

# MPB GSA NEWSLETTER

Summer 2011

The purpose of this newsletter is to serve as a resource for MPB students to get to know the department better.



## Molecular Physiology & Biophysics Graduate Student Association



JACKIE CORBIN & SHARRON FRANCIS  
TRIBUTE

**By Elizabeth Meredith**

When I heard Jackie and Sharron were retiring, I thought it was necessary to pay them a tribute on their “way out”. Although I personally don’t know Sharron as well, I have come to know Jackie over the past couple years, after he came up to me at the MPB Halloween party dressed as a pirate and informed me I resembled his daughter. I decided to get help from past students to really learn about what Jackie and Sharron’s lab was like and who they are as everyday people. This was quite a fun project as I was able to learn more about Sharron and confirm some my suspicions about Jackie. I’d like to take you through a timeline of students beginning with their first and ending with the last, re-visiting some entertaining stories. One thing that is interesting is that traits described of them from some of their first students still stood out to people in the lab during the later years. To me this sounds like the two of them remained true to their core values over the years.

Both Jackie and Sharron grew up in rural communities, Jackie from North Carolina and Sharron from Kentucky. Jackie went to undergrad at TN Tech in Cookeville, playing football. Sharron

went to Western Kentucky University. They both came to Vanderbilt post-college for their graduate training, working with MPB and Vanderbilt legends such as Rollo and Janie Park and Earl Sutherland. After graduate school they flew the Vanderbilt nest and worked on opposite coasts, Sharron at the NIH and Jackie at UC Davis. However, the magnetic pull towards Vanderbilt was too strong and they eventually made their way back to the great city of Nashville. They formed a lab together nearly 40 years ago and have co-mentored many students since then. Jackie’s first student was our very own Chuck Cobb (began in 1983). He describes the beginning of their lab as upbeat and interactive. Jackie was enthusiastic and patient while Sharron helped him understand not just the technical way to do experiments but also the theory behind them. This helped with troubleshooting later on. Chuck describes a very entertaining story about a day in the lab: “While I was a grad student, I didn’t have a car (due to the low grad student stipends). I was purifying PKA from fresh cow hearts so a few times a year I had to go out to the slaughterhouse to get 10-12 hearts. Jackie would loan me his Mazda Rx-7 sports car to get this task done. One time when I was coming back, someone turned right in front of me, causing me to slam on the brakes. The loosely secured bloody cow hearts and ice were propelled all over the car, into the front seat, and all over me. With hesitation, I had to tell Jackie about what happened, which he was totally cool about. I cleaned it up best I could but I think you could still detect that faint odor of blood in it on the hot summer days in Nashville until he sold it years later.”

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## UPCOMING EVENTS

**Stay Tuned for more information about the Halloween Party!**

# Student Spotlight: Nidhi Jalan-Sakrikar

By Marquicia Pierce

## Nidhi Jalan - Sakrikar

Currently working in Roger Colbran's laboratory.

She is interested in understanding how interacting proteins like alpha-actinin, densin affect CaMKII function in brain.



**Remember, “Science” is not easy but is exciting. Embrace it with all the challenges it presents you and it will be fun.**

### What goals (professional or personal) do you have for the upcoming year?

One of my major goals is to welcome our first baby into this beautiful world and take on new adventures of managing our bundle of joy with science ☺

### What is the next step for you after graduation?

I love/enjoy science, so I wish to continue in academia as a postdoc after my graduation. My goals for the next few months are to finish a paper, thesis, defense, and prepare for the arrival of our baby.

### What was your most memorable science moment?

The most memorable science moments for me includes working with my twin, Laurel Hoffman. More personally, getting a clean (background free) and sensible result is always exciting. When I got the results for my first experiment of my thesis proposal, and prepared the final figure for my paper, it was the most exciting moment. Another most memorable one was when I finally (after 2.5 years of optimization) was able to successfully co-immunoprecipitate  $\alpha$ -actinin with CaMKII and vice versa from mouse brain.

### What influenced you to pursue a scientific career and stay within academics?

My interest in science had stemmed during my school days in India. I never got an opportunity to nourish my interest while in India. When I came to

the USA I had a chance to change my field from Engineering to a career in Science. Since then, I enjoy the nature of work we do, asking complex questions and making new discoveries. I also enjoy the flexibility of planning, and performing new experiments in academia. I also admire the qualities we gain while pursuing academics like independence, drive, initiative, creativity, perseverance, work ethic and problem solving capabilities.

### What advice would you give to new graduate students?

Besides working on your own thesis, use your skills to collaborate within or outside the lab. This will give you more confidence and publications. Also sign up for email alerts from top journals, and Pubmed to stay abreast of the current findings in your field. This is an asset that can be your best friend during qualifying examinations, committee meetings and seminars. Remember, “Science” is not easy but is exciting. Embrace it with all the challenges it presents you and it will be fun.

### What do you like to do in your free-time? Hobbies?

Any free time I get, I like to spend with my husband. I really enjoy cooking, so most free time is spent in the kitchen. We both are foodies, so we like to try out new eateries around. Then we experiment in our kitchen to bring the eatery to our home. «»

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# MPB Relay Race

Just a few pictures from the annual relay race...

Don't miss out  
on the fun!

Join us for our  
next MPB GSA  
sponsored  
event:

Halloween  
Party!



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40 Years of Research

# Jackie Corbin & Sharron Francis Laboratory

## Lab. Laugh. Life.

**(continued from front page)**

Linda McAllister decided to join Jackie and Sharron's lab in 1989 as an MSTP student after a couple key encounters with the PIs. First, she heard Jackie give a seminar on cAMP dependent protein kinase in which Jackie said, "I reckon that that ole protein looks somethin' like this." She claims that after hearing a professor describe the structure of a protein using the word "reckon," she needed to talk more with this man. Second, after a meeting with Jackie and Sharron to discuss some upcoming experiments, Linda remembers being in awe about how well Sharron could think critically on the spot and bring up suggestions no one else had thought of. In the middle of that meeting she knew that she wanted to pursue her PhD studies in the presence of these two great scientists. She knew Jackie would always have her best interest at heart and could help her identify exciting and medically relevant research while Sharron was a great female mentor who could help teach her how to balance her life, as a mother and a scientist, as well as negotiate the academic world as a budding young female researcher.

Jenny Busch, now teaching at Wheaton College, joined the lab in 2003. She was attracted to Jackie and Sharron's passion for their research and down-to-earth personalities. They were very supportive during her early teaching career. In her later years as a grad student, Sharron let her teach a couple of her undergrad Physiology lectures to gain experience for her Wheaton College application. They have also allowed Jenny to come back a couple summers to work in the lab with some of her students as interns to further her research. Sharron was an excellent role model in putting her heart and soul into her career, family, and hobbies.

Mitsi Blount, Terri Lee Foster, and Michelle Fosler all describe Jackie and Sharron similar to those already mentioned. Michelle especially commented about all the wonderful gatherings they had at the two PI's houses. They were always celebrating something: a holiday (Dirty Santa at Christmas), a defense, the acceptance of a grant. And past students say Sharron was an excellent cook. They always looked forward to dinner at her house. James Weeks was their last full time PhD

student to have in the lab. He is now working in the Biological Sciences department here at Vanderbilt. His mentors meant so much to him that he decided to set up the Corbin/Francis Travel Fund in honor of them so that students could have the same opportunity he had in their lab with being able to travel to scientific conferences and courses to further their education. Jackie and Sharron believe in this opportunity so much that they now contribute to it as well.

Over the years, the lab always went on camping and canoeing trips. It was a great bonding experience for the lab members as well as an opportunity to create stories that will never be forgotten. They would caravan to the park and backpack in to the campsite. This was not your typical car camping. It takes a close group of people to be able to trust one another in a situation like this. Jackie described one camping trip where they had a black bear come into their campsite one night in the Smokies to get at their food bag. Instead of picking up and moving spots, he rigged the food bag up in the same spot the next night so they could lure the bear back into the site to get pictures and see it. One other encounter on the trail that probably best sums up Jackie and Sharron's relationship is when Jackie said, "Of course it's safe to drink the water. Look how pure and clear it is." Sharron responds by saying, "Don't listen to him. Be sure to use a filter; I have one here in my pack."

From the stories I have presented here, it sounds like these two complemented each other very nicely. They have left a strong place in each of their student's lives. The overwhelming amount of information and praise their past students had of them really suggests a lot about their character. I am honored that I was able to spend some time to get to know them and I encourage you to as well if you haven't yet before they fly the Vanderbilt nest all together. Jackie and Sharron, on behalf of the MPB family and your past students, we wish you the best of luck in your retirement and hope that you will continue to pass through the halls of the 7<sup>th</sup> and 8<sup>th</sup> floors in Light Hall/PRB/MRBIV in the years to come. «» **By Elizabeth Meredith**

## Thank you for all you have given us!



# A chat with Sharron Francis

By Marquicia Pierce

**What was my most memorable science moment or achievement?** This occurred when I realized that studies that I had done many years before with PDE5 supported the interpretation that all cyclic nucleotide phosphodiesterases used zinc as a key component of the catalytic mechanism.

**What influenced me to pursue a scientific career and stay within academics?**

I had a truly inspiring high school biology teacher. We dissected all sorts of animals, discussed organ/system functions, and had the option for an Advanced Biology course. I went to college determined to become a biology and chemistry teacher. There, I encountered two professors who encouraged me to apply to graduate school. I stayed in academics because it afforded me the opportunity to pursue studies that I found to have merit and to be interesting. I was not interested in a large salary or an administrative post; I wanted an intellectually stimulating career where I could interact with colleagues with similar intellectual values. My soul thrives on the excitement of new knowledge, working with students, and being immersed in the academic intellectual community.

**What does it mean to be a leader in the scientific community?** It means doing more for everyone. It means being a supporting mentor to those in your own lab and department as well as to scientists, particularly young scientists, around the world. It means doing additional work for no pay (editing books, reviewing manuscript) for journals, serving on editorial boards, and initiating projects (symposia at international meetings, editing special sections in journals focusing on a particular topic) to promote interest in your area of expertise, and availing every opportunity to give other scientists in your area a venue for presenting their most recent findings.

**How have I used my personal strengths to excel in science?** I have a mantra: "Don't presume and never give up." Science is a tough career choice. You must be willing to work very hard, and you cannot be easily discouraged when experiments fail, grants are not funded, or a promotion does not materialize. You must push on with optimism, hard work, and an eye aiming for success in keeping your work going. My youth was filled with many hardships, and I learned there to be mentally tough and to persist in achieving my goals. You must love your work, first and foremost—that is the key to success in any discipline.

**Goals that I have for the next few years:**

I will volunteer at a nature center (Owl's Hill) to educate young people about the nature that surrounds us. I will volunteer at the Humane



Association because fostering homeless animals is a major passion for my family. I will volunteer at Ronald McDonald House, and I am writing children's books focusing on wildlife topics. Then, I plan to further search our family's genealogy. I will be busy.

**Advice for new graduate students and postdocs:**

Work hard, stay positive always, remember all your observations however trivial, and find an area that captures your imagination; science should not be a "job"—it should be something that you happily think about when you are away from work, something that makes you eager to design and perform the next experiment, and something in which you find great pleasure with even the smallest of new insights. Small insights (if remembered) frequently lead to major findings.

**Balancing family and a science career:**

It is tough to balance family and career. Science is in many ways conducive to family life because there can be lots of time flexibility. You can leave at mid-afternoon for a scout meeting, school play, etc. and come back that night to start/finish the experiment, come on the weekend to work for a bit, work on your manuscripts/lab presentations/data calculations and plots at home after the children are in bed, etc. I found that traveling to meetings (which is critical to career advancement) when my two children were young was a major problem; because my husband (a physician) was frequently on call, and we had no family nearby, I simply could not travel to many meetings, and for years this diminished my visibility and personal interactions in the scientific community. This undoubtedly hampered my career significantly, but in later years, I tried to make up for this. For me, my family had to come first, but I worked extra hard to try to keep myself engaged, involved, and visible. I could then expand upon that foundation when the children were older. «»



## A word with Jackie Corbin

By Marquicia Pierce

### What was my most memorable science moment or achievement.

My most memorable moment or achievement was the discovery of phosphodiesterase-5, an enzyme responsible for breakdown of cyclic GMP, which is the target of Viagra, Levitra, and Cialis.

### What influenced me to pursue a scientific career and stay within academics?

I enjoy solving problems, working puzzles, and discovering new things. I like the environment of a scientific community and college campus.

### What does it mean to be a leader in the scientific community?

To be a leader in the scientific community means that I have considerable independence to pursue goals that I deem important. It also means that other scientists in my field might pay more attention to me.

### How have I used my personal strengths to excel in science?

My main strengths are high energy, focus, enjoyment of my work, and persistence.

### Goals that I have for the next few years:

My only remaining scientific goal is to solve the overall mechanism of regulation of



phosphodiesterase-5. My other goal is to live a healthful and happy life.

**Advice for new graduate students and postdocs:** I urge you to enjoy the thrills of discovery and be inspired by the scientific community.

Respectfully,

*Jackie Corbin*

### Don't forget!!

SYMPOSIUM HONORING THE DISTINGUISHED CAREERS OF

**Drs. Jackie Corbin and Sharron Francis**

FOR THEIR CONTRIBUTIONS IN DEFINING THE

*mechanisms of action of cAMP and cGMP*

**SEPTEMBER 23, 2011 • 1:00 P.M.**

**VANDERBILT STUDENT LIFE CENTER**



40 Years of Research

# Jackie Corbin & Sharron Francis Laboratory Lab. Laugh. Life.



Lab in 1985. "Overall, being a graduate student in Jackie's lab was a great experience, at both the professional and personal levels." - *Chuck Cobb*



Sharron receiving an award from her alma mater, WKU. "She has put her heart and her soul into her career, her family, and her hobbies. Thank you, Sharron."

- *Jenny Busch*



"Jackie and Sharron made everyone feel welcome."

- *Michelle Foster*





40 Years of Research

# Jackie Corbin & Sharron Francis Laboratory

*Lab. Laugh. Life.*



Graduation celebration for Robyn Richie-Jannetta (far right) and Jenny Busch (2<sup>nd</sup>). Sharron, Roya Zoraghi (post-doc) and Mitsi Blount (graduate student).



"My sincere hope for Jackie and Sharron is that at this time of their retirement, they know that through their work at Vanderbilt University, they have played an instrumental role in many lives - many students, many laboratory employees, many research trainees, many faculty colleagues, and last but certainly not least.... many patients who take sildenafil."

— *Linda McAllister-Lucas*



"My research experience with Dr. Corbin and Dr. Francis has been invaluable, one that I brag about, and one that will always be memorable".

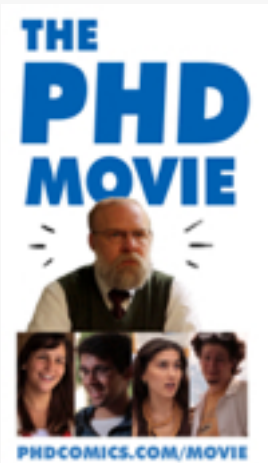
— *Terri Lee Foster*



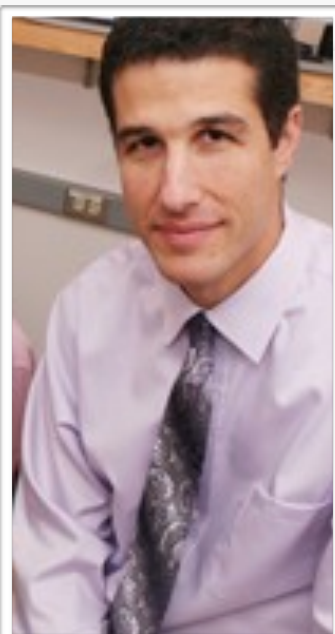
"The lab environment was always upbeat and interactive." — *Chuck Cobb*



## Congratulations to Lynley Pound and Katie Colbert - Coate on successfully defending their theses!!



**Vandy GSC is having a second showing due to an overwhelming response of the PhD Comics movie at 8:30 on Monday if you weren't able to get tickets for the 7:00 showing. Tickets are at the Vandy Valet. Be sure to spread the word.**



### Mark your calendars!

Student invited speaker **Dr. Jeffery Zigman**, from UT Southwestern Medical Center will be here December 14th, 2011!

One of the major overlying research interests of the Zigman lab is to gain a better understanding of the controls of eating behavior, food intake and body weight. To that end, we have developed several models to study the peptide hormone GHRELIN. Ghrelin levels in the blood stream are influenced mainly by the release of ghrelin from specific endocrine cells (ghrelin cells) lining the stomach and intestine. Ghrelin is of particular interest to both obesity and cachexia researchers because it stimulates food intake and its levels are raised in association with hunger, diet-induced weight loss, and certain forms of obesity in humans. In addition, our group has shown that ghrelin levels rise in the setting of chronic stress, and that this mechanism may influence eating behaviors as well as alterations in mood associated with stress. Our group has also shown that ghrelin motivates animals to work hard to obtain and eat fatty foods, and thus enhances the pleasurable aspects of fatty foods. Ghrelin also has several other functions, including modulation of insulin release and roles in gastrointestinal motility, gastric acid secretion, and growth hormone release, among others.

<http://www.utsouthwestern.edu/utsw/home/research/zigmanlab/index.html>

We want to hear from you!

**MPB students know how to get things done! Let us know of recent grants, awards and publications so we can feature it in the newsletter. Also, If you would like to contribute to the newsletter just let us know. You can submit articles to [mpbgsa@gmail.com](mailto:mpbgsa@gmail.com). It's a great way to improve your writing skills and would look great on your CV. Comments and suggestions are encouraged as well.**



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