



NC STATE UNIVERSITY

CRISPR IN LATIN AMERICA AND THE CARIBBEAN

Assessment of the Regulatory and Institutional Frameworks

PROGRAM

The Inter-American Development Bank is working with North Carolina State University's Genetic Engineering and Society (GES) Center in a two-year project to assess the regulatory and institutional frameworks surrounding gene-editing via CRISPR-based technologies in the Latin America and Caribbean (LAC) regions.

REGIONS

Focus countries for the regional analysis will include: **Argentina, Brazil, Uruguay, Paraguay, Bolivia, Colombia, Peru, Mexico, and Honduras.**

FOCUS AREAS

Current Policy Evaluation of existing agricultural biotechnology policies and cost/time necessary to bring a product to market in identified regional states, policy trends and gaps, and licensing structures for commercialization;

Forecasting and Future Policy Scenario Analysis including targeted crop-country case studies with emerging agricultural biotechnologies illustrating potential economic, trade, and social consequences of various policy directions; and

Identifying Bank Investment Priorities for gene editing product developments, key capacity deficits, and future opportunities for IDB investment in human and physical capital.

WHAT IS CRISPR AND WHY IS IT IMPORTANT?

While gene-editing is not new, innovative tools are revolutionizing the field.



The 2020 Nobel Prize in Chemistry was awarded to researchers for the development of CRISPR-based gene editing

CRISPR technology works as a **'search and replace'** method that scans DNA and guides a protein to cut at a specific target sequence. A genetic tool designed to **insert, alter, or simply remove segments of DNA** to achieve a **change in the organism's physical traits**, for example, increasing a plant's resistance to disease and pests.

CRISPR is thought to be **simpler and less expensive** than past genetic engineering tools. Potentially making it more accessible and enabling its adoption and use in a more expansive way.

CRISPR's ability to alter an organism's genetic code without the use of foreign DNA may **challenge current countries' rules and regulations on how they govern and perceive risks** around the importation, domestic use, or intentional introduction into the environment.



ABOUT

GENETIC ENGINEERING AND SOCIETY CENTER

The **GES Center at NC State University** serves as an international hub of interdisciplinary research, engaged scholarship and inclusive dialogues surrounding opportunities, and challenges associated with genetic engineering and society.

Positioned at the nexus of science and technology, the social sciences and humanities, the GES Center has taken a national and international lead in examining the technical, ethical, and societal dimensions of the products and impacts of biotechnology.

PROJECT TEAM

The consultancy team includes experts from economics, public policy, international law, communications, and biotechnology.

IDB TASK TEAM LEADERS

Eirivelthon Lima, Leading Rural Development Specialist

Gonzalo Muñoz, Senior Rural Development Specialist

PRINCIPAL INVESTIGATORS

Michael S. Jones, PhD, Assistant Professor of Economics, University of Alaska Anchorage

Todd Kuiken, PhD, Senior Research Scholar, GES Center, NC State University

CO-PRINCIPAL INVESTIGATORS

Margo Bagley, JD, Asa Griggs Candler Professor of Law, Emory University School of Law

Zachary S. Brown, PhD, Associate Professor of Agricultural and Resource Economics, NC State University

Jennifer Kuzma, PhD, Goodnight-NC GSK Foundation Distinguished Professor in the Social Sciences and Co-director, GES Center, NC State University

Maria Mercedes Roca, PhD, Executive Director, BioScience Think Tank

GES CENTER PROJECT STAFF

Patti Mulligan, Communications Director

Sharon Stauffer, Center Program Manager

ONLINE

To learn more about the project, upcoming workshops, field visits, or to contact the project team at go.ncsu.edu/ges-idb-crispr

SUPPORT

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