International Infectious Disease Research and Mentoring: Tufts University School of Medicine and TMC

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Disclaimer

- NOT outlining research work going on globally by Tufts faculty
  - Not focus of talk
  - Not enough time
  - Don’t want to exclude anyone

- Focus
  - (mostly) international trainees at Tufts; multiple Tufts residents, fellows, medical and PH students have participated but few are mentioned
  - Infectious Disease
International Health Projects at Tufts

Vellore, India
Cryptosporidiosis
Probiotics
HIV/AIDS and Nutrition

Karachi, Pakistan
Zinc supplementation and intestinal microbiota

Voi, Kenya
HIV/AIDS and Cryptosporidiosis

International Health Projects at Tufts

Chennai, India
HIV/AIDS and nutrition, HIV and Drug use

Nairobi, Kenya
HIV/AIDS and Cryptosporidiosis

Kampala, Uganda
Respiratory Cryptosporidiosis
HIV/AIDS

Karnal, India
Measles vaccine

Pune, India
HIV/AIDS and Nutrition, HIV resistance

Dhaka, Bangladesh
Cryptosporidiosis, Cholera

Legon, Ghana
HIV/AIDS, Schistosomiasis

Shanghai, China
Cryptosporidiosis

Hannover, Vietnam
HIV/AIDS, and Nutrition, HIV resistance

Chennai, India
HIV/AIDS and nutrition, HIV and Drug use
Why do International research and mentoring?

- Tufts University Mission includes Global Citizenship
- Unique medical problems of significant public health importance
- Teasing out unique risks for disease: genetics, diet, environment
- Ability to do T3-T4 translational research (translation to program and policy)
- Opportunities to collaborate with extraordinary colleagues and institutions
How Have We Supported Global Health Training at Tufts?

- T32 NIH Training grants in Infectious Disease
- Tally Fellowship
- NIH Fogarty AIDS International Research Training Program (AITRP)
  - Thailand, India, Vietnam, Cambodia, Kenya, Ghana, and Namibia
- Short term training or degrees at Tufts
  - Masters/Doctorate of Public Health
  - Masters/Doctorate in Clinical Research
  - Masters/Doctorate in Nutrition
How Have We Supported Global Health Training at Tufts?

- Fogarty Global Health Innovations
  - CMC, Vellore, S India and Tufts; School of Medicine and TMC

- Fogarty Global Infectious Disease Research (GIDR)
  - PI (Dr. G Kang) at CMC

- Center for AIDS Research (CFAR) pilot project grants
  - Junior faculty in the US or at international sites
Voi, Kenya
International Research: Kenya

- Nutrition and HIV progression in rural Kenya (Voi) (intervention study)
- HIV transmission knowledge and predictors
- Food insecurity and HIV
- Malaria and HIV progression in rural Kenya
- Management of Non Communicable Diseases in Kenya
- HPV disease and cervical cancer

Multiple trainees at all levels from Tufts have worked on projects in Voi
International Research: Africa
Nairobi, Kenya

• Jane Wanyiri, Fogarty Scholar

• Kenya Medical Research Institute and
  Kenyatta National Hospital

• Cryptosporidiosis in HIV/AIDS
  • Clinical features and epidemiology
  • Molecular epidemiology
  • Immune Response to crypto
Multiple trainees at all levels from Tufts have worked on projects in Namibia.
WHO HIV drug resistance early warning indicators
WHO HIV drug resistance monitoring surveys
ART patient tracing intensification and predictors of loss to follow-up
ART adherence measures
Food insecurity and ART adherence
Pre-ART patient retention
Namibia Fogarty Training Grant

☐ Newest of our Fogarty Grants

☐ With University of Namibia Medical School
  □ And with Ministry of Health and Social Services

☐ Trainees include:
  □ 2 CFAR pilot project awardees
  □ 1 applicant to MPH
  □ 1 applicant to DrPH
  □ 1 applicant to nutrition school
  □ 2 short term trainees to work on data analysis
International Research: Asia
Chennai, India

YRG CARE

• HIV/AIDS
  • Nutrition and Metabolic
  • Status of HIV-Infected ART treated individuals
  • CVD Risk in HIV
  • Food Security in HIV
• Suneeta Saghayam, PhD
  • Fogarty Fellow
  • Earned PhD
  • Has GRIP award to study Nutritional and Metabolic Impact of ART
National Institute for Research in Tuberculosis (ICMR)
Workshop on
“Triple Trouble” : Malnutrition, TB & HIV
August 2-4, 2012, Chennai, India
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PadmaPriya Darsini, MD, MSc

- Fogarty Fellow at Tufts
  - Masters degree in Clinical Research
- Senior Scientist at National Institute of Tuberculosis Research (NIRT) of the Indian Council on Medical Research, Chennai
- Funded projects:
  - HDL-cholesterol 1 year after NVP based ART
  - Genetic factors in lipid metabolism in children with HIV
Christian Medical College
Vellore, India

- Cryptosporidiosis
  - Molecular and Geospatial Epidemiology
  - Transmission Dynamics
  - Immune Responses in a Birth Cohort of Children
  - Role of Intestinal Microbiota
- Infectious Diarrhea
  - Probiotics
  - STEC And HUS
  - Environmental Predictors Of Diarrhea
  - Intestinal Microbiota, Intestinal Integrity And Immunity
- HIV/AIDS
  - Nutrition in TB and HIV Co-infection
  - ART and Intestinal Integrity
  - Predictors of ART Adherence
  - Intestinal Microbiota
Rural Unit for Health and Social Affairs
Rita Isaac, MD, MPH

- Fogarty Fellow at Tufts
  - MPH
- Director of Rural Unit for Health and Social Affairs, CMC
- GRIP award: Impact of Intestinal Function on ART in Rural India
- Intestinal Microbiota and ART (Joint US-India Collaborative award)
- Has mentored Tufts fellows, residents and students
Current Fogarty Fellow
- Completed the MSc in Clinical Research at Tufts
- Current PhD candidate in Clinical Research at Tufts

Thesis project: Cost effectiveness of Tenofovir vs AZT in ART in South India
ART clinic

- One of 5 NACO sites in Vellore district (~ 3.5 million people) one of 27 sites in Tamil Nadu (~ 62.4 million people)
What have we accomplished?

- Fogarty has trained 10 degree candidates at Tufts
  - 7 MPH
  - 3 MSc
    - 2 enrolled for or awarded PhD
  - 1 MSc in Nutritional Epidemiology
    - enrolled for PhD
  - 10 non degree trainees
    - Many have done laboratory work

- All trainees have stayed in academics or research
We have the opportunity to work with incredible collaborators

- Christian Medical College
- YRG CARE clinic
- National Institute of Epidemiology
- National Institute of Research in Tuberculosis
- Hopers
- Voi Research Center
- University of Namibia School of Medicine
- Aga Khan School of Medicine
Sincere Thanks

- To all the Tufts faculty and staff who have made these training programs possible by mentoring and supporting trainees, helping them with adjustment to life in Boston and Tufts.

- To our trainees who are willing to leave home and family for months-years to work with us at Tufts. And their families and institutions who are willing to let them come.