



Brazil

Each MSI Institute in Brazil takes the form of a network of excellence. A lead institution, or “main node,” links as many as twenty-seven affiliated centers around the country. While the majority of the institutions involved already meet the stringent standards of the MSI, a program of Centers in Development links emerging research institutions with these MSI networks, thereby extending the mentoring function of the MSI.

Of the seventeen MSI Institutes selected in Brazil’s first MSI competition in 2002, two operate in strategic fields as defined by Brazil’s Ministry of Science and Technology. One focuses on Brazil’s semi-arid northwest region, and the other on the country’s coastal resources. The remaining fifteen were selected in a competition open to applicants in any field of science. All seventeen underwent a rigorous competitive process of international peer review.

A second-round competition is underway as of 2005.

Brazil’s MSI Institutes, including name, main node, coordinator, and number of affiliated centers, are:

Global Integrated Advancement of Mathematics in Brazil and Contribution to the Region, Instituto Nacional de Matemática Pura e Aplicada, Jacob Palis, 27 centers

Institute Factory of the Millennium, Universidade de São Paulo–São Carlos, João Fernando Gomes de Oliveira, 6 centers

Mangroves: Structure, Function, Evolutionary History, Sustainable Use, and Relationships to Other Ecosystems, Universidade Federal do Pará, Horácio Schneider, 6 centers

Millennium Institute on Stellar and Galaxy Evolution in the Era of Large Telescopes: Implementation of Instrumentation for SOAR and GEMINI (MEGALIT), Universidade de São Paulo, Beatriz Leonor Silveira Barbuy, 19 centers

Integration of Genetic Breeding, Functional and Comparative Genome of Citrus, IAC/Centro de Citricultura Sylvio Moreira, Marcos Antônio Machado, 6 centers

Integrated Strategies for Research and Control of Tuberculosis in Brazil: New Drugs and Vaccines, Diagnostic Tests and Clinical-Operational Evaluation, Universidade de São Paulo–Ribeirão Preto, Célio Lopes Silva, 17 centers

Land Use Changes in Amazon: Climatic and Carbon Cycling Implications—Milênio LBA, Universidade de São Paulo, Paulo Eduardo Artaxo Netto, 13 centers

Institute of Quantum Information, Universidade Federal do Rio de Janeiro, Luiz Davidovich, 9 centers

Millennium Institute of Complex Materials, Universidade de Campinas, Fernando Galembeck, 4 centers

Institute of Nanosciences, Universidade Federal de Minas Gerais, Alaor Silverio Chaves, 15 centers

Water: A Mineral Approach, Universidade Federal de Minas Gerais, Virginia Sampaio Teixeira Ciminelli, 10 centers

Instituto Multidisciplinar de Materiais Poliméricos IMMP, Universidade de São Paulo, Roberto Mendonça Faria, 17 centers

Institute for Immunological Investigation, Universidade de São Paulo, Jorge Kalil, 7 centers

Tissue Bioengineering: Cell Therapies for Chronic Degenerative Diseases, Fundação Oswaldo Cruz, Ricardo Ribeiro dos Santos, 13 centers

Research Network on System-on-Chip, Microsystems and Nanoelectronics, Universidade de Campinas, Jacobus Willibrordus Swart, 7 centers

Millennium Institute of the Semi-Arid: Biodiversity, Bio-Prospecting and Conservation of Natural Resources, Universidade Estadual de Feira de Santana, Ana Maria Giuliatti, 23 centers

Use and Appropriation of Coastal Resources, Fundação Universidade Federal de Rio Grande, Jorge Pablo Castello, 15 centers

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The following MSI projects were selected in 2005:

Institute for Immunological Investigation,
George Kalil*

Millennium Institute of Semi-Arid Regions,
Ana Maria Giulietti*

Integration of Environmental Approaches,
Land Use and Social Dynamics in the
Amazon: Human-Environmental Relations
and the Challenge of Sustainability, Paulo
Eduardo Artaxo Netto*

Micro- and Nanoelectronic Technologies for
Integrated Intelligent Systems, Jacobus
Willibrordus Swart*

Integrated Strategies for Research and
Control of Tuberculosis in Brazil, Celio Lopes
Silva*

Global and Integrated Advances in
Mathematics and Regional Contributions,
Jacob Palis*

Millennium Institute of Manufacturing, João
Fernando Gomes de Oliveira*

Intolerance and Tolerance, Segment I:
Induced Demand, Democracy, and
Citizenship, Anita Waingort Novinsky

Millennium Institute of Vaccine Development
and Manufacture, Ricardo Tostes Gazzinelli

The Social Dimension of Inequality:
Indicators of Stratification and Social Mobility,
Nelson do Valle Silva

The Use of Biodiversity as a Source of New
Chemical Compounds Against Molecular
Targets for Treatment of Malaria,
Tuberculosis and Illnesses Caused by T-cell
Lymphocytes, Luiz Hildebrando Pereira da
Silva

Millennium Institute for Development of
Drugs Based on Peptide Toxins, Marcus
Vinicius Gomez

Institute of Nanotechnology, Belita
Koeller

Productivity, Sustainability and
Utilization of the Humpback Whale
Ecosystem, Eurico Cabral de Oliveira
Filho

Implementation and Growth of
Telemedicine in Brazil, Eduardo Massad

Network of Gene Therapies, Rafael
Linden

The Impact of Violence on Mental
Health in Brazil, Jair de Jesus Mari

Millennium Institute of Quantitative
Information, Amir Ordacgi Caldeira

Millennium Institute of Complex Fluids:
Liquid Crystals, Magnetic Fluids and
Biological Applications, Antonio Martins
Figueiredo Neto

Institute for Nonlinear Optics, Cid
Bartolmeu de Araújo

Millennium Institute of Innovation and
Development of New Pharmaceuticals
and Drugs, Eliezer Jesus de Lacerda
Barreiro

Productivity Increases in Brazilian
Agriculture via Biological and
Transgenic Nitrogen Fixation, Fabio de
Oliveira Pedrosa

Genetic Ancestry and National Identity –
Biomedical and Forensic Implications,
Francisco Mauro Salzano

Techniques to Combat Plant Poisoning in
Herbivores in Brazil and the Study of Toxic
Plants in the North, Northeast and Central
West, Franklin Riet Correa

Millennium Institute of Complex Materials,
Henrique Eisi Toma

Millennium Institute of Structural Biology in
Biomedicine and Biotechnology, Jerson Lima
da Silva

Urban Studies: Territory, Social Cohesion
and Democratic Governance, Luiz Cesar de
Queiroz Ribeiro

Transfer of Nutrients and Heavy Metals in
Land-Ocean Interactions in Five Basins of the
Southeastern and Northeastern Brazilian
Coast, Luiz Drude de Lacerda

Evolutionary Psychology, Maria Emilia
Yamamoto

Historical Dictionary of Brazilian Portuguese
(16th, 17th and 18th Centuries), Maria Tereza
Camargo Biderman

Origin and Evolution of Migration Among the
First Human Groups of Southeastern Piauí,
Niede Guidon

Redox Reactions: Molecular Bases and
Therapeutic Implications, Ohara Augusto

Geophysical and Tectonic Studies of
Borborema Province, Reinhardt Adolfo Fuck

Multidisciplinary Institute of Polymeric
Materials, Yvonne Primerano Mascarenhas

*Renewal