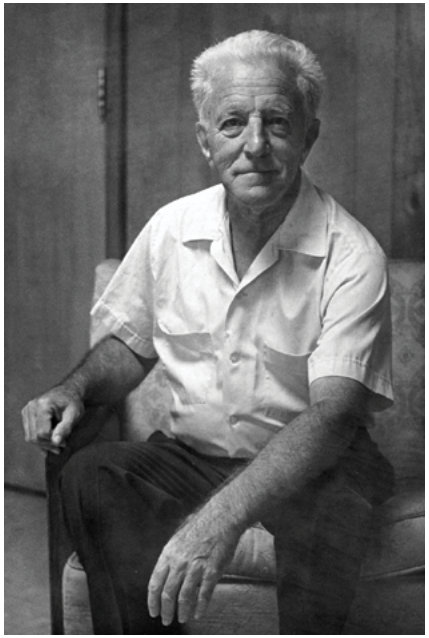
About the Brother Lucian Blersch Symposium

Organized by the School of Natural Sciences and the Kozmetsky Center of Excellence in Global Finance at St. Edward's University, the event is free and open to the public. This symposium honors Brother Lucian Blersch, CSC, a longtime professor of Engineering at St. Edward's who died in 1986 and in whose name a professorship in the School of Natural Sciences was endowed by a gift from J.B.N. Morris hs '48, '52 and his family.



PAST SYMPOSIA

2015	Global Health & Infectious Disease: Amyloids and Human Disease
2013	Global Health & Infectious Disease: Stress and Inflammation
2012	Global Health & Infectious Disease: Pathogenic Proteins
2011	Global Health & Infectious Disease: Tuberculosis
2010	Global Health & Infectious Disease: HIV/AIDS

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ST. EDWARD'S UNIVERSITY

School of Natural Sciences
3001 South Congress Avenue
Austin, TX 78704

CHANGE SERVICE REQUESTED

GLOBAL HEALTH & INFECTIOUS DISEASE SYMPOSIUM

CANCER: NOVEL TARGETS AND THERAPIES

A joint event brought to you by the **Brother Lucian Blersch Endowment**

9.23.2016

9:30 a.m. | Carter Auditorium
John Brooks Williams
Natural Sciences Center
St. Edward's University

MICHAEL A. WHITE, PhD
Professor of Cell Biology and the Grant A. Dove Chair for Research in Oncology
University of Texas Southwestern Medical Center

BEVERLY A. TEICHER, PhD
Chief of the Molecular Pharmacology Branch
National Cancer Institute (NCI)

ANTONIO "TITO" FOJO, MD, PhD
Professor in the Division of Hemotology and Oncology
Columbia University Medical Center

EAMONN F. HEALY, PhD
Brother Lucian Blersch Professor of Science and Professor of Chemistry
St. Edward's University

ST. EDWARD'S UNIVERSITY

GLOBAL HEALTH & INFECTIOUS DISEASE

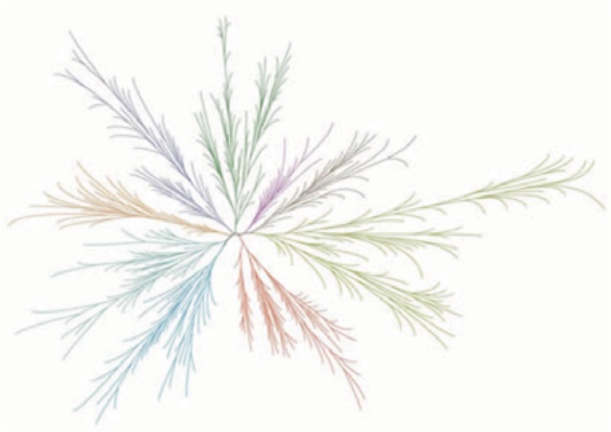
CANCER: NOVEL TARGETS AND THERAPIES

Despite billions of dollars, decades of research, and an unparalleled level of international cooperation between research scientists and clinicians, cancer remains a major cause of death worldwide. Therapies have improved and many forms of cancer are now treatable, but the disease still kills over eight million people throughout the world each year. For this reason, cancer research funding represents one of the largest expenditures of the United States federal government, and has led to improved medical treatments as well as greater understanding of the molecular intricacies of the disease. However, because cancer is now considered not simply one disease, but rather a multitude of independent disorders that can all result in malignant cellular growth, the dream of a cure for cancer, the "magic bullet", to miraculously eliminate the disease, is now considered unrealistic in light of these overwhelming complexities. The interdisciplinary approach that has emerged is offering new hope for therapies and treatment. Since not all tumors are the same, molecular targeting, or the attempt to tailor therapy to the specific abnormalities causing disease, has become one of the most promising areas in cancer biology research. By combining molecular biology and biochemistry with combinatorial chemistry and organic chemistry, pharmaceutical research has embraced the field of rational drug design as a specific application of molecular targeting. In the past few years, the rapidly advancing field of cancer immunology has produced several new methods of treating cancer. These immunotherapies increase the strength of immune responses against tumors. However, cancer cells are sometimes able to avoid detection and destruction by the immune system. Drug development takes time, and it is years, often decades, before a drug that shows promise in the lab will make it into the clinic. And of course, resistance to chemotherapy and molecularly targeted therapies remains a major problem. This symposium seeks to highlight some of the innovative and creative approaches being pursued in light of these challenges.

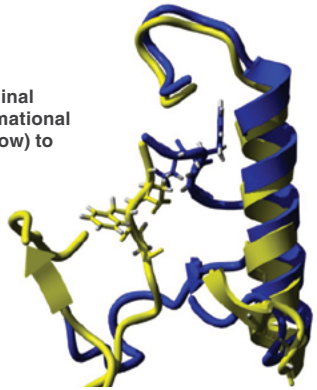
EVENT SCHEDULE

9:30 a.m.	Welcome
9:40 a.m.	Dr. Eamonn F. Healy (St. Edward's University): *"Modulating Kinase Activity through Desolvation"*
10:10 a.m.	Dr. Michael White (University of Texas Southwestern Medical Center): *"Towards Patient-based Cancer Therapeutics"*
11 a.m.	Break
11:15 a.m.	Dr. Beverly Teicher (National Cancer Institute): *"Antibody Conjugate Therapeutics: Challenges and Potential"*
12:05 p.m.	Dr. Antonio Fojo (Columbia University Medical Center): *"Novel Therapies for Cancer: Why Dirty Might Be Better"*
1 p.m.	Lunch and student poster session: Foyer, John Brooks Williams Natural Sciences Center–North

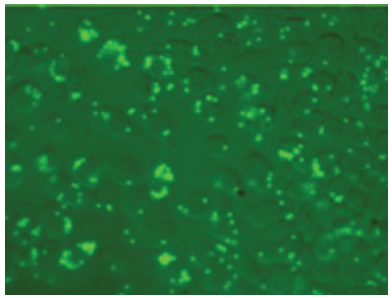
For directions and a map of campus, go to: **stedwards.edu/map**.



Displaying the relationship among target proteins by representing the Euclidean distance among gene signatures.



Activation of the C-Jun N-terminal kinase (JNK2) through conformational change from the DFG-out (yellow) to DFG-in (blue) state.



A phagocytosis assay utilizing the murine macrophage cell line J774.A1

SPEAKERS

Michael A. White, PhD, is professor of Cell Biology and the Grant A. Dove Chair for Research in Oncology at the University of Texas Southwestern Medical Center. His research is aimed at uncovering the molecular nature of cell autonomous regulatory mechanisms with the goal of permitting appropriate responses of human cells to their environment. White received his undergraduate degree from the University of Iowa, and a PhD from the University of North Carolina. Through elaboration of the biogenesis of catabolic organelles, White's laboratory is helping to uncover some of the central principles that govern cellular homeostasis, and examining the processes governing the adaptive modulation of cell growth and self-renewal. His ultimate goal is to identify authentic intervention targets for the development of a sufficiently diverse cohort of therapies to contend with oncological heterogeneity.

Beverly A. Teicher, PhD, is chief of the Molecular Pharmacology Branch at the National Cancer Institute (NCI). Teicher completed a PhD in Bioorganic Chemistry at the Johns Hopkins University and postdoctoral training at Yale University School of Medicine. After positions at the Dana-Farber Cancer Institute and Harvard Medical School, Teicher served as research advisor in Cancer Drug Discovery at Lilly Research Laboratories and Vice President of Oncology Research at Genzyme. Teicher is best known for her work in solid tumor models and physiologic measurements of tumor hypoxia and oxygenation. She has authored or co-authored more than 400 scientific publications, edited eight books, and is editor for the journal *Clinical Cancer Research*, the journal *Pharmacology and Therapeutics*, and the Cancer Drug Discovery & Development book series.

Antonio "Tito" Fojo, MD, PhD, is professor in the Division of Hemotology and Oncology at Columbia University Medical Center. He received his MD and PhD from the University of Miami and completed internal medicine training at Washington University School of Medicine / Barnes Hospital. Prior to his arrival at Columbia, Fojo was a principal investigator in the Medicine Branch, and program director for the Medical Oncology Fellowship Program, of the National Cancer Institute, where he established a highly successful translational clinical program. Fojo works to understand the molecular basis of drug resistance, and has worked on the development of novel microtubule-targeting agents therapies for endocrine and neuroendocrine cancers, Fojo is also active in the design, conduct and interpretation of oncology clinical trials.

Eamonn F. Healy, PhD, is the Brother Lucian Blersch Professor of Science and professor of Chemistry at St. Edward's University. The general focus of his research involves the use of molecular modeling to design structure-activity probes for the purpose of elucidating enzymatic activity. Recent targets have included HIV-1 integrase, the c-Kit and src-abl proteins associated with tumor development and certain leukemias, and the metalloproteinases. Healy's group has also developed in silico characterizations of the mechanism of action for the heat shock response associated with the Mtb alpha-crystallin protein, the heat shock response of Escherichia coli, and the observed suppression of spinocerebellar ataxia and superoxidxe dismutase (SOD1) aggregation by human alphaB-crystallin. He received his doctorate in Chemistry from UT–Austin.