

UC DAVIS
CANCER CENTER

SYNTHESIS

syn·the·sis (sin'thə sis) **n.**, *pl.* - **ses** (-sez') [[Gr. < *syn-*, together + *tithenai*, to place, DO¹]] **1** the putting together of parts or elements so as to form a whole **2** a whole made up of parts or elements put together **3** *Chem.* the formation of a complex compound by the combining of two or more simple compounds, elements, or radicals **4** *Philos.* in Hegelian philosophy, the unified whole in which opposites (thesis and antithesis) are reconciled.



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S Y N T H E S I S

A PUBLICATION OF
UC DAVIS CANCER CENTER
VOL 8 • NO 2
FALL/WINTER 2005

**Breast CT
reaches clinical
testing**

**Molecular
imaging**

**On the
Asbestos
Trail**



To our readers

Dear Reader:

As I write, the directors of National Cancer Institute-designated cancer centers from throughout the United States are working together to ensure treatment for the estimated 7,000 cancer patients whose care was disrupted by Hurricane Katrina. Since the hurricane hit, the directors of all 60 cancer centers have gathered via teleconference to work through the logistics of arranging treatment, transportation and lodging for affected cancer patients and their families, and to ensure that patients participating in NCI-sponsored cancer clinical trials experience as little disruption in their trial protocols as possible.

At UC Davis, we identified inpatient beds that can be made available to evacuees at the Veterans Administration teaching hospital and in the UC Davis Health System's new General Clinical Research Center. Our clinics are prepared to accept displaced patients as well, and we have worked with other area agencies to determine options for temporary housing for patients and families. We have also offered to take on clinical trial associates, nurses and other medical personnel whose jobs were lost due to the storm.

A disaster on the scale of Hurricane Katrina is a national tragedy. Our faculty and staff, as they rally to help affected cancer patients, share the sorrow of everyone affected by the devastation.

At the same time, we have cause to celebrate at the Cancer Center. In July, after a rigorous and exhaustive peer review, UC Davis Cancer Center was awarded a five-year renewal of its National Cancer Institute designation, first granted in July 2002. NCI designation is awarded only to cancer centers with the demonstrated ability to make significant contributions to the nation's cancer agenda. We were recognized for

our original, groundbreaking research with Lawrence Livermore National Laboratory, our unique, collaborative culture that draws on disciplines as diverse as veterinary medicine and plant metabolomics, and our potential to impact on cancer worldwide.

There is much more news to share. In this issue of Synthesis, we bring you a trio of articles about exciting new developments in imaging technology. I invite you to read about the new ways we're looking at cancer. You'll also meet Francesca Arnaudo, who at age 9 has overcome two cancers. And you'll learn about our latest research into the health risks of naturally occurring asbestos in California.

From Sacramento to the Gulf Coast, this is a time of real progress and high hopes for everyone facing cancer.

Sincerely,



Ralph W. deVere White, M.D.
Director, UC Davis Cancer Center

FEATURED CLINICAL TRIAL

Investigational two-drug regimen for small cell lung cancer

Phase I study of weekly bortezomib (Velcade) and weekly topotecan in solid tumor patients with an emphasis on small cell lung cancer

What are the goals of this study?

Topotecan is a synthetic camptothecin, a compound derived from the bark of the Chinese camptotheca tree. The drug is a topoisomerase inhibitor that works by blocking an enzyme, topoisomerase, which is responsible for maintaining the structural function and integrity of DNA. By inhibiting topoisomerase, topotecan ultimately causes cancer cell death.

Bortezomib is a proteasome inhibitor that works by blocking the proteasome, an enzyme complex found in cells, and interfering with the chemical messengers that control cancer cell growth and regulate cell survival. This results in a variety of anti-cancer effects, including cancer cell death.

Previous research has shown that bortezomib can enhance the sensitivity of camptothecins. This Phase I study is designed to evaluate the safety and feasibility of combining the two drugs to treat patients with advanced solid tumors. If the results are favorable, a Phase II trial will be developed in specific tumor types, such as small cell lung cancer, to evaluate whether the two drugs combined are more effective than topotecan alone.

Background

About two-thirds of patients with small cell lung cancer have advanced or extensive disease when their cancer is first found. The standard treatment for these patients is a combination of the drugs etoposide, another topoisomerase inhibitor, and cisplatin or carboplatin. Treatment for patients with advanced disease, however, is rarely curative.

Researchers are testing new drugs and drug combinations in patients with extensive-stage small cell lung cancer in an effort to improve the median survival time, now about 10 months.

Who can join this trial?

Researchers seek to enroll 34 patients ages 18 and over with advanced solid tumors who have progressive disease after their standard therapy. For a complete list of eligibility criteria, please call Jennifer Jernigan at (916) 734-7094.

Where is this trial taking place?

This study is offered only at UC Davis Cancer Center.

Principal investigator:

Angela Davies, assistant professor of medicine, hematology and oncology, UC Davis.

This trial is sponsored by GlaxoSmithKline

For more information about this or other clinical trials available at UC Davis Cancer Center, please visit <http://www.ucdavisclinicaltrials.org>