



Bio Korea! Global KRIBB!
- A Global Institute Leading Biotechnology Powerhouse -



Korea Research Institute of
Bioscience and Biotechnology



MESSAGE

KRIBB realizes **health and longevity**

The Korea Research Institute of Bioscience and Biotechnology (KRIBB), which has been at the forefront of the nation's biotechnology development since its founding in 1985, strives to improve public health and further the development of bio-industry by undertaking essential research to increase our understanding of living phenomena. To that end, we conduct high-end biotechnology research in various fields such as health-care, food, new biomaterials, the environment, and novel energy sources.

In the spirit of progress, challenge and innovation, we intend to become a major progenitor of biotechnology development and national prosperity. We request your steadfast support for all our endeavors.

Kyu Tae Chang, Ph. D.
President



We are boosting the power of biotechnology to assist the nation's progress and promote people's welfare.



Mission

- ▶ To carry out R&D activities and related projects in the field of bioscience and biotechnology in joint effort with other research institutes, academia and businesses at home and abroad.
- ▶ To disseminate the results of its scientific research and technological development.

Vision

2018 GLOBAL BEST KRIBB

Global Research institute Leading Bio-Innovation for the Humankind

Generating New Economic Growth Engine

Five World-class Platform Technologies

Providing Solutions to National Agenda

Three internationally Competitive R&D groups

Establishing World-class Research Infrastructure

World's Top Five Biotechnology Research Infrastructure



Convergence Technology | Personalized Bio-Medicine | Bio Green Technology | Bio-based National Agenda

Bio Research Infrastructure

RESEARCH DIRECTION





INTERNATIONAL NETWORK

Extending Beyond Borders to become a World-Class Institute

KRIBB makes every effort to become an internationally renowned bio-technology research institute by cooperating with other major R&D organizations.

In addition, KRIBB's International Biological Material Research Center maintains diverse bio-sample collection and distribution partnerships with countries in Asia, South America and Africa to establish a worldwide network for the utilization of biological resources providing researchers with diverse overseas biological materials.

The center also establishes the nation's core infrastructure for developing candidates for new drugs and novel materials development.



- **YAAS** Yunnan Academy of Agricultural Sciences
- **INBio** Instituto Nacional de Biodiversidad
- **BPPT** Agency for the Assessment and Application of Technology
- **IEBR** The Institute of Ecology and Biological Resources



RESEARCH ACTIVITIES

Covering from Basic Life Science to
Biotechnological Applications

Division of Strategic Research Groups

- Resolution of national/social pending issues such as aging and rare/incurable diseases

Division of Biomedical Sciences

- Target discovery to overcome incurable diseases and development of structure-based control technologies

Division of Systems Biology and Bioengineering

- Production of high functional food/pharmaceutical/ industrial materials and development of application technologies for such materials

Division of Bioinfrastructure

- Provision of industry-academia-research supports for primate materials and development of new drugs including bio organs for incurable diseases

Division of Business Development

- Conduct of the technology marketing in line with supports for small and medium enterprises and technology development to commercialize biopharmaceutical materials

Division of KRIBB Strategic Projects

- Provision of the function of Bio Big Data infrastructure, conduct of tasks for government policy regarding BT, and development of stem cell-based technologies



EXCELLENT RESEARCH CASES

**nature
immunology**

Infection-specific phosphorylation of glutamyl-prolyl tRNA synthetase induces antiviral immunity [2016]

Cell

A Lactate-Induced Response to Hypoxia (2015)

Science

Regulatory T cells generated early in life play a distinct role in maintaining self-tolerance (2015)

**nature
cell biology**

Amino-terminal arginylation targets endoplasmic reticulum chaperone BiP for autophagy through p62 binding [2015]

**nature
structural &
molecular biology**

Molecular basis for unidirectional scaffold switching of human Plk4 in centriole biogenesis (2014)

**nature
commun**

The structural basis for the negative regulation of thioredoxin by thioredoxin-interacting protein [2014]

**Cell
Metabolism**

TXNIP Maintains the Hematopoietic Cell Pool by Switching the Function of p53 under Oxidative Stress (2013)

**nature
biotechnology**

Analysis of a genome-wide set of gene deletions in the fission yeast *Schizosaccharomyces pombe* (2010)

nature

Genome evolution and adaptation in a long-term experiment with *Escherichia coli* (2009)

**nature
cell biology**

Drosophila short neuropeptide F signalling regulates growth by ERK-mediated insulin signalling (2008)

**nature
medicine**

E2-EPF UCP targets pVHL for degradation and associates with tumor growth and metastasis (2006)

BIOTECH FOR ECONOMIC GROWTH AND **BETTER LIVING STANDARDS**

From fundamental research exploring basic facts about life to cutting-edging technologies, our work is aimed at creating new engines for economic growth and bringing concrete improvements in the quality of life for Koreans all over. Our goal is to shape a brighter, better and healthier future for all, in Korea and around the world.



KRIBB

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