Memorias del Primer Congreso Internacional de Biotecnología e innovación - ICBi 2018

Meeting Report of the First International Congress of Biotechnology and innovation - ICBi 2018

The First International Congress of Biotechnology and Innovation, held in Lima- Peru from July 9 to 12, 2018, was organized by the Laboratory of Mycology and Biotechnology “Marcel Gutiérrez-Correa” (LMB-MGC) of La Molina National Agrarian University (UNALM).

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Scientific Program

The scientific program (Appendix 1) was divided into four sections. The first two sections corresponded to different biotechnological areas according to their application: i) Agricultural and Animal Biotechnology and ii) Industrial and Environmental Biotechnology. The third section covered different Molecular Tools Applied to Biotechnology and, finally, the fourth focused on Innovation in Biotechnology in the region.

The Congress not only sought to promote Biotechnology and Innovation in Peru, but also to contribute to the interaction with researchers and innovators from other countries. Therefore, the four sections included diverse conferences offered by about 50 scientists and specialists from 14 different countries (see scientific program, Appendix 2). Each section was closed with a Round Table focused on discuss the Current Situation and Perspectives of the area in Peru.

Participants

ICBi 2018 was attended by 150 registered participants from various countries such as Peru, Brazil, Chile, and Bolivia. Participants presented 37 Oral Communications and 44 Posters which were grouped according to the first 3 sections (Supplementary material S1). The best oral communications and posters were awarded.

Theoretical-Practical Courses

A total of five specialized theoretical-practical courses were offered before and after the Congress, with approximately 20 participants per course: i) Analysis of Transcriptomic data: RNA-Seq, ii) Bioprospecting of Soil Microorganisms, iii) Applications of Raman – AFM Microscopy, iv) Gene Editing in Fungi and Yeasts: CRISPR-Cas9 and v) Metagenomics: Identifications of OTUs by Illumina Next Generation Sequencing Technology (Table 1).

Financing and Sponsorship

Most of the budget to carry out ICBi 2018 came from the registration fees of the participants. Support was also received from 17 companies and an NGO, which had the opportunity to show their products and services on stands (Table 2).

| Table 1. Specialized Courses offered by ICBi 2018 |
| --- | --- | --- |
| **Course** | **Duration (days)** | **Specialist** | **Affiliation** |
| Analysis of Transcriptomic data: RNA-Seq | 2 | MSc. Hugo Valdivia | BioScience App (Peru) |
| Bioprospecting of Soil Microorganisms | 3 | Dr. Doris Zuñiga, Dr. Marcia Toro, Dr. Ernesto Ormeño, Dr. Kathy Ogata | Laboratory of Microbial Ecology and Biotechnology (LEMYB-UNALM) |
| Applications of Raman – AFM Microscopy | 1 | Dr. Fernando Vargas | Witec (Germany) |
| Gene Editing in Fungi and Yeasts: CRISPR-Cas9 | 2 | Dr. John Wyrick, Dr. Jakob Blaesbjerg | Washington State University, Technical University of Denmark |
| Metagenomics: Identifications of OTUs by Illumina Next Generation Sequencing Technology | 5 | Guillermo Trujillo | GenLab del Perú |
In addition, ICBi 2018 was supported by academic and scientific sponsors such as Research Vice-Rectorate and Faculty of Sciences of the UNALM, the Peruvian Society of Biochemistry and Molecular Biology, whose members participated in the selections of the works presented, and Revista Peruana de Biología, responsible for preparing a Special Number dedicated to the Congress.

Acknowledgment
Organizing Committee wants to thank to:

La Molina National Agrarian University authorities:
Dr. Enrique Flores, Rector
Dr. Carmen Velezmoro, Research Vice-Rector
Dr. Jorge Alarcón Academic Vice-Rector
Dr. Victor Meza, Faculty of Sciences - Dean
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Academic and Scientific Sponsors:

- Peruvian Society of Biochemistry and Molecular Biology (SPBBM)
- Peruvian National Council for Science (CONCYTEC)
- National Innovation Program for Competitiveness and Productivity (INNÓVATE PERÚ)

Sponsoring companies
Scientific Committee and Evaluation Panel
Support Committee:
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Luis Enrique Moyano, from i design Perú, for his great work on the web page: www.icbiperu.com
PROGRAMME

ICBi 2018

Monday, July 9

9:00 - 10:00 Registration
10:00 - 10:30 Welcoming words from the President of Organizing Committee
Dr. Gretty Villena

Section I: Agricultural and Animal Biotechnology
10:30 - 11:15 Keynote Conference: “Genome editing in crop improvement”
Dr. Paul Chavarriaga
Centro Internacional de Agricultura Tropical (CIAT), Colombia
11:15 - 11:35 Coffee break
11:35 - 12:05 “Use of genomics in animal breeding and improvement”
Dr. Mario Poli
Instituto Nacional de Tecnología Agropecuaria (INTA), Argentina
12:05 - 12:35 “Evaluation and regulation of genetically modified organisms in Latin America. Considerations”
Dr. Eduardo Menéndez, Spain
12:35 - 13:30 Lunch
13:30 - 14:00 “Biotechnological advances in animal reproduction and genetic improvement”
Dr. William Vivanco
Universidad Nacional Agraria La Molina (UNALM), Peru
14:00 - 14:30 “Genomics of phytopathogenic viruses”
Dr. Jan Kreuze
Centro Internacional de la Papa (CIP), Peru
14:30 - 15:00 “Biotechnological tools for Fusarium wilt study”
Dr. Mauricio Luna
Universidad Veracruzana (UV), Mexico
15:00 - 15:45 Round Table: Current situation and perspectives of agricultural and animal biotechnology in Peru
Dr. Gustavo Gutiérrez, Universidad Nacional Agraria La Molina (UNALM)
Dra. Martha Valdivia, Universidad Nacional Mayor de San Marcos (UNMSM)
Dr. César López, Universidad Nacional Agraria La Molina (UNALM)
Dr. William Roca, Asociación Peruana para el Desarrollo de la Biotecnología (PeruBiotec)
15:45 - 16:05 Coffee break

Section II: Industrial and Environmental Biotechnology
16:00 - 16:45 Round Table: Current situation and perspectives of agricultural and animal biotechnology in Peru
Dr. Gustavo Gutiérrez, Universidad Nacional Agraria La Molina (UNALM)
Dr. Marco Vázquez, Universidad Nacional Mayor de San Marcos (UNMSM)
Dr. Carlos Arias, Asociación Peruana para el Desarrollo de la Biotecnología (PeruBiotec)
16:45 - 17:05 Coffee break

Tuesday, July 10

Section II: Industrial and Environmental Biotechnology
17:15 - 18:00 Homage Round Table: “Marcel Gutiérrez Correa and Biotechnology in Peru”
Dr. Ernesto Bustamante
Dr. David Campos, Universidad Nacional Agraria La Molina
Dr. José Luis Bauer, Universidad Peruana Cayetano Heredia
Dr. Gianangelo Nava
18:00 Official Ceremony of Inauguration by the authorities of UNALM
Words from the Rector Dr. Enrique Flores Mariazza
Cultural act and welcoming cocktail

Wednesday, July 11

Section I: Agricultural and Animal Biotechnology
9:30 - 10:15 Keynote Conference: “Challenges in the implementation of agro-industry by-products based bio-refineries”
Dr. José Testeira
Universidade do Minho (UMinho), Portugal
10:15 - 10:45 “Wastewater treatment and value-added compounds production”
Dr. Mario Kato
Universidade Federal de Pernambuco (UFPE), Brazil
10:45 - 11:20 “Ureide metabolism as a novel target to improve abiotic stress resistance in plants”
Dr. Christopher D. Todd
University of Saskatchewan (Usask), Canada
11:20 - 11:40 Coffee break
11:40 - 12:10 “Use of macroalgae for bioremediation and its biotechnology uses”
Dr. Loretto Contreras
Universidad Andrés Bello (UNAB), Chile
12:10 - 13:00 Round Table: Current situation and perspectives of industrial and environmental biotechnology in Peru
Dr. Patricia Gil, Universidad Nacional Agraria La Molina (UNALM)
Dr. David Campos, Universidad Nacional Agraria La Molina (UNALM)
Dr. Pablo Ramírez, Universidad Nacional Mayor de San Marcos (UNMSM)
Dr. Víctor Meza, Universidad Nacional Agraria La Molina (UNALM)
13:00 - 14:00 Lunch
14:00 - 14:45 Keynote Conference of Intellectual Property: “Patents: management and administration in biotechnological products”
Mj. Sharply Sosa
MIBEST, Peru
14:45 - 16:00 Oral Presentations: Agricultural and Animal Biotechnology, Auxiliary Room 1
Industrial and Environmental Biotechnology, Main Auditorium
Molecular Tools Applied to Biotechnology, Auxiliary Room 3

Academic and Scientific Sponsors:

Revista Peruana de Biología
Academia y Biotecnología
**Thursday, July 12**

**Section IV: Innovation in Biotechnology**

09:00 - 09:45 Keynote Conference: “Platforms for bioproduction”
Dr. Inna Matveeva
Santiago, Argentina

09:45 - 10:15 "Strategies for the diagnosis and prevention of main diseases through biotechnological tools”
Dr. Mauricio Fernández
Fasoy, Peru

10:15 - 10:45 "Scale up and optimization of bio-processes”
Dr. Edgar Javier Alles Barrios
Equinote, USA

10:45 - 11:15 "Use of NGS and genomic indicators to certify aquaculture origin of finfish”
Dr. Mónica Santa María
Bans, Peru

11:15 - 11:30 Coffee break

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11:30 - 12:00 "Application of enzymatic processes for the use of by-products of the fishing industry”
Dr. Fernando Miranda del Solar
BioAl, Peru

12:00 - 12:30 "Current application of molecular markers as opportunity for the development of knowledge and technologies in local genetic resources”
Dr. Luis Eduardo Morales
Instituto Nacional de Investigaciones Agropecuarias (INIA), Ecuador

12:30 - 13:15 "Advancing with confidence steps within postharvest operations processes”
Dr. Carlos Bracho
Biosalud

13:15 - 13:45 Luncch

13:45 - 14:15 "Optimization of chitin degradation by 6-chitinase of chitinolytic fungi”
Dr. Arturo Sánchez-Díaz
Universidad Nacional de La Plata (UNLP), Argentina

14:15 - 14:45 "Enzymatic synthesis of 3D inorganic materials using cellulose as an efficient and renewable matrix”
Dr. eurov Plekhan
Uppsala University, Sweden

14:45 - 15:15 "Characterization and in vitro selection of enzymes for bioproduction”
Dr. Natalia Díaz
Instituto Nacional de Investigaciones Agropecuarias (INIA), Ecuador

15:15 - 16:00 "Biosynthesis of bioactive compounds by fungi through biotechnology”
Dr. Abel Ponce de León
Universidad Nacional de las Fronteras (UNAF), Argentina

16:00 - 16:30 "Platforms for biosimilars production”
Dr. Irina Mathov
Eppendorf, USA

16:30 - 17:15 "Mechanistic and functional studies of plant-associated microorganisms”
Dr. Adelaida Séptima
Universidad Nacional de las Fronteras (UNAF), Argentina

17:15 - 17:30 Coffee break

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17:30 - 18:00 "New tools for multiplexed immunofluorescence: More colors and more dimensions, faster and easier”
Dr. Fernando Vargas
Laboratorio de Biociencias de la Universidad del Pacífico (UPC), Perú

18:00 - 18:30 "Correlative microscopy AFM-RAMAN in biological applications”
Dr. Rafael Vázquez-Duhalt
Universidad de La Plata (UNLP), Argentina

18:30 - 19:15 "Application of genomic tools for the analysis of bacterial communities in functional microorganisms”
Dr. Andrés Jiménez
Universidad Nacional de las Fronteras (UNAF), Argentina

19:15 - 19:45 Luncch

19:45 - 20:15 "Application of multiomics approaches to nutraceutical industry”
Dr. Mónica Santa María
Bans, Peru

20:15 - 21:00 "Advancing with confidence steps within postharvest operations processes”
Dr. Carlos Bracho
Biosalud

21:00 - 21:30 "Application of molecular markers for the identification of plant diversity and conservation”
Dr. Alfredo Ibáñez
Pontificia Universidad Católica del Perú (PUCP), Perú

21:30 - 22:00 "Application of molecular markers for the identification of plant diversity and conservation”
Dr. Alfredo Ibáñez
Pontificia Universidad Católica del Perú (PUCP), Perú

22:00 - 22:30 "Application of molecular markers for the identification of plant diversity and conservation”
Dr. Alfredo Ibáñez
Pontificia Universidad Católica del Perú (PUCP), Perú
**APPENDIX 2**

### Sección I: Biotecnología Agrícola y Animal

**Lugar:** Sala Auxiliar 1 – Auditorio Principal de la UNALM

| Horario | Expositor Código | Título |
|---------|------------------|--------|
| 14:45 – 15:00 | Freddy Fabian Domínguez OBA20 | Metagenomic characterization of the intestinal microflora and feces of the piglet (Sus scrofa) and probiotic evaluation of lactic acid bacteria strains identified molecularly. |
| 15:00 – 15:15 | German De La Cruz OBA03 | Potato Genes Candidates for Resistance to Gibberella patula, identified with AIHqks in the radicular transcriptome |
| 15:15 – 15:30 | Joa Adhir-mir De Sousa Pacheco OBA04 | Viruses detection in arracacha (Arracacia xanthorrhiza) using Next Generation Sequencing |
| 15:30 – 15:45 | Karina Zapata Vilamora OBA05 | Molecular identification of the microbe associated with blood and gonads of the brown shell Anodara tuberculosa |
| 15:45 – 16:00 | Óscar Gómez Quispe OBA06 | Time of conservation under refrigeration of gelified semen of alpaca (Vicugna pacos) |
| 16:00 – 16:15 | Ana Luz Nolberto Sotucuhamu OBA07 | GC-MS analysis of Sanky (Corynascus brevisporus BRITON & ROSE), an endemic cactus from Peru |
| 16:15 – 16:30 | Víctor Carhuapoma De La Cruz OBA08 | Antibiotic resistance of Salmonella sp, Escherichia coli in babies of alpacas (Vicugna pacos) with and without enteropathies diarrheal |
| 16:30 – 16:45 | Josselyin Marilyn Avila Arenano OBA09 | Isolation and molecular characterization of sulphate-reducing bacteria present in the blood of the bivalve mussel Anodara tuberculosa [Sowerby 1833] "black shell" |
| 16:45 – 17:00 | Yoel Zegarra Bermúdez OBA14 | Preliminary results on implementation of CRISPR/ Cas9 system for WSV receptor-directed mutagenesis in Lipoptepanum seminum shrimp spermatids |
| 17:00 – 17:15 | Juan Pauro Roque OBA48 | Effect of the inoculation of colistin-promoting bacteria in controlled conditions isolated from Peruvian highland soils |

### Sección II: Biotecnología Industrial y Ambiental

**Lugar:** Auditorio Principal de la UNALM

| Horario | Expositor Código | Título |
|---------|------------------|--------|
| 14:45 – 15:00 | Rosita Castillo Rangel OBA15 | Culture-dependent and independent analysis of bacterial community of an area contaminated and not contaminated with petroleum in Neuquén, Amazonas |
| 15:00 – 15:15 | Augusto Castill o Río Calderón OBA16 | Optimization of the environmental parameters of the fermentation of Kluyveromyces marxianus NRRL-Y-7171 for the production of insulin |
| 15:15 – 15:30 | Emilio Freddy Ybar Villanueva OBA17 | Evaluation of phytochemical and microbiological characteristics of tococh during fermentation |
| 15:30 – 15:45 | Mathis Araya OBA18 | Physicochemical characterization and application of biocor as copper biosorbent generated from the kelp Macrocystis pyrifera |
| 15:45 – 16:00 | Santiago Justo Arevalo OBA19 | Studies on the Microbial Degradation of Cyanide: A Functional, Structural, and Bioinformatic approach. |
| 16:00 – 16:15 | Verónica Edith Trujillo OBA20 | Studies on the Microbial Degradation of Cyanide: A Functional, Structural, and Bioinformatic approach. |
| 16:15 – 16:30 | Victor Hugo Sarmiento Casavilla OBA21 | Evaluation of a bioremediation system for heavy metals based in fungal biomass from Santuario Nacional del Amaya |

### Sección III: Herramientas Moleculares Aplicadas a la Biotecnología

**Lugar:** Sala Auxiliar 2 – Auditorio Principal de la UNALM

| Horario | Expositor Código | Título |
|---------|------------------|--------|
| 14:45 – 15:00 | María Fernanda Dávila Pulido OMB28 | Genetic diversity and population structure of Persea americana Mill. at northwestern Mexico |
| 15:00 – 15:15 | Jesús Mireya Higueras Rubio OMB29 | Bioinformatic analysis of polyphenoloxidase coding genes in avocado (Persea americana Mill.) |
| 15:15 – 15:30 | Rosalva Carolina Valdez Agramán OMB30 | Bioinformatic analysis of orthologous sequences to HMGR, VTE1 and VTE5 in avocado (Persea americana) genes |
| 15:30 – 15:45 | Juan Pablo Valenzuela Apodaca OMB31 | Identification of SNP molecular markers associated to grain yield, oil and protein content for the development of corn hybrids in Mexico |
| 15:45 – 16:00 | Elizabeth Patiño Anticena OMB32 | Influence of vaginal birth on the content of lactic acid bacteria with probiotic potential in meconium of human neonates |
| 16:00 – 16:15 | Mónica Criollo Joaquin OMB41 | Design and evaluation of DNA vaccines against the Tia pia Lake Virus (TVP) in Oncorhyncus niloticus from Peru |
| 18:45 – 18:50 | Hugo Jiménez OBA83 | Biodegradation of oil hydrocarbons using an undefined microbial ecosystems in submerged systems, evaluation by means of a factorial design. |
| 18:50 – 19:05 | Carmen Tamari Ángeles OBA70 | Identification of cellulolytic and xylanolytic thermostable enzymes from Chaeacoccus hot spring and their ability to degrade agricultural waste |
| 19:05 – 19:20 | Jimmy Capía López OBA80 | Evaluation of the Hydraulic Residence Time in a MBBR bioreactor for the treatment of effluents of the wastewater industry. |
| 19:15 – 19:30 | Leslie Velande de la Cruz OBA88 | Tolerance of lignolytic basidiomycetes to chrysophytes and metabolobiosis in conditions of stress |
| 19:30 – 19:45 | Norma Gamarra OBA97 | Identification and characterization of cellulosomes from Aspergillus niger ATCC-10648 in three fermentation systems |

**Grupos bacterianos asociados a la descomposición microbiana de la biomasa de lechuga y procesamiento de residuos orgánicos**

- **Horario:** 14:45 – 15:00
- **Expositor:** Benito Diringer, Carolina Valdez Higuera Rubio, Jesús Mireya Higueras Rubio, Karla Lucia Benoit, Carlin Galicia, Benito Castill o Río Calderón, Verónica Edith Trujillo, Victor Hugo Sarmiento Casavilla
- **Código:** OBA15, OBA16, OBA17, OBA20, OBA21, OMB28, OMB29, OMB30, OMB31, OMB32, OMB41
- **Título:** Bioinformatic analysis of polyphenoloxidase coding genes in avocado (Persea americana Mill.)
### Sección I: Biotecnología Agrícola y Animal

| Expositor          | Código     | Título                                                                 |
|--------------------|------------|------------------------------------------------------------------------|
| Rosalinda Arévalo  | PBAA010    | Quantitative variation of characters associated to ploidy level in androgenic plants of aguaymanto (Peruvsia peruvianiana L.) |
| Omaris Esquén Baea | PBAA011    | Analysis of genetic variability of Suri populations (Phrornocerina pennata) in three rescue centers from Puno and Lambayeque using microsatellite markers |
| Susan Linares Huapaya | PBAA012 | Identification of reference genes from RNA-seq data in lupinus mutabilis Sweet |
| Natal Rios Castro  | PBAA013    | Molecular characterization of bacteria associated with the microalgae toxochyta galbana and Characortes gracilis, used in the culture of the mollusk Ascpecten purpuratus |
| Rosalinda Arevalo Pinedo | PBAA049 | Mutagenesis at the N-terminal end of the CeyLAb toxin of Bacillus thuringiensis var. kurstaki |
| Carlos Eduardo Villanueva Aguilar | PBAA050 | "in vitro" culture of meristems of four varieties of Dianthus caryophyllus L. standard carnation |
| Jessica Martín Guerra López | PBAA062 | Optimization of culture medium for the production of biomass of Aspergillus parabipolarinum |
| Jhaklin Gloria Reyes Vasquez | PBAA067 | Post-chasing quality of spermatogenical stem cells (SSC) of alpaca (Vicugna pacos) proliferated in vitro |
| Ricardo Montesinos | PBAA072    | Development of downstream purification processes of recombinant glycoprotein G obtained from insect cells: a proof of concept |
| Silvia Aguiar Aguilera | PBAA094 | Brefotyphidium sp. with high potential for phosphorus solubilization in lupinus mutabilis c.p. Smith "pera" |

### Sección II: Biotecnología Industrial y Ambiental

| Expositor          | Código     | Título                                                                 |
|--------------------|------------|------------------------------------------------------------------------|
| Conra Berrocal     | PBAA022    | Potential application of commercial enzyme preparations for the production of isomaltosigosaccharides from maltose |
| Mayara Almeda Lustosa | PBAA026 | Isolation and Identification of Mangrove Bacteria Sediment with Potential Biodegradation of Petroleum |
| Francisco Castañeda | PBAA027 | Bioactive compounds from Porphyry CW and Pyropia okurinus during natural dessiccation cycle |
| Iris Mami Hilaaris  | PBAA041    | Chemical study of the seaweed Caulerpa fibrillosa (chlorophyta) as a potential source of bioactive principles |
| Diego Batista       | PBAA042    | Synthesis of cellulase nanofibers from lignocellulosic materials from industrial waste |
| Andrea Cuba Portocarrero | PBAA045 | A fast and cost-effective methodology for Purification of cyanide-degrading enzyme from Bacillus pumilus |
| Miguel Montero Orozco | PBAA046  | A Cyanide Bacterial Biosensor based on Genomic editing of Cyn operon from Bacillus pumilus |
| Daidalier Miguel Castillo Cotrina | PBAA047 | Bioelectricity from celluloliticos microes in cell of microbial fuel |
| Luis David Padon Rodriguez | PBAA052 | Physogenetic and Sequence-based Analysis of Proteolytic Cyani Dihydrotases (CynD) |
| Jorge A. Lopez      | PBAA053    | Prospection of Mangrove Bacteria with Organochlorine Compound Remediaion Potential |
| Judith Soldev Fanyk Vinicente | PBAA061 | Efficiency of biodegradation of ammonia by an isolated microbial consortium in a bioreactor type: Runoff filter |
| Danielle Thuss Zapata Sifuentes | PBAA065 | A low molecular weight protein induced as a function of cyanide concentration in a Bacillus licheniformis strain |
| Jessi Claudio Fonseca | PBAA074 | Design of a production medium with waste agroindustrial as optimizing the capacity of mineralization of calcium by Bacillus pseudofiliformis |
| David Tarazona Jurado | PBAA075 | Design of an artificial bioproduction microfluidic system for protein synthesis |
| Francisco Cresvani | PBAA077    | Mixed culture of Aspergillus niger and Trichoderma reesei for the production of cellulases by Surface Adhesion Fermentation with Bolaina Blanca residues |

### Sección III: Herramientas Moleculares Aplicadas a la Biotecnología

| Expositor          | Código     | Título                                                                 |
|--------------------|------------|------------------------------------------------------------------------|
| Joselin Huca Juarez | PHMB002    | Plasmid Library construction through in vivo cloning in the yeast Saccharomyces cerevisiae |
| Katherine Pefaranda | PHMB003    | Aptamer-based biosensors for the direct detection of infectious microorganisms |
| Luis Gutiérrez Mijas | PHMB004 | Genetic screening for proteins that confer resistance to UV radiation or oxidants in Saccharomyces cerevisiae |
| Omar Melo Calero   | PHMB005    | Characterization of Aedes aegypti cultivable microbiota by tandem mass spectrometry proteotyping |
| Raquel Marieño     | PHMB006    | An in vitro assay to identify NAD+, FAD or Coq as components of the capping structures of DNA |
| Sandy Mansilla     | PHMB007    | Comparison of the photoprotective effects of commercial sunscreens using yeast cell survivability to UV irradiation |
| Victor Zegarra     | PHMB008    | Identification of small peptides targeting pkng from Mycobacterium tuberculosis by structural and combinatorial biology approaches |
| Ana Elena Sánchez  | PHMB009    | Aptamers as inhibitors of bacterial protein synthesis |
| Cristian Bustamante | PHMB055 | Genetic diversity and structure of creole goat Caprio hircus from Lima and Pura using microsatellites |
| Michelle Alessandra Broscia Realdeguz | PHMB073 | In silico analysis of P34R8 mutation in SCC17A5 through defect in lymphoblast transport of acidic salt |
| Segundo Levi Estela Moreno | PHMB076 | Influence of nitrates in the expression levels of the Acetyl CoA Carboxylase gene and total lipids production in oleaginous microalgae from the Peruvian Amazon |
| Joel Flores        | PHMB078    | Advances in the selection of Frost Tolerant Genotypes in Peruian potato landraces (Solanum sp.) |
Welcome to the First International Congress of Biotechnology and Innovation, July 9 - 12, 2018

by Gretty K. Villena, President of ICBi

Dear colleagues, young researchers and students

It is an honor for us to welcome you to the I International Congress of Biotechnology and Innovation, ICBi 2018, organized by the National Agrarian University La Molina (UNALM) and the Laboratory of Mycology and Biotechnology "Marcel Gutiérrez-Correa" (LMB).

As a country, in recent years Peru has experienced positive economic changes, further development and the first efforts to boost scientific research and innovation begin to be noticed. Certainly, the investment in Science and Technology is not yet comparable with that of other Latin American countries. However, we are aware that as researchers we also have a social and moral commitment to the scientific and economic development of the country. Many young scientists have returned to the country and many others have been trained here, and the expectations for contributing effectively to the country are enormous. The research carried out in recent years in the country is translating into innovations and ventures. We must not stop this initial advance.

As a University, we have managed to prioritize research efforts and improve installed capacity and infrastructure in Biotechnology. Nowadays, UNALM has modern Biotechnology Laboratories and this gives us a unique opportunity to join efforts in developing basic and applied Biotechnology research as development instruments and effective contribution to the productive sector.

In this context, following the example and joining the efforts of our professors and mentors, we have decided to organize the First edition of the International Congress of Biotechnology and Innovation, ICBi 2018. It is time to promote Biotechnology and Innovation in Peru, it is time to promote more strongly the interaction between researchers and innovators in Latin America and other countries of the world.

It is time to encourage new generations of researchers and students to be actively involved in the different areas of biotechnology.

Also, it is a very special occasion to, through this event, pay tribute to who was a tireless researcher and promoter of Biotechnology in Peru, Dr. Marcel Gutiérrez Correa, professor at UNALM. We are motivated by the next inauguration of the new building of the Laboratory of Mycology and Biotechnology that he founded, and that he could not see concluded. The LMB will be named after him and will be our best legacy.

The scientific program of ICBi 2018 is organized in conferences in the sections of Agricultural and Animal Biotechnology, Industrial and Environmental Biotechnology as well as the section of Molecular Tools used in Biotechnology. We have also included the innovation section to publicize the experiences of technological development in biotechnology in the region.

The organization of this event could not be possible without the support of committed people and institutions. We appreciate the academic sponsorship of UNALM, the Vice-Rectorate for Research and the Faculty of Science of UNALM. CONCYTEC and Innovate who help us with networking the ICBi 2028.

To the Peruvian Society of Biochemistry and Molecular Biology for their support in the Scientific Committee.

To the Revista Peruana de Biología, for the academic support and endorsement in the edition and publication of the Book of abstracts of the Congress.
To the companies that have supported us to make this effort viable.

I personally thank the Organizing Committee, the Vice President and the Secretary of the Organizing Committee of the ICBi 2018 and the Support Committee for their commitment and unswerving effort in organizing this event.

To our Latin American and foreign guests, we will have the pleasure of receiving you in our historic capital, surrounded by archeological sites, with its colonial architecture declared a World Heritage Site by UNESCO, and its very well recognized gastronomy.

Thank you very much to all of you for the effort in preparing your lectures, posters and oral presentations and for making this event a reality.

Finally, we hope that this initiative will be replicated in our country or abroad and that ICBI 2021 is a reality. We will work hard on that goal.

Thank you

Gretty K. Villena, Ph.D
President, ICBi 2018
Lima, Peru
