UMHS/UMMS – FMUSP Adrenal Platform

PANSAT
(Pan-American Network for the Study of Adrenal Cancer)

“The Team, The Team, The Team”
Colleagues

UMHS/UMMS – FMUSP Adrenal Platform
ICE – 2008
CONCEPT of Collaboration

Presidental Delegation 2013
Developing Synergies and Cooperative Project teams

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Staff of Lab – LIM42

Hospital das Clínicas
Unidade de Suprarrenal
Laboratório de Hormônios e Genética Molecular

Instituto de Câncer
de Estado de São Paulo
(ICESP)

Instituto de Ciências Biomédicas
Departamento de Anatomia
Development of Collaborative platform

Priority 1: Advance Research
Priority 2: Advance Clinical care for the UNDERSERVED
Priority 3: Advance Medical Education

Unique scientific strengths
Unique patient populations

UM
Animal models
Signaling/transcription/cell biology
Basic adrenal development
Steroidobolomics/Genomics
Adrenal cancer/CAH

USP
Unparalleled patient population
Molecular genetics
Translational research
Clinical research
Adrenal cancer/CAH

UmHS/UMMS – FMUSP Adrenal Platform

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UM
MICHIGAN CENTER FOR CAH

BRAZILIAN CAH MULTICENTER STUDY GROUP

Unique P53 mutation in South Brazil–ACC (15X prevalence ACC)

P53 R337H

BRAZILIAN CAH MULTICENTER STUDY GROUP

Zambretti, GP 2007

Unique P53 mutation in South Brazil–ACC (15X prevalence ACC)

P53 R337H

Zambretti, GP 2007

 Oliveira, EL et al 2003

DiGiammarino, EL et al 2003
7.5 PERCENT of ADULT ACC Patients have GERMLINE mutations in P53

Counseling and P53 germline testing for all ACC patients

Raymond VM et al 2013


Claudimara Lotfi, Ph.D.

UofM Gary Betty Faculty Scholar Program

Pioneering molecular genetics of adrenal development
POD1 downregulates SF1
POD1 inversely correlates with SF1 in ACC

França MM, et al 2013

Lorena Oliveira Lima - Graduate Student
C.A.P.E.S Brazilian Scholar Program
Characterized the role of various factors in animal models of adrenal development

Thiago Nogueira - Medical Student
C.A.P.E.S Brazilian Scholar Program
Characterized the natural history of small adrenal masses imaged on CT that ultimately developed into ACCs

Radiographic Characteristics of Incidentally Discovered Masses in Pts Later Diagnosed with ACC

Nogueira, TM et al (In Revision)
Initiated a whole genome (next generation) sequencing project in adrenal cancer

Coordinated publication on targeting IGF pathway in ACC

IGF2 as potential drug target for ACC

IGF inhibition to treat adrenal cancer

Almeida et al. JCEM 2008
IGF inhibition to treat adrenal cancer

3 clinical trials: Phase 1, 2 and 3

- Pre-treatment
- Post-treatment

Complete radiologic resolution of pulmonary metastasis in ACC patient treated with targeted therapy against IGF1R

Sustainable results but only in <10% of patients

WHERE DO WE GO FROM HERE?

PANSAT
PanAmerican Network for the Study of Adrenal Tumors
Shared USA-BRAZIL database-registry
(clinical and genetic)

POPULATION GENETICS IS HERE

PERSONALIZED MEDICINE is COMING
PanAmerican Network for the Study of Adrenal Tumors (PANSAT)

Shared USA-BRAZIL database-registry (clinical and genetic)

Roles in adrenal cancer

TCGA – ACC

Whole Genome Sequencing

USA – Michigan, MDA
Brazil – Sao Paolo
Australia – Sydney
Europe (ENSAT) – France, Germany, Italy

Roles in adrenal cancer

TCGA – ACC dashboard
