The Center for Cancer Prevention Research traces its origins to 1987, when Allan H. Conney arrived at Rutgers’ pharmacy school and began building a strong research department, the Department of Chemical Biology, to speakein in the causes and prevention of cancer. Over the next two decades, the original laboratory recruited an outstanding faculty and nurtured a network of multi-institutional, interdisciplinary research collaborators. Today, the center is among the few research institutions dedicated to the prevention of cancer.

- Chung S. Yang, PhD, Director
- Allan H. Conney, PhD, Associate Director
- Ah-Ng Tony Kong, PhD, Associate Director

The Ernest Mario School of Pharmacy is one of the country’s leading pharmacy schools and the only pharmacy school in New Jersey. Its curricula include a six-year professional program leading to the PharmD and three graduate programs leading to the PhD. The 85-member faculty includes innovative clinicians and top researchers in the pharmaceutical sciences. The school is a research powerhouse, ranking sixth among the nation’s 111 pharmacy schools in research funding from the National Institutes of Health. Learn more at pharmacy.rutgers.edu.

- Christopher J. Molloy, PhD, RPh, Dean and Professor of Pharmacology and Toxicology

A Worthy Endeavor

Direct medical costs for cancer treatment in the United States total over $93 billion each year, yet the cure remains elusive and far too many lives are lost. Science is offering new hope, both in the great strides toward understanding the mechanisms of cancer and the great promise of preventing the genesis of cancer. This is the work of the Center for Cancer Prevention Research. Our goal, as scientists, is to exert worldwide impact through groundbreaking research. But our dream, as spouses, parents, and grandparents, is to secure a future without cancer.

To learn more about our current research and what role you might play in furthering our efforts, contact us at

Center for Cancer Prevention Research
Ernest Mario School of Pharmacy
Rutgers, The State University of New Jersey
164 Frelinghuysen Road
Piscataway, NJ 08854
phone: 732-445-3400, ext. 244
email: csyang@rci.rutgers.edu
web: pharmacy.rutgers.edu/content/chemical_biology_ccpr

Rutgers University, the State University of New Jersey, is dedicated by law and by purpose to serving all people on an equal and nondiscriminatory basis. For more information, see policy.rutgers.edu.
Starting from a Pharmaceutical Perspective

As a research center at the Ernest Mario School of Pharmacy of Rutgers, The State University of New Jersey, the core of our work is in the pharmaceutical and biological sciences. At the same time, from our location on Rutgers’ high-tech science campus, we collaborate with colleagues across the university—in genetics, chemistry, molecular biology, food science, psychology, and more—to bring a multidisciplinary energy to our research. Our collaborations also stretch beyond Rutgers, to industry labs, health care centers, and other academic research groups across the United States and around the world. Our expertise in the pharmaceutical and biological sciences makes the center uniquely positioned to understand how various chemical compounds might work within the human body to fend off cancer. We have pioneered the study of dietary constituents that have cancer-preventive properties, including calcium, green tea, caffeine, curcumin, vitamins D and E, and omega-3 fatty acids. We have also shown that exercise has profound anticancer effects and the effects are even greater when combined with certain dietary constituents or drugs. We have discovered that drugs commonly used to relieve arthritis and lower cholesterol can also block cancer. We have identified genetic and molecular mechanisms that provide promising targets for both cancer prevention and treatment.

A Renowned Staff of Scholar-Teachers

The center’s two dozen-plus research associates are recognized nationally and internationally for their innovative work. Their insights have direct implications for cancers of the skin, colon, esophagus, head and neck, lung, breast, prostate, and pancreas, among others. Between 2004 and 2009, they attracted more than $30 million in federal and state research funding. As scientists and teachers, the center’s associates are educating the next generation of cancer researchers as well as the future pharmacists who will guide the public in lowering their cancer risk through diet, exercise, and healthy lifestyles.

We study how cancer starts and how it can be stopped, with the constant goal of moving from basic research to clinical trials as quickly as possible.

From Bench to Bedside

Our mission is to move basic science from the laboratory to the medical setting, where it can be put to work saving lives. While our primary focus is on cancer prevention, the possibilities we explore frequently hold equal promise for treatment breakthroughs. Thus, our translational approach—research that “translates” from basic science to practical application—leads to findings that may prevent, slow, or treat existing cancers. Cancer-fighting interventions based on the center’s research are being tested today, in clinical trials with real patients. Read on for a few examples.

Compounds that prevent cancer tomorrow may also treat cancer today.

Our scientists have discovered …

A gene that contributes to the development of melanoma. Now a drug that acts against that gene is under study for the treatment of patients with melanoma.

Two common drugs delay tumor progression. Now patients who have undergone treatment for prostate cancer and have relapsed are receiving the two-drug combo—celecoxib (Celebrex®), an anti-inflammatory agent, and atorvastatin (Lipitor®), a cholesterol fighter—as an approach for slowing or preventing tumor growth.

Caffeine kills sun-damaged skin cells. Now caffeine is being tested as a novel approach for the prevention of skin cancer in humans.

Green tea inhibits tumor development. Now patients with colon cancer and with head and neck cancer are being treated with green tea polyphenols in two clinical trials.

A specific form of vitamin E inhibits tumor formation. Now clinical trials are examining the effects of a γ-tocopherol-rich vitamin E preparation in patients with colon cancer and with prostate cancer.

Caffeine and exercise may inhibit sunlight-induced skin cancer. Now this combination is being tested as an approach to prevent sunlight-induced skin cancer, the most prevalent cancer in the United States—with more than one million cases per year.

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