donors, $20 million from the Kansas Masonic Foundation, and $5 million a year since 2007 from the state—have helped fund the remodeling projects. Since 2009, a sales tax of one-eighth cent in Johnson County, Kansas, home to KUCC, has generated about $5 million a year for the clinical research center.

Recognized for clinical excellence in blood, breast, head and neck, and prostate cancers, KUCC is also highly regarded for its basic science and clinical research efforts, including drug discovery and development.

KUCC has also fostered an affiliation with Kansas City's Stowers Institute for Medical Research, which conducts basic biomedical research. "Without support from the Stowers Institute, it would've been very difficult to make this happen," Jensen said of the new designation. ■

KUMedical Center

Researchers at the University of Kansas Cancer Center, including MD-PhD student Anand Venugopal, have uncovered a possible link between the protein RBM3 and stem cell–like characteristics in several types of solid tumors, including colorectal cancer.

Studying Cost, Efficacy of Cancer Care

By 2020, annual spending on cancer care is expected to exceed $158 billion in the United States. With an aging population and therapy regimens that often top $100,000 a year per patient, costs are rising at an unsustainable rate, says Scott Ramsey, MD, PhD, a member of the Public Health Sciences Division at the Fred Hutchinson Cancer Research Center in Seattle.

Ramsey, a physician and health economist, has been named director of Fred Hutchinson's Institute for Cancer Outcomes Research and Evaluation (ICORE), set to officially launch in early 2013. "Our mission is to improve the quality of cancer care and to reduce the cost for patients and the healthcare system," he says.

The price of cancer drugs, particularly in newer combination regimens, has reached a crisis level, says Ramsey, one example being that "cancer patients have bankruptcy rates 3 to 8 times as high as people in the general population." He notes that as prices rise, costs will be transferred to patients in the form of higher co-pays.

"We want drug companies to recoup their expenses and make a profit, but it's society as a whole that will ultimately decide whether it's worth spending $100,000 to $200,000 to gain an extra month of life," Ramsey points out.

Overall, ICORE will study outcomes, cost-effectiveness of prevention and early detection and treatment, pragmatic clinical trial design, and health policy.

One important effort will be to examine ways to reduce the use of diagnostics and treatments that appear to offer little to no survival benefit, but are being prescribed widely off-label or against clinical practice guidelines.

Another primary focus of the new Institute will be to reduce disparities in cancer care that are based on socioeconomic or geographical barriers. "In study after study, we find patients with very similar clinical problems who are either not getting the care they need or are receiving care that isn't shown to be beneficial," says Ramsey.

The Institute's efforts will build on collecting and analyzing large volumes of data that are typically in silos, such as cancer registries, electronic medical records, and insurance claims.

"Cancer treatment has traditionally relied on information from clinical trials, but only 3% to 5% of all cancer patients enroll in clinical trials," notes Ramsey. "The other 95% receive standard care in their communities. Our goal is to try to collect that extra information, link all these databases so that we can get a better picture of cancer patients' experiences, and make that information available to other researchers." ■

CellMiner Integrates NCI-60 Genomic, Pharmacologic Data

The cancer field is awash in data capturing the molecular activity of cancer cells and their responses to anticancer compounds. But the resulting databases have become so large and complex that their information may be virtually inaccessible to many researchers trying to understand cancer and develop better treatments.

"There's been a big barrier between the people who need this information and those trained in bioinformatics who are able to access it," says William C. Reinhold, a pharmacology researcher at the National Cancer Institute's (NCI) Center for Cancer Research. "We created a toolkit called CellMiner to help bridge that barrier and make this information readily accessible to any researcher."

CellMiner, freely available at http://discover.nci.nih.gov/cellminer, integrates tools for analyzing drug activity, gene expression, and microRNA expression in the NCI-60, widely used cancer cell lines developed by the NCI for testing drug candidates.

The suite of Web tools features a pattern comparison tool that identifies statistically significant correlations between gene expression and drug activity profiles, or other patterns of interest, and that also allows input from individual experiments. "This used to be a long, cumbersome process," says Reinhold, who is first author on a *Cancer Research* paper describing CellMiner (Cancer Res 2012;72:3499–511). "Now it happens automatically. All you need to know is what you want to compare."

One prime application will be comparing drugs and genetic targets to identify compounds that could be effective against different forms of cancer. In an example cited in the paper, the researchers looked at colon cancer patterns and found a new compound that potentially may show greater anticancer activity than 3 compounds in clinical trials.

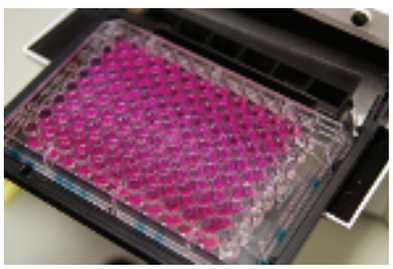
CellMiner currently includes data from 22,379 genes and 360 microRNAs catalogued in the NCI-60 and from 20,503 previously analyzed chemical

NOTED

- **Leaders of the U.S. Congress expect to pass a continuing resolution in September to fund the federal government at current levels** through March, avoiding a possible government shutdown before the fall election. The agreement does not affect the automatic budget cuts ("sequestration") scheduled to arrive in January if suitable measures are not taken to reduce the federal deficit. The cuts would be expected to take a $2.4-billion bite out of the NIH budget.
- **For $3 billion in cash, GlaxoSmithKline will buy Human Genome Sciences (HGS)** of Rockville, MD. Among its cancer projects, HGS is running a randomized phase II trial of mapatumumab with sorafenib (Nexavar; Onyx Pharmaceuticals and Bayer HealthCare Pharmaceuticals) in advanced hepatocellular cancer.
- **The American Society of Clinical Oncology (ASCO) is creating a breast cancer–specific prototype for CancerLinQ,** the society's initiative for a rapid learning system in cancer care. CancerLinQ is designed to assemble and analyze millions of unconnected medical records in a central knowledge base. Among its benefits, CancerLinQ will let investigators explore clinical data in unprecedented ways and generate research hypotheses, according to ASCO.
- **Dendreon of Seattle, maker of the prostate cancer immunotherapy treatment Provenge (sipuleucel-T), has cut 600 jobs and will close 1 of its 3 manufacturing sites,** as it seeks to reduce its annual costs by about $150 million.
- **The NIH is expanding access to the NIH Clinical Center in Bethesda, MD, to extramural researchers.** The nation's largest hospital devoted entirely to clinical research, the center until now exclusively served the agency's intramural research program. A new grant program, Opportunities for Collaborative Research at the NIH Clinical Center, will support partnerships with outside researchers.
- **Global spending on oncology drugs will reach at least $83 billion in 2016,** making this the largest category among total drug spending, which will near $1.2 trillion that year, predicts a report from the IMS Institute for Healthcare Informatics of Parsippany, NJ.

compounds (with data from the Developmental Therapeutics Program), including 102 U.S. Food and Drug Administration–approved drugs.

The NCI team is completing additional database analyses, and will soon add comparative genomic hybridization and whole-exome sequencing databases and tools. ■



The CellMiner Web analytic tool includes data from 22,379 genes and 360 microRNAs catalogued in the NCI-60 cell lines and from 20,503 previously analyzed chemical compounds.

Industry Gains Incentives for Drugs for Children

The U.S. Food and Drug Administration (FDA) reauthorization bill signed into law by President Obama in July adds provisions intended to bolster drug development for rare childhood diseases such as cancers.

Known as the FDA Safety and Innovation Act, the bill establishes a more stable business environment for drug developers by permanently authorizing the Best Pharmaceutics for Children Act and the Pediatric Research Equity Act.

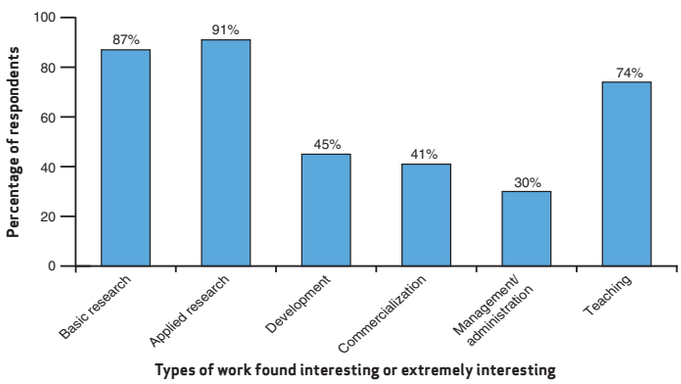
Unfortunately, those 2 acts have given little economic incentive to develop drugs that are specific for rare pediatric diseases, contributing to a long-standing gap for childhood therapeutics, including those for cancer. "The gap is growing as our knowledge of molecular mechanisms increases, and we are learning that diseases require specific pediatric therapies, which one can't simply move directly from the adult to the pediatric realm," comments Peter Adamson, MD, chair of the Children's Oncology Group and chief of clinical pharmacology and therapeutics at the Children's Hospital of Philadelphia.

The FDA bill tackles this lack of incentives head-on in an unusual way: Manufacturers who get a drug for a rare pediatric disease approved and on the market earn a voucher requiring the FDA to review a second drug within 6 months of submission of an application for its approval. Proponents say the vouchers will be significant assets for companies and will act as major incentives to create pediatric drugs.

However, the act does not incorporate proposals to extend the existing legal requirements by mandating consideration of appropriate pediatric testing of molecularly targeted oncology drugs approved for adult use that may be effective against other types of cancer in children. ■

BY THE NUMBERS

What Types of Work Most Interest Life-science PhD Students?



Here's what life-science PhD students found interesting or extremely interesting among potential work activities in a national survey at 39 large U.S. research institutions.

Source: *PLoS One* 2012;7:e36307

For more news on cancer research, visit *Cancer Discovery* online at http://CDnews.aacrjournals.org.