# Building Research Integrity Capacity Across Latin America: Lessons from Ethics Training, Institutional Practice, and Regional Engagement

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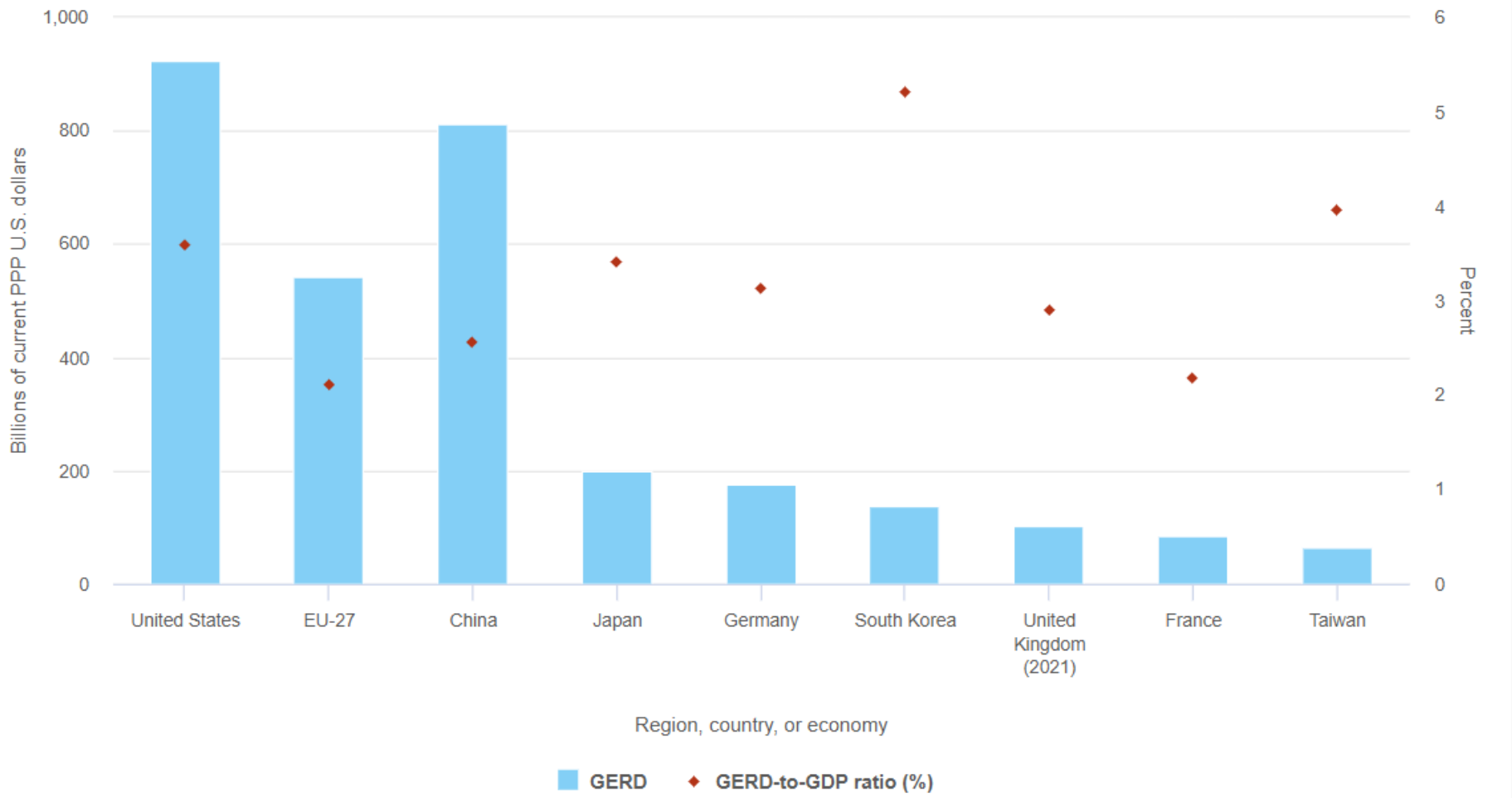
# Incentives for Developing Research Integrity Institutional Policies

- Significant investment in R&D
  - National interest in science as an economic development factor
  - Transparent use of taxpayer's money
    - Citizens concerned about the use of their taxes
    - Citizens paying taxes
- Collaborative research
  - Oversight efficacy of foreign funding agencies
    - Similar controls as existent in the fundings agencies' nations
      - Political decision to enforce the norms in place in the funding agencies' nation
  - Scientific relevance of the collaboration
- Governance, rule of law and control of corruption

# GERD and GERD-to-GDP ratio, by selected region, country, or economy: 2022 or most recent year

Chart | Data | Combined




EU-27 = European Union; GDP = gross domestic product; GERD = gross domestic expenditures on R&D; PPP = purchasing power parity.

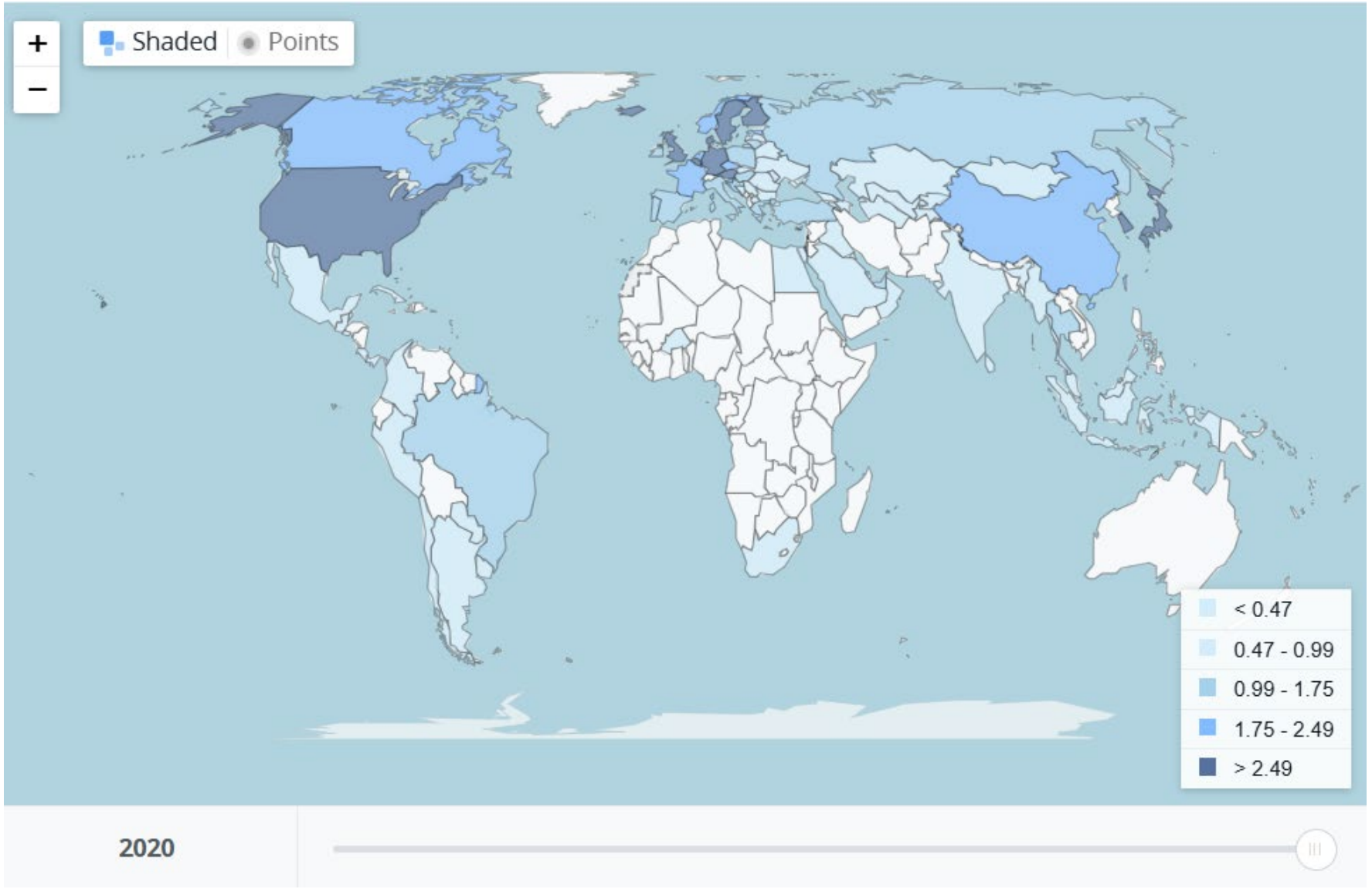
**Note(s):**
Some data are preliminary and may be revised later. The most recent year of data for the United Kingdom was 2021.

**Source(s):**
National Center for Science and Engineering Statistics, National Patterns of R&D Resources (2021–22 edition); Organisation for Economic Co-operation and Development, Main Science and Technology Indicators, July 2024, https://stats.oecd.org/Index.aspx?DataSetCode=MSTI_PUB.

*Science and Engineering Indicators*

https://ncses.nsf.gov/pubs/nsb20257/global-r-d-and-international-comparisons-2

# R&D Expenditure (% of GDP) Latin America and Caribbean




https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS?end=2020&locations=ZJ&start=2000&view=map&year=2020

# Latin American Weakness on Research Integrity Initiatives

- Ambiguity in definitions and actions. In most countries, institutional policies or documents related to research integrity are aspirational rather than normative
- Undefined institutional procedures for investigating allegations
- Absent or inconsistent initiatives in research integrity education
- Inadequate identification and disclosure of conflicts of interest
- Promotion criteria emphasizing publication metrics rather than research quality or relevance
- Lack of or deficit in capacity in education in research ethics and disparate standards of scientific integrity
- Sometimes, problematic relationships between researchers, institutions, countries or regulators

# Some Perceived Problems in Latin America

- Plagiarism emerges as the most commonly detected transgression in countries where research integrity concerns are relatively recent or resources for original research are limited
- Guest or honorary authorship and conflicts of interest often go unrecognized as problematic practices
- Disconnect between integrity training and observed research practices
- Fear that public disclosure of misconduct cases will damage institutional reputation
- Insufficient or no available guidance on handling misconduct allegations
- Perverse academic incentives, as everywhere

# Overview of Research Integrity Guidance and Policies in 4 Latin American Countries

# Argentina

2006 - Año de homenaje al Dr. Ramón Carrillo

*Ministerio de Educación, Ciencia y Tecnología*
*Secretaría de Ciencia, Tecnología e Innovación Productiva*
*Consejo Nacional de Investigaciones Científicas y Técnicas*

BUENOS AIRES, 22 MAR 2006

# Argentina- CONICET

- Researchers and society
- The responsibility of the researcher in relation to his or her own work
- Research output, publication, authorship credit
- “Error", "negligence" and "inappropriate conduct" must be prevented
- Inappropriate conduct is defined as "fabrication of results, their alteration (falsification) and plagiarism

# Integridad en las relaciones de la comunidad científica


Comité Nacional de Ética
en la Ciencia y la Tecnología

Ingreso
**13 de agosto de 2001**
Origen
**Comité Nacional de Ética en la Ciencia y la Tecnología**
Aprobación
**11 de noviembre de 2002**

Comité Nacional de Ética en la Ciencia y la Tecnología

# CETCE Proposals for Socially Responsible Science and Technology

**Socially responsible research must consider the following guiding principles:**

**I.** Respect for human rights

**II.** Consolidation of democratic values and practices

**III.** Contribution to peace and justice, with special attention to the most vulnerable sectors

**IV.** Care for the environment, biodiversity, and the biosphere as a whole

**V.** Open access to knowledge and information

**VI.** Equity in access to the benefits of knowledge

**VI.** Freedom of research and the development of critical analysis capacity and innovative creativity

# Colombia


- Discussions began in 2013, between different stakeholders
- COLCIENCIAS (now MINCIENCIAS) developed a series of events, called National Dialogues on Research Ethics, which included expert conferences and discussion groups to build a national policy on research ethics.
- Since 2013, at least eight National Dialogues have been held.
- It proposes "a roadmap to strengthen a culture that promotes reflection on the importance and relevance of ST&I [Science, Technology and Innovation], in accordance with ethical guidelines and the adoption of good scientific practices that promote quality and excellence"
- 130-page document on research ethics and scientific integrity.

*Excerpted from the Report for Subsidy 1 ORIIR190053-01-00 by Dr. Manuela Fernandez Pinto, Center for Applied Ethics, Universidad de Los Andes, Bogotá, Colombia*

# México

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YASMIN ESQUIVEL >

# A federal court orders UNAM to bury the ruling on the plagiarism of Yasmín Esquivel's thesis

In the ruling, which EL PAÍS has accessed, the judges validate an internal document in which the university's former lawyer stated that a former student's degree could not be revoked.

ZEDRYK RAZIEL | BEATRIZ GUILLÉN

Mexico - DEC 17 , 2024 - 12:37 GMT+9

8

# Perú


**RESOLUCIÓN DE PRESIDENCIA N° 062-2023-CONCYTEC-P**

Lima, 02 de junio de 2023

**VISTOS:** El Informe N° D000059-2023-CONCYTEC-OGAJ-EAF y Memorando N° D000185-2023-CONCYTEC-OGAJ de la Oficina General de Asesoría Jurídica;

**CONSIDERANDO:**

Que, conforme al artículo 14 de la Constitución Política del Perú, es deber del Estado promover el desarrollo científico y tecnológico del país;

Que, el Consejo Nacional de Ciencia, Tecnología e Innovación Tecnológica - CONCYTEC, es un organismo público técnico especializado adscrito a la Presidencia del Consejo de Ministros, con personería jurídica de derecho público interno y autonomía científica, técnica, administrativa, económica y financiera, que constituye un pliego presupuestal, conforme a lo establecido en la Ley N° 28303, Ley marco de Ciencia, Tecnología e Innovación Tecnológica (en adelante Ley Marco) y en la Ley N° 28613, Ley del Consejo Nacional de Ciencia, Tecnología e Innovación Tecnológica (en adelante Ley del CONCYTEC); con las modificaciones introducidas por la Ley N° 30806[1] [2];

Que, el artículo 2 de la Ley Marco, establece que el desarrollo, promoción, consolidación, transferencia y difusión de la Ciencia, Tecnología e Innovación Tecnológica, son de necesidad pública y de preferente interés nacional, como factores fundamentales para la productividad y el desarrollo nacional en sus diferentes niveles de gobierno;

Que, de conformidad al citado marco legal, el CONCYTEC es el ente rector del Sistema Nacional de Ciencia, Tecnología e Innovación Tecnológica – SINACYT, el cual está integrado por el conjunto de instituciones y personas naturales en el país, dedicadas a la investigación, desarrollo e innovación tecnológica en ciencia y tecnología y a su promoción. El CONCYTEC tiene por finalidad normar, dirigir, orientar, fomentar, coordinar, supervisar y evaluar las acciones del Estado en el ámbito de la ciencia, tecnología e innovación tecnológica;

Que, con fecha 5 de julio de 2018, se publicó en el Diario Oficial El Peruano, la Ley N° 30806, Ley que modifica diversos artículos de la Ley 28303, Ley marco de Ciencia, Tecnología e Innovación Tecnológica; y de la Ley N° 28613, Ley del Consejo Nacional de Ciencia, Tecnología e Innovación Tecnológica, la cual otorga potestad sancionadora al CONCYTEC;

Que, de acuerdo al artículo 14-A de la Ley del CONCYTEC, modificada por la Ley N° 30806, se faculta al CONCYTEC a aprobar mediante acuerdo de su Consejo Directivo y formalizado por Resolución de Presidencia, el Reglamento de Infracciones y Sanciones del CONCYTEC, el cual contendrá la tipificación de infracción, así como la cuantía y la graduación de las sanciones;

Que, asimismo, el artículo 14-A de la Ley citada precedentemente, establece que constituyen infracciones pasibles de sanción las acciones u omisiones que infrinjan las normas sobre lo siguiente: a) Ética en la investigación; b) Rendición de cuentas de las subvenciones otorgadas por el CONCYTEC; c) Plagio y/o apropiación total o parcial de experimentos, datos,

[1] Ley que modifica diversos artículos de la Ley N° 28303, Ley marco de Ciencia, Tecnología e Innovación Tecnológica; y de la Ley N° 28613, Ley del Consejo Nacional de Ciencia, Tecnología e Innovación Tecnológica.
[2] Normatividad vigente de acuerdo a la Primera Disposición Complementaria Final de la Ley N° 31250, Ley del Sistema Nacional de Ciencia, Tecnología e Innovación (SINACTI) la cual entrará en vigencia el día siguiente de la publicación de su reglamento en el Diario Oficial El Peruano.

Los Angeles Times

WORLD & NATION

# ‘Vaccine-gate’ roils Peru: Politicians, families and friends secretly got COVID shots

By Patrick J. McDonnell and Adriana León

Feb. 18, 2021 5:52 PM PT

“The commission [ *Peruvian Government Investigative Commission*] determined that, in principle, the 3,200 vaccines should never have arrived in the country because it is not customary to reserve vaccines outside of the clinical trial.

It was also determined that 1,200 vaccines were delivered to the Chinese Embassy in Peru, and their final destination is unknown.

Of the remaining 2,000 vaccines, 803 are being held at the Universidad Peruana Cayetano Heredia (UPCH) and 58 at the Universidad Nacional Mayor de San Marcos (UNMSM). Of the remaining 1,139 vaccines, 235 were used on individuals who had received a placebo during the clinical trial, **706 on the research team, and 198 on the close associates of the researchers**”.

Global Investigative Journalism Network

## Insider Access to Chinese Vaccines: A Case Study in Pandemic Corruption from Peru

by Rowan Philp · August 4, 2021

gob.pe | Plataforma digital única del Estado Peruano

# Retractions from Latin American Authors

# Studies Quantifying Retractions in Latin America

| Study | Countries | N Retracted | Period | Field | Main Causes (% when available) |
|---|---|---|---|---|---|
| Herrera-Añazco et al. 2025 | Latin America & Caribbean | 147 | 2003–2022 | Health sciences | Procedural/data errors (39); inconsistent results (37); plagiarism (21); suspected fraud (19) |
| Ramos-Castaneda et al. 2025 | Latin America | 181 | 1987–2024 | Biomedical | 63% misconduct; 21.5% honest error; remainder unspecified |
| Santos-d'Amorim et al. 2025 | Latin America | Two-decade dataset | ~2002–2022 | All fields | 44.8% misconduct; 20.5% editorial error; 16.5% author error |
| Almeida et al. 2016 | Latin America & Caribbean | 31 | Up to 2014 | All fields | Plagiarism dominant (JCR & non-JCR SciELO) |
| Santos-d'Amorim 2021 | Brazil | 162 | Up to 2019 | All fields | Plagiarism ≈12.2%, duplication, ethical issues, fabrication |
| Santos-d'Amorim 2024 | Brazil (SciELO) | SciELO subset | 2010s–2020s | All fields | Plagiarism dominant; increasing paper-mill activity |
| Ordoñez, Litewka, Heitman et al. 2025 | Mexico | 55 | 2004-2022 | All fields | Duplication, plagiarism, fabrication |

Data Sources: Herrera-Añazco et al. (2025) Developing World Bioethics; Ramos-Castaneda et al. (2025) Revista de Saúde Pública; Santos-d'Amorim et al. (2025) Scientometrics; Almeida et al. (2016) Science and Engineering Ethics; Santos-d'Amorim (2021) Transinformação; Santos-d'Amorim (2024) SciELO Brazil; Ordoñez et al. (2025) Developing World Bioethics.

# Retracted Biomedical Research Papers from Latin American Institutions ( 1977-2024)

| | Overall | |
|---|---|---|
| | n | % |
| Error | 39 | 21.5 |
| Scientific misconduct | 114 | 63.0% |
| Ethical/legal issues | 41 | 33.1 |
| Fabrication/falsification | 25 | 20.2 |
| Duplication | 22 | 17.7 |
| Unreliable data/results | 19 | 15.3 |
| Plagiarism | 17 | 13.7 |
| Reason not specified | 28 | 15.5 |
| Total | 181 | |

- 181 retracted papers with at least one authors from a Latin American institution
- 82.3% original research papers
- Authors from Mexico, Argentina, Colombia, Chile with the highest numbers of retracted papers
- Main reason for retraction was misconduct (63%) and error (21.5%). For 15.5%, no reason was identified

Ramos-Castaneda JA, Candal-Pedreira C, Pérez-Ríos M, Teijeiro A, Ruano-Ravina A, García G. Characteristics of retracted biomedical research papers from Latin American institutions. Rev Saude Publica. 2025 Oct 17;59:e25. doi: 10.11606/s1518-8787.2025059006328. PMID: 41124487; PMCID: PMC12534018.

# Retracted Articles by Mexican Authors

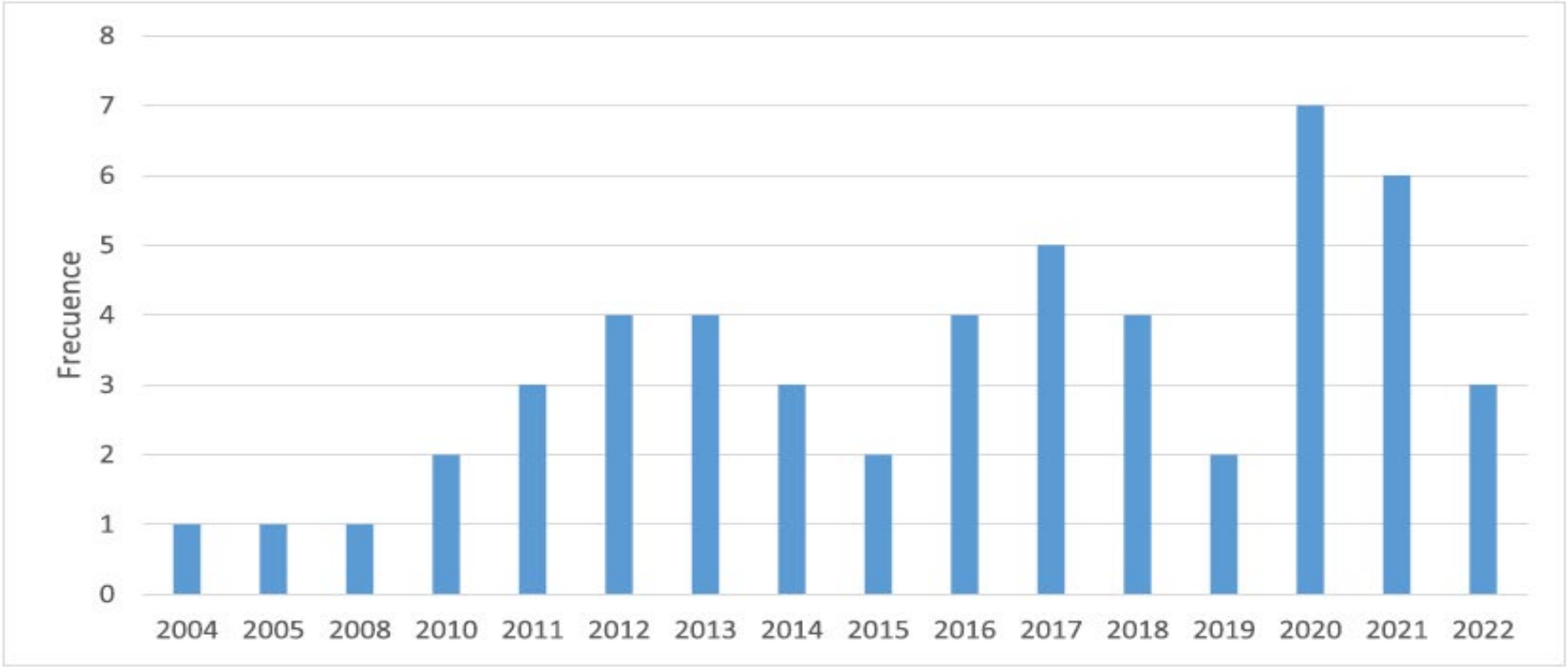


**FIGURE 2** | Retracted articles by Mexican authors per year of publication.

K. Ordoñez-Torres, S. Litewka, and E. Heitman, " What Retractions Tell Us About Research Integrity in Mexican Academia," *Developing World Bioethics* 0 (2025): 1- 10, https://doi.org/10.1111/dewb.70011.

# Building Research Integrity Capacity in LAC: Some Suggestions

- Develop institutional policies defining research misconduct
- Research integrity education starting at undergraduate level
  - While effectiveness remains debated, programs raise awareness of inappropriate practices: plagiarism, text recycling, image duplication, undeserved authorship, poor conflict of interest management, fabrication, and falsification
- Foster ethical institutional climate by aligning administrative practices with integrity principles
- Increase investment in research integrity resources
  - Funding agencies may consider to request that a percentage of grant funding should be allocated for the creation of research integrity offices, data management structures, and quality assurance systems
- Enhance transparency and accountability at all levels
- Promote collaborative approaches
  - Partnerships with institutions from countries with developed research integrity systems provide critical support through benchmarking, training, policy development, and institutional learning
- Create a national or regional database of retracted articles

K. Ordoñez-Torres, S. Litewka, and E. Heitman, " What Retractions Tell Us About Research Integrity in Mexican Academia," *Developing World Bioethics* 0 (2025): 1- 10, **https://doi.org/10.1111/dewb.70011**.