During his 12 years as President of the University of Maryland, Dr. Mote built a unique presence for Maryland in the world, boosting UM to #37 in the world, according to the Academic Ranking of World Universities in 2009.

President Mote’s Commitment to Making Global Connections
During the 12 years of Mote’s presidency, the University of Maryland has seen an increase in international partnerships and programs through fostering relationships with countries like China, Taiwan, Russia, Brazil, Argentina, and more.

Nina Federoff at IIP’s Africa Colloquium
At the Africa colloquium this past May, Nina Federoff—along with commentator Dr. Romain Murenzi—spoke about the evolution of knowledge-based societies and cited Rwanda and other African countries as current examples.

Colwell Awarded 2010 Stockholm Water Prize
UM Professor Rita R. Colwell has been awarded the 2010 Stockholm Water Prize for her pioneering research in prevention of cholera and other waterborne infectious diseases, which has helped protect the health and lives of millions of people.

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M A R Y L A N D  I N T E R N A T I O N A L is the newsletter of the Institute for International Programs (Saúl Sosnowski, director; Joseph Scholten, associate director) and the interconnected group of offices under its auspices, including Office of International Services (Barbara Varsa, interim director), Education Abroad (Michael Ulrich, director), the Maryland China Initiative (Robert Daly, director), and the Confucius Institute at Maryland (Chuan Sheng Liu, director). Issues are published twice during the fall and spring semesters and once during the summer. To submit story ideas and/or photos, please contact the editor, Vivian Hayward, at vhayward@umd.edu or 301.405.4312.
Since the arrival of President C.D. Mote, Jr. at the University of Maryland in 1998, the university has built solid educational, research, and economic relationships with institutions in key countries, including China, Argentina, Brazil, Israel, Egypt, Taiwan, Thailand, Russia, Turkey, and India. “Placing Maryland in the world and the world at Maryland is one of President Mote’s signatures and part of his legacy,” says Saul Sosnowski, associate provost for international affairs. “Dr. Mote instilled this vision in us, and it remains an integral part of his tightly packed overseas luggage.”

Mote increased the university’s international partnerships, launching graduate programs in business, public policy, and criminology and criminal justice in China. Mote significantly strengthened the university’s ties to China, traveling there frequently to establish relations with universities, private industry, and government agencies. He also helped create the Confucius Institute at Maryland, the first in the world, which promotes the teaching and study of Chinese language and culture, and led the effort to establish the UM-China Research Park through an agreement between UM and China’s Ministry of Science and Technology (see page 6 for more information on the Research Park).

Interest in fostering global connections is evident across campus as well, with expanded language and culture offerings and a record 1,873 students who participated in study abroad or international experiences last academic year—triple the number of participants since Mote’s arrival.

“The world awaiting our students requires that they understand international issues,” says Mote. “More than ever before, international leadership is the responsibility of a top-ranked research university.”

By Lauren Brown, University Communications and Marketing

Dr. Mote dedicated the new office building of UM-China Research Park on October 16, 2009. From left to right: Secretary Christian Johansson of DBED, Dr. C.D. Mote, Jr., Minister Wan Gang of the China Ministry of Science and Technology, and Minister Liu Guangyuan from the Chinese Embassy in Washington.

Photo courtesy of the University of Maryland-China Joint Research Park
In expanding UM’s international relationships, Mote helped to develop an agreement between the university and the Ministry of Science and Technology for the Peoples’ Republic of China to establish the first Chinese research park outside of the Mainland. Through the years, the University of Maryland-China Research Park has grown and become the anchor tenant for the recently formed Maryland International Incubator.

The mission of the Research Park is to connect Maryland and Chinese companies for successful joint ventures through a targeted array of business services, state-of-the-art facilities, and world-class resources. Not only does the state’s economy benefit from companies thriving in the area through the Research Park, but also faculty and students benefit from intellectual and cultural exchange.

With over $500 million in sponsored research funding each year, Maryland is one of the research universities in the prestigious 61-member Association of American Universities. It is classified as a Research-I university by the Carnegie Foundation, by virtue of the amount of federal support received and the number of doctoral degrees awarded each year, sharing that honor with the top research universities in the country.

For more information on the Research Park, visit www.umcrp.umd.edu.

COUNTER-CLOCKWISE FROM TOP:
President and Patsy Mote in Jerusalem. Mote signing an agreement with then Argentina’s Vice President, Daniel Scioli. While building and strengthening ties with Egypt, President and Patsy Mote visit the Great Sphinx. Mote and Saúl Sonenstein in Thailand.

Nina Federoff Speaks about Knowledge-Based Societies at IIP’s Africa Colloquium

At the turn of the century, almost half the population in the United States lived on farms; today that number has dwindled down to less than two percent. Through the years, knowledge and technology have made agricultural production easier and more efficient, allowing people freedom away from the farm. With its roots as a land grant university, UM has worked closely in researching and developing innovative ideas to enhance agricultural processes, such as mechanization of farming, the use of chemicals for diseases and growth, and genetic modification of crops.

On May 7, at the Africa Colloquium sponsored by the Institute for International Programs, Nina Federoff, president-elect of the American Association for the Advancement of Science (AAAS) and former science and technology adviser to the U.S. Secretary of State, discussed her observations on the process of becoming a knowledge-based society—a culture where the economy’s primary driving forces are the acquisition and application of new knowledge—and its importance in sub-Saharan Africa.

Agriculture is the foundation for building a knowledge-based society, as it is one of the most common occupations in the world—with Africa having a higher percentage of its population involved in manual agriculture when compared to the rest of the world. “Every recent transformation of a country from a poor, agrarian society to a more wealthy, diverse, and knowledge-intensive society has begun with increases in productivity of its agriculture through the application of technology and science,” Federoff explained.

Rwanda, for example, is currently embarking on such a transformation, transitioning from a country that imports crops to a country that now exports them. In recent years, the dissemination of knowledge has evolved. Decades ago, knowledge was hard to share. Books and journals were limited to specific areas and practically inaccessible in underdeveloped countries. But, as the Internet has become more accessible, the ability to share and create new knowledge has spread.

As the commentator alongside Federoff, Dr. Romain Murenzi—joint fellow at the AAAS and the UM Institute for Advanced Computer Studies and former minister of education and Rwandan presidential adviser on education, science, and technology—cited a project currently being carried out by the Mauritian company SEACOM as an example of Africa’s successful transition towards a knowledge-based society. The company is in the process of building a fiber-optic backbone linking the major cities of Africa’s east coast encompassing hospitals, schools, police stations, banks, and other critical infrastructure and facilities.

Internet access is just one step in solidifying Africa’s long-term development. As Federoff noted in her lecture, “Today we have a global crisis in education. We have no shortage of people or talent, but we’re short of people with sufficient technical training to support the increasing knowledge and science dependent societies of the 21st century.” Further investments in education and innovation are underway in response to this shortage, including a Pan-African University that is linked to five continental centers, along with the 2003 launch of the African Institute of Mathematical Sciences (AIMS) in South Africa that promotes African initiatives in education, research, and technology.

To learn more about SEACOM, visit www.seacom.com. For more information about AIMS, visit www.aims.ac.za/. Contact Dr. Joseph B. Scholten, IIP associate director, at scholten@umd.edu to be added to the UM Africa list.
This past semester, I’ve been fortunate enough to be a part of the Maryland-in-Haifa program. I’ve had an amazing and unique experience living in Haifa. Israel is a beautiful land with historical and religious significance. Although this isn’t my first trip to the country, I’ve never experienced Israel like an Israeli until this trip. I am proud to say that I have fully grasped daily life in Haifa. I understand the public transportation system, the bustling streets, and experience Haifa so unique is the people from different cultural backgrounds living here. Besides the international students who come from the United States, Canada, Mexico, France, Germany, Estonia, Denmark, Argentina, China, and Switzerland; there are Russians, Israelis, Arabs (Muslim and Christian), Druze, and Bahai all living in the same city. In the university dorms, the international students live with the regular students, so we can interact with people from different cultural, religious, and political backgrounds. It also gives us an opportunity to learn multiple perspectives on the conflict we wouldn’t see in Jerusalem because of the more homogeneous student body. Social activity coordinators plan trips to familiarize us with Haifa, and the international school staff knows everyone by name and is open to working with us to enrich our experience abroad. I am so grateful to have had this opportunity to study abroad and highly recommend this program.

By Nomi Ehrich, UM Education Abroad student, Spring 2010

For more information on Maryland-in-Haifa, visit www.international.umd.edu/studyabroad/4031.

HIGHLIGHTS OF NEW EDUCATION ABROAD

Azerbaijan: Environmental and Cultural Issues in the Caucasus, Faculty: Dr. Richard Weismiller. Following the Spring Semester, students traveled to Azerbaijan to explore the ancient city of Baku, which was founded upon oil and trade. Today it is a vibrant city located on the western shore of the Caspian Sea. Students stayed with local host families, allowing for a richer cultural experience. Studies revolved around the restoration and renovation of local oil fields and solid waste disposal sites to gain experience researching and generating solutions to environmental issues. During the program, students took tours to local cultural and historical destinations and paired with Kharaz University students to fully appreciate and experience Azerbaijani culture.

United Kingdom: Queer London, Faculty: Dr. Jason Rudy. Among the world’s most vibrant metropolises, London was the destination for a new summer program, in which students participated in the London Pride Festival and the London Literature Festival. The course included visits to the Sigmund Freud house (founder of modern sexuality studies), the British Museum (home to Greek artworks that inspired British queer aesthetics), the Adonis art gallery (one of the world’s premier gay art venues), and Soho (heart of today’s queer London). Students were required to read and discuss historical and literary works and meet with local scholars, gallery directors, writers, and community organizers/activists to better understand queer culture in contemporary London.

PROGRAMS OFFERED THIS SUMMER

Azerbaijan
May 21 to June 4

United Kingdom
June 20 to July 9

Scandnavia
July 12 to August 6

Norway
July 30 to August 15

Scandnavia: Culture & Place, Faculty: Peter Noonan. This month, students will travel to Scandinavia to increase awareness of the role that culture, geography, and history contribute to architectural form through the investigation of the built and natural environment in Scandinavia. The course includes trips to Sweden, Denmark, and Finland with extended stays in the national capitals Copenhagen, Helsinki, and Stockholm. Excursions into the wider metropolitan areas will also be included. Students will take a group flight from Copenhagen to Helsinki; bus tours in central Finland; and an overnight ferry from Turku, Finland, to Stockholm, Sweden.

For more information on education abroad, visit www.international.umd.edu/studyabroad.

AMBASSADORIAL LECTURE SERIES
Russian Ambassador Discusses the History of U.S.-Russian Relations

During the night of August 7, 2008, Georgia launched an attack in South Ossetia in an attempt to reclaim the territory from Russia. In response, Russia deployed troops into South Ossetia and commenced bombing raids into Georgia. Although the attacks quickly subsided on both sides, the U.S. media painted Russia as the aggressors and the Georgians as the victims—an indication that almost 20 years after the Cold War, relations are still complex between the United States and Russia. “We tend to see each other through the optics of old stereotypes,” said H.E. Sergey I. Kislyak, Ambassador of the Russian Federation to the United States.

In the Ambassadorial Lecture Series that took place in May, co-sponsored by the Center for International and Security Studies (part of the School of Public Policy) and the Institute for International Programs, Kislyak reflected on the tenous relationship between the two countries. Ambassador Kislyak stressed that the United States and Russia need to focus on what they can do together rather than holding onto old stereotypes. Unfortunately, with the lack of a strong trade relationship and cultural exchanges between the two countries, perceptions remain firmly stuck in the past. “We’re not building any new images to change relations and misconceptions. What the [Russian] government is trying to do now is build intertwined relationships on all levels,” Kislyak explained.

Although the process is slow going, Kislyak also spoke of the hard work already accomplished. In 2002, the NATO-Russia Council was created to be an official diplomatic tool for handling security issues and joint projects between NATO and Russia and, currently, Russia is working on its third attempt to build Serbian relations. Kislyak concluded with the view that with so many new challenges facing the world, it is important that the United States and Russia get past their outdated perceptions and work together for the best interests of both countries.

By Nomi Ehrich, UM Education Abroad student, Spring 2010

For more information on Maryland-in-Haifa, visit www.international.umd.edu/studyabroad.

Photo above: Spring 2010 UM students in Haifa with Professor Edward (Edy) Kaufman, senior research associate, Center for International Development and Conflict Management, by Saul Sosnowski.
Domestic Dysfunction in the Israel-Palestine Conflict:

The Peace Process Meets Anti-Politics

A Middle East Symposium at the University of Maryland

T he University of Maryland’s prominence in the study of Middle Eastern affairs—which was highlighted in the Spring 2010 issue of Maryland International—was on display in April at the day-long symposium, “Domestic Dysfunction in the Israel-Palestine Conflict: The Peace Process Meets Anti-Politics.” Co-sponsored by the Saul Stern Professorship of Civic Engagement in the UM School of Public Policy and the Joseph and Alma Gildenhorn Institute for Israel Studies, the event brought together a high-powered group of speakers and respondents before a capacity crowd at the Samuel Riggs Alumni Center. According to Dr. I. “Mac” Destler, who holds the Saul Stern Professorship, the goal of the gathering was to take “a close look at the Israeli and Palestinian politics that underlie the current impasse in the peace process.”

The morning panel on Palestinian and Israeli societal environments and lessons for U.S. policy-makers was moderated by UM’s Shibley Telhami, who holds the Anwar Sadat Professorship of Conflict Engagement in the UM School of Social Sciences and is director of the Gildenhorn Institute, the Saul Stern Professorship, the goal of the gathering was to take “a close look at the Israeli and Palestinian politics that underlie the current impasse in the peace process.”

The afternoon featured a panel discussion focused on the future of the Middle East region and the path for the coming years. Featured speakers were Yousef Alpher and Amjad Allilz. Alpher is co-editor of the bittersweet family of Internet publications. A former senior official in the Mosaic, he has also served as director of the Jaffee Center for Strategic Studies, Tel Aviv University, and director of the American Jewish Committee’s Israel/Middle East office in Jerusalem. Alpher produced “The Alpher Plan” for an Israeli-Palestinian final settlement and has coordinated several Track II dialogues between Israelis and Arabs. Atallah is co-director of the Middle East Task Force at the New America Foundation and senior affiliated expert with the Public International Law and Policy Group. Previously, he headed the Strategic Assessments Initiative, a not-for-profit organization that assists conflict and post-conflict negotiations. He has advised the Palestinian delegation in peace negotiations with Israel on international borders, security, and constitutional issues, and was liaison to U.S. government officials in Washington, D.C. Moderating the discussion, which included the mornings’ panelists, was Kenneth M. Pollack, director and academic and served the late Israeli Prime Minister Yitzhak Rabin as political advisor.

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the Latin American Studies Center (LASC) celebrated its 20th anniversary Friday and Saturday, April 30-May 1, in a conference entitled “Reconfiguring Latin America: Conversations for the 21st Century” in the Prince George’s Room of the Stamp Student Union. Distinguished scholars gathered to discuss the progress, state, and future of Latin America and Latin American studies centers and programs. For many, like Interim Director Mary Kay Vaughn, the conference was a time for reflection. “We invited three major intellectuals to discuss Latin America in the 21st century,” university faculty to talk about the Caribbean, and a Haitian novelist to speak on Haiti and how it fits into Latin America, the Caribbean, and the world,” said Vaughn. “One change we will address is how Latin American studies relates to U.S. Latino studies.” The conference also honored Said Sosnowski, associate provost for international affairs, for his work in creating the center at the University of Maryland.

In 1983, Sosnowski, a professor of Latin American literature, brought together distinguished writers, historians, social scientists, and intellectuals from Argentina to address questions about cultural and intellectual life as it related to Argentina after the fall of its dictatorship. The success of the conference inspired several similar conferences among scholars, critics, and intellectuals in Uruguay in 1986, Brazil in 1988, Chile in 1991, and Paraguay in 1994. Between conferences, Sosnowski received the Rockefeller Foundation Grant for residency scholars in Latin American literatures and culture, which was later extended to the Visiting Scholars program. The center also received the TITLIE VI grant and used the funding to expand studies in many areas, primarily in the languages.

Recently, the center has begun new initiatives under the leadership of Director Karin Rosemblatt, such as working with the interests of faculty across the campus to build relationships between the cultural community in Washington, D.C., and living communities in Latin America. There is an increase in the presence of faculty who have research interests in African Diaspora in the Caribbean, literature, anthropology, immigration, environmental issues, and more. The center also has outreach initiatives in local Latin American communities, such as the Langley Park Project and Pedestrian Safety Campaign.

The center became a meeting place for cultural critics, writers, and Latin American officials. When looking forward to the next twenty years, Vaughn hopes, “The center strengthens the collaboration between the university and public history, where knowledge generated at the university is available to large numbers of people through museum exhibits and integrates academic knowledge with local knowledge.” Similarly, Sosnowski hopes to see, “A signature program that can generate dialogue between Latin America and Latin Americans, and have an impact there.”

By Shayla Atkins, ARHU
University of Maryland Links with National Taiwan University through Videoconferencing

In a small classroom in College Park this past spring, four UM graduate students worked closely with students in Taiwan through a new course offered by video link and Facebook. The course, Molecular Nutrition, was taught twice a week by Assistant Professor Wen-Hsing Cheng, in the College of Agriculture and Natural Resources (AGNR), and Drs. Ning-sung Shaw and Yi-chen Lo, professors at National Taiwan University (NTU) in Taipei.

Cheng, who was born and raised in Taiwan and received his B.S. degree from NTU, was the perfect candidate for this first course with the Taiwanese university. Molecular Nutrition is the first class to be offered as a result of a collaboration between UM and NTU and the second regular UM course offered that uses videoconferencing with a foreign university. The first course with videoconferencing, Environmental Issues and Culture in USA and Russia, was taught by Drs. Weismiller and Steinhielber at UM and Andrei Sorokin at Moscow State University of Environmental Engineering in Russia. It is no small coincidence that both courses were offered through the College of AGNR, which has been utilizing videoconferencing for approximately 10 years.

Last year UM, AGNR, NTU, and the Taipei Economic and Cultural Representative Office in the United States agreed to work together to develop joint courses and establish faculty and student exchanges. AGNR Dean Cheng-i Wei, is part of the consortium, as well as inviting other Taiwanese universities in being part of the consortium.

Cheng and his collaborators at NTU developed the UM/NTU course together and shared the responsibility of "co-teaching" it. Each class was conducted by videoconference, which allowed the instructor to project documents onscreen for the students to read, while keeping the class on camera so they could see their classmates on the other side of the world.

During classes, which were taught in English, the UM students were teamed with their NTU counterparts to work on assignments. The class also set up a Facebook study group, which allowed the teachers to post their lectures online with 24-hour access. The students were also able to post items of interest to the group or ask questions about assignments.

Coming this October, Dr. Roberta Levine in UM's College of Education will be co-teaching the next online course with videoconferencing, Methods of Teaching English as a Second Language (ESOL), with Tamkang University. Although there are many challenges in creating a co-taught course with a foreign university—finding access to necessary technology, technical support for videoconferencing, and working with differences in both semester schedules and time zones—the pay-off provides students the expertise of faculty from both universities, the insights into other cultures, and the opportunity to make new friends. Wei believes the success of the nutrition course will open the door for more courses, providing a richer academic experience. He also hopes the foreign students will come to UM on student exchange and that UM students will go to Taiwan.

By Ann J. Leger, Coordinator International Programs in AGNR

A record 13 UM students and alumni have been awarded Fulbright grants for 2010-11, surpassing the seven last year. Three additional students are currently alternatives for Fulbright grants. The UM professor enthusiasm and interest in the student Fulbright program continues to build," says English Professor Jonathan Auerbach, the University's official Fulbright Program Advisor. "With nearly twice as many applicants and winners as the previous year, our candidates will be pursuing fascinating projects around the globe."

The Fulbright Program, administered by the Institute of International Education, is the flagship international educational exchange program sponsored by the U.S. government and is designed to increase mutual understanding between the United States and other countries. Recipients of Fulbright grants are selected on the basis of academic and professional merit and are expected to contribute to the cultural interchange that is the core of the Fulbright Program. In 2009-10, approximately 5,000 American citizens taught, studied, researched, and engaged in highly professional activities in 140 countries.

More than 8,600 applicants competed for the 13 grants for 2010-11, surpassing the seven last year. Three additional students are currently alternatives for Fulbright grants. The UM professor enthusiasm and interest in the student Fulbright program continues to build," says English Professor Jonathan Auerbach, the University's official Fulbright Program Advisor. "With nearly twice as many applicants and winners as the previous year, our candidates will be pursuing fascinating projects around the globe."

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The 13 UM students and alumni who received Fulbright grants for 2010-11 are:

- **Benjamin Block**—B.A. in Government and Politics and a minor in English Language and Literature. Basu will work as an English Teaching Assistant in Turkey.
- **Christian Benefiel**—M.F.A. in Sculpture. Benefiel will work with local artists and environmental engineers in Finland. His project will culminate in the design, building, and operation of a small-scale live art foundation.
- **Benjamin Block**—B.A. in Journalism and a B.S. in Environmental Science and Policy. Block plans to study how Peru is interpreting an international climate change program that pays tropi cal communities to maintain forest cover on their land.
- **Sarah Cantor**—Ph.D. candidate in Art History and Archaeology. Cantor will examine paintings of the 17th-century landscape artist Gaspard Dughet, conduct archival research, and study original treatises and manuscripts available only in Rome.
- **Susan Davidson**—B.A. in German and Linguistics, French, and Russian, and a minor in Mathematics. Davidson will work as an English Teaching Assistant in Germany.
- **Natasha Basu**—B.A. in Government and Politics and a minor in English Language and Literature. Basu will work as an English Teaching Assistant in Turkey.
- **Mary McMenamin**—B.A. in English Literature and Language and a minor in German. McMenamin will work as an English Teaching Assistant in Germany.
- **Megha Rajagopalan**—B.A. in Journalism and a minor in English. Rajagopalan received Fulbright's Critical Language Enhancement Award to study advanced Mandarin at Tsinghua University in Beijing. She will examine how journalists have worked in cooperation with central government guidelines and explore their impact on the community and their evolving role as watchdogs in Chinese society.
- **Daniel Sender**—M.D.A. candidate in Music Performance. Sender will study traditional and modern Hungarian violin-playing techniques for his dissertation.
- **Christopher Stevens**—Ph.D. candidate in Philosophy. Stevens will investigate Norwegian methods of interdisciplinary environmental research created and used successfully at the Center for Development and the Environment at UiO University.
- **Christoph Tabisz**—B.A. in Graduate Studies and Linguistics, and a minor in French. Tabisz will be an English Teaching Assistant in Germany.
- **Benjamin Block**—B.A. in Government and Politics and a minor in English Language and Literature. Basu will work as an English Teaching Assistant in Turkey.
- **Christian Benefiel**—M.F.A. in Sculpture. Benefiel will work with local artists and environmental engineers in Finland. His project will culminate in the design, building, and operation of a small-scale live art foundation.
- **Benjamin Block**—B.A. in Journalism

Thirteen University of Maryland Students Win Fulbright Awards

(From left to right) Christian Benefiel at the foundry, Benjamin Block in Copenhagen, Sarah Cantor, Ian Gross, Megha Rajagopalan, Daniel Sender, and Christopher Stevens in Helsinki.

By Liesl Biro, NISO Coordinator

See page 15 for other UM award recipients.
UM's Colwell Awarded 2010 Stockholm Water Prize

Distinguished University Professor Rita R. Colwell has been awarded the 2010 Stockholm Water Prize, widely recognized as the world’s premier award for water-related research or policy work. The prize, which includes a $150,000 award and a crystal sculpture, honors “individuals, institutions or organizations whose work contributes broadly to the conservation and protection of water resources and to improved health of the planet’s inhabitants and ecosystems.” Colwell, who joined the UM faculty in 1973, is a renowned scientist and educator, whose work bridges many areas including microbiology, ecology, public health, and computer and satellite technology. Her pioneering research in prevention of cholera and other waterborne infectious diseases has helped protect the health and lives of millions.

Colwell has been studying cholera for more than 45 years, combining high-tech instruments with molecular biology to make major advances in detecting outbreaks. “We’re using satellites to correlate sea height and sea temperature in order to predict and reduce cholera epidemics,” she said. “It’s proven to be uncannily effective because outbreaks are associated with plankton blooms.” In fact, Colwell’s work has established a basis for environmental and infectious disease risk assessment used around the world. However, Colwell has worked not just to identify and assess disease risk, but also to reduce it. She is a long-time leader of efforts to combat waterborne diseases by finding and promoting those clean-water technologies most appropriate to a particular region or situation.

Dr. Colwell’s numerous seminal contributions towards solving the world’s water and water-related public health problems, particularly her work to prevent the spread of cholera, is of utmost global importance,” noted the Stockholm Water Prize Nominating Committee in its citation. “Through her research on its physiology, ecology, and metabolism, Dr. Colwell advanced the fields of mathematics, genetics and remote sensing technology and not only as they relate to [cholera] bacteria but to the prevention of other diseases in many developing countries.”

Revolutionizing the Fight Against Cholera
In the 1960s, Colwell observed that the causative agent for cholera, the bacterium, *Vibrio cholerae*, could survive by attaching to plankton. This led to her groundbreaking discovery that certain bacteria, including *Vibrio* species, can become dormant in rivers, lakes and oceans under conditions adverse for growth, only to revert to an actively growing state when conditions are again favorable. The environment thus serves as reservoir of infection. These findings contradicted the then conventional wisdom that cholera was only spread by person-to-person contact, food or drinking water and that its presence in the environment could only be due to the release of sewage. As a result of this, scientists are now able to link changes in the natural environment to the spread of disease.

Colwell and her colleagues have shown how changes in climate, adverse weather events, shifts in ocean circulation, and other ecological processes can create conditions that allow infectious diseases to spread. And through knowledge of that link, she has led the crafting of preemptive policies to minimize outbreaks. Her research in the Bay of Bengal in Bangladesh, for example, demonstrated that warmer surface ocean temperatures stimulate growth of cholera-hosting zooplankton and is associated with an increase in the number of cholera cases.

In the U.S. she was the first to lead research experiments on the impact of El Niño on human health and the aquatic environment. In the 1990s, Colwell was one of the first scientists to research the impacts of climate change on the spread of infectious diseases. She serves on dozens of international panels, including the Global Health Assembly, and as a top government public health advisor on adaptation strategies to climate change.

High and Low Tech
During her career, Colwell has bridged work at the forefront of science and technology with a lifelong dedication to crafting practical solutions for clean drinking water and protection of human and ecosystem health through understanding the ecology of infectious diseases.

Colwell, who holds appointments at the University of Maryland (Institute for Advanced Computer Studies and Cell Biology and Molecular Genetics) and the Johns Hopkins University Bloomberg School of Public Health, developed the first model that applied remote satellite imaging to track and predict outbreaks of cholera before they occur. This model has become an archetype for infectious disease monitoring and prevention used around the world. And she helped create and lead bioinformatics—a field combining biology, computer science and information technology—to an exponentially advanced understanding, diagnosis, treatment, and prevention of waterborne diseases.

Yet, she has said she may be proudest of perhaps her simplest idea: using folded sari cloth to filter from drinking water plankton with which the cholera bacterium is associated. The method was shown to reduce the incidence of the disease 48 percent across 65 villages in Bangladesh.

A Lifetime of Scientific Leadership
Colwell has held many advisory positions in the U.S. government, in non-profit science-policy organizations, within private foundations, and in the international scientific research community. Colwell served as director of the National Science Foundation (NSF) from 1998 to 2004. She was the NSF’s first female director and the first with a life sciences background. Colwell has been recognized for the great impact and breadth of her work with many previous honors including induction into the U.S. National Academy of Sciences in 2000, and the National Medal of Science, the United State’s highest honor for science, awarded in 2006.

About the Stockholm Water Prize
H.M. King Carl XVI Gustaf of Sweden will present Colwell with the 2010 Stockholm Water Prize at a Royal Award Ceremony in Stockholm City Hall during the 2010 World Water Week in Stockholm. The Stockholm Water Prize is a global award founded in 1990 and presented annually by the Stockholm International Water Institute, “a policy institute that contributes to international efforts to combat the world’s escalating water crisis.”

Founders of the Prize are Swedish and international companies in cooperation with the City of Stockholm. They are: Bacardi, Borealis & Borouge, DuPont, Eurofosra, WaterFurnace International, Finnved Wastewater Technologies, Grundfos Management, Hewlett Packard, IFT Water & Waste-water, Kemira Water, KPMG Sweden, Läckeby Water, P & G, Ragn-Sells, Scandic, Scandinavian Airlines (SAS), Siemens, AG, SJ (Swedish Railways), Saemck, Uponor, Water Environment Federation and Ålandsbanken Sverige.

By Lee Tune, Senior Media Relations Associate, University Communications
To submit story ideas and photos, please contact the editor, Vivian Hayward, at vhayward@umd.edu or 301.405.4312.