

collection was used to estimate the prevalence and risk for cervical dysplasia and cancer in the general population of the Kedougou Region of Senegal. Women aged 30 to 50 years from clusters representing the population at large self-selected for participation in a clinical screening test.

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): Final data due in January 2014 will be reported. Preliminary data, based on 240 screenings, illustrate the prevalence of cervical dysplasia in the Kedougou Region of Southeastern Senegal at 5.2% with one of three districts displaying a preliminary prevalence of 7.32%. Final data will be based on $n = 800$. The number of identified VIA-positive lesions and the number of cases of suspected frank cervical cancer as well as a comparison of prevalence within each district of the Kedougou region will be reported. The risk factors identified from our survey for the development of cervical dysplasia will also be reported. We will distinguish the risks among all districts in the region.

Summary/Conclusion: We have employed the VIA screening technique to estimate the prevalence of cervical dysplasia and cancer in a rural setting in Senegal. Low-resource setting communities, health leaders in low-income countries, and global health advocates who are prioritizing the advancement of cervical cancer prevention programs will find this work illustrative. In addition to prevalence data, findings about the associated risk factors can guide future interventional research programs aimed at addressing dysplasia or cervical cancer in this population. This will build on previous knowledge that characterizes relevant risk factors for cervical cancer in similar settings while expanding our understanding of how to further develop the cervical cancer services in this specific region. This information will also be used to inform the implementation of cervical cancer prevention programs in other areas in Senegal and similar low-resource settings.

The Caribbean Consortium for Research in Environmental and Occupational Health (CCREOH): A model for trans-disciplinary global health research

W.B. Hawkins¹, M.Y. Lichtweld¹, D.R.A. Mans²; ¹Tulane University School of Public Health and Tropical Medicine, Department of Global Environmental Health Sciences, New Orleans, LA/US, ²Anton de Kom University of Suriname, Faculty of Medical Science, Paramaribo/SR

Background: The Caribbean Consortium for Research in Environmental and Occupational Health's (CCREOH) overarching goal is to address high-priority environmental and occupational health risks in Suriname and those common to the increasingly vulnerable Caribbean region while preserving the unique assets, health, and cultural traditions of indigenous and other health disparate populations. CCREOH's investigator team is indicative of its trans-disciplinary research portfolio, bringing together an array of scientists from biology to epidemiology including toxicology and medicine.

Structure/Method/Design: Funded by the Fogarty Center of the National Institutes of Health, CCREOH partners are characterizing key environmental and occupational health (EOH) risks associated with gold mining—related mercury contamination, pesticide use in agriculture including pesticide-induced suicide, and indigenous nutraceutical contamination to inform a gap and opportunities assessment of relevant environmental policies in Suriname and the Caribbean region; creating a sustainable public health and EOH network to serve as the trans-disciplinary research and training hub; developing a trans-disciplinary research roadmap to guide the consortium's environmental and

occupational health research leveraging all consortium partner assets; and putting in place a capacity-building portfolio including a regional EOH training program to successfully implement the priority areas articulated in the CCREOH research roadmap. The research roadmap deployed by the CCREOH team represents the continuum from basic, mechanistic approaches to community-based participatory environmental health designs.

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): The CCREOH builds on the existing partnerships in place between the University of Suriname, Faculty of Medical Sciences, Tulane University, School of Public Health and Tropical Medicine, and the Caribbean Public Health Agency.

Summary/Conclusion: The CCREOH has conducted and advanced a series of assessments to document baseline capacity levels and community needs focused on health outcome data, laboratory capacity, training programs, and environmental health policy. Currently, research is focused on the impact on the environment and human health of gold mining-related mercury contamination in Suriname through the examination of four Maroon and indigenous communities; analyzing pesticide residues in frequently consumed vegetables and fruits, as well as the role pesticides play as an effector in suicide attempts and successful suicides; exploring the anti-proliferative effects of indicator medicinal plants; and evaluating the data derived from a preliminary environmental and occupational health assessment in Trinidad and Tobago.

"Bind wounds, not make blood run"—Evaluation of Surinamese plant-derived nutraceuticals for their potential effects on angiogenesis

D.R.A. Mans¹, J.R. Toelsie², I. Magali¹, R.C. Soekhoe¹, J.A. Hasrat¹, R. Bipat²; ¹Anton de Kom University of Suriname, Faculty of Medical Sciences, Pharmacology, Paramaribo/SR, ²Anton de Kom University of Suriname, Faculty of Medical Sciences, Physiology, Paramaribo/SR

Background: Aberrant angiogenesis is involved in a multitude of distinct diseases including cancer, rheumatoid arthritis, chronic wounds, and certain cardiovascular, ocular, and skin diseases. This has led to the development of a wide array of therapeutically efficacious anti- and pro-angiogenic substances, and the identification of a number of (plant-derived) substances that allegedly prevent angiogenesis-dependent diseases. Based on the latter consideration, the Departments of Pharmacology and Physiology of the Faculty of Medical Sciences (FMeW), Anton de Kom University of Suriname (AdeKUS), have implemented a large-scale research project to evaluate Surinamese plant-derived nutraceuticals for their potential to interfere with angiogenesis. Suriname is located on the Guiana Shield, a hotspot with a unique biodiversity and a substantial expanse of pristine tropical rain forest. The project is part of a more comprehensive collaborative effort with the Suriname Conservation Foundation aimed at the identification of Surinamese plants with clinically applicable angiogenesis-interfering properties.

Structure/Method/Design: Candidate plants are acquired on the basis of ethnopharmacological indications from Suriname's rich medicinal folklore and chemosystemic clues from the literature. The plants are authenticated by taxonomists, and then extracted according to the traditional use. Angiogenesis involves, among others, the proliferation, migration, and structural rearrangement of endothelial cells to form tube-like structures. Therefore, the samples are subsequently assessed for these effects in cultured human umbilical vein endothelial cells using a sulforhodamine B, a Boyden chamber, a scratch wound healing, and a tube formation assay.

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): The project is being carried out in partnership with the School of Public Health and Tropical Medicine of Tulane University and the Caribbean Public Health Agency, within the framework of the Caribbean Consortium for Research in Environmental and Occupational Health. This agency is funded by the Fogarty Center of the National Institutes of Health, and investigates, among others, public health issues associated with Surinamese plant-derived nutraceuticals.

Summary/Conclusion: So far, 500 candidate plants have been identified, 90 plants have been collected, and extraction facilities have been set up, producing eight extracts per month. The above-mentioned cell culture studies have been delayed by extended delivery times of laboratory materials due to the absence of local representatives in Suriname. Nevertheless, up to now, 45 plant extracts have been evaluated, although so far with negative results.

Evaluation of a comprehensive HIV prevention program in North West Province, South Africa: Results from the pilot

J.L. Morris¹, L. Prach¹, J. Gilydis², E. Naidoo³, S. Treves-Kagan¹, J. Grignon³, S. Barnhart⁴, S.A. Lippman¹; ¹University of California, San Francisco, Center for AIDS Prevention Studies, San Francisco, CA/US, ²International Training and Education Center for Health, University of Washington, Seattle, WA/US, ³International Training and Education Center for Health, University of Washington, Pretoria/ZA, ⁴University of Washington, Seattle, WA/US

Background: South Africa, where there are more people living with HIV than in any other country, has an urgent need for evidence-based HIV prevention. The University of Washington and the University of California, San Francisco, are implementing a comprehensive HIV prevention program in South Africa's high-prevalence North West Province. Although multicomponent and comprehensive prevention programs are now being widely promoted, there have been few rigorous evaluations to date. Through collaboration with the Centers for Disease Control and Prevention, Statistics South Africa, and local government, an evaluation is underway to determine the impact of this comprehensive prevention model.

Structure/Method/Design: The overall evaluation is a pre-post-test comparison group design with delayed community entry in one of two geographical areas where the comprehensive program is being implemented. Data collection will include a series of cross-sectional, population-based community surveys with biological sample collection, conducted to monitor changes in outcomes: uptake of HIV testing and services as well as community viral load. A pilot study of the data collection was conducted in September 2013 where fieldworker and community health worker teams administered a computer-based survey, conducted HIV rapid testing, point-of-care CD4 testing, and collection of dried blood spots (DBS) in participants' households.

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): Of the 71 eligible individuals in the random sample, 46 (65%) were located and participated in the pilot study. All 46 participants (100%) consented to and completed the behavioral survey, 37 (80%) consented to rapid HIV testing and a CD4 test if positive, and 36 (78%) agreed to DBS collection if requested. Eight participants (22%) tested HIV positive, all of whom knew their positive status prior to testing; 6 currently on ART. DBS cards were requested from those testing positive and a random sample of negatives; 15 were collected and used for laboratory quality assurance purposes.

Summary/Conclusion: The study pilot proved acceptable and feasible, preparing the team for the full impact evaluation roll out, scheduled for early 2014 and including data collection with 1200 randomly selected people from 46 census areas. Community interest and participation rates were high, including consent to point-of-care CD4 and DBS collection for viral load testing. While population-based samples are problematic due to high rates of mobility (34% of the selected sample had moved 2 months following the census exercise), they are the most rigorous means of evaluating wide-scale community programming. The prodigious start of this impact evaluation was a result of successful university collaboration with local government. The results of this collaboration will lead to rare population-based data on sensitive markers for HIV prevention, valuable for both program evaluation and planning for local health officials.

Biomedical research capacity building in Mozambique through the MEPI

E.V. Noormahomed¹, C. Carrilho², A. Damasceno³, A.O. Mocumbi³, S. Patel⁴, C. Fuzamo⁴, R.T. Schooley⁵, C. Benson⁵; ¹University of Eduardo Mondlane, Mozambique, Parasitology, Maputo/MZ, ²University of Eduardo Mondlane, Mozambique, Pathology, Maputo/MZ, ³University of Eduardo Mondlane, Mozambique, Cardiology, Maputo/MZ, ⁴University of Eduardo Mondlane, Mozambique, Medicine, Maputo/MZ, ⁵University of California, San Diego, Medicine, San Diego, CA/US

Background: Locally developed and conducted research can be a major catalyst for sustainable national development. Universidade de Eduardo Mondlane and University of California San Diego are partners in Mozambique's U.S. NIH/PEPFAR-funded Medical Education Partnership Initiative (MEPI) program. A major aim of the UEM/UCSD MEPI is to develop infrastructure, expertise and human resources to implement sustainable country-aligned biomedical research programs to both enhance public health and attract and maintain medical faculty in the public medical schools in Mozambique.

Structure/Method/Design: We conducted a directed interview needs assessment and comprehensive analysis of the biomedical research capacity within the Faculties of Medicine in Mozambique's major public universities to identify barriers to building research capacity and establishing country-led research programs. Based on this analysis, we developed an integrated plan to overcome these barriers, to implement basic and applied research programs within Mozambique focused on locally identified research priorities, and to build faculty capacity to sustain such programs.

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): We implemented the following key research activities: 1) basic, translational, clinical, and public health didactic research training programs; 2) a robust research administration support center; 3) multiple collaborative research projects that have emphasized local research priorities; 4) bioinformatics infrastructure to support research programs; 5) an institutional review board that serves biomedical research within the UEM Faculty of Medicine and Maputo Central Hospital; and 6) a newly renovated and equipped laboratory for communicable disease research. The research administration support center provides services and personnel to support grant application development and submission, fiscal management of grant funds, and mentored training for research staff. Approximately 32 pilot multidisciplinary research projects and grant applications were developed focused on HIV/AIDS, tuberculosis, sepsis, stroke, and other communicable and noncommunicable diseases have been developed; to date 12 of these have been funded through NIH or