A GLOBAL FOOTPRINT

Around the world, Washington University researchers are working at the forefront of new knowledge to transform lives. This is just a sample of the many research projects the university has in its global network. For a complete list, go to **global.wustl.edu.**

North America & the Caribbean

Helping moms and children

Lora Iannotti, associate professor and associate dean for public health, and Patricia Kohl, associate professor and associate dean for social work, teamed up in Haiti to create a parenting intervention program. It offered families eggs for 12 weeks and brought moms together to discuss sanitation, hygiene and the importance of animal-sourced foods for kids. “What we’re learning in Haiti is applicable to impoverished communities in the U.S.,” Kohl says.

Understanding animals

Jonathan Losos, the William H. Danforth Distinguished University Professor, has traveled the world studying animals and biodiversity, with a focus on Caribbean *Anolis* lizards. He is also the founding director of the Living Earth Collaborative, a center for biodiversity. A collaboration involving Washington University, the Missouri Botanical Garden and the Saint Louis Zoo, the Living Earth Collaborative will have field projects all over the world to study and save the plants and animals that sustain life on Earth.

Europe

Protecting human rights

Leila Sadat, the James Carr Professor of International Criminal Law at the School of Law and director of the Whitney R. Harris World Law Institute, wrote the world’s first global treaty on crimes against humanity, addressing their prevention and punishment. The draft treaty, available in seven languages, is being debated by the UN International Law Commission and governments around the world.

Building connections

In addition to exploring the broad social transformations taking place in the worldwide Muslim community (with field sites across Europe, Asia, the Middle East and Africa), John Bowen, the Dunbar-Van Cleve Professor in Arts & Sciences, is also leading the Trans-Atlantic Forum, a collaboration between Washington University scholars in the social sciences and graduate schools in Paris and Amsterdam.

South Asia

Clearing the air

In India and other energy-impoverished regions, people still use solid fuels (wood, charcoal, crop waste) to cook their food, which can release dense, black smoke into the home. Pratim Biswas, assistant vice chancellor of international programs and the Lucy and Stanley Lopata Professor in the James McKelvey School of Engineering, and Rajan Chakrabarty, assistant professor of engineering, went to rural parts of India to study the impact of cook-stove emissions. “Traditional cook-stove burning is one of the largest sources of pollutants in India,” Chakrabarty says. “We found it’s a really big problem, revising what people knew for decades.”

Treating the gut

Jeffrey I. Gordon, MD, the Dr. Robert J. Glaser Distinguished University Professor and the director of the Edison Family Center for Genome Sciences & Systems Biology, has used his groundbreaking studies of the gut microbiome to help malnourished children in developing countries. His research in Bangladesh showed that children suffering from malnutrition possess gut microbial communities that fail to assemble normally. His studies have catalyzed efforts to develop new microbiome foods directed at repairing the problem.

East & Southeast Asia

Advancing global food security

Barbara Schaal, dean of the Faculty of Arts & Sciences and the Mary-Dell Chilton Distinguished Professor, is an internationally renowned evolutionary biologist. Her research has helped make staple food crops such as rice resistant to genetic mutations, able to withstand floods and less vulnerable to insect attacks. A recent study took her to the remote rice farms of Thailand. “It’s fun working on something where everything that you do … contributes to a larger effort to produce more food for the world,” she says.

Helping families save for children

Michael Sherraden, the George Warren Brown Distinguished University Professor and founding director of the Center for Social Development (CSD), studies inclusion and asset building. His policy ideas have led to many countries starting child-development accounts that help families save for their children. Recently, Li-Chen Cheng, PhD ’95, a former student of Sherraden’s, helped develop a child-development–account policy in Taiwan, after working closely with Washington University’s CSD.

Earning high honors

The university currently has three faculty members who have earned the Chinese Ministry of Education’s highest award for an individual in higher education, the Yangtzee River Scholar Award. (An alum as well as another faculty member who earned his Yangtzee River Scholar Award through another school were also honored.) It is rare for a U.S. university to have even one such scholar, let alone three.

Central & South America

Battling cancer

As the Larry J. Shapiro Director of Washington University’s Institute for Public Health, William G. Powderly, MD, the Dr. J. William Campbell Professor of Medicine and co-director of the Division of Infectious Diseases at the School of Medicine, has made a huge impact on medicine around the world, particularly in the field of HIV/AIDS, where he has been conducting research for 30 years. Recently, Powderly began a new initiative funded by USAID to install radiotherapy equipment in Guatemala that will help diagnose and treat cancer patients.

Understanding ancient climates

Bronwen Konecky, assistant professor of earth and planetary sciences, and Sarah Baitzel, assistant professor of archaeology, both in Arts & Sciences, are studying climatic and environmental change in the high Andes Mountains as a backdrop to pre-Hispanic human activities. Their reconstruction of past climate and cultural shifts at a newly discovered archaeological site at Lake Sibinacocha, Peru, is supported by the National Geographic Society and Washington University’s International Center for Energy, Environment and Sustainability (InCEES).

Africa

Developing new diagnostics

Testing blood for malaria can be expensive and challenging in developing countries. Audrey Odom John, MD, associate professor of pediatrics and director of the pediatric infectious diseases fellowship program, is developing a breath test for malaria, by collecting breath samples from children in Malawi.

Battling childhood malnutrition

In 2001, world-renowned doctor and researcher Mark J. Manary, MD, the Helene B. Roberson Professor of Pediatrics, was in Malawi field-testing a nutrient-rich, peanut butter–based food that restored malnourished children to health. Since 2004, his Project Peanut Butter has treated more than one million malnourished children in Africa.

Improving women’s reproductive health and girls’ access to education

Throughout his career, L. Lewis Wall, MD, the Selina Okin Kim Conner Professor in Arts & Sciences and professor of obstetrics and gynecology at the School of Medicine, has worked in Africa to improve the health and lives of women. Now, he has started Dignity Period to help girls in Ethiopia get access to menstrual pads and menstruation education. Typically, girls stay home from school during their menstrual periods because they lack proper supplies, a practice that contributes to higher dropout rates.

Middle East

Helping children through savings

Michal Grinstein-Weiss, the Shanti K. Khinduka Distinguished Professor at the Brown School, helped get a child savings account program for all newborns passed in Israel’s parliament in 2015.

Showing mobile banking works in areas of conflict

Tarek Ghani, assistant professor at Olin Business School, conducted a study in Afghanistan to see if mobile banking could facilitate a default-savings program. The country has seen a proliferation of mobile-phone subscriptions, but it still lacks a financial infrastructure. The study showed that the default-savings program worked and was easily scalable.

Australia

Improving legal education

As director of Washington University’s Criminal Justice Clinic, Peter A. Joy, the Henry Hitchcock Professor of Law and vice dean for academic affairs in the School of Law, supervises student-lawyers who provide direct legal representation to clients. Joy’s expertise in clinical programs led him to co-author the book *Australian Clinical Legal Education* and recently took him to Monash University and University of Melbourne, both in Melbourne, Australia. He delivered talks on legal ethics, another of his areas of expertise.

Antarctica

Unlocking the universe …

The Earth is constantly being bombarded by cosmic rays, high-energy particles from beyond the solar system. Brian Rauch, research assistant professor of physics in Arts & Sciences, launched SuperTIGER in Antarctica, which could reveal the origin of these rays. This was not SuperTIGER’s first flight; its previous flight, led by Robert Binns, research professor of physics, lasted 55 days.

and the Earth

Due to melting ice, the bedrock in Antarctica is rising at one of the fastest rates ever recorded. Douglas Wiens, the Robert S. Brookings Distinguished Professor in Arts & Sciences, is studying the phenomenon. The findings so far mean that up to 10 percent more ice has disappeared from the region than previously thought.