



# CIRWH NEWS FLASH

Center for Interdisciplinary Research in Women's Health

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THE UNIVERSITY OF TEXAS MEDICAL BRANCH

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## From the Director's Desk



The UTMB National Women's Health Week (NWHW) celebration was held on May 16 this year. Attendees listened to Dr. Lewis Morgenstern, Director of the Stroke Program

at the University of Michigan Health System, and Dr. Brian Zachariah, Medical Director of the Division of Emergency Medicine at UTMB, give informative and entertaining presentations. Their topic was how to recognize stroke symptoms and the importance of promptly calling 911 if stroke is suspected. Following their talks a reception was held in Levin Hall. The event was well attended and enjoyed by all.

We are proud to announce that two new BIRCWH scholars, Celia Chao, MD, from New York, and Jeff Temple, PhD, who is proud to call himself a native Texan, have joined the research community at UTMB. Celia will be conducting research in surgical oncology and Jeff intends to pursue research in domestic violence. You can read more about their research on page 3.

The 2007-2008 CIRWH seminar series will begin on October 8, 2007, with a presentation by James Rice, winner of last year's UTMB seed grant competition. In addition to Dr. Rice, we expect to have presentations from a wide variety of scholars, including Dr. Constance Baldwin, whose talk on grant preparation was very popular last year. The seminars will be held in Classroom 3.124 in Levin Hall.

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## Winners of the 2007 NWHW Poster Session



L-R: Chandrasekhar Thota - Basic Science Research; Sangeeta Jain - Clinical Science Research; Essameldine Othman -Translational Science Research.

The quality of the posters presented at the National Women's Health Week celebration on May 16 was very high and picking the winners was a challenge for the judges. First-place winners in the three categories (pictured left) each received an award of \$300, with second- and third-place participants receiving \$200 and \$100.

The winning posters were as follows: Sangeeta Jain's poster was entitled "Comparing uterine electromyography measurements to other parturition factors in term pregnant patients"; Essameldine Othman discussed "Towards gene therapy of endometriosis: Targeting adenovirus to human

endometriotic cells using tissue specific promoters and fiber modified viruses"; and Chandrasekhar Thota presented "Parathyroid hormone-like hormone mediates the estradiol-induced increase in osteopontin in Ishikawa cells."

We appreciate the efforts of everyone who participated.

## Faculty Spotlight: Dr. Kathleen O'Connor

### 1. How long have you been at UTMB?

I joined UTMB in January of 2002, so a little over five years ago. I was recruited by the Sealy Center for Cancer Cell Biology (then under the direction of Alan Fields) and the Department of Surgery.

### 2. What is the focus of your women's health research?

My research is focused on breast cancer, specifically the traits that promote metastasis. My lab looks at the role of integrin extracellular matrix receptors on the metastatic process, most specifically on what promotes the cell motility of invasive and metastatic tumors. Without cell motility, cells would not leave the primary tumor site and would rarely be lethal. We find that a particular integrin, the  $\alpha 6 \beta 4$  integrin, promotes metastasis. It does so by promoting cell motility and invasion as well as upregulating the expression of several potent pro-metastatic genes. We are actively investigating both events.



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# Stress and Your Health

For optimal general and heart health, it is advisable to relieve at least some of the stress in your life.

## What are some of the most common causes of stress?

Stress can arise for a variety of reasons. Stress can be brought about by a traumatic accident, death, or emergency situation. Stress can also be a side effect of a serious illness or disease.

There is also stress associated with daily life, the work-place, and family responsibilities. It's hard to stay calm and relaxed in our hectic lives. As women, we have many roles: spouse, mother, caregiver, friend, and/or worker. With all we have going on in our lives, it seems almost impossible to find ways to de-stress. But it's important to find those ways. Your health depends on it.

## What are some early signs of stress?

Stress can take on many different forms, and can contribute to symptoms of illness. Common symptoms include headache, sleep disorders, difficulty concentrating, short temper, upset stomach, job dissatisfaction, low morale, depression, and anxiety.

## How do women tend to react to stress?

We all deal with stressful things like traffic, arguments with spouses, and job problems. Some researchers think that women handle stress in a unique way: we tend and befriend.

- Tend: women protect and care for their children
- Befriend: women seek out and receive social support

During stress, women tend to care for their children and find support from their female friends. Women's bodies make chemicals that are believed to promote these responses. One of these chemicals is oxytocin (ahk-see-toe-sin), which has a calming effect during stress. This is the same chemical released during childbirth and found at higher levels in breastfeeding mothers, who are believed to be calmer and more social than women who don't breast-feed. Women also have the hormone estrogen, which boosts the effects of oxytocin.

## How does stress affect my body and my health?

Everyone has stress. We have short-term stress, like getting lost while driving or missing the bus. Even everyday events, such as planning a meal or making time for errands, can be stressful. This kind of stress can make us feel worried or anxious.

Other times, we face long-term stress, such as a life-threatening illness, or divorce. These stressful events also affect your health on many levels. Long-term stress is real and can increase your risk for some health problems, like depression.

Both short- and long-term stress can have effects on your body. Research is starting to show the serious effects of stress on our bodies. Stress triggers changes in our bodies and makes us more likely to get sick. It can also make problems we already have worse.

## How can I help handle my stress?

Don't let stress make you sick. As women, we tend to carry a higher burden of stress than we should. Often we aren't even aware of our stress levels. Listen to your body, so that you know when stress is affecting your health. Here are some ways to help you handle your stress.

- *Relax.* It's important to unwind. Each person has her own way to relax. Sometimes it helps to take a few minutes to sit, listen to soothing music, or read a book.
- *Make time for yourself.* It's important to care for yourself. No matter how busy you are, you can try to set aside at least 15 minutes each day in your schedule to do something for yourself, like taking a bubble bath, going for a walk, or calling a friend.
- *Sleep.* Sleeping is a great way to help both your body and mind. Your stress could get worse if you don't get enough sleep. You also can't fight off sickness as well when you sleep poorly. Try to get seven to nine hours of sleep every night.
- *Eat right.* Try to fuel up with fruits, vegetables, and proteins. Good sources of protein can be peanut butter, chicken, or tuna salad. Eat whole grains, such as wheat breads and wheat crackers.
- *Get moving.* Believe it or not, getting physical activity not only helps relieve your tense muscles, but helps your mood too! Your body makes certain chemicals, called endorphins, before and after you work out. They relieve stress and improve your mood.
- *Set limits.* When it comes to things like work and family, figure out what you can really do. There are only so many hours in the day. Set limits with yourself and others. Don't be afraid to say NO to requests for your time and energy.
- *Plan your time.* Think ahead about how you're going to spend your time. Write a to-do list. Figure out what's most important to do.
- *Don't deal with stress in unhealthy ways.* This includes drinking too much alcohol, using drugs, smoking, or overeating.

### Stress can play a part in these problems:

trouble sleeping	stomach cramping
headaches	stomach bloating
constipation	skin problems, like hives
diarrhea	depression
irritability	anxiety
lack of energy	weight gain or loss
lack of concentration	heart problems
eating too much or not at all	high blood pressure
anger	irritable bowel syndrome
sadness	diabetes
higher risk of asthma and arthritis flare-ups	neck and/or back pain
tension	less sexual desire
	harder to get pregnant

## Introducing UTMB's Newest BIRCWH Scholars



**Dr. Celia Chao**

Celia was born in Taiwan and came to New York City at the age of six with her family. She grew up in New York and in high school volunteered for a research project at the Mount Sinai Hospital Medical Center. She worked for a surgeon who was studying the effects of diet and breast cancer. Since then, she has always been interested in the study of solid cancers.

Dr. Chao earned an AB (1987) in East Asian Studies from Columbia University and her MD (1991) from Albert Einstein College of Medicine. She completed her residency at Yale University School of Medicine and a fellowship at The Fox Chase Cancer Center in Philadelphia.

She became a surgical oncologist because most cures for solid tumors are the result of surgical intervention. This leaves open many avenues of study in cancer research. Celia investigates the role of gut peptide hormone bombesin in breast cancer.

Approximately 25% of breast cancer patients have over-amplification of the Her-2-neu gene, a member of the epidermal growth factor (EGF) family of receptor tyrosine kinases. Among ovarian, breast, and prostate cancer, studies have shown increased expression of the bombesin (BBS)-like peptide hormone, gastrin-releasing peptide (GRP), and its cognate receptor, GRP receptor (GRPR). Her research on the EGFR family, including Her-2-neu, examines whether it synergizes with GRPR to develop the metastatic phenotype.

Specific molecular targeting of breast cancers with Her-2-neu over-expression is moderately therapeutic in the metastatic setting and unknown in the adjuvant setting. The elucidation of EGFR transactivation by GRPR should facilitate the design of combination drug regimens. The goal of her research is to elucidate the molecular mechanisms regulating development of the metastatic phenotype prior to the development of large volume disease, thereby tailoring specific combination treatment options in the adjuvant setting.



**Dr. Jeff R. Temple**

Dr. Temple earned a bachelor of science degree (1998) in psychology from the University of Texas at San Antonio, and was awarded his MA (2004) in psychology and PhD (2006) in counseling psychology from the University of North Texas. He completed a predoctoral internship and postdoctoral research fellowship at Brown Medical School.

As a first year graduate student, Jeff was broadly interested in studying the acute and long-term effects of stressful life events. Upon learning of the overwhelming prevalence and severity of abuse between intimate partners, he became specifically focused on researching domestic violence and women's health.

Jeff's research has primarily focused on examining the causes, course, and consequences of violence within intimate relationships. He is particularly interested in the negative effects of partner violence, sexual aggression, and psychological abuse on women's mental and physical health. For example, he recently found that sexual assault by a current or former partner was associated with more symptoms of PTSD, stress, and dissociation than sexual assault by a stranger. He has also conducted research demonstrating that a sizeable portion of violent relationships are characterized by mutual violence in which both the man and woman perpetrate and are victimized by violence. However, despite the similarities in rates of violence perpetration, Dr. Temple's research has shown that women are substantially more likely to suffer negative consequences relative to their male counterparts.

Jeff has become increasingly interested in violence prevention and intervention research as a means to prevent the occurrence and recurrence of partner violence in intimate relationships. Thus, in addition to pursuing his line of research on the association between partner violence and women's health, he intends to design, implement, and evaluate the efficacy of a violence prevention program for at-risk youth.

**3. Why did you go into this area of research?**

I developed a strong interest in cancer research in graduate school and quickly decided that metastasis research would be the most beneficial since greater than 90% of all cancer-related deaths are a direct result of tumor metastasis. When I chose my post-doctoral position, I wanted to investigate epithelial cancers. Art Mercurio, my post-doc mentor, had a strong program in breast cancer. This is how I ended up in breast cancer research.

**4. What do you enjoy most about your work?**

I enjoy teaching and helping students and post-docs become greater scientists than they are now. I also love the challenge of research and its problem solving aspects.

**5. What do you enjoy least about your work?**

Bureaucracy.

**6. If money were no object, what would you be doing right now?**

I would do what I do now, except I would have a larger lab with a larger budget so that we could realize the potential of our current work without having to worry so much about obtaining and maintaining NIH funding under the current climate.

CIRWH is proud to co-sponsor the Daniel Kempner Symposium to be held on November 16, 2007. The keynote speaker is David Barker, MD, PhD, FRS, who is a physician and professor of clinical epidemiology at the University of Southampton, UK, and professor in the Department of Medicine at the Oregon Health and Science University. His research has shown that low birth weight is associated with an increased lifetime risk for heart disease, hypertension, stroke, and type 2 diabetes.

Fall 2007 marks the observances of many national health awareness events, including National Immunization Awareness Month in August, World Heart Day on September 30, Ovarian Cancer Awareness Month in September, and National Breast Cancer Awareness Month in October. For all 2007 National Health Observances, visit [www.healthfinder.gov/library/nho/nho.asp](http://www.healthfinder.gov/library/nho/nho.asp).

Here's to your good health.



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