3**. For the **area 4**, there is no fixed deadline, since applications will be reviewed on a rolling basis so that we are able to provide a quicker response in these challenging times.



VOLVER AL MENÚ



## CONVOCATORIAS

## BECAS Y DISTINCIONES

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### • INSTITUTO IBERO-AMERICANO (IAI) / BECAS PARA ESTADÍAS DE INVESTIGACIÓN EN BERLÍN

**DESCRIPCIÓN**

El Instituto Ibero-Americano (IAI) concede cada año entre diez y doce becas para estadias de investigación de uno a dos meses en Berlín. Su objetivo es brindarles a los becarios la posibilidad de avanzar proyectos innovadores vinculados con la línea de investigación del IAI, participar en un diálogo interdisciplinario con los investigadores del Instituto y con otros investigadores visitantes, utilizar los fondos y las colecciones especiales del Instituto, presentar y discutir los resultados de su trabajo en nuestro coloquio de investigación y tomar contacto con colegas en Alemania. La adjudicación de las becas se realiza a través de un llamado a concurso por parte del Instituto Ibero-Americano.

Para 2021 pueden presentarse solo proyectos referidos a América Latina y el Caribe dedicados a analizar el campo temático Medialidad/ Intermedialidad desde las perspectivas de la antropología cultural y social, la arqueología, la historia, las ciencias sociales y los estudios literarios y culturales.

[MÁS INFORMACIÓN...](#)

**FECHA PLAZO PARA CONSULTAS**

14 Agosto 2020.

### • MICROSOFT / PHD FELLOWSHIP

**DESCRIPTION**

The Microsoft Research PhD Fellowship has supported hundreds of fellows over the last two decades, many of whom have gone on to work within the Microsoft Research organization. Others have gone on to perform pioneering research elsewhere within the technology industry or accept faculty appointments at leading universities.

How to submit a proposal: Doctoral students must be in their third year of PhD studies and nominated by the department chair's office in their field of study.

[READ MORE...](#)

**APPLICATION DEADLINE**

14 August 2020, at 5:00 PM Pacific Daylight Time.

### • SCIENTIFIC COMMITTEE ON ANTARTIC RESEARCH / SCAR FELLOWSHIPS

**DESCRIPTION**

The SCAR Fellowship programme is for PhD students, or those within five years of having completed a PhD on the day of the deadline for applications, to undertake research at an institute in one of the 44 SCAR Member countries. Topics for support should link to the objectives of one or more of SCAR's science groups, including the Humanities and Social Sciences group, and/or the current Scientific Research Programmes endorsed by SCAR.

[READ MORE...](#)

**APPLICATION DEADLINE**

26 August 2020.

### • ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD) / CO-OPERATIVE RESEARCH PROGRAMME: BIOLOGICAL RESOURCE MANAGEMENT FOR SUSTAINABLE AGRICULTURE SYSTEMS (CRP)

**DESCRIPTION**

Applications are invited from research scientists working in agriculture, forestry or fisheries and who would like to conduct research projects abroad, in another member country of the Co-operative Research Programme. The aim of the Research Fellowships is to strengthen the international exchange of ideas and increase international mobility and co-operation among scientists working in these areas. Applications relevant to the work of the OECD Committee for Agriculture and other bodies are particularly welcome:

- Emerging diseases and zoonoses, especially COVID-19, including their possible transmission through food.
- Resilience and risk management.
- Climate change, including carbon sequestration in agriculture, forestry and land use.
- Digital technologies.
- Plant and animal breeding to enhance sustainable productivity growth and resilience to climatic events.
- Fisheries and aquaculture productivity, sustainability and resilience.
- Ecosystems and biodiversity, including in aquaculture and farmlands, and natural resources.
- Development of alternatives to antibiotics for use in livestock and less harmful plant protection chemicals and improved fertilisers.
- Sustainable food systems.

[READ MORE...](#)

**APPLICATION DEADLINE**

10 September 2020, midnight (Paris time).

### • THE ROYAL SOCIETY / ENTREPRENEUR IN RESIDENCE

**DESCRIPTION**

The Royal Society Entrepreneur in Residence (EiR) scheme, part of the Science, Industry and Translation programme, aims to increase the knowledge and awareness in UK universities of cutting edge industrial science, research and innovation. The scheme provides opportunities for enthusiastic, highly experienced industrial scientists and entrepreneurs to spend one day a week at a university developing a bespoke project to:

- Expose university staff and students to state-of-the-art industrial research and development, and the scientific challenges faced by industry
- Provide support and expert advice aimed at promoting innovation and the translation of research by universities
- Grow confidence in and understanding of business and entrepreneurship among staff and students
- Provide career recognition to the award holders, and support their professional development

[READ MORE...](#)

**APPLICATION DEADLINE**

25 September 2020 at 3:00 PM, United Kingdom.

### • INTERNATONAL CENTER FOR GENETIC ENGINEERING AND BIOTECHNOLOGY (ICGEB) / ICGEB PHD AND POSTDOCTORAL FELLOWSHIPS 2020

**DESCRIPTION**

ICGEB offers competitive Postdoctoral Fellowships to highly motivated scientists wishing to pursue postdoctoral research in a world-class scientific environment. The Fellowships comprise a very competitive package including stipend, health insurance and additional benefits. The most successful fellows will also be eligible, upon completion, to apply for ICGEB Early Career Research Grants to support their own research programmes as young PIs upon return to an ICGEB Member State.

[READ MORE...](#)

**APPLICATION DEADLINE**

30 September 2020.

### • INTERNACIONAL CENTRE FOR GENETIC ENGINEERING AND BIOTECHNOLOGY (ICGEB) / SHORT-TERM PHD FELLOWSHIPS APPLICATION

**DESCRIPTION**

ICGEB offers Short-term fellowships for Pre-doctoral studies in ICGEB Component laboratories to fund ongoing collaborative research between scientists from ICGEB Member States and research groups at ICGEB laboratories in Trieste, Italy, New Delhi, India and Cape Town, South Africa, with the aim of facilitating access to the latest research techniques and to strengthen capacity building. The duration is 12 months.

[READ MORE...](#)

**APPLICATION DEADLINE**

30 September 2020.

### • INTERNACIONAL CENTRE FOR GENETIC ENGINEERING AND BIOTECHNOLOGY (ICGEB) / GUIDELINES AND APPLICATION FORM – ARTURO FALASCHI SHORT-TERM POSTDOC FELLOWSHIPS

**DESCRIPTION**

ICGEB offers Short-term fellowships for Pre-doctoral studies in ICGEB Component laboratories to fund ongoing collaborative research between scientists from ICGEB Member States and research groups at ICGEB laboratories in Trieste, Italy, New Delhi, India and Cape Town, South Africa, with the aim of facilitating access to the latest research techniques and to strengthen capacity building. The duration is from 1-6 months.

[READ MORE...](#)

**APPLICATION DEADLINE**

30 September 2020.

### • INTERNACIONAL CENTRE FOR GENETIC ENGINEERING AND BIOTECHNOLOGY (ICGEB) / GUIDELINES AND APPLICATION FORM – SMART FELLOWSHIPS

**DESCRIPTION**

The ICGEB SMART Fellowship programme promotes the mobility of researchers between ICGEB Member States as a way of enhancing skill development, acquisition of specific hands-on training in new technologies and increasing cooperation in science and technology and should show clear evidence of strong collaboration between the two laboratories. The programme promotes the mobility of researchers between ICGEB Member States as a way of enhancing skill development, acquisition of specific hands-on training in technologies available in the receiving laboratory and increasing bilateral cooperation in science and technology, and should show clear evidence of strong collaboration between the two laboratories. Applicants should focus on the impact for the fellow's career, the benefit to the applicant's home laboratory and the suitability of the receiving laboratory.

[READ MORE...](#)

**APPLICATION DEADLINE**

30 September 2020.

### • INTERNACIONAL CENTRE FOR GENETIC ENGINEERING AND BIOTECHNOLOGY (ICGEB) / GUIDELINES AND APPLICATIONS ICGEB-DIC-MOST INTERNATIONAL FELLOWSHIP PROGRAM (IFP)

**DESCRIPTION**

The ICGEB-DIC-MOST International Fellowship Program (IFP) offers competitive Short-term Fellowships in Life Sciences to highly motivated scientists from the eligible ICGEB Member States wishing to pursue postgraduate research in China. The Program supports the mobility of researchers to prestigious Chinese laboratories for a period of 6 or 12 months, to benefit from the expertise and technologies available in the receiving laboratories.

The IFP is aimed at promoting the training of scientists and researchers in developing countries and emerging economies, particularly in Asia, Africa and countries involved in the Belt and Road initiatives. The Program supports short-term fellowships of scientists from eligible ICGEB Member States in these regions as listed below to prestigious Chinese laboratories as a way of enhancing skill development, acquiring specific hands-on training in technologies available in the receiving laboratory and increasing bilateral cooperation in science and technology between China and the eligible ICGEB Member State.

[READ MORE...](#)

**APPLICATION DEADLINE**

30 September 2020.



VOLVER AL MENÚ

CONVOCATORIAS  
CURSOSVOLVER  
AL MENÚ

- **MODELING AND SIMULATION OF MULTIBODY SYSTEMS**  
UNIVERSITÉ CATHOLIQUE DE LOUVAIN

**OBJECTIVE:**

Vehicles, bicycles, cranes, human bodies and robots are multibody systems. Learn how to model them and to compute their kinematic and dynamic characteristics, such as velocities, accelerations and forces.

**DURATION AND CONDITIONS:**

14 weeks. Free, with option for certification (previous payment).

**STARTS ON:** 1 September 2020.

[READ MORE...](#)

- **ENERGY PRINCIPLES AND RENEWABLE ENERGY**  
THE UNIVERSITY OF QUEENSLAND AUSTRALIA

**OBJECTIVE:**

An introduction to the language of energy, key scientific principles that underpin energy systems, future energy challenges and available renewable energy options.

**DURATION AND CONDITIONS:**

14 weeks. Free, with option for certification (previous payment).

**STARTS ON:** 8 September 2020.

[READ MORE...](#)

- **RETHINK THE CITY: NEW APPROACHES TO GLOBAL AND LOCAL URBAN CHALLENGES**  
DELFT UNIVERSITY OF TECHNOLOGY

**OBJECTIVE:**

How do you plan future cities? Explore alternative theories and innovative solutions for urban challenges in the Global South.

**DURATION AND CONDITIONS:**

7 weeks. Free, with option for certification (previous payment).

**STARTS ON:** Free enrolling.

[READ MORE...](#)

- **BATTERIES, FUEL CELLS, AND THEIR ROLE IN MODERN SOCIETY**  
URAL FEDERAL UNIVERSITY

**OBJECTIVE:**

This course is an introduction to batteries and fuel cells - the cornerstones of electromobility and renewable energy.

**DURATION AND CONDITIONS:**

6 weeks. Free, with option for certification (previous payment).

**STARTS ON:** Free enrolling.

[READ MORE...](#)

- **WATER RELATED HEALTH**  
QUEEN'S UNIVERSITY

**OBJECTIVE:**

Water plays a critical role in our daily lives. This course is an introduction to human health at the individual and population level.

**DURATION AND CONDITIONS:**

4 weeks. Free, with option for certification (previous payment).

**STARTS ON:** Free enrolling.

[READ MORE...](#)



- **SEMINAR SERIES CONNECT SCIENCE**  
DANA-FARBER/HARVARD UNIVERSITY

**OBJECTIVE:**

The DF/HCC Connect: Science seminar series offers remote participation through Zoom (create an account here) to pull our community of faculty, trainees, and lab staff together during this difficult time and it promotes engagement during these next several weeks. We plan to involve speakers who are leaders in cancer biology, immune oncology and other fields from across the world.

**DURATION AND CONDITIONS:**

The series will begin on March 23 and be held every Monday, Tuesday, Thursday and Friday. All talks will be begin at 12 PM EST.

[READ MORE...](#)

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## **COLABORA**

**SI QUIERES DIFUNDIR ACTIVIDADES O NOTICIAS  
VINCULADAS A I+D+i PUEDES ENVIARLAS AL CORREO  
NEWSLETTER.DINV@UTEM.CL PARA QUE SEAN INCLUIDAS  
EN UN PRÓXIMO BOLETÍN.**



**VOLVER AL MENÚ**



## **Grupo Editorial**

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Programa Institucional de Fomento a la I+D+i (PIDi) UTEM

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  - Programa de Comunicaciones y Asuntos Públicos
  - Coordinación del Proyecto Institucional INES
- “Prácticas innovativas de articulación académica:  
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