UM/USP Medical School Meeting
How FMUSP has sought to develop and nurture International Collaborations:
lessons from UM-Brazil initiatives

Ana Claudia Latronico, M.D., Ph.D.
Full Professor of Endocrinology and Metabolism
Chief of the Internal Medicine Department
Vice-President of Committee on International Affairs
Medical School of São Paulo University
Sao Paulo, Brazil

• 1912- Foundation (102 years)

• Undergraduate courses in Medicine, Physical Therapy, Speech and Occupational Therapy

• Mission
  • The main mission of the FMUSP-HC System is to provide assistance to patients, teaching, research and extramural activities with emphasis on a multidisciplinary and multi-institutional approach, adaptable to the Brazilian reality, and able to contribute to the quality of the Brazilian public health system

USP Medical School

Hospital das Clínicas
It provides education, research and health services (high complexity treatments) 2,200 beds spread among specialized institutes

FMUSP-HC system
Sao Paulo Cancer Institute (ICESP)
Goals of Medical School (FMUSP 2020)

- Internationalization
- Increase the current structure and organization (committees, office staff, programs, actions)
- Promote international visibility
- Build international networks (Institutional Partnerships)

International Housing at USP Medical School

18 rooms (36 beds) for international students at Hospital das Clínicas area

Longstanding Collaborations

Stefan S. Fajans, M.D.
Professor Emeritus of UM Endocrinology and Metabolism

Bernardo Lüs Wajchenberg, M.D.
Professor Emeritus of USP Endocrinology and Metabolism

Burton L. Baker, Ph.D.
Outstanding Professor of Cell Biology

Flávio Fava de Moraes, Ph.D.
Former USP Rector
Current President of SP Medical Foundation
History of Institutional Cooperation

- First visit of Michigan’s Delegation to São Paulo Medical School
  - October 2010

- First USP and UM Symposium at Convention Center
  - April 2011

- USP delegation visits Michigan University
  - April 2012

- Second USP and UM Symposium at USP
  - December 2012

- President Mary Sue Coleman’s visit
  - November 2014

UM/USP Platform

- Education and Training Core
  - Exchange of undergraduate students
  - Exchange of medical residents, fellows and faculty members

- Research Core
  - Translational and clinical research
Education

**USP Undergraduate Students**

- **Thales Ishizaki** (M3)
  Period: December 2011 to January 2012

- **Tatiana Yendo** (M3), **Tamires Rocha** (M3), **Juliana Nogueira** (M3) and **Marianna Hollaender** (M3)
  Department of Obstetrics and Gynecology
  Department of Neurology
  Period: December 2012 to January 2013
  Financial support: USP (Academic merit fellowship)

- **Thiago Nogueira** (M4)
  Endocrinology- Prof. Gary Hammer’s Laboratory
  Period: December 2013 to January 2014
  Financial support: USP (Academic merit fellowship)

- **Leonardo Lima** (M5) and **Thaisa Barbosa** (M5)
  Internal Medicine Department
  Period: January to March 2014
  Validation of credits
  Financial support: USP (Academic merit fellowship)

- **Arthur Seokjae Hang**
  Endocrinology Division (HC and ICESP)
  Period: February 2012 to March 2012

- **Alberta Hsueh-Min Yen**
  Infectious Diseases Department
  Period: April 2012

**UM Undergraduate Students**

- **Thaisa Silveira Barbosa** (USP-M5) with UM colleagues (January/ March 2014)
**Education**

**UM Undergraduate Students**

- Adam Smith  
  Department of Gynecology and Obstetrics  
  Period: February to March 2014

- Stephanie Chalifour, Marlon Emmanuel Bohorquez, Miguel Alfonso Rovira, Simanjit Kaur Mand, Pooja Agrawal and William Shield III  
  Primary Care  
  Period: June to August 2014

**Selected USP Undergraduate Students 2015**

- Ligia Couceiro (M5)  
- Wellington M. Candido (M6)  
- Ana Flavia Garcia (M5)  
- Edgard Katayama (M5)

**Opportunities in the Research Labs**

- Antonio Marcondes Lerario M.D. Ph.D.  
  Gary Hammer’s Laboratory (UM)  
  Main field: Next generation sequencing analysis  
  First Period: November 2011- April 2012  
  Second Period: 2013-to date

- Lorena Lima, M.D.  
  Gary Hammer’s Laboratory (UM)  
  Main field: animal models for understanding adrenal tumorigenesis  
  Period: March 2012- April 2012

**Research Program**

**Current Thematic Areas**

- Endocrinology  
- Primary Care  
- Spinal Cord Injury  
- Gynecology
Discovering Common Interests

Adrenal Tumors

- Brazil has one of the highest concentrations of adrenal cancer in the world
- UM’s Endocrine Oncology Program is an international destination program center of excellence for treatment of adrenal cancer

Publications

   The combination of insulin-like growth factor receptor-1 (IGF1R) antibody cirunatumab and mitotane as a first-line therapy for patients with recurrent/metastatic adrenocortical carcinoma: a multi-institutional NCI-sponsored trial.

   The combination of insulin-like growth factor receptor 1 (IGF1R) antibody cixutumumab and mitotane as a first-line therapy for patients with recurrent/metastatic adrenocortical carcinoma: a multi-institutional NCI-sponsored trial.

   Genetics and epigenetics of adrenocortical tumors.

   POD-1 binding to the E-box sequence inhibits SF-1 and StAR expression in human adrenocortical tumor cells.

   Progression to adrenocortical tumorigenesis in mice and humans through insulin-like growth factor 2 and β-catenin.

On Going Research Project in Spinal Cord Injury

Poster presented jointly by Rafael Yamauti MD (USP) and Denise Tate Ph.D. (U-M) at the 51st Annual Scientific Meeting of the International Spinal Cord Society in London (Sept. 2012).

Dr. Julia Grewe’s Resident Physician Lecture in the Department of Physical Medicine and Rehabilitation, University of Michigan Div. Tate, Grewe and Hurvitz, PM&R Chair.

Studies in Primary Care

Training courses performed by Dr. Michele Heisler and Dr. Ken Resnicow to Brazilian health professionals of Western Region community of Sao Paulo city.

11/19/14
Potential Funding Sources in Sao Paulo/Brazil

- Research Agencies
- FAPESP
- CAPES
- CNPq

- USP programs
- Private Funds

Cooperation Agreement between FAPESP and UM

- Agreement signed in September, 25, 2012
- Aims to support the development of joint research projects and may include the exchange of researchers and post-doctorate students in any academic discipline
- Projects are selected through calls for proposals (maximum of 5 proposals). Duration: 24 months

Eligibility

- Sao Paulo Institutions: Principal Investigators of ongoing research projects funded by FAPESP

- University of Michigan: Faculty members and researchers who are assistant, associate or full professors, research professors or research scientists, or clinical faculty engaged in research.

Funding principles

FAPESP will provide funding of up to US$10,000 per proposal per year and UM will provide funding of up to US$10,000 per proposal per year, for the duration of the grant to cover research-related mobility expenses.
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<tr>
<th>Researchers</th>
<th>Project title</th>
<th>Area</th>
<th>FAPESP#</th>
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<tbody>
<tr>
<td>Alexandra Valéria Maria Brentani (USP)</td>
<td>Development of standard methods to evaluate driving among older individuals with and without disabilities: a collaborative research project</td>
<td>Health</td>
<td>2013/50160-4</td>
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<td>Michele Heisler (UM)</td>
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<td>Eurico de Arruda Neto (USP- Ribeirão)</td>
<td>Neuropathogenesis of Oropouche virus in a mouse model</td>
<td>Health</td>
<td>2013/50140-3</td>
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<td>Katherine Spindler (UM)</td>
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<td>Gilberto Câmara Neto</td>
<td>Governance of land-use change: a collaboration to understand the impacts of institutional arrangements on Amazonian Forest resource use</td>
<td>Human Sciences</td>
<td>2013/50105-3</td>
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<td>Arun Agrawal (UM)</td>
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<td>Holmer Savastano Júnior</td>
<td>Development and characterization of green durable concrete for truly sustainable infrastructure applications</td>
<td>Engineering</td>
<td>2013/50107-6</td>
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<td>Victor Li (UM)</td>
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<tr>
<td>Julia Maria D’Andréa Greve (USP)</td>
<td>Development of standard methods to evaluate driving among older individuals with and without disabilities: a collaborative research project</td>
<td>Health</td>
<td>2013/50138-9</td>
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<td>Denise Tate</td>
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<td>Carlos Rossa Junior</td>
<td>Modulation of adaptive immunity by soluble products of head and neck squamous cell carcinoma (HNSCC) cells: a role for tumor-derived galanin?</td>
<td>Health</td>
<td>2014/50312-1</td>
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<td>Nisha Jacinta D’Silva</td>
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<td>Gabriela Marques Di Giulio</td>
<td>Governance, sustainability and climate issues in urban environments: the role of scientific knowledge and networks in shaping citizens’ capacity to respond to climate impacts</td>
<td>Human Sciences</td>
<td>2014/50313-8</td>
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<td>Maria Carmen Lemos</td>
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<td>Rafael Silva Oliveira</td>
<td>Hydraulic factors of rainforest resilience</td>
<td>Human Sciences</td>
<td>2014/50332-2</td>
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<td>Valery Ivanov</td>
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<td>Sandra Augusta Santos</td>
<td>Solving nonconvex formulations of Euclidean Steiner tree problems in N-space</td>
<td>Human Sciences</td>
<td>2014/50309-0</td>
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<td>Jon Lee</td>
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### Science in Brazil

**Major Challenges of Science in Brazil**

- Increase the number of PhD’s relative to population
- Enhance the interaction between academia and both the business sector and civil society
- Promote international collaborations in scientific publications
- Foster the rate of patent applications nationally and internationally
Aims of Science Without Borders

- Increase the presence of students, scientists and industry personnel from Brazil in international institutions of excellence
- Encourage young talents and highly qualified researchers from abroad to work with local investigators in joint projects
- Induce the internationalization of universities and research centers in Brazil by encouraging the establishment of international partnerships

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Science Without Borders Opportunities

- **To Foreign Researchers** - Special Visiting Researcher scholarship program aims attract a senior foreign researchers recognized internationally to conduct projects with Brazilian research groups and visit Brazil for up to three months each year over two to three years
- **To Brazilian Researchers** – scholarships for Brazilian students to doctoral and postdoctoral keep projects in Brazil and abroad.

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Next Steps of the UM/USP Platform

- Improve our collaborations through the creation of a more dynamic network between USP and UM faculty members (Institutional media)
- Organize Annual USP/UM Symposia with common interest health topics
- Stimulate long term fellowship of medical residents and postgraduate fellows (“sandwich” doctorate and post-doc) that could become a strong research activity link between both Institutions
- Explore the pre existent financial supports and create a specific fund for USP/UM activities (private sources and donations)

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Acknowledgments

- Sao Paulo Medical School International Affairs Committee and Staff – Ms. Talita Almeida and Mr. Douglas Bartholomeu
- Global Reach Faculty and Staff – Mrs. Elisa Teixeira
- All USP and Michigan Colleagues
Thank You!