It is a pleasure to update the members of the Washington State Medical Association on activities and accomplishments at the University of Washington School of Medicine over the past academic year and to tell you about plans for the upcoming year. The Washington State Medical Association and its members are wonderful partners in achieving our common goal of improving health throughout Washington.

**2012 State Legislative Recap**

Potential budget cuts preoccupied Olympia’s lawmakers throughout the most recent legislative sessions. With revised reductions in estimated revenues, Governor Gregoire called a special session of the Legislature for December 2011 to cut the $31 billion operating budget by $1.3 billion. In lieu of this no-new-revenue, “all cuts” approach, the Governor proposed a budget that would cut $479 million.

An “all cuts” approach would have been catastrophic and would have eliminated the Basic Health Plan, Disability Lifeline-medical, certified public expenditures (CPE) to public hospitals serving low-income individuals, critical access hospital payments, Dental Education in the Care of Persons with Disabilities (DECOD) and non-emergent dental care for low-income patients, regional support networks with programs for non-Medicaid mental health services, emergency room cuts and a variety of smaller healthcare programs such as family planning and volunteer physician services. In addition, the Governor’s proposed cut to the University of Washington was $37.8 million (17 percent).

Fortunately, the legislators chose to take cuts without some of the largest reductions for healthcare and adjourned on December 2011 after shrinking the deficit by $480 million. This early action left another $968 million deficit for the session that began in January 2012.

After several successive years of budget cuts amounting to $10 billion, the 2012 legislators faced an almost $1 billion deficit to be addressed through program cuts, revenues or both. High risk of cuts threatened UW Medicine’s budget priorities without clear commitments to prioritizing health training or healthcare services for the underserved.

The February revenue forecast improved, increasing by almost $87 million, and state expenditures decreased by $335 million as fewer people signed up for state services. The final adopted operating budget took a balanced approach incorporating a small infusion of new revenues ($177 million), fund transfers and reserves ($265 million), maintenance level changes ($340.3 million), policy changes ($295.4 million) and reversions ($120 million) to close the $1.2 billion gap.

Major budget reductions did not target higher education but encompassed all state entities. On a positive note, the budget recognized the importance of continuing funding for the
WWAMI program in Spokane, including securing state funding for a new health sciences building on the Riverpoint campus in Spokane that will house WWAMI Spokane medical students and other health professions students.

UW Medicine’s budget priorities for healthcare programs and medical education were spared from major reductions. While large budget challenges remain at the federal level, the CPE program, volunteer physicians, emergency room cuts (special thanks to WSMA’s leadership on this issue), Disability Lifeline, and the Basic Health Plan continue. The member hospitals are working on an agreement negotiated by WSMA, WSHA, ACEP and others.

WSMA was very active in discussions and lobbying that preserved some of our essential state programs that benefit patients, provide access and ensure quality. I extend a strong and heartfelt thank you to WSMA and its membership for supporting these vital programs.

On policy bills, numerous bills were introduced on Medicaid qui tam anti-fraud programs, nurse staffing, hospital financing regulation, networks, compensation, labor negotiations, charges and fees, and workforce. While many bills died, some significant pieces of legislation passed that could entail additional work by healthcare entities and licensed providers in documentation, administrative work or new duties. These include implementing the Exchange/ACA (E2SHB 2319), hospital community benefits additional reporting (ESHB 2341), medical services fraud detection (ESHB 2571), Medicaid fraud qui tam (ESSB 5978), and collective bargaining for postdoctoral researchers and clinical employees (ESSB 6486).

The legislative work that ended April 11, 2012 brought welcome respite from the major budget cuts experienced in previous sessions. Medical education and training programs can continue without significant reductions through the end of the biennium. Many thanks for WSMA’s continuing interest and support for patients, members, medical students and residents.

**UW School of Medicine Status**

Despite the many state and federal financial challenges experienced in recent years, the UW School of Medicine remains financially stable. Our clinical revenue base in the UW Medicine health system provides important support for our education programs and the research productivity of our faculty remains very high.

The UW School of Medicine was ranked the No. 1 medical school in the nation for primary-care training for the 19th consecutive year in the annual *U.S. News & World Report* professional school rankings, as well as No. 1 in both family medicine and rural medicine for the 21st consecutive year. The UW School of Medicine is again No. 1 in the nation among public medical schools in NIH research funding and No. 2 among all medical schools in the nation (behind only Harvard).

We remain committed to caring for the underserved, an activity that is essential to our mission of improving the health of the public. UW Medicine remains a major provider of charity care to Washington State residents.
Education Programs

Administrative changes

Ellen Cosgrove joined the UW School of Medicine as vice dean for academic affairs in October 2011. She previously served as senior associate dean for education at the University of New Mexico School of Medicine. Dr. Cosgrove, a general internist who led a successful and innovative curriculum renewal at New Mexico, is taking the lead in a medical school curriculum renewal process at UW discussed later in this report.

Tom Norris stepped down as vice dean for academic affairs in December 2010 to become acting chair of the Department of Family Medicine. He was appointed the permanent family medicine chair in December 2011.

Alan Weiner stepped down as chair of the Department of Biochemistry in December 2011 to return to his full-time faculty position. Trisha Davis, professor of biochemistry, is serving as acting chair while a national search is conducted.

Fred Wolf stepped down as chair of the Department of Medical Education and Biomedical Informatics in June 2011. Peter Tarczy-Hornoch, professor of pediatrics and of medical education and biomedical informatics, is serving as acting chair while a national search is conducted. The department’s name has been changed to the Department of Biomedical Informatics and Medical Education.

Jens Chapman, UW professor of orthopaedics and sports medicine, was appointed chair of the Department of Orthopaedics and Sports Medicine in August 2011 after a national search. Chapman became acting chair of the department in 2009 when Frederick Matsen stepped down from the position after 25 years.

Tom Montine, the Alvord Professor of Neuropathology, became chair of the Department of Pathology on June 16, 2012. Prior to that, Montine had served as interim chair since December 2010. He succeeds the late Nelson Fausto, who died earlier this year.

W. Robb MacLellan was appointed head of the Division of Cardiology in the Department of Medicine in November 2011. He came to the UW from UCLA. He succeeded Richard Page, now chair of the Department of Medicine at the University of Wisconsin, and James Caldwell, who had been acting division head since Page’s departure.

Jane Shelby was appointed first-year assistant dean and director of WWAMI medical education at the University of Alaska, Anchorage, effective July 1, 2012. Shelby, a basic scientist, will be responsible for the coordination, oversight and faculty leadership of UW Medicine’s WWAMI medical education program at the University of Alaska, Anchorage. Most recently, Shelby was executive director for health sciences at Montana State University where she worked with WWAMI students and chaired the WWAMI Montana medical information and decision-making course.
Yong “Ki” Shin was appointed the first assistant clinical dean of WWAMI Western Washington, effective July 1, 2012. Shin will serve as a liaison between hospitals in Western Washington, Washington State Medical Association, Washington State Hospital Association, residency programs and the School of Medicine to represent the needs and opportunities for medical education in Western Washington. A WWAMI graduate, Shin is a general internist in Montesano, Wash.

Medical student update

Incoming 2012 class: The Washington component of the entering 2012 medical school class had 750 applicants, of whom 119 were accepted. The ratio of Washington applicants to admissions is 6.3 to 1. Overall, 5,101 applications were received for our 220 first-year positions for fall 2012. Among all entering students, 52 percent are women. The average age in the new class is 24, with a range of 20 to 43, and the average GPA is 3.69.

Medical students in residency match: Our medical students had a very successful match for residency positions. I am pleased to report that the number of UW students who matched in family medicine residency programs increased to 40 students (up from 33 in 2011 and 26 in 2010). The number of UW students matching into internal medicine also increased to 54 students compared with 42 the previous year.

WWAMI matches: Forty-three percent of our 2012 UWSOM graduates are entering residency training programs in the WWAMI region. This, too, is a substantial increase from the previous two years. A total of 78 students are completing residency training in Washington, four in Idaho, three in Alaska and four in Montana. Forty-two UWSOM students matched to UW programs in Seattle, and four entered the UW internal medicine program in Idaho.

Primary care matches: The percentage of students entering primary-care specialties is 54 percent (up from 52 percent in 2011 and 47 percent in 2010), which is substantially higher than the national average. The steady increase in the percentage of UW students entering primary care is the result of many factors, including a persistent effort to highlight the vital importance of primary care to our region and nation as well as the outstanding WWAMI program and the opportunities it provides for our students to experience primary care in diverse settings throughout the region.

Thank you, WSMA: I would like to express my deep appreciation to WSMA members who teach and mentor UW medical students and other health professions students in your practices. Through your teaching, advice and example, you have a profound impact on the decisions and directions of our students and provide them with the solid skills and attitudes that serve them throughout their careers in medicine.

Graduate Medical Education (GME) update

UW residency and fellowship training programs: UW Medicine is the sponsoring institution for 93 residency and fellowship programs accredited by the Accreditation Council for Graduate Medical Education (ACGME) and for two Board-approved fellowship programs. Approximately
950 residents and 300 fellows participate in these programs each year. Internal medicine is the largest residency program with 175 positions, followed by anesthesiology (110), pediatrics (105), psychiatry (77), general surgery (69), diagnostic radiology (49) and orthopaedic surgery (40).

The WWAMI Family Medicine Residency Network, overseen by the UW School of Medicine, consists of 18 family medicine residency programs across the WWAMI region, including 12 in Washington. The Network trains about 400 family medicine residents, many of whom remain in the WWAMI region to practice upon completion of training.

UW Medical Center, Harborview Medical Center, Seattle Children’s, and the VA Puget Sound Health Care System are the primary training sites in Seattle for our residents and fellows, with some resident training also offered at Valley Medical Center and Northwest Hospital & Medical Center. The School of Medicine also maintains close affiliations with over 150 community-based training sites in the Seattle area, as well as with many inpatient and outpatient settings for a growing number of specialties throughout the WWAMI region.

The UW School of Medicine partners with multiple hospitals throughout the region to expand the scope of our educational programs and to develop new training affiliations. Advancing GME opportunities and building new GME programs throughout the region remain critical needs. There is a high correlation between site of residency training and site of practice. Without additional residency positions and programs, expansion of medical school opportunities will have limited long-term impact on the region’s workforce. I thank those WSMA members who have worked hard on behalf of GME expansion.

GME accreditation: All UW School of Medicine residency training programs are fully accredited. The majority of our programs received the five-year maximum accreditation cycle length granted for re-accreditation. The School recently initiated several new residency programs in emergency medicine, internal medicine (based in Boise), integrated cardiothoracic surgery, integrated vascular surgery and integrated plastic surgery. New fellowship programs include pediatric gastroenterology, rehabilitation sports medicine and pediatric rehabilitation.

As the sponsoring institution, UW Medicine holds a Continued Accreditation status with a five-year cycle. This very favorable status reflects the strong leadership, oversight, and administration of residency and fellowship education at the School of Medicine, primary training sites in Seattle, and training sites throughout the WWAMI region. Thank you to all WSMA members who are involved in residency training.

Residency match: Our residency programs did extremely well in filling positions in the national match. Ninety-three percent of 251 available UW resident positions were filled in the initial match and the remaining positions were filled with excellent candidates immediately afterwards. Ninety-eight percent of our positions were filled with U.S. medical school seniors, which compares very favorably to the national average of 71 percent.

Educational initiatives and milestones

Second GME Summit: In March, the UW School of Medicine convened medical and community leaders from throughout the WWAMI region and nation to discuss how to advance
graduate medical education (GME) in the region. This meeting, held on the Spokane Riverpoint
campus, explored key issues related to enhancing and expanding GME and best practices of
financing GME in an era of increased need for physicians and reductions in federal and state
funding for medical training.

Participants discussed ways to extend the School of Medicine’s WWAMI model to
develop more residencies in communities throughout the region. John McCarthy, UW assistant
dean for regional affairs in Spokane, described the needs assessment and work of the GME
Expansion Committee for Eastern and Central Washington, and Paul Rockey, director of
graduate medical education for the American Medical Association, discussed the national
landscape of GME. Other guest speakers covered state and federal funding models and
resources.

As with undergraduate medical education, developing solutions for increasing GME
programs and positions must be a collaborative process, especially as federal GME funding
declines. The WWAMI model, built on collaboration and partnership, provides a roadmap and
foundation for moving GME forward for the region with high-quality and cost-effective
programs.

**WWAMI 40th anniversary year:** Throughout the 2011-2012 academic year, WWAMI
participants and sites region-wide celebrated WWAMI’s 40th anniversary. Events were held in
each of the five WWAMI states, including several in Washington. In Spokane, a gala reception
was held in the Davenport Hotel’s ballroom in conjunction with the GME Summit. It was
wonderful to see so many members of the Spokane medical and business community present to
mark the occasion. In April, a celebration reception was held in Pullman in conjunction with the
annual White Coat Ceremony and Preceptor Appreciation Event. The anniversary year
culminated in a reception and dinner in Seattle on June 3. The dinner was attended by over 300
WWAMI supporters, including some of the WWAMI pioneers involved in initiating the
program. The Honorable Daniel Evan, the event’s keynote speaker, was a major supporter of
WWAMI as Washington State Governor at the time the program began, and he remains a strong
WWAMI advocate. The evening was a wonderful celebration of the enduring power of
community and collaboration.

WSMA had a major role in the inception of WWAMI. Initial discussions that led to
WWAMI were held in 1970 at an annual meeting of WSMA. You have continued to support this
landmark program across the past 40 years. Thank you for all you have done as preceptors and
supporters of the WWAMI program.

**Medical school curriculum renewal:** Twelve years ago, the UW School of Medicine’s
curriculum underwent a comprehensive curriculum review — the first in many years. One of the
products of the review was initiation of the Colleges program. This clinical skills training and
mentoring program has played a major role in our educational arena ever since. It is considered a
key source of satisfaction among our students and has been emulated and lauded nationally.

In 2011, we began another curriculum review, with a year-long committee of faculty,
students and staff evaluating the medical school curriculum. This committee performed extensive
research into curricula nationally and talked with hundreds of our faculty, staff, students, alumni and others about our curriculum. The committee’s final report identified both strengths and challenges. While we have an excellent medical school and produce outstanding physicians for the future, the findings of this report indicate a mandate for change. The committee identified several major areas for curricular improvement, including enhancing active learning in the preclinical curriculum and increasing integration within and across years. Other areas identified for change were: increasing flexibility for students in curricular choices and schedules, additional time for career exploration, and expanded focus on critical thinking, information management and lifelong learning. Due to the ongoing, rapid change in medical knowledge and a constantly shifting healthcare environment, the committee recommended that a continuous curriculum renewal process be initiated rather than a time-limited process.

Subsequently, a “visioning” committee led by Wylie Burke, chair of the School’s Department of Bioethics and Humanities, and a broadly representative group of faculty, students and staff, developed key principles for curricular reform. The resulting document highlights areas of profound strength and importance at UWSOM, including professionalism, the WWAMI partnership, continuous lifelong learning, dually addressing individuals and populations, serving those in need, and building on our dual strengths in primary care and research.

The next phase will involve committees and workgroups that use the pre-review findings and vision principles to develop and implement modifications to the curriculum. The process will have intensive development and implementation phases, followed by an ongoing, continuous improvement process to ensure that we maintain the best possible curriculum that meets the needs of our students, faculty, alumni, and the communities our students will serve during their practice careers.

**WWAMI Spokane expansion:** In last year’s report, I told you about plans to expand WWAMI Spokane to include the training of second-year students on the Spokane Riverpoint campus. I am very pleased to announce that in March, an agreement was reached between the UW and WSU to initiate a pilot WWAMI second-year medical school training program at the Riverpoint campus. The proposed start date for the second-year pilot program is fall 2013. The pilot will place up to 20 second-year UW School of Medicine medical students in Spokane for each of two consecutive years. Continuation of the program beyond the two pilot years is dependent on approval from the Liaison Committee on Medical Education (LCME) and funding from the Washington State Legislature.

Ken Roberts, director of WWAMI Spokane, George Novan, associate director of WWAMI Spokane, Chris Copin, curriculum development leader, and others in Spokane are working closely with regional and academic leaders in Seattle to develop a curriculum for the Spokane pilot that is consistent with the objectives of the second-year courses in Seattle and that includes some key elements called for in the curriculum pre-review, including more active learning and more individualized programs that advance a lifelong learning approach. The Spokane model will utilize clinical “guides” who will devote a substantial portion of their time to working with small groups of second-year students in mastering the curriculum through active, case-based learning.
This is a very exciting step for the UW School of Medicine, WSU and WWAMI. The pilot opens the door to possible expansion of medical school education in Eastern and Central Washington, provides a model for future expansions throughout WWAMI, and serves as a model for curriculum change in all of our medical school sites, including Seattle.

Many people and organizations have contributed to making the pilot possible. I would like to thank in particular Warwick Bayly, WSU provost and executive vice president; Brian Pitcher, chancellor of WSU Spokane; and Gary Pollack, vice provost for WSU health sciences, for their outstanding work in developing a shared vision and approach. Rich Hadley, CEO of Greater Spokane Incorporated (GSI) and the entire GSI organization have done a superb job of making the case for a second year in Spokane and providing major fundraising for the pilot. The Empire Health Foundation and the Health Sciences and Services Authority of Spokane County (HSSA) have been important collaborators and funders of the pilot as well. Many businesses, health organizations and members of the Spokane community have provided funding and support that make the pilot possible. Thank you to WSMA members who have advocated and provided strong support for the pilot program.

Scientific Discovery

Key research initiatives

Advances in reducing HIV infection: A pivotal study in Africa conducted by the UW’s International Clinical Research Center has resulted in new hope for reducing HIV infection. The study found that taking a daily AIDS drug can keep an uninfected person from getting the AIDS virus. The study was conducted in Kenya and Uganda among 4,758 discordant couples. In those couples in which one partner was infected and the other was not, participants who took a daily Truvada pill — a mix of tenofovir and emtricitabine — had a 73 percent lower chance of becoming infected. Connie Celum, UW professor of medicine and global health, was principal investigator and protocol co-chair of the study, and Jared Baeten, UW associate professor of medicine and global health, was medical director and protocol co-chair. The research was featured in TIME’s book 100 New Scientific Discoveries: Fascinating, Unbelievable and Mind Expanding Stories. In July 2012, Truvada became the first drug approved by the FDA that focuses on reducing the risk of HIV infection acquired through sexual activities.

Celum and Baeten also collaborated with Robert W. Coombs of the Division of Allergy and Infectious Diseases in an observational study (published in The Lancet) of nearly 3,800 couples in Africa finding that women using hormonal contraception – such as a birth control pill or a shot like Depo-Provera – are at double the risk of acquiring HIV.

Institute for Protein Design: The recent establishment of the UW Institute for Protein Design heralds a new era of research opportunities that will in the future significantly improve clinical care. The Institute for Protein Design will study the structure and modification of proteins for 21st century medicine.

A major challenge for designing proteins for specific purposes is predicting threedimensional shape from the amino acid sequence. David Baker, UW professor of biochemistry
and an investigator of the Howard Hughes Medical Institute, has had remarkable success in making these predictions and in designing new proteins with new functions. Baker is the institute’s director. His work includes the development of Rosetta software, which has become the world’s standard for predicting protein structures and designing new proteins. His group has used Rosetta to design proteins with a wide range of new functions, including catalysts for chemical reactions, HIV vaccine candidates, and flu virus inhibitors. The group involved the general public in these efforts through Rosetta@home (http://boinc.bakerlab.org/rosetta/) and Fold.It.

**New genomic science programs:** The National Human Genome Research Institute has established two major UW programs to accelerate genome sequencing applications for patient care. The *UW Center for Mendelian Genomics* is one of three centers nationwide funded to search for the genes underlying Mendelian disorders – inborn diseases and birth defects caused mainly by single-gene mutations. The center will use the latest advances in rapid genome sequencing to aid in the discovery of the genetic changes responsible for these illnesses. Principal investigators for the center are Deborah Nickerson, UW professor of genome sciences, Michael Bamshad, UW professor of pediatrics in the Division of Genetics and Development, Mark Rieder, UW research associate professor of genome sciences, and Jay Shendure, UW associate professor of genome sciences.

The second major UW project recently funded by the National Genome Research Institute, the *UW Clinical Exploratory Research Project*, is one of five projects designed to speed the application of genomic science to medical care. The projects will explore the ways clinicians might use genome sequencing information in caring for patients. Healthcare professionals, genome scientists, ethicists, patients and patient families will work together to learn important lessons from applying genome sequencing information in a medical setting. Gail Jarvik, UW professor of medicine and head of the Division of Medical Genetics, is leading the project that includes a diverse team of experts from multiple departments.

**Palliative Care Center of Excellence:** Recently established, the Palliative Care Center of Excellence brings together nationally recognized UW experts in palliative care. Its goal is to enhance current research and provide increased opportunities for collaboration and coordination of palliative care clinical services and educational programs across UW Medicine sites and the UW Health Science Schools. J. Randall (Randy) Curtis, UW professor of medicine in the Division of Pulmonary and Critical Care Medicine, is the center director and Anthony L. (Tony) Back, UW professor of medicine in the Division of Medical Oncology, is co-director. The center will coordinate and augment clinical palliative care services provided throughout UW Medicine and the region through development and implementation of standards, program evaluation, program development support, and integration with research and educational activities.

**Major new research awards:**

The following are a few of the many new research awards received by our faculty and staff this past year:
Researchers at the UW and Fred Hutchinson Cancer Research Center (FHCRC) are among the first to receive funding from the National Institutes of Health Blueprint for Neuroscience Research program aimed at developing new drugs for disorders of the nervous system. The principal investigators Edwin Rubel, UW professor of otolaryngology – head and neck surgery; David Raible, UW professor of biological structure; and Julian Simon, associate member molecular pharmacology in the FHCRC Clinical Research Division and UW affiliate associate professor, will focus the award on hearing loss and balance disorders. The team will develop compounds to prevent the damaging effects of certain antibiotics and anticancer drugs on the inner ear.

Susan G. Komen for the Cure awarded research grants to advance cures for breast cancer to Mary-Claire King, UW professor of genome sciences and medicine, and Anne McTiernan, UW research professor of epidemiology in the School of Public Health. King received a scholar grant to discover new genes to better identify women at risk for inherited breast cancer. Her lab uses generation sequencing to find the genes responsible for complex human conditions, including inherited breast and ovarian cancer. McTiernan, a FHCRC investigator, received a scholar grant to investigate vitamin D insufficiency and weight, two potentially modifiable risk factors for breast cancer. Another FHCRC investigator, Jamie Guenthoer, received a grant to develop a blood test that, with mammography, could detect cancer and provide early diagnosis of aggressive forms of the disease.

An $8.1 million NIH biodefense grant is funding development of new drugs to treat some of the world’s most dangerous diseases, including Ebola, plague, Japanese encephalitis and other lethal pathogens. Michael Gale, Jr., UW professor of immunology and the grant’s principal investigator, studies innate immunity to virus infection, and the intracellular immune processes and virus-host interactions that control viral replication and infection outcome. The project builds on discoveries from collaborations between the UW and Kineta, a Seattle-based privately held biotechnology company specializing in clinical advancement of drugs that modulate and enhance the human immune system, to develop novel antiviral drugs and vaccine boosters called adjuvants. Michael Katze, UW professor of microbiology and associate director of the Washington Regional Primate Research Center, will provide bioinformatics and systems biology genomics analysis. This grant will increase the number of disease targets to include yellow fever, Ebola, Marburg, plague and other diseases.

The UW Institute of Translational Health Sciences (ITHS) has been awarded nearly $65 million over the next five years from the National Institutes of Health to continue its groundbreaking work. The ITHS helps scientists accelerate the translation of research discoveries into practical applications to improve the health of the public. Nora Disis, UW associate dean for translational science and professor of medicine in the Division of Oncology, leads the ITHS. The new funding will support the next phase of ITHS work, which includes galvanizing research teams around critical issues and looking at how to take novel technologies—for example, the molecular design of proteins—and make them clinically useful. ITHS will also increase community engagement in translational research.

Research highlights from the year:
A one-dose method for delivering gene therapy into an arterial wall effectively protects the artery from developing atherosclerosis despite ongoing high blood cholesterol. David A. Dichek, the study’s senior author, is the John Locke Professor of Cardiovascular Research at the UW and associate director for research in the Division of Cardiology, Department of Medicine. Gene transfer would move the production of the therapeutic “drug” (in this case a therapeutic gene) directly to the site of atherosclerosis development, the blood vessel wall. The approach maximizes delivery of the drug to the artery wall and minimizes side effects in the rest of the body.

UW and international researchers have discovered a new genetic defect that predisposes people to acute myeloid leukemia and myelodysplasia. The mutations were found in the GATA2 gene. Among its several regulatory roles, the gene acts as a master control during the transition of primitive blood-forming cells into white blood cells. The results come from an international collaboration of scientists and the participation of families from Australia, Canada, and the United States. The U.S. portion of the study was conducted by Marshall Horwitz, UW professor of pathology.

The FDA has approved the first drug that treats an underlying cause of cystic fibrosis. The FDA approval follows the results of a clinical trial study led by Bonnie W. Ramsey, UW professor of pediatrics and director for Clinical and Translational Research at Seattle Children’s Research Institute. The drug, Kalydeco, also known as invacator or VX-770, was developed by Vertex Pharmaceuticals with financial support from the Cystic Fibrosis Foundation. The oral medicine targets the defective protein produced by the gene mutation called G551D that causes cystic fibrosis. The mutation accounts for approximately four percent or 1,200 cystic fibrosis cases in the United States.

Significant differences in brain development starting at six months of age have been found in high-risk infants who later develop autism compared with high-risk infants who did not develop autism. Stephen R. Dager, UW professor of radiology was principal investigator at the UW site; Annette Estes, UW research associate professor of speech and hearing sciences was co-author of the study.

In a study that sheds light on the genetic basis of autism spectrum disorders, UW researchers uncovered new gene mutations that disrupt the function of proteins and discovered a pathway related to modifying chromatin—the tightly coiled spools of DNA in the cell—and to regulating genes in the brain and nervous system. Various changes in this pathway contribute to children developing autism in different ways. Mutations in this pathway also may contribute to a variety of childhood intellectual, social, and psychiatric disabilities, with implications beyond autism. The lead author, Brian J. O’Roak, senior fellow in the Department of Genome Sciences works with senior authors Jay Shendure, UW associate professor of genome sciences, and Evan Eichler, UW professor of genome sciences.

UW scientists have successfully sequenced the genome of a baby in the womb without tapping its protective fluid sac. Maternal blood sampled at about 18 weeks into the pregnancy and a paternal saliva specimen contained enough information for the scientists
to map the DNA of the fetus. This method was later repeated for another expectant couple closer to the start of their pregnancy. The researchers checked the accuracy of their genetic predictions using umbilical cord blood collected at birth. What distinguishes this team’s latest methods is the ability to assess many and more subtle variations in the fetus’ genome, down to a minute, one-letter change in the DNA code. The scientists applied a recently developed technique to resolve the mother’s haplotypes, groups of genetic variations residing on the same chromosome. From these groupings, the researchers were able to identify parts of the baby’s genetic material inherited from each parent with over 98 percent accuracy. The research was conducted in the laboratory of **Jay Shendure**, UW associate professor of genome sciences.

**Administrative changes**

**Lori Mitchell**, formerly financial operations officer for UW Medicine hospitals and clinics, was appointed chief financial officer for UW Medicine and UW vice president for medical affairs, a new senior executive position, effective May 1. In her new role, Mitchell leads a team of approximately 1,000 individuals within UW Medicine.

**Richard B. Utarnachitt**, UW acting instructor and co-director of the medical school program in the Division of Emergency Medicine, has been appointed medical director of Airlift Northwest (ALNW). Utarnachitt had served as acting medical director of ALNW since January.

**Designated Stroke Centers**: The Department of Health and Washington State have designated Harborview Medical Center and Northwest Hospital & Medical Center as Level 1 Stroke Centers. The hospitals are two of four facilities in King County to qualify as Level 1 Stroke Centers. The Level 1 designation was created by the new Washington State Emergency Cardiac and Stroke System, which seeks to reduce the time it takes for people having a heart attack or stroke to obtain medical care. A Level 1, or Comprehensive Stroke Center, is a facility or system with the personnel, infrastructure and expertise to diagnose and treat stroke patients who require intensive medical and surgical care, specialized tests, or interventional therapies.

The system also establishes Level 2 Primary Stroke Centers and Level 3 Acute Stroke Capable designations. These facilities include UW Medicine’s Valley Medical Center (Level 2) and UW Medical Center (Level 3). In addition to their stroke designations, Harborview Medical Center, Northwest Hospital, Valley Medical Center and UW Medical Center are Level 1 Cardiac Centers.

**UW Medical Center first in Pacific Northwest to discharge a total artificial heart patient**: UW Medical Center became the first Pacific Northwest hospital to discharge a patient implanted with the world’s only approved Total Artificial Heart. The device, manufactured by SynCardia Systems, is approved for use as a bridge to heart transplant in the U.S., Canada and Europe. The patient was implanted with the Total Artificial Heart during a six-hour procedure in February. The surgeon was **Nahush A. Mokadam**, the hospital’s co-director of heart transplantation and...
director of mechanical circulatory support. He was assisted by Awori J. Hayanga, chief resident in cardiothoracic surgery. Mokadam is the LeRoss Endowed Professor in Cardiovascular Surgery.

The SynCardia device, approved by the FDA as a temporary solution until a donor heart becomes available, is available to patients at risk of imminent death from biventricular failure. Currently, the only FDA-approved driver for powering the Total Artificial Heart weighs 418 pounds and confines patients to the hospital while they wait for a matching donor heart. SynCardia’s portable driver, which weighs only 13.5 pounds, is undergoing an FDA-sanctioned clinical study to determine whether it can safely be used at home.

**Center for Medicare and Medicaid Innovations Awards:** Two UW School of Medicine projects have received major awards from the Center for Medicare and Medicaid Innovations (CMMI) that provide innovative models for the care of patients. The first, Project ECHO (Extension for Community Healthcare Outcomes), will help increase access, improve quality and reduce costs of care for 6,000 high-risk Medicare and Medicaid patients across Washington State and New Mexico. Created 10 years ago at the University of New Mexico, Project ECHO helps clinicians who serve in rural and underserved areas to evaluate and treat complex chronic conditions through weekly clinics held via videoconferencing. The Project ECHO model allows primary-care providers to obtain timely consultations from a wide range of academic medical center-based specialists. John Scott, UW assistant professor of medicine in the Division of Allergy and Infectious Diseases, launched Project ECHO in Washington State in 2009 to help clinicians in more remote areas with the evaluation and treatment of hepatitis C. Since then, UW’s Project ECHO has expanded to include teleconferences in chronic pain, psychiatry, addictions, and HIV/AIDS.

CMMI also awarded nearly $18 million to a national collaboration of partner organizations that includes UW Medicine to implement an evidence-based collaborative care management model for patients with depression plus diabetes and/or cardiovascular disease in primary care in seven states. Jürgen Unützer, UW professor and vice chair in the Department of Psychiatry & Behavioral Sciences and director of the Division of Integrated Care and Public Health, leads the AIMS (Advancing Integrated Mental Health Solutions) Center that will participate in the collaboration. Dr. Unützer is principal investigator for the UW portion of the project. Other investigators include Wayne Katon, UW professor and vice chair of the Department of Psychiatry & Behavioral Sciences, and Paul Ciechanowski, UW associate professor of psychiatry & behavioral sciences. Integrated mental health is designed to improve the health of populations through patient-centered, integrated mental health services. A large number of studies have shown that such programs are more effective and more cost-effective than usual care for common mental disorders such as depression and anxiety.

**Airlift Northwest’s new base at Yakima International Airport** will serve communities in Central Washington. The service, featuring a new Turbo Commander and flight crew, began Dec. 5 and runs daily from 11 a.m. to 11 p.m. The twin-engine Gulfstream Turbo Commander and a crew of two pilots and two critical care nurses serve Yakima, Wenatchee, Ellensburg, Omak, Moses Lake, Tri-Cities and other communities in Central Washington. Day-basing the Turbo Commander in Yakima allows Airlift Northwest to decrease its estimated arrival time and provides patients access to complex medical care sooner. In addition to Yakima, Airlift
Northwest aircraft, equipped with the most up-to-date safety equipment, are strategically located at five other bases throughout the Pacific Northwest (Juneau, Alaska and Arlington, Bellingham, Olympia and Seattle in Washington).

Faculty Honors

- **William Foege**, an alumnus of the UW School of Medicine, was one of 13 individuals selected by President Barack Obama to receive the Presidential Medal of Freedom, the nation’s highest civilian honor. Foege helped lead the successful campaign to eradicate smallpox in the 1970s and later helped shape the global health work of the Bill and Melinda Gates Foundation.

- **Mary-Clare King**, American Cancer Society Professor of Medicine and Genome Sciences, received Rockefeller University’s Greengard Prize as a leading woman scientist for her work in cancer genetics.

- **George Kraft**, UW professor emeritus of rehabilitation medicine and adjunct professor of neurology, received the 2011 Volunteer Lifetime Achievement Award from the National Multiple Sclerosis Society, honoring his 35 years of outstanding service. George has had a profound influence on the field of multiple sclerosis. He is also the principal investigator of the Multiple Sclerosis Rehabilitation Research and Training Center.

- **Evan Eichler**, UW professor of genome sciences and a Howard Hughes Medical Institute investigator, is one of three UW faculty members elected to the National Academy of Sciences for excellence in original scientific research. Eichler’s lab studies hotspots in human and animal genomes, regions that have undergone rapid structural changes from jumping or duplicated segments. Technologies developed by his group have advanced the understanding of primate evolution, of mutations linked to intellectual and mental disabilities, and autism.

- **Lawrence Corey**, UW professor of medicine in the Division of Allergy and Infectious Diseases and laboratory medicine, and president and director of Fred Hutchinson Cancer Research Center, was elected a member of the American Academy of Arts and Sciences. An authority in virology, immunology, and vaccine development, Corey is principal investigator of the international HIV Vaccine Trials Network, a member of the National Cancer Institute Board of Scientific Counselors, and a member of the Institute of Medicine, among many other responsibilities and honors.

- **Jerry P. Palmer** received the 2011 Outstanding Physician Clinician in Diabetes Award from the American Diabetes Association. Palmer is a UW professor of medicine in the Division of Metabolism, Endocrinology and Nutrition, director of the Diabetes Endocrinology Research Center, and section head at the VA Puget Sound Health Care System.

- **Sandra Bajjalieh**, UW professor of pharmacology, is one of three recipients nationally of the 2011 McKnight Technological Innovations in Neuroscience Awards. The award is to develop biosensors for signaling lipids in brain cells.
• **Philip D. Greenberg**, UW professor of medicine and immunology, received the 2011 William B. Coley Award for Distinguished Research in Basic and Tumor Immunology from the Cancer Research Institute. Greenberg was cited for his pioneering work to bring adoptive T-cell transfer to its effective application as a treatment for cancer. He shares the award with Steven Rosenberg of the National Cancer Institute. Greenberg is a member of the Fred Hutchinson Cancer Research Center where he heads the Program in Immunology.

• **Christine Queitsch**, UW assistant professor of genome sciences, received a 2011 NIH Director’s New Innovator and Transformative Research Projects Award to develop DNA biomarkers for disease susceptibility.

• **Kristina M. Utzschneider**, UW assistant professor of medicine in the Division of Metabolism, Endocrinology and Nutrition, has been named a recipient of a Presidential Early Career Award for Scientists and Engineers (PECASE) — the nation’s highest honor for scientists at the beginning of their independent research careers.

• **Catherine Otto**, UW professor of medicine in the Division of Cardiology, received the 2011 Distinguished Scientist Award (clinical domain) from the American College of Cardiology.

• **Jonathan Himmelfarb**, UW professor of medicine in the Division of Nephrology and director of the UW Kidney Research Institute, received the J. Michael Lazarus Distinguished Award from the National Kidney Foundation. The award recognizes scientists whose research has yielded novel insights related to renal replacement therapy.

• The American Academy of Family Physicians (AAFP) recognized four UW-affiliated family medicine practitioners for outstanding patient care, philanthropy, education and leadership at its annual Scientific Assembly: **Richard D. Kovar**, UW clinical professor of family medicine and medical director of Country Doctor Community Health Centers in Seattle, was named the national 2012 Family Physician of the Year by the AAFP. **William R. Phillips**, T.J. Phillips Endowed Professor in Family Medicine and clinical professor of health services in the School of Public Health, received the 2011 AAFP Foundation Philanthropist of the Year Award in recognition of his leadership, long-term dedication and philanthropic contributions to family medicine and his community over time. **Tom E. Norris**, UW professor and chair of the Department of Family Medicine, received the 2010 John G. Walsh award from the AAFP in honor of his contributions to the advancement of family medicine. **Glen R. Stream**, a family physician in Spokane and UW School of Medicine alumni, was installed as the 64th president of the American Academy of Family Physicians.

• **John E. Olerud**, UW professor of medicine and head of the Division of Dermatology, received the 2011 Regents Distinguished Alumnus Award, the highest honor Washington State University bestows on its alumni. Olerud, who holds the George F. Odland Endowed Chair in Dermatology, is a graduate of WSU and of the UW School of Medicine where he completed residency training in medicine and a dermatology fellowship.
• **Paul Lange**, UW professor and chair emeritus of the Department of Urology, received the Huggins Medal, the highest award bestowed by the Society of Urologic Oncology. The Huggins Medal recognizes outstanding contributions in furthering the science of urological oncology and advancing patient care for individuals with genitourinary cancer.

• **David R. Eyre**, UW professor of orthopedics and sports medicine, received the Orthopaedic Research Society 2012 Arthur Steindler Award in recognition of his contributions to advancing the understanding of musculoskeletal systems, disease and injury.

• **David R. Park**, UW associate professor of medicine in the Division of Pulmonary and Critical Care Medicine, received the 2012 Outstanding Educator Award from the American Thoracic Society.

• **Carlos A. Pellegrini**, the Henry N. Harkins Professor and Chair of the UW Department of Surgery, received the 2012 Andrew L. Warshaw Master Educator Award from the Society for Surgery of the Alimentary Tract Foundation. The honor recognizes his excellence as a mentor, teacher and educator.

• **Ruth Ballweg**, director of MEDEX Northwest, received the American Academy of Physician Assistants’ (AAPA) highest honor, the 2012 Eugene A. Stead Jr. Award. The Stead Award recognizes Ballweg’s lifelong commitment to advancing the PA profession and her dedication to creating paths to the profession for military servicemen and women.

**Passages**

During the past year, we mourned the passing of the following members of the UW School of Medicine community:

• **John Ensinck**, UW professor emeritus of medicine in the Division of Metabolism, Endocrinology and Nutrition, instrumental in establishing policies for including and protecting human subjects in research and teaching; **Nelson Fausto**, UW professor of pathology, senior advisor to the dean of the School of Medicine, and former chair of the Department of Pathology, acclaimed researcher, author, teacher and mentor; **K. Alvin Merendino**, the second chair of the Department of Surgery and a pioneer in open-heart surgery and other experimental surgical procedures; **William O. Robertson**, UW professor emeritus of pediatrics, founder of the Washington Poison Center, and one of Seattle’s most influential physicians in pediatrics, toxicology, teaching and poison prevention; **Cyrus E. Rubin**, UW professor emeritus of medicine in the Division of Gastroenterology, faculty member for 57 years and pioneer of engineering advances in gastric and intestinal biopsy that led to the accurate diagnosis of celiac disease; and **Alvin J. Thompson**, UW clinical professor emeritus of medicine, who practiced internal medicine and gastroenterology in Seattle for 40 years and was a passionate mentor to many health professionals who trained at the UW.
Thank You

We appreciate the strong and ongoing support we receive from the WSMA and its membership. Your involvement is critical to our success – the time you spend with our medical students, residents and trainees throughout Washington is invaluable, as is your advocacy on behalf of research, education and clinical advances that improve healthcare. As budgets shrink and more is demanded of your time, we are increasingly reminded of how valuable your time and contributions are.

If you would like additional information about any of the topics discussed in this report or about topics not covered, please feel free to contact me (pramsey@uw.edu). In addition, if you have comments, suggestions, concerns or ideas related to the UW School of Medicine, I would like to hear from you. Thank you for your outstanding commitment and accomplishments on behalf of improving health.

Sincerely,

Paul G. Ramsey, M.D.
CEO, UW Medicine
Executive Vice President for Medical Affairs and
Dean of the School of Medicine,
University of Washington