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UNIVERSIDAD PERUANA
CAYETANO HEREDIA

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PAVING A WAY FOR BETTER GLOBAL HEALTH

A conversation with **ALEJANDRO BUSSALLEU RIVERA**, Vice Rector for Research at Universidad Peruana Cayetano Heredia



Since opening its doors in 1961, Universidad Peruana Cayetano Heredia (UPCH) has been devoted to promoting research in Peru. Many Peruvian health-related investigators who hold key leadership positions in national and global research institutions have passed through our university. UPCH's research production has led to a better understanding of how diseases affect people, and has contributed to the development of improved diagnoses and treatments. Here, Alejandro Bussalleu Rivera discusses UPCH's efforts to tackle neglected diseases, its work on global health, its work with indigenous communities in Peru and its aims for the future.

How does UPCH contribute to global public health?

We are regional pioneers in undergraduate and graduate programmes in global health and life sciences, and in research efforts from basic to applied science in diseases of global relevance. We have designed new rapid diagnostic methods and conducted clinical trials in tuberculosis and other infectious diseases; we have models of cervical cancer prevention based on HPV molecular characterization; developed molecular diagnostics and control strategies based on geographical information systems (GIS) for malaria. We have the only School of Public Health in the country, where we develop research aimed to improve national policies.

What about the impact of climate change on human health?

Peru is a country that will be severely affected by global climate change. Glacial melting of the large number of tropical glaciers in our country will reduce water availability during the dry season and impact agriculture and other resources, undermining human health. As a consequence, there is a threat of the spread of emerging vector-borne diseases.

What work do you do with indigenous communities?

Through international collaboration and participatory

approaches with indigenous populations we work in endemic diseases, creating awareness of the effect of climate change on health and on food and water security. We also identify social determinant components that increase resilience to a changing environment by promoting education and health in their proper cultural context.

What neglected infectious diseases are your priority?

Cysticercosis, caused by a tapeworm, is a major burden in poor countries worldwide. Neurocysticercosis can cause epilepsy and other neurological disorders. UPCH hosts the Cysticercosis Working Group in Peru, a multidisciplinary network focused in improving the diagnosis, treatment and management of this parasitic infection. The working group has created and advanced diagnostic and therapeutic approaches to tackle cysticercosis, including defining the best serological tests and conducting clinical trials of antiparasitic treatment. The group has published, in the New England Journal of Medicine, the results of a large field programme in an endemic area of northern coastal Peru that showed it is possible to interrupt the transmission of the disease, laying the foundations for future elimination of this parasitic infection in other endemic regions worldwide.

PERU IS A COUNTRY THAT WILL BE SEVERELY AFFECTED BY GLOBAL CLIMATE CHANGE.

What other diseases are you tackling?

The Alexander von Humboldt Tropical Medicine Institute has research groups on malaria, tuberculosis, leishmaniasis and HIV, as well as neglected diseases such as HTLV-1, fascioliasis and intestinal parasites. We take an integrated approach, with research going from molecular biology, clinical trials to social determinants of health. We are proud to practice and teach tropical medicine in the tropics. The Gorgas Course in Clinical Tropical Medicine, in partnership with the University of Alabama at Birmingham, is one of our most internationally renowned medical courses; that has trained 850 health professionals from more than 85 countries in 23 years. Also we do research in the rising epidemic of non-communicable diseases through CRONICAS, our Centre of Excellence in Chronic Diseases.

What brings international scholars to a university in Peru?

Visiting scholars are attracted by our research facilities, academic excellence, unique geography, and

by the biodiversity and culture that favour a multidisciplinary approach to research in health-environment interactions. We participate in international, high impact research initiatives such as the 1000 Genomes Project, the Consortium for the Analysis of the Diversity and Evolution of Latin America, and the Potato Sequencing Consortium. In epidemiology and public health, we are part of the Global Pneumococcal Sequencing Project, the TANDEM Consortium, and the Latin American Research Consortium on the Genetics of Parkinson's Disease, among others.

What are your aims for the future?

We are the leading academic and research institution in Peru according to rankings such as Scimago and Times Higher Education. We are looking for strategic partnerships and research sponsors. We are determined to make a significant contribution to the knowledge and to solving the most pressing challenges in health of vulnerable populations, not only in the biomedical sciences but across our range of capabilities including education, veterinary sciences and a broad spectrum of life and environmental sciences.



58 YEARS LEADING HIGH IMPACT RESEARCH in Peru



CENTER FOR CLINICAL RESEARCH

Generating and translating clinical research for the population.

CYSTICERCOSIS WORKING GROUP IN PERU

Global leader in cysticercosis research.

CRONICAS Center of excellence

Multidisciplinary team tackling non-communicable diseases.

FASPA SCHOOL OF PUBLIC HEALTH AND ADMINISTRATION

Leading social innovation, training and research in public and global health from implementation to policy.

LID Laboratorios de Investigación y Desarrollo

More than 80 laboratories working on biomedical and environmental sciences.

INSTITUTO DE MEDICINA TROPICAL Alexander von Humboldt

Promotes excellence in research and training of tropical and infectious diseases in the tropics.

