

UPSTATE

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CLINICAL & RESEARCH UPDATE

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Major Advances on the Cancer Front: The Upstate Cancer Center

Scheduled to open in 2012, a dramatic, 90,000-square-foot building will integrate Upstate's outpatient cancer services into a single facility.

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The Upstate Cancer Research Institute

Creating teams to fight cancer, Upstate's new cancer-focused research consortium will adopt the transdisciplinary philosophy of its founding director, Ziwei Huang PhD, professor and chair of pharmacology.

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Upstate Escalates Its Assault on Cancer

Upstate Medical University's bold strategies include a dramatic new outpatient facility as well as a highly focused cancer research consortium.

Upstate Medical University is entering the new decade with two major cancer-fighting initiatives: the construction of the Upstate Cancer Center for outpatient services and the creation of the Upstate Cancer Research Institute.

Fuelling these advances is Upstate's strong reputation for clinical care and cancer research.

On the clinical front, the cancer program at Upstate University Hospital – ranked in the top 20 percent of cancer programs nationwide – has repeatedly secured the prestigious seal of approval from the American College of Surgeons Commission on Cancer. In Syracuse, only Upstate University Hospital carries this select designation, cementing Upstate's reputation as the epicenter of cancer treatment, research and education in Central New York.

In the research arena, more than 35 percent of its research faculty members focus on cancer-related studies, and its new Upstate Cancer Research Institute has recruited an internationally recognized, inventive – and highly collaborative – founding director, Ziwei Huang PhD, recently named professor and chair of pharmacology at Upstate. ■



Leslie Kohman MD, Stephen Graziano MD and Ernest Scalzetti MD of Upstate's Thoracic Oncology Team.



New Upstate Cancer Center to open fall 2012

Scheduled to open in the fall of 2012, the Upstate Cancer Center will be the region's most comprehensive resource for the diagnosis and treatment of cancer and related disorders.

This visionary, 90,000-square-foot facility will include a full range of outpatient diagnostic and treatment services as well as dedicated spaces that support holistic patient care.

Location

The Upstate Cancer Center will be constructed on East Adams Street, just steps from the main entrance to Upstate University Hospital and connected to its west wing.

Services

Last year alone, more than 16,000 patients received cancer-related services through Upstate University Hospital, home to an ever-evolving arsenal of treatment strategies, research studies and support services.

With the new Upstate Cancer Center, this impressive spectrum of outpatient services will be integrated into a single facility. Once disparate entities, such as diagnostic imaging, infusion services and radiation oncology, will now be delivered in a single, convenient, patient-focused environment.

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CANCER CENTER



Architect's renderings of the Upstate Cancer Center. EwingCole, Architects, Philadelphia.

Upstate Cancer Center – continued from pg. A3

Staff

The bedrock of the Upstate Cancer Center will be Upstate's elite corps of cancer specialists, finally working in an environment that reflects their expertise.

The world-class cancer team at Upstate already includes 90 board-certified physicians, including surgeons, medical oncologists, radiation oncologists, pathologists and other medical specialists. These physicians work in interdisciplinary teams, beside hundreds of additional cancer specialists, from nurses to scientists, therapists, social workers, epidemiologists and more.

Interdisciplinary

Architecturally and philosophically, the Upstate Cancer Center is inspired by Upstate's interdiscipli-

nary approach to cancer care, which can compress weeks of individual consultations into a single session. In addition to convenience, patients benefit from the critical mass of expertise assembled to evaluate, treat and monitor their care.

Philosophy

At the heart of this serene, supportive facility is a reverence for patients and a partnership approach to defining their goals, designing their care and collaborating with their families.

Service Area

The Upstate Cancer Center will serve more than 1.8 million Central New York residents from 17 counties – a region that stretches from Albany to Rochester and from the Canadian border to the Pennsylvania state line. ■

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Special Features of the Upstate Cancer Center

- Natural light-filled interiors
- Dedicated space for children's cancer services
- New linear accelerator
- 25 private infusion areas, plus additional communal infusion areas
- Four-season, rooftop healing garden
- Meditation room
- Family resource center
- Serene, spa-like spaces for exercise, stress management, nutrition, spiritual and other support services
- Private spaces for genetic, financial and other counseling
- Valet parking



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Announcing the Creation of the Upstate Cancer Research Institute

Central to Upstate's aggressive campaign against cancer is the Upstate Cancer Research Institute, a formal consortium of Upstate scientists who study cancer from a variety of disciplinary perspectives.

Progress on the Upstate Cancer Institute took a dramatic leap forward last fall with the arrival of its founding director, Ziwei Huang PhD. Recruited from the acclaimed Burnham Institute for Medical Research at the University of California (UC), San Diego, Dr. Huang brings more than \$2 million in NIH funding to Upstate.

Transdisciplinary

A major factor in Dr. Huang's decision to join — and lead — Upstate's cancer research team is its transdisciplinary focus. "The leading cancer centers, as well as the National Institutes of Health, are adopting this transdisciplinary model, where investigators from a variety of disciplines work together to understand and address a common medical problem such as cancer," he explains.

"At Upstate, we have all the infrastructure — strong faculty in the basic and clinical sciences and several



Ziwei Huang PhD, chair of pharmacology at Upstate Medical University

dozen laboratories involved in basic and clinical research related to cancer," Dr. Huang continues. "We also have a strong commitment to integrating the basic and clinical sciences and to translating discoveries into medical applications.

"Our goal as scientists is to benefit human health. It is very important to coordinate our efforts, to develop synergy, to maximize our output — with a goal of developing new diagnostics and new cures," he says.

"A Catalyst"

According to Upstate leaders, Dr. Huang is the ideal person to develop such synergy. "He is a catalyst who leads scientists in exciting new directions and stimulates and inspires them to work together," says Steven Scheinman MD, Upstate's senior vice president and dean of the College of Medicine.

"Dr. Huang is known for a collaborate style that reaches across disciplines and departments."

“He is an energetic and entrepreneurial leader, in addition to an outstanding scientist,” adds Steven Goodman PhD, vice president and dean of research. “Dr. Huang will be a tremendous colleague and role model for students and faculty alike.”

In addition to his NIH funding, Dr. Huang brings an impressive resume to Upstate. He earned a doctorate in chemistry at UC San Diego and completed two years of post-doctoral research at the University of California, San Francisco, in the laboratory of Stanley Prusiner MD, who in 1997 received the Nobel Prize in Medicine for his work on the prion protein and the mechanism of mad cow disease.

Dr. Huang then established his own research laboratory at the Jefferson Medical College in Philadelphia, an NCI-designated cancer center. As an assistant professor, he discovered and developed a peptide molecule as a novel pharmaceutical for cancer patients undergoing bone marrow transplants.

From Philadelphia, Dr. Huang moved his research to the University of Illinois at Urbana-Champaign, where he was a tenured associate professor. In 2004, he joined the Burnham Institute in San Diego, another NCI-designated cancer research center.

Dr. Huang lectures around the world and has published more than 100 research articles, book chapters, reviews and conference presentations. He is also author of the book *Drug Discovery Research: New Frontiers in the Post-Genomic Era*.

Protein Shield

One of Dr. Huang’s many research projects is focused on the protein BCL-2, which is highly expressed in cancer cells. “It works like a shield to protect the cancer cells from treatment,” Dr. Huang explains. “If we could destroy this shield, we could increase the efficacy – and decrease the toxicity – of cancer treatment.”

At Upstate, Dr. Huang is continuing his search for a pharmaceutical agent to target and turn off the BCL-2 protein, thus lowering cancer cells’ resistance to treatment.

A Focal Point for Upstate Research

With more than \$40 million in research funding generated annually, the research enterprise at Upstate Medical University includes a strong cancer component. Approximately 200 researchers and 50 research laboratories are engaged in cancer-related studies, exploring such areas as the genetic and molecular mechanisms underlying abnormal cell growth and the development of experimental cancer therapeutics. Upstate researchers are also investigating viral oncology and tumor immunology, which show increasing promise in treating human malignancies.

“We are screening compounds – natural and synthetic – but there are hundreds of thousands of possibilities,” he reports. “But by using computers with compound databases, and automating our search, we have identified some novel agents to disrupt the protein’s function.”

Puzzle Pieces

In addition to studying how cancer cells mutate to resist treatment, Dr. Huang studies how they migrate from one area to another.

Meanwhile, in other Upstate laboratories, researchers study other mechanisms of cancer cells, such as replication, invasion and apoptosis.

“Our goal is to first understand, and then to interfere with, these processes. By working together with other Upstate researchers,” Dr. Huang says, “the picture will come together, like a puzzle. This is the mission of the Upstate Cancer Research Institute.”

“There is no other cancer research institute in Central New York,” he adds. “Upstate Medical University, which serves almost one-third of New York State, is the ideal home for this rare resource.” ■