


Pollard L.M., Chutake Y., Rindler P.M., and Bidichandani S.I. 2007 Deficiency of RecA-dependent RecFOR and RecBCD pathways causes increased instability of the (GAA•TTC)n sequence when GAA is the lagging strand template. Nucleic Acids Res., (Epub 2007 Oct 11 ahead of print)


Switching in Erythroid Precursor Cells from Sickle Cell Patients
Stewart C.S., Pyr Q.N., Broyles R.H.,
annual meeting, Orlando, FL, Dec. 12, 2006.

Myxovirus binding and release
Jialing Lin
Biophysics, Laboratory of Dr. Jianjie Ma, January 17, 2007.

Conformational and functional alteration of Bcl-2 during apoptosis initiation
Jialing Lin

Conformational and functional alteration of Bcl-2 during apoptosis initiation
Jialing Lin
Beijing Normal University, College of Life Science, Beijing, China, October 18, 2007.

Conformational and functional alteration of Bcl-2 during apoptosis initiation
Jialing Lin
Hong Kong University of Science and Technology, Department of Biology, October 10, 2007.

Conformational and functional alteration of Bcl-2 during apoptosis initiation
Jialing Lin
Washington University in St. Louis, School of Engineering and Applied Sciences, Department of Biomedical Engineering, November 17, 2006.

The structural basis of RNA editing in the mitochondrion of trypanosomes
Blaine Mooers
Tribeta Biology Club, University of Central Oklahoma, Edmond, OK, September 27, 2007.

Myr-Akt and Insulin Redistribute GLUT4 to the Plasma Membrane Using Different Syntaxin Proteins
Ann Louise Olson

Nitrone Anti-Cancer Activity in APCmin Model of Colon Cancer
Robert Floyd
San Juan, Puerto Rico, January 17-21, 2008.

Summary and Perspective on the Study of Nitrones in APCmin Model of Colon Cancer
Jialing Lin
Beijing Normal University, College of Life Science, Beijing, China, October 18, 2007.

Summary and Perspective on the Study of Nitrones in APCmin Model of Colon Cancer
Jialing Lin
Hong Kong University of Science and Technology, Department of Biology, October 17, 2006.

Professor of Medicine / Genetics Panel, U.S. Army Medical Research, October 2007.
Sanjay Bidichandani:
Muscular Dystrophy Association, Fall 2007 MAC panel, October 2007.

Sanjay Bidichandani:

Conformational and functional alteration of Bcl-2 during apoptosis initiation
Jialing Lin
University of Michigan Health System, Department of Radiation Oncology, March 26, 2007.

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Masamha, C. P., Liu, T., and Benbrook, D.M. "SHetA2 targets cyclin D1 for proteosomal degradation through a GSK3β-independent mechanism leading to G1 cell cycle arrest" AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics, October 22-26, 2007.

Liu, T., Masamha, C.P., Chengedza, S., and Benbrook, D.M. "Regulation of apoptosis, cell cycle progression and differentiation by SHetA2 in renal cancer cells is associated with alterations in Bcl-2, Cyclin D1 and E-Cadherin proteins" AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics, October 22-26, 2007.


Floyd, R.A. "The role of inducible nitric oxide synthase (iNOS) and nitric oxide in cancer development" Japanese Society of Toxicology and Pathology, Nagoya, Japan, February 6-7, 2008.


Doris M. Benbrook, Rapid Access to Preventive Intervention Development (RAPID), “Flexible Heteroarotinoids for Chemoprevention” 2007 to completion, funding for preclinical development of SHetA2

Doris M. Benbrook, Gynecologic Oncology Group (GOG), “A Phase II Evaluation of Enzastaurin in the Treatment of Persistent or Recurrent Epithelial Ovarian or Primary Peritoneal Car cinoma” 2007 to completion, funding for biomarker analysis of blood specimens

Hiroyuki Matsumoto NIH, R21 Award, “Proteomic Trajectory Mapping of Retinopathy of Prematurity” 9/30/07-8/31/09.

Lori Gwyn, Rodgers Lab NIH, Kirkstein (F32) Award "Specific Interactions of RAG-RSS in V(D)J Recombination" 7/1/07-6/30/10. (correction from last issue)
Kudos to Paul DeAngelis, who received the "Rooster Award" for scientific achievement related to production of synthetic hyaluronan. Confined by the International Society for Hyaluronan Sciences in Charleston, SC, April 2007.

Dr. Robert Broyles is President of a new foundation The Sickle Cell Cure Foundation, Inc. (SCCF). The SCCF was registered in the State of Oklahoma as a nonprofit corporation on July 8, 2006, and was granted 501(c)(3) status by the IRS on February 12, 2007. The purpose of the SCCF is research and education on sickle cell disease (SCD), with the goal of delivering a cure for SCD clinically that can be applied broadly and at low cost.
Spring 2008 BMB Student Travel Award

Jonathan Miner 
McEverLab
2008 Experimental Biology Meeting

Shuying Zhao 
Rodgers Lab
2008 Experimental Biology Meeting

2007 Fred & Marie Gray Research Achievement Award

Craig Eyster
Ann Louise Olson’s Lab
Congratulations to our graduates:

Madhu Pandey, Weigel Lab
Master of Science Biochemistry & Molecular Biology

Xiaoju Zhang, Air Lab
Master of Science Biochemistry & Molecular Biology

Jun Peng, Lin Lab
Doctor of Philosophy Biochemistry & Molecular Biology

Laura Pollard, Bidichandani Lab
Doctor of Philosophy Biochemistry & Molecular Biology

In the News...

Research scientist wins national award

Oklahoma Medical Research Foundation scientist Robert A. Floyd will receive the 2007 Discovery Award from the Society for Free Radical Biology and Medicine at its annual meeting today in Washington.

Floyd, a founding member of the society, will be recognized for his contributions to the field of free radical biology, which includes the study of antioxidants and their role in human disease formation, prevention and treatment. Floyd has been a member of OMRF’s scientific staff since 1975 and holds the Merrick Foundation Chair in Aging Research.

The effects of free radicals have been linked to the development of Parkinson’s disease, ALS and even some cancers.

Dr. Robert Floyd, Adjunct Professor in BMB, receives the 2007 Discovery Award at a recent national meeting of the Society for Free Radical Biology & Medicine. Article featured in the Daily Oklahoma November 14, 2007.

Note: This article is also posted in the display case BMSB 8th floor hallway for your convenience.
Gillian Air pulls blue gloves snugly over her hands before opening the small refrigerator and carefully removing a tray of eggs. The refrigerator is 99.5 degrees inside.

“It’s warm like a mother hen,” Air said.

It’s not chicks Air is hoping will hatch from these eggs, though. Instead, the doctor’s reason for taking such “mother like” care of the eggs rests on the hope the shelled subjects will deliver a few milligrams of influenza — the disease she’s been studying for 30 years.

Air is a George Lynn Cross Research Professor at the University of Oklahoma Health Sciences Center. Although her role as a virologist requires her to study how viruses, specifically influenza, infects and mutates, her work has a combating component as well.

“We’re trying to improve the vaccine,” Air said, sliding the eggs back into the fridge.

The eggs incubate for 10 days before they are inoculated with the flu virus. The virus multiplies in the egg. The lab receives about 400 eggs every two weeks, Air said, and tracking how long the eggs have been incubating is very important.

“We have to record when we put them in,” she said, pointing to a sheet with dates and times. “If we lose track — which has only happened once — then we get chickens.”

Air’s research includes looking at the antibodies from people who get the flu shot, studying how their body reacts to the vaccination. She works with the Oklahoma Medical Research Foundation on its study of the flu vaccination’s effects on lupus patients.

Air evaluates the antibodies of patients both before and after they get the vaccination, looking at the quality and quantity of the antibodies.

Linda Thompson, one of the leaders on the project, said Air’s presence in Oklahoma City made it sensible to study the flu vaccination.

“We’re really lucky to have her here,” Thompson said. “She’s really an expert. We couldn’t do any of this without her.”

Air’s research may focus on a virus everyone is familiar with, but it’s also a virus Air said many people have never experienced.

“I think quite a number of people never get the flu,” she said. Air said many people mistake their illness for the flu, partly because the 1918 epidemic made the virus well-known to the point that people are quick to diagnose themselves at the first sign of fever.

“What we say is if you can’t get out of bed you have the flu,” she said. “If you are up walking around, you are infected with another virus.”

Of course there is more to diagnosing influenza than that, but Air said it’s a simple gauge, especially if science and the flu are not your specialty.

Although Air has been studying the flu for three decades, the Australian-born doctor’s interest in science piqued when the double helix was discovered in 1953. Fourteen years later, Air got her undergraduate degree in biochemistry and later topped it off with a doctorate in the same area.

This time of the year — flu season — is a busy time for Air, but she doesn’t spend her days like many may assume. Over the years her days in the lab have decreased while she spends more time behind a desk. Paperwork and grant reviews keep her busy, though she does get the chance to occasionally “troubleshoot” in the lab.

But she does still share in the celebration of the research.

“When you do get a result it’s exciting,” Air said. Patience is an important virtue in the lab because celebrations and breakthroughs are rarely immediate, she said. And the research sometimes comes with its own flu symptom: headaches.

“We’re always making progress,” she said. “It’s just when we make progress, we see there is more to do.

“You just have to stick to it — sometimes late at night and on the weekends — but when it works, it’s really good.”

Ja’Rena Lunsford, 475-3126, jlunsford@oklahoman.com

Publication: The Oklahoman; Date: Nov 25, 2007; Section: Business; Page Number: 44

Note: This article is also posted in the display case BMSB 8th floor hallway for your convenience.
Health: State research may lead to blood test for pancreatic disease

Battling ‘the most deadly cancer’

By Jeff Raymond
Staff Writer

University of Oklahoma Health Sciences Center researchers have found molecules that are present at high levels in pancreatic cancer patients' blood, potentially opening the door to a blood test for the nation's fourth-leading cancer killer. The research appeared in this month's issue of the journal, Pancreas.

"If there were some sort of blood test for pancreatic cancer before the overt symptoms appear, then the cure rate would be much higher," he said.

Early detection is possible

Pancreatic cancer is virtually a death sentence, with a five-year survival rate of 4 percent. By the time patients are diagnosed with the disease, it often has spread to the liver and elsewhere. Jaundice and excruciating back pain are commonly seen among such patients.

"Usually by the time it's diagnosed, it's too late," Hanas said. "Pancreatic cancer in that respect is probably the most deadly cancer."

Blood tests are ideal, he said, because they are not invasive. The idea is that cancer — for that matter, any illness — causes the body to secrete molecules in response. If these can be found and screened, early detection of their causes is possible.

"All these different diseases will create a different serum profile," he said of the chemicals and molecules in the blood.

For pancreatic cancer patients, Hanas found large concentrations of unidentified molecules. He said he found 20 indicators unique to pancreatic cancer and identified about 150 that may be unique to pancreatic cancer.

Hanas began the research about five years ago and has received funding from the Oklahoma Center for the Advancement of Science and Technology, the Department of Defense and the Department of Surgery at the OU Health Sciences Center.

What's next for research?

Now that Hanas has targets, he plans to examine whether the molecules he has discovered are found in the blood of patients with other cancers or unrelated illnesses. He also plans to separate blood samples of pancreatic cancer patients by stage, or severity level, to see if the molecules appear similarly among them.

Cancers are categorized in four stages depending on tumor sizes and whether they have spread.

Hanas, who has been with OU Health Sciences Center for 23 years, tested the blood of roughly 36 pancreatic cancer sufferers and 36 healthy adults.

The test will be available within five years, according to a health sciences center news release. The tests could be given to those at risk of developing pancreatic cancer, such as smokers, diabetics and those who have had pancreatitis.

Liz Thompson, director of research for the Pancreatic Cancer Action Network, said a blood test, even if only for high-risk families, would be "terrific."

Thompson called Hanas' work "interesting" and "provocative" but noted researchers elsewhere will need to show they can replicate it. Another promising pancreatic research program, at The Johns Hopkins University, uses ultrasound to find small tumors or precancerous cells, she said.

Pancreatic cancer

According to the Oklahoma Cancer Registry, pancreatic cancer is the sixth leading cause of cancer death in Oklahoma. In Oklahoma, men are more likely to be diagnosed with pancreatic cancer than women.

About 360 people die from pancreatic cancer in Oklahoma each year, and the number is rising.

In 2007, pancreatic cancer was the fourth leading cause of cancer death in the U.S., with 33,000 deaths in 2007.

Most people survive for about six months after diagnosis.

The five-year survival rate is 4 percent.

There are more than 100 diagnoses of pancreatic cancer every day.

New cases have increased by more than 7,000 over the last three years.

No early detection is available.

Risk factors

- Smoking increases risk of pancreatic cancer by 70 percent
- Long-standing diabetes
- Chronic pancreatitis (inflammation of the pancreas)
- Aging
- Family history
- Hereditary pancreatitis
- Heavy alcohol consumption
- Obesity

Symptoms

- Jaundice
- Pain in the upper or middle abdomen and back
- Unexplained weight loss
- Loss of appetite, fatigue

Get pancreatic cancer support group information and more
The Winning Team: (L to R) Ed Harris, Amy Padgett-Mc Cue, Andria Parker-Medina (all Weigel Lab) and Derrick Grady (BMB Administrative Office)

BMB team takes 2nd in the H2O Water Throw at the 2007 Wacky Games and were presented medals (shown above).

They also participated in Water Volleyball and while their score didn’t win them a medal, they proudly represented BMB with skill and fortitude.