Showcasing some research in Genomics and Bioinformatics
Improving Life Through Science and Technology

Texas A&M AgriLife Research is the state's premier research agency in agriculture, natural resources, and the life sciences. We conduct hundreds of projects spanning many scientific disciplines to deliver life-sustaining and industry-changing impacts to citizens throughout Texas and around the world.

A member of The Texas A&M University System, AgriLife Research collaborates with the Texas A&M University College of Agriculture and Life Sciences, the Texas A&M AgriLife Extension Service, and many others to help fulfill the A&M System's land-grant mission of teaching, research, extension, and service.
Welcome

TEES-AgriLife Center for Bioinformatics and Genomic Systems Engineering (CBGSE)

NEW CENTER LOCATION

The TEES-AgriLife Center for Bioinformatics and Genomic Systems Engineering (CBGSE) functions in the general areas of bioinformatics, computational biology, and systems biology research. As a cooperative effort between AgriLife and TEES, it constitutes both an active research group and a cross-institution graduate student training program focused on plant genomics.

Research
Home

Mission
The mission of the Institute is to develop plant biotechnology, genomics, and related life science technologies and to foster technology utilization and dissemination. Our scientific goals are to improve crop productivity and to sustain food security while conserving the natural environment. To achieve our goals, we are committed to the continuous development and implementation of new scientific and management strategies. We focus on building and maintaining a high quality research program, fostering innovative approaches, and encouraging the participation of all sectors of society in the development and application of new technologies.
Genomics and Bioinformatics Services

Providing Genomics and Bioinformatics Services to the Texas A&M System, Texas, and the World

Who We Are

Texas A&M AgriLife Genomics and Bioinformatics Service was established thru a mission directive from Dr. Craig Nessler, Director of AgriLife Research to radically improve genomic research across AgriLife, COALS, and the Texas A&M University System, addressing a central and pressing need for access to the latest genomic technologies, and world-class laboratory and bioinformatics expertise. To meet this ambitious goal, AgriLife Research brought together a team of leading genomics, bioinformatics, molecular, and computational scientists to meet the next generation sequencing (NGS) and bioinformatics needs of the TAMU system and broader scientific community. The new AgriLife unit received start-up funds from Texas Emerging Technology Fund as part of a larger AgriLife ETF program.

The AgriLife unit is directed by Dr. Charles D. Johnson, who was recruited from the biotech industry to develop a next generation sequencing and bioinformatics program at Texas A&M AgriLife Research.
Origins of Early Man Questioned

A new study by an international team of researchers that includes a Texas A&M University anthropologist shows that the modern European and East Asian populations were firmly established by 36,000 years ago, and that Neanderthal and modern human interbreeding occurred much earlier, around 54,000 years ago.

The study was led by the Centre for GeoGenetics at the University of Copenhagen, in collaboration with scientists from several institutions, including Cambridge, UC Berkeley, Griffith, UC San Francisco, and Peter the Great Museum in Russia as well as Texas A&M.
Biochemistry & Biophysics

James Sacchettini
Professor of Biochemistry and Biophysics and of Chemistry; Wolfe-Welch Chair in Science
ILSB / Room 2138A
sacchett@tamu.edu
979-862-7636
http://www.sacclab.com
B.A St. Louis University (1980)
Ph.D. Washington University, St. Louis (1987)
Postdoc. Washington University, St. Louis (1987-89)
Professor, Albert Einstein College of Medicine
Joined Texas A&M in 1996

Crystallography / Drug Design

My lab uses X-ray crystallography to better understand the relationship between proteins and ligands. Two different protein systems have been studied extensively: the

CONNECT WITH US

UPCOMING SEMINARS

NOV 12

4:10 pm Mark Fisher, Department of Bioh... @ BioBio 108
“Catching Transients to Determine Toxin Structures and Validate Protein Stabilizers”
Host: Hays Rye

HOT PAPERS

View Calendar
Tuberculosis

What is it?
Tuberculosis (TB) is an infectious disease caused by a bacterium. Approximately two billion people, one third of the Earth's population, are infected with TB, mostly in the third world although there has been a resurgence in the first world due largely to the spread of HIV/AIDS. There are approximately 8.5 million new active cases and 2 million deaths annually from TB. Most of these deaths are preventable with antibiotic treatment.

Dye et al. JAMA 1999; 282: 677
Malaria

What is it?
Malaria is a widespread vector-borne disease caused by parasites in the Plasmodium family (specifically Plasmodium falciparum, Plasmodium vivax, Plasmodium ovale, and Plasmodium malariae) and transmitted by the bite of an infected female Anopheles mosquito. Each year between 300 and 500 million people are infected and more than one million people die, most of them children and pregnant women. Malaria is associated with tropical and subtropical climates because the warm temperature allows the Anopheles mosquito to grow year round.
News

New drug boosts immune system to protect against world's deadliest infectious diseases

Rising star in cancer research comes to Texas, continues work on life-saving therapies

New technology may offer safe alternatives to BPA
Other Local NMR Labs/Groups:

- Center for Chemical Characterization and Analysis (CCCA) in the Chemistry Department
- Dr. Christian Hilty's NMR Research Group in the Chemistry Department.
- Dr. Tatyana Igumenova's NMR Research Group in the Biochemistry & Biophysics Department.
- Dr. Steven Wright's NMR Imaging Research Group in the Electrical and Computer Engineering Department.
- Dr. Joseph Ross's Condensed Matter Research Group in the Physics and Astronomy Department.
- Magnetic Resonance Imaging in Veterinary Medicine.
- Vegetable and Fruit Improvement Center in the Horticultural Science Department.
Tatyana Igumenova  
Associate Professor  
NMR / Room N118A  
tigumenova@tamu.edu  
979-845-6312  
http://conda.tamu.edu/Igumenova/  
Ph.D. Columbia University, 2003  
Joined Texas A&M in 2008

Protein Dynamics and NMR

The importance of Nuclear Magnetic Resonance (NMR) methods in structural biology is illustrated by the rapidly growing number of three-dimensional NMR structures in the Protein Data Bank. While well-folded soluble proteins make up the majority of these structures, membrane proteins or small, tightly packed proteins are less amenable to these methods.
Biochemistry & Biophysics

Ry Young
Professor of Biochemistry & Biophysics; Sadie Hatfield Professor of Agriculture
BioBio / Room 311A
ryland@tamu.edu
979-845-2087
http://young.tamu.edu

A.B. Rice University (1968)
Ph.D. University of Texas, Dallas (1975)

Postdoc. Harvard Medical School (1975-78)
Joined Texas A&M in 1978

The Molecules and Mechanisms of Bacteriophage Lysis
Phage lysis

CONNECT WITH US

UPCOMING SEMINARS

NOV 19 Wed
4:10 pm Francisco (Paco) Barona-Gomez, C...
@ BioBio 106
"Integrative biology of enzyme promiscuity"
Host: Paul Straight

HOT PAPERS
1. Karamysheva, AI, Patrick, AE, Karamysheva, ZN,
Gironas, EJ, Koch, EJ, "Tailless Lambda...
Vytas A. Bankaitis
Professor, E.L. Wehner-Welch Foundation Chair in Chemistry

Department of Molecular and Cellular Medicine
108 Reynolds Medical Bldg.
College Station, TX 77843-1114

Phone: 979-862-3188
Fax: 979-847-9481
vytas@tamuhsce.edu
Dr. Bankaitis' Lab

Education and Post-Graduate Training
Edinboro University, Edinboro, PA; B.S.; 1978; Biology
Clemson University, Clemson, SC; M.S.; 1980 Microbiology
University of North Carolina, Chapel Hill, NC; Ph.D.; 1984; Microbiology
California Institute of Technology, Pasadena, CA Postdoctoral; 1986; Cell Biology

Honors
Recipient of the President's Award for the outstanding student research presentation; regional meeting for the Southeastern and South Carolina branches of the American Society for Microbiology, November, 1979.
Recipient of a Predoctoral Fellowship of the Humphrey Foundation - awarded to outstanding incoming graduate students, 1985.