

THE VITAL ROLE OF RESEARCH

NINTH
IN A SERIES
THE NEXT FIVE YEARS

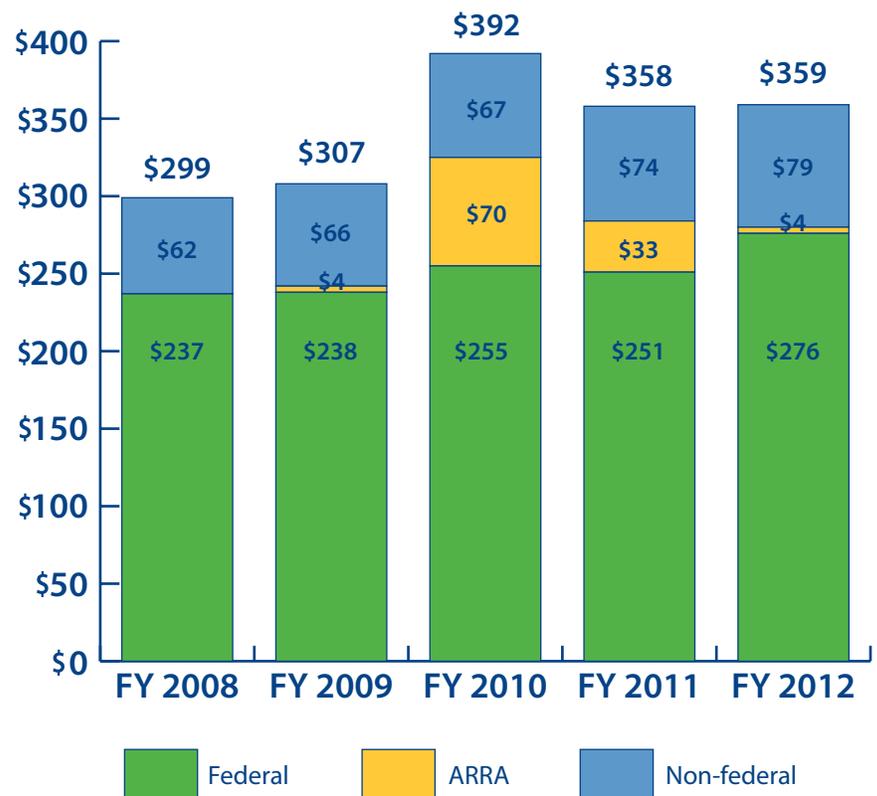
As health reform moves toward the triple aim goals of increased access, improved patient experience and lower costs, OHSU's research mission will have a vital role to play. Research breakthroughs offer hope for less expensive treatments, more efficient delivery of care and the translation of new discoveries to prevent disease.

OHSU is poised to lead. Our research strength is reflected in numerous ways: publications in top-tier research journals, the support of visionary philanthropists like Phil and Penny Knight, and in our merit-based awards. Last year, our faculty and research staff were awarded \$359 million in competitive grant funding, up \$1 million from the previous year.

This figure is notable because of the expected drop off in American Recovery and Reinvestment Act funding, which resulted in OHSU's ARRA funding dropping from \$32.7 million awarded in fiscal year 2011 to \$4.4 million awarded in fiscal year 2012. In other words, the non-ARRA research base went up roughly 9 percent in the last year, a tribute to the productivity of OHSU investigators.

Maintaining that impressive record will be a challenge, since federal funding for the National Institutes of Health will likely shrink. OHSU is actively working to diversify our funding portfolio – to expand relationships with other federal agencies, broaden our philanthropic partnerships, and work with industry in innovative ways to create joint research and training programs.

Research awards of the last five years, in millions



STRENGTHENING THE BASE



OHSU is noted for its research in neuroscience, cardiology and cancer, among other disciplines. These strengths lie on a solid foundation of basic science discovery by our excellent faculty. The next five years will require us to continue to support these outstanding scientists — as well as to recruit new faculty.

We have made important infrastructure investments. One example: we've invested in multiple imaging tools that will revolutionize our ability to see how disease works at a molecular level. These tools will be used to

understand the causes of cancer, as well as cardiovascular, neurologic and developmental disorders.

We've also made a critical investment in a new data center to house the computational infrastructure for supporting the research, patient and educational activities of the future. Managing "Big Data" is necessary to effectively mine the massive amounts of information we're gathering. Breakthroughs will come from how well we can define key patterns and understand connections.

PERSONALIZED MEDICINE

The Knight Cancer Institute continues to recruit top scientists who conduct cutting-edge research on how cancer cells grow and personalized cancer treatments. These treatments target abnormalities in an individual's cancer cells to stop the disease, while leaving healthy cells alone. OHSU is a national leader in this line of research.

The new OHSU Knight Biobrary and the Knight Diagnostic Laboratories will be crucial resources for this work, allowing research on thousands of tumor and tissue samples, and developing effective tests for these cancer-causing molecules.

Personalized medicine is evolving rapidly. Already, we are discovering that

research must go beyond identifying changes to known genes in a patient's DNA. We must now study other, less well understood segments of our DNA, as well as how gene function can be modified by the environment, diet and lifestyle. This field is called epigenetics, and many areas of investigation will be influenced by its discoveries.

THE RESEARCH GAP

The next five years will see a new effort to bridge a knowledge gap identified by health reform — namely, understanding and dismantling the barriers to implementing research findings in clinical practice. OHSU has significant resources to bring to bear on this problem — resources in translational research, health systems effectiveness,

evidence to inform clinical practice, and evidence to inform policy discussions. In the next five years, the social and economic pressures of an aging population will require research into everything from how to improve oral health in patients with dementia to containing costs — and respecting patient wishes — at the end of life.

OHSU is poised to lead, but challenges remain. Rapid deployment of science into the clinic will require new partnerships among our schools, institutes and centers, and our hospital and clinics. OHSU's clinical settings, research infrastructure and overall culture will need to become more connected and team-oriented to meet these goals.

Next up: Outreach and conclusions.

To see the whole series, search for "The Next Five Years" on the Staff News blog.