Research Integrity at Brazilian Universities: The Case of the Federal University of Rio de Janeiro, UFRJ

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I. UFRJ: A Brief Overview
Federal University of Rio de Janeiro

- Created in 1920 by the union of 3 schools: the Medical School (1808), the Polytechnic School (1810), and the Law School (1891). By then it was called Universidade do Rio de Janeiro;

- Reorganized in 1937 as University of Brazil. There were 15 faculties then.

- Named Universidade Federal do Rio de Janeiro (Federal University of Rio de Janeiro) in 1965.
<table>
<thead>
<tr>
<th>Undergraduate Studies</th>
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<tr>
<td>Undergraduate Courses</td>
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<tr>
<td>Enrolled Students (2013)</td>
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<tr>
<td>Enrolled Distance Education Students</td>
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<tr>
<td>Scholarships</td>
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## Graduate Studies

<table>
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<tr>
<th>Programs</th>
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<tbody>
<tr>
<td>Sensu Lato (Certificate Courses)</td>
<td>315</td>
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<tr>
<td>Strictu Sensu Courses</td>
<td>168</td>
</tr>
<tr>
<td>• Master’s</td>
<td>86</td>
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<tr>
<td>• Professional Master’s</td>
<td>9</td>
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<tr>
<td>• Doctorate</td>
<td>75</td>
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<table>
<thead>
<tr>
<th>Enrolled Students</th>
<th>10,549</th>
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<tbody>
<tr>
<td>• Master’s</td>
<td>5,522</td>
</tr>
<tr>
<td>• Professional Master’s</td>
<td>388</td>
</tr>
<tr>
<td>• Doctorate</td>
<td>5,038</td>
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<tr>
<th>Graduated Scholarships</th>
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<tbody>
<tr>
<td>• Master’s</td>
<td>1,902</td>
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<tr>
<td>• Doctorate</td>
<td>1,947</td>
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<th>Capes Evaluation (2010)</th>
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<td>• 3 and 4</td>
<td>42</td>
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<tr>
<td>• 5</td>
<td>31</td>
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<td>• 6 and 7</td>
<td>34</td>
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<th>Extension</th>
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<tr>
<td>• Programs</td>
<td>15</td>
</tr>
<tr>
<td>• Projects</td>
<td>112</td>
</tr>
<tr>
<td>• Classroom-based Courses</td>
<td>110</td>
</tr>
<tr>
<td>• Distance Education Courses</td>
<td>6</td>
</tr>
<tr>
<td>• Reached Public</td>
<td>1,036,990</td>
</tr>
</tbody>
</table>
Ocean Basin
- The deepest ocean basin in the world;
- Studies, tests and simulation of equipment and structures in profound waters.

Pre-Salt Technologies
- Studies and computational simulations for the analysis of tensions around non-conventional wells: wide range wells, horizontal wells, multilateral wells etc.

Hybrid Bus
- Capacity: 64 passengers
- Fuel Cell (hydrogen) + battery;
  Ethanol Engine + Battery;
  Battery.
National Museum - It is the largest museum of Natural History and Anthropology in Latin America. Created in 1818 by D. João VI, King of Portugal. The Museum was incorporated in 1946 to the Universidade do Brasil.

Science Park

40

Large 33%
PMEs 25%
Start Ups 42%

National Center for Bioimaging and Structural Biology
UFRJ: Increasing Collaboration to Foster Initiatives to Promote Research Integrity

http://www.ibrispe.coppe.ufrj.br/

II BRISPE, May 28 - June 1, 2012

http://www.ibrispe.coppe.ufrj.br/
Joint Statement on Research Integrity of the II BRISPE (focused on Brazilian institutions)

RESEARCH INTEGRITY, ACCOUNTABILITY, and EDUCATION
II. Research Ethics Advisory Council

Câmara Técnica de Ética em Pesquisa

UFRJ
Organizational Structure

Created by Administrative Act No. 8645, July 30, UFRJ, 2013
Growing concern about ethical issues in doing and communicating academic research and about the role of universities in addressing these issues;

Increasing demand for accountability in science and for universities to stimulate responsible research and innovation, as well as to promote social justice and benefit society;

Increasing need to foster ethical standards and responsibility among staff, students, junior and senior researchers;

Recognition by UFRJ that the quality of its teaching and research contributions - locally and globally – depends on academic integrity.
Members of CTEP

I – PR2 [Provost for Research and Graduate Studies];

II – Faculty, technical staff and students (undergrads/grads) who have a special interest in research ethics/integrity, from widely different fields. ~ 30 people!!

New member - Undergraduate student who copied the “monograph” from a friend. She was caught and lost her degree. I invited her to work with us at CTEP! (I will came back to this issue after… )
CTEP is organized into six subcommittees (each has a Coordinator and Vice-Coordinator):

- (1) Research involving human subjects;
- (2) Research integrity and responsible conduct of research;
- (3) Use of animals for scientific and teaching purposes;
- (4) Biosafety in teaching and research;
- (5) Access to biodiversity, genetic resources and associated knowledge;
- (6) Relationship between university and industry, innovation and intellectual property.
RESEARCH WITH HUMANS

INTEGRITY & RESPONSIBLE CONDUCT IN RESEARCH

RESEARCH WITH ANIMALS

UNIVERSITY/INDUSTRY RELATIONSHIP

ACCESS TO BIO-DIVERSITY

BIOSAFETY

Ethics Commission for Animals Use CCS (2008)

UFRJ Agency of Innovation (2007)

Research Ethics Committee
IESC; HUCFF-FM; IPUB; INDC; IPPMG; EEAN-HESFA; ME; CFCH

CTEP

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Subcommittees as Working Groups

- Each subcommittee, which functions as a working group, has a coordinator and a vice-coordinator;
- The subcommittee should have regular meetings for its members;
- The subcommittees should disseminate information for all CTEP members and cooperate for initiatives, especially educational, with other sub-committees.
1. Research on Human Subjects

- Guidelines for researchers and students to use CEP/CONEP [Research Ethics Committees*/National Commission for Research Ethics] system. CEP/CONEP system uses “Plataforma Brasil”, a digital platform, for submission and ethical review of research on human subjects;

- Design of research ethics courses and educational materials for undergraduate and graduate students at the university;

- Biannual meeting of Research Ethics Committees at UFRJ to exchange experiences, harmonize policies and procedures.

* Brazilian CEPs[Research Ethics Committees] are equivalent to Institutional Review Boards (IRBs) in the US
2. Research Integrity and Responsible Conduct of Research

- Address critical issues on the responsible conduct and communication of research at UFRJ;

- Promote activities that can help novice and experienced researchers to develop a critical attitude toward research integrity and its relationship with the quality of its contributions locally and globally;

- Promote regular seminars and workshops and develop educational materials on research integrity for undergraduate and graduate students in all fields at UFRJ;

- Develop guidelines particularly focusing on plagiarism and intellectual property for the academic community at UFRJ (ongoing);

- Help develop an academic integrity policy at UFRJ (ongoing) and institutional mechanisms to investigate allegations of research misconduct and questionable practices in the conduct and/or publication of research.
3. Use of Animals for Teaching and Research Purposes

- Ensure compliance with policies and guidelines established by the Institutional Animal Care and Use Committee (CEUAS, in Brazil);

- Record and monitor all spaces for maintenance and breeding of animals used for scientific and educational purposes at UFRJ, according to federal ethical and animal welfare standards;

- Offer orientation through courses and seminars for students and teachers who use animals for scientific and educational purposes.
4. Biosafety in Teaching and Research

- Guidelines for minimizing risks (biological, chemical, physical, ergonomic) and accidents at UFRJ labs and other facilities, including orientation for correct disposal of waste generated by research activities;

- Guidance on procedures for implementation and development of research with genetically-modified organisms;

- Support the creation of biosafety committees at research units at UFRJ;

- Development of educational activities for undergraduate and graduate students and technicians.
5. Biodiversity, Genetic Resources and Associated Knowledge

- Promote seminars, workshops, and courses at the University Forum for researchers, students and administrative staff;
- Assist researchers with compliance with Brazilian federal regulations by CGEN, CNPq, IBAMA and IPHAN in their research projects using biodiversity, genetic resources and associated knowledge;
- Discussion and dissemination of regulations involving access to biodiversity, genetic resources and associated knowledge.
6. University-Industry Cooperation, Innovation and Intellectual Property

- Guidelines on conflict of interests, ownership, and authorship in collaborative projects between UFRJ and the private sector, on ethical issues related to sharing of knowledge, laboratories, equipment, tools, materials and other facilities with the private sector;

- Guidelines for researchers to avoid unethical behavior in university-private sector relationships;

- Development of teaching materials and courses (especially distance-learning materials).

- **Directives for academic integrity-UFRJ** TO BE LAUNCHED IN SEPTEMBER;
  - Launch of the website;
  - TurnItIn – we have just signed it! But, we have to discuss deeply what we are going to do with uncovered FFP cases.…

- **3rd Forum - Meeting of the Research Ethics Committees** [CEPs, equivalent to Institutional Review Boards] of UFRJ;

- Development of “Train the Trainers” Workshops on Responsible Conduct and Communication of Research for Faculty;

- Forums and Seminars for Undergraduate and Graduate Students on ethical issues associated with the six topics addressed by the subcommittees;

- Institutional support for CTEP to develop mechanisms to tackle misconduct and other unethical practices by members of the UFRJ community;

- Strategic meetings to monitor and develop educational actions by the six subcommittees.
Concluding Remarks:

- CTEP’s major contribution will be to develop educational actions to address academic integrity and current ethical challenges in research at the university.

- The actual role of CTEP in the administrative structure of UFRJ is still evolving. However, it is clear that it has an important advisory role for decisions to be taken when it comes to research ethics and the responsible conduct of research.
Science Ethics: Young scientists speak (http://scim.ag/NextGen11Results), Science 4 July, 2014

Young scientists’ concerns

• “How ought we communicate about the promise of novel biotechnologies with the aim of catalysing public support while avoiding hype?”
  
  Sheila Benjaminy

• “Why not catch the criminal (scientist who fabricate data) before they commit the crime?”

  Rosalie Doerksen

• “….in China, most universities did not offer courses concerning scientific integrity or a code of scientific conduct…”

  Fengbo Li

• “In genetic research it is likely that I will encounter incidental finding of BRCA, CF, Alzheimer’s... Should I contact the sample provider?”

  Girish Valluru

• “How do we achieve consensus among researchers, pharmaceutical industry representative, ethics boards, families advocates on best ethical practices for conducting large scale multicenter clinical trials…?”

  Nina Di Pietro

• etc…
A recent case of plagiarism at UFRJ

Our students: the next generation of researchers!

This specific case was discussed by the University Council, the most important council of UFRJ.

**Decision:** the student lost her degree in History, but the Council decided to readmit her, to give her an opportunity to write a new monograph (+ working at CTEP with us!).

In the process, there was a letter from the student who committed plagiarism apologizing publically for her misconduct and describing all her suffering after she was caught. She visited all her professors asking for excuses and lost most of her friends....

**Questions (on my mind...):**

- Should this student (or students, in general) have another opportunity?
- Was her “crime” already “paid” with all her suffering+loss of her degree?
- In a university, what would be the best method of education: a new opportunity or no opportunity?
- Do we teach adequately our students about research integrity? About how they should cite someone else’s work? Is honesty something to be taught?
- **DO WE SPEND ENOUGH TIME READING THE PROJECTS, THE EXAMS, THE MONOGRAPH/THESIS FROM OUR STUDENTS IN ORDER TO STIMULATE THEM TO BE CREATIVE, TO SEND THEM SIGNS WE CARE ABOUT WHAT THEY WRITE?**