

Med School Watercooler

NEWS FROM FREDERICK P. WHIDDON COLLEGE OF MEDICINE
AT THE UNIVERSITY OF SOUTH ALABAMA

Thursday, January 19, 2023

Researchers publish novel findings that could improve management of prostate cancer



Postdoctoral researcher Srijan Acharya, Ph.D., is studying the mechanisms underlying the contradictory actions of androgens in prostate cancer.

Srijan Acharya, Ph.D., a postdoctoral researcher at the USA Health Mitchell Cancer Institute, serves as the lead author on a research study that offers promising potential in managing prostate cancer more effectively.

His research, titled, "[Biphasic transcriptional and post-transcriptional regulation of MYB by androgen signaling mediates its growth control in prostate cancer](#)," unveils a novel mechanism to explain contradictory actions of androgens in prostate cancer. He conducted his research in the lab of Ajay Singh, Ph.D., professor of pathology at the Frederick P. Whiddon College of Medicine at the University of South Alabama. The work was supported by funding from the National Cancer Institute and the Mitchell Cancer Institute.

Androgens, which are a group of male hormones, play a significant role in the growth of prostate cancer. "Therefore, lowering their levels or inhibiting their function remain frontline treatment options for patients with advanced or metastatic prostate cancer," Singh said.

Although androgen-suppression therapy – also known as hormone therapy – is effective in most patients, it inevitably fails in the long term. "Interestingly, it has been observed that androgens at high doses can also suppress prostate cancer growth, which has led oncologists to examine androgen supplementation as a therapeutic approach in clinical trials," Singh said. "The resulting data is promising; however, the mechanisms underlying the dichotomous action of the

androgens remain unclear, which could yield molecular signatures to help in prospective identification of likely responders.”

Their research successfully identified that androgens confer their growth-promoting action by inducing the expression of a protein, MYB, which the group identified earlier to be overexpressed in prostate cancer. “Interestingly, we found that at high doses androgens suppressed the expression of MYB through induction of negative regulatory microRNA, miR-150,” Acharya said.

“Thus, we have identified MYB and miR-150 as two important functional targets downstream of androgen signaling, whose levels can be used for therapeutic planning and to monitor the response of androgen-targeted therapies in prostate cancer,” Singh added. “In addition, newer therapeutic approaches that either inhibit MYB function or enhance miR-150 levels in prostate cancer cells can be evaluated to manage prostate cancer more effectively.”

Other members of the research team responsible for the findings include Shashi Anand, Ph.D., a postdoctoral fellow in pathology; Mohammad Aslam Khan, Ph.D., a senior research associate at the Mitchell Cancer Institute; Haseeb Zubair, Ph.D., a postdoctoral fellow in pathology; Sanjeev Srivastava, Ph.D., formerly a researcher at the MCI and currently an analytical scientist at Johnson & Johnson; and Seema Singh, Ph.D., professor of pathology at the Whiddon College of Medicine.

Meet a Med Student: Grace Dunbar

Grace Dunbar

Age: 24

Class: 2026

Hometown: Spanish Fort, Alabama

Undergraduate education: B.S. in biology at the University of Alabama

What do you enjoy most about being a medical student at the Whiddon College of Medicine?

I am grateful that everyone at the Whiddon College of Medicine cares so deeply about our success. From administrators, to professors, to students in the grades above, and my classmates, I feel encouraged and supported by everyone involved in our medical education. I also really enjoy going out to clinic within the Mobile community and having hands-on practice in seeing patients and learning from local providers.



Are you involved in any research, organizations or other initiatives at the College of Medicine?

I am involved in the Christian Medical Ministry of South Alabama, Admissions Ambassador Team, several specialty interest groups, and I conduct research within the Fanny Meisler Trauma Center at University Hospital. I also enjoy being one of the social chairs of the Class of 2026.

What are your interests and hobbies?

I enjoy spending time with my family (especially my three nephews), cheering on the Crimson Tide, listening to Heather McMahan’s “Absolutely Not” podcast, and traveling.

What is something unique about you?

I had a year-long streak learning Dutch on Duolingo.



New members selected for Gold Humanism in Medicine Honor Society



This year, 11 third-year medical students, five residents and two faculty members were named to the USA Chapter of the Arnold P. Gold Humanism in Medicine Honor Society (GHHS) at the Frederick P. Whiddon College of Medicine.

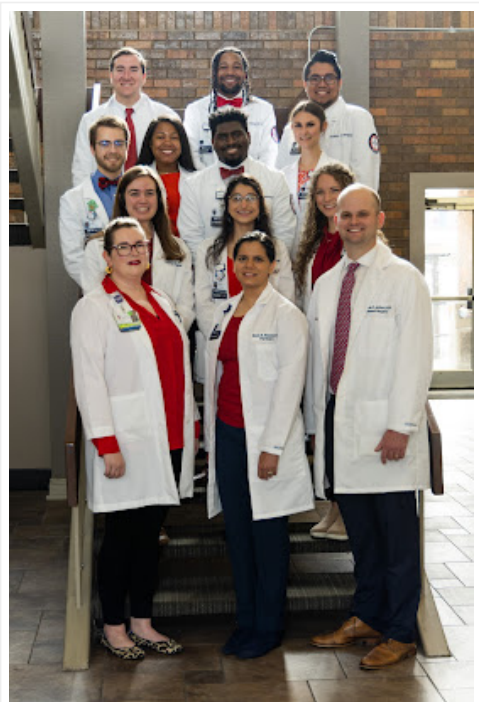
GHHS is a national society that celebrates compassionate, patient-centered care and recognizes a select group of students, residents and faculty who serve as role models, mentors and leaders in medicine while providing compassionate patient care. They are selected through a peer-nominated process.

"These students, residents and faculty serve as role models of humanism in healthcare," said T.J. Hundley, M.D., associate dean for medical education and a chapter adviser. "They were identified for exemplifying the GHHS goal of placing compassion, dignity, empathy and human value at the heart of education and patient care."

The following students, residents and faculty were "tapped" in for the GHHS class of 2024:

- Arcole Brandon, student
- Tiara Dean, student
- David Gahan, student
- Carey Johnson, student
- Marjorie Jones, student
- Christian Manganti, student
- Jessica Moore, student
- Justin Penninger, student

- Lameace Sayegh, student
- Trentyn Shaw, student
- Claudia Stephens, student
- Hayden Alford, M.D., resident, department of surgery
- Santiago Diaz Gonzalez, M.D., resident, department of neurology
- Shyla Hossain, M.D., resident, department of psychiatry
- Angela Mosley-Johnson, M.D., resident, department of obstetrics and gynecology
- Nicole Weidow, M.D., resident, department of pediatrics
- Anna Foust, M.D., assistant professor of pediatrics
- Melody Petty, M.D., assistant professor of pediatrics



Brandon was elected to serve as president. The other elected officers are Shaw, who will serve as secretary and treasurer, and Stephens, who will serve as social coordinator. The new members will be inducted and pinned at the white coat ceremony on Friday, June 16.

The Arnold P. Gold Foundation sustains the commitment of health care professionals to provide compassionate, collaborative and scientifically excellent patient care. The society currently has approximately 30,000 members in training and practice.