ICBGF 2030

International Conference on

BIOTECHNOLOGY FOR A GREEN FUTURE

2030

Translating Research into Solutions for Health, Agriculture, and Industry (ICBGF 2030)

अंतर्राष्ट्रीय सम्मेलन: हरित भविष्य के लिए जैव प्रौद्योगिकी 2030 - स्वास्थ्य, कृषि और उद्योग के लिए अनुसंधान को समाधान में परिवर्तित करना (आईसीबीजीएफ 2030)

(ICBGF 2030)

Theme

From Lab to Land: Biotechnological Solutions Shaping the Future of Health, Agriculture, and Industry

About

The Internaonal Conference on Biotechnology for a Green Future 2030 (ICBGF 2030) is a premier event dedicated to exploring the innovative & transformative role of biotechnology in building a sustainable future. This conference will convene leading researchers, industry experts, and academics from around the world to discuss and share advancements across cellular biology, genetics, bioinformatics, and industrial biotechnology, all aimed at addressing global challenges in health, agriculture, and environmental sustainability.

Conference Focus Areas and Objectives

ICBGF 2030 will delve into four main biotechnology domains with the following goals:

- **Cellular Biology for Health Innovations:** Focusing on cellular mechanisms and regenerative medicine to combat disease and improve human health outcomes.
- **Genetic Engineering for Food Security:** Highlighting innovations in gene editing (e.g., CRISPR) to create climate-resilient, high-yield crops that support global food security and sustainable agriculture.
- **Bioinformatics and Big Data in Biotechnology**: Showcasing bioinformatics' role in precision medicine, drug discovery, and agricultural optimization through big data analysis and computational modeling.
- **Industrial Biotechnology for Sustainability:** Addressing sustainable production and environmental stewardship through bio-manufacturing, bioremediation, and green technology applications.

Themes

Theme 1 – Cell Biology in Therapy

- **Stem Cell Therapy Innovations**: Applications in regenerative medicine for disease treatment and tissue repair.
- **Immunotherapy Developments**: Advances in immune cell engineering for targeted cancer therapies and autoimmune disease management.
- **Gene Editing in Therapeutics**: Utilizing CRISPR and other gene-editing tools for treating genetic disorders.
- **Translational Cell Biology**: Moving cellular biology discoveries from research to clinical applications.

Theme 2 – Genetic Crop Innovation

- **CRISPR for Crop Improvement**: Genetic editing for enhanced yield, resistance to pests, and climate resilience.
- **Nutrient-Enriched Crops**: Biofortification to improve crop nutrition and address global malnutrition.
- **Hybrid and GM Crop Development**: Integrating traditional breeding with geneticmodification for optimized crops.
- **Ethics and Regulation in Crop Biotechnology**: Addressing societal and regulatory concerns around GMOs.

Theme 3 – Precision Drug Discovery

- **Computational Target Identification**: Using bioinformatics to identify potential drug targets.
- **AI in Drug Screening**: Leveraging artificial intelligence for high-throughput screening and lead optimization.
- **Structure-Based Drug Design**: Using molecular modeling for precise drug interaction predictions.
- **Omics Data in Personalized Medicine**: Applying genomics, proteomics, and metabolomics for tailored therapies.

Theme 4 – Eco-friendly Biomanufacturing

- **Bio-Based Materials and Polymers**: Developing sustainable materials to replace conventional plastics.
- **Enzyme Engineering for Green Chemistry**: Designing efficient enzymes for eco-friendly industrial processes.
- **Waste-to-Value Technologies**: Bioconversion of waste into biofuels, bioplastics, and other valuable products.
- **Sustainable Bio-Refineries**: Integrating bioprocesses for the production of chemicals, energy, and materials.

Theme 5 – Insect Biodiversity Management

- **Insects in Pollination and Crop Yield**: Enhancing agricultural productivity through natural pollinators.
- **Insect-Based Pest Control**: Using predatory insects as sustainable alternatives to chemical pesticides.
- **Conservation of Beneficial Insects**: Strategies for protecting pollinators and pest-control insects.
- **Insects in Ecosystem Services**: Exploring the ecological roles of insects in soil health and nutrient cycling.

Theme 6 – Advanced Veterinary Health

- **Biotechnology in Veterinary Medicine**: New vaccines, diagnostics, and treatments for animal health.
- **Antimicrobial Resistance Management**: Addressing resistance through innovative treatments and vaccines.
- **Zoonotic Disease Prevention**: Controlling diseases that impact both animal and human health.
- **Veterinary Genomics**: Using genetic tools to improve animal breeding and health monitoring.

Theme 7 – Sustainable Dairy Practices

- **Green Dairy Farming**: Environmentally-friendly practices in dairy production, including waste management.
- **Nutritional Enhancements in Dairy**: Biotechnology for fortified dairy products to improve health.
- **Animal Welfare and Ethical Practices**: Ensuring ethical treatment and welfare of dairy animals.
- **Reducing Dairy Carbon Footprint**: Innovations to lower emissions and improve dairy sustainability.

Theme 8 – Cell Regeneration Techniques

- **Tissue Engineering Advances**: Techniques for growing and regenerating tissue for medical applications.
- **Cell Therapy for Regenerative Medicine**: Using specialized cells for repairing damaged tissues.
- **Biomaterials for Cell Growth**: Developing materials that support cell regeneration and tissue engineering.
- **Stem Cell-Based Regeneration**: Utilizing stem cells for targeted repair in degenerative conditions.

Curriculum

Day 1: Cellular Biology and Genetic Innovations in Health and Agriculture

Theme:

Pioneering Advances in Cell Biology and Genetics for Health and Food Security

Session 1: Cellular Mechanisms in Disease and Therapeutics

- Overview of conference objectives, focusing on how cellular and genetic advancements are shaping future healthcare.
- Harnessing Cellular Biology for Disease Prevention and Treatment Speaker
- Mechanisms of cellular communication in health and disease.
- Applications of cellular therapies in regenerative medicine.

Session 2: Genetic Solutions for Agriculture and Climate Resilience

- Advances in Crop Genetics for Sustainable Agriculture Speaker:
- CRISPR-based crop improvements.
- Genetic strategies for climate resilience and food security.
- Presentation slot for authors

Panel Discussion: Cell and Genetic Research: Bridging Lab Discoveries with Real-World Applications

- Discussion on ethical, environmental, and economic implications of gene editin gand cellular therapy in agriculture and healthcare.

Presentation slot for authors

- Topics may include cell signaling pathways, regenerative medicine, and immune cell therapy.
- Topics may include crop genetic engineering, climate adaptation strategies, genomics in plant breeding.

Day 2: Bioinformatics and Data-Driven Biotechnology

Theme:

Transforming Big Data into Biotechnological Solutions for Precision Health and Agriculture

Session 3: Bioinformatics in Drug Discovery and Precision Agriculture

- Introduction to the role of bioinformatics in enabling data-driven research across healthcare and agriculture.
- Accelerating Therapeutic Development through Bioinformatics Speaker:
- Advances in computational modeling, target identification, and molecular modeling.

Session 4: Data Integration and Omics in Biotechnology

- Integrating Multi-Omics for a Holistic Understanding of Biological Systems Speaker:
- Systems biology and data integration for healthcare applications.
- Using omics data for precision agriculture.

Workshop: Exploring Bioinformatics Tools for Genomic Research

- A practical, hands-on session for researchers to work with bioinformatics tools, data integration methods, and data visualization techniques for genomic datasets.

Presentation slot for authors

- Topics may include bioinformatics in drug discovery, data analytics in precision agriculture, or computational models in genomics.
- Topics may include multi-omics data analysis, bioinformatics tools for agriculture, or disease modeling.

Day 3: Industrial Biotechnology and Emerging Trends

Theme:

Sustainable Industrial Biotech: Innovations for Environmental and Economic Impact

Session 5: Industrial Biotechnology for Sustainable Production

- Overview of how industrial biotechnology is transforming sustainable production in various industries.
- Biomanufacturing and Environmental Solutions through Industrial Biotechnology Speaker:
- Applications of bio-manufacturing, enzyme engineering, and sustainable materials.

Session 6: Translational Biotechnology for Healthcare and Environment

- Advancing Biotechnology for Global Health and Environmental Sustainability Speaker:
- Biotechnology in developing therapeutics, diagnostics, and solutions for environmental challenges.

Closing Panel Discussion: Future Biotechnology Innovations and Global Impact (30 mins)

- A discussion on the future direction of biotechnology in healthcare, agriculture, and industry, covering collaborations, regulatory hurdles, and global implications.

Presentation slot for authors

- Topics may include bioprocessing techniques, industrial applications of biotechnology, bioremediation, or enzyme engineering.
- Topics may include biotech in vaccine development, environmental biotech, sustainable agriculture solutions.

Important Dates

Call for Abstract Submission: **10 January 2025 (start date)**

Call for Abstract Submission: **20 May 2025 (last date)**

Full length Article Submission: **05 June 2025 (last date)**

Article Acceptance Notification: **15 June 2025 (last date)**

Submission of Presentations: **20 June 2025 (last date)**

Camera-Ready Paper Submission: **30 June 2025 (last date)**

Conference Dates: **03 – 05 July 2025**

Call for Papers

Biotechnology for a Green Future 2030: Translang Research into Soluons for Health, Agriculture, and Industry (ICBGF 2030) 03-05 July 2025 | Online Conference

ICBGF 2030 invites full-length original research contributions from professionals in the healthcare industry, academic institutions, R&D organizations, government agencies, and research scholars from across the globe. Researchers are encouraged to submit original research papers and review articles not exceeding eight pages, following the double-column format [Author Guidelines]. Submissions should contribute to new research ideas, developmental approaches, analysis, findings, and results in oncology and cancer care. The manuscript should not have been published or under review in any other journals, magazines, or conference proceedings.

All manuscripts will undergo a rigorous peer review process, and the corresponding author will be notified of the outcome. If revisions are recommended by the reviewers, authors will be given fifteen days to submit the revised manuscript from the date of notification.