

Med School Watercooler

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

Friday, June 26, 2020

New research reveals unexpected findings in the cat flea genome sequence



Kevin R. Macaluso, Ph.D., professor and Locke Distinguished Chair of Microbiology and Immunology, was among the collaborators of new research published that determined no two cat fleas have the same genome sequence.

Research published this month by a collaboration of scientists of a chromosome-level assembly of the cat flea genome revealed rampant gene duplication and genome size plasticity.

In other words, the scientists discovered that no two cat fleas have the same genome sequence.

Project collaborators include Kevin R. Macaluso, Ph.D., University of South Alabama College of Medicine professor and Locke Distinguished Chair of Microbiology and Immunology.

The study was published online on June 19, 2020, by BMC Biology, a peer-reviewed international research journal.

Fleas are the small parasites of birds and mammals whose blood-feeding can transmit a variety of serious pathogens causing diseases including bubonic plague, flea-borne rickettsioses (typhus and spotted fever) and cat scratch disease.

Historically, a lack of flea genome assemblies has hindered research, especially comparisons to other disease vectors, according to the scientists. The researchers set out to generate a genome sequence for the cat flea, known as *Ctenocephalides felis*, an insect that generates a substantial human health risk throughout the world.

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A genome is a complete set of DNA sequences of an organism. By combining specific sequencing of DNA derived from multiple inbred female fleas, the scientists generated a chromosome-level genome assembly for the cat flea. The study provides the first genome sequence for Siphonaptera, which is expected to substantially inform comparative studies on insect vectors of human disease, according to the authors.

The authors are Timothy P. Driscoll, Victoria I. Verhoeve, Joseph J. Gillespie, J. Spencer Johnston, Mark L. Guillotte, Kristen E. Rennoll-Bankert, M. Sayeedur Rahman, Darren Hagen, Christine G. Elsik, Macaluso and Abdu F. Azad.

The accrued resources and knowledge from the study are timely as a rise of typhus cases have been reported in Southern California and Galveston, Texas. These cases, according to the authors, are directly attributable to fleas associated with increasing populations of rodents and opossums, and requires immediate efforts to combat this serious and underappreciated risk to human health.

This research was supported by the National Institutes of Health, National Institute of Allergy and Infectious Diseases, and represents a collaboration between faculty at the USA College of Medicine, West Virginia University, University of Maryland School of Medicine, Texas A&M University, Oklahoma State University, and University of Missouri.

Posted by [Med School Watercooler](#) at [9:40 AM](#) No comments:

Thursday, June 25, 2020

Mark your calendar: USA Medical Alumni Reunion set for July 29



The University of South Alabama Medical Alumni Association will host a virtual reunion via Zoom on Wednesday, July 29, beginning at 6:30 p.m.

Classes celebrating reunion years – 1980, 1985, 1990, 1995, 2000, 2005 and 2015 – will be invited to join Zoom rooms. However, all alumni are welcome to join the reunion.

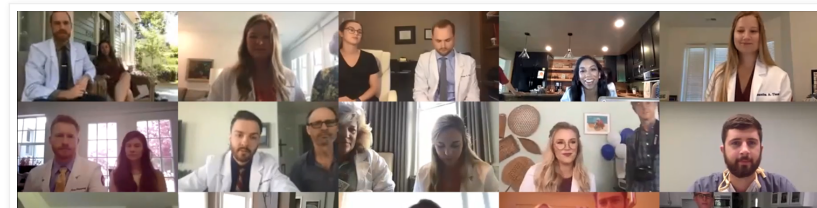
"We were incredibly disappointed to have to cancel the summer 2020 COM Alumni Reunion, and knew we couldn't wait a whole year for everyone to get together," said Ann Eleece Kouns, associate director of alumni relations at the USA College of Medicine. "Although the format is different, we hope our alumni family will take this opportunity to check in with their USA College of Medicine classmates and colleagues on July 29."

Details and Zoom links to follow as the event gets closer.

Posted by [Med School Watercooler](#) at [2:08 PM](#) No comments:

Tuesday, June 23, 2020

Class of 2022 cloaked with white coats in virtual ceremony



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Students entering their third year of medical school at the University of South Alabama College of Medicine donned their white coats at a virtual ceremony on Friday, June 19.

Separated by social distancing requirements, 79 students convened on the digital meeting platform Zoom to take the Medical Student Oath, a promise to uphold the human aspects of medicine such as sensitivity, compassion and respect for patients. Linda Ding, M.D., assistant professor of surgery at the USA College of Medicine, delivered the keynote address.

Ding touched on humanism, professionalism, empathy and compassion, as well as the work-life balance.

"If I had my way, instead of a white coat, I would have each of you don a patient's gown," she said. "Very few of us have had that experience, and yet our job is to care for patients and alleviate suffering. The best substitute for the firsthand experience as a patient is curiosity."

Ding urged the students to be mindful and present in each moment spent with a patient. "In doing so, you will engage in a shared experience, one that will enrich your character and move you to action on behalf of your patients," she said.

Also during the ceremony, Ding, three residents and 10 rising fourth-year medical students were inducted into the Arnold P. Gold Foundation Gold Humanism Honor Society. Inductees are chosen by current third-year medical students for practicing patient-centered medical care with altruism, integrity and compassion.

Inductees included rising fourth-year medical students Nkemdi Agwaramgbo, Grayson Domingue, Dala Eloubeidi, Tyler King, W. Hamilton Moore, Raymond Moosavi, Ravi Rajendra, Jordan M. Smith, Gisella Ward and Zachary White. Residents included Sara McConnell, D.O., a resident in the department of internal medicine and pediatrics; Taylor Twiggs, M.D., a resident in the department of obstetrics and gynecology; and Jonathan Bernard, M.D., a resident in the department of surgery.

The USA Medical Alumni Association sponsors the White Coat Ceremony each year.

Posted by Med School Watercooler at [12:35 PM](#) No comments:

USA College of Medicine hosts virtual M3 Case Symposium

The University of South Alabama College of Medicine Student Assembly hosted the fourth annual M3 Case Report Symposium on June 5. This year, because of social distancing constraints, 38 rising fourth-year medical students presented case reports via Zoom.

The following students won awards for their presentations:

1st Place

Jacob Rosner: "Gynecologic-Oncology Surgery: A Case Study in Surgical Candidate Decision-Making for Stage IA Grade 2 EMCA"
Faculty sponsor: Jennifer Scalici, M.D.

2nd Place (Tie)

Jordan M. Smith: "A Rare Case of Squamous Cell Carcinoma of the Penis"
Faculty sponsor: Christopher Keel, D.O.

Zachary B. White II: "Safety and Efficacy of Treatment with Immune Checkpoint Inhibitors (ICIs) in a Patient with Child-Turcotte-Pugh (CTP) Class C Hepatocellular Carcinoma (HCC)"
Faculty sponsor: Moh'd Khushman, M.D.

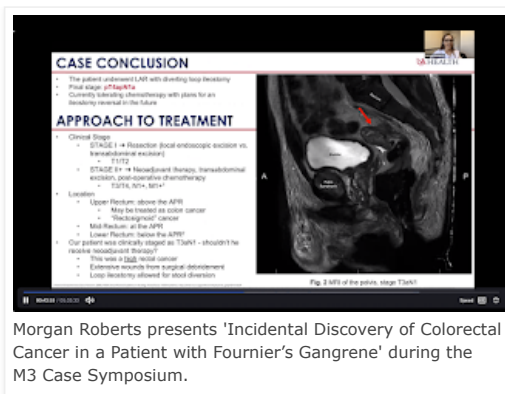
3rd Place (Tie)

Morgan Roberts: "Incidental Discovery of Colorectal Cancer in a Patient with Fournier's Gangrene"

Faculty sponsor: John Hunter, M.D.

Alexis L. H. Kentros and Kay Ann Simmons: "Urine Leaking from Surgical Site"
Faculty sponsors: Paul Rider, M.D., and Lorie Fleck, M.D.

Jacob Rosner, who received first place for his presentation, collaborated with Jennifer Scalici, M.D., chief of gynecologic oncology at USA Health Mitchell Cancer Institute. Their case concerned a patient with stage IA grade 2 endometrial cancer.



"Although surgical intervention is the gold standard for this stage and grade, Dr. Scalici and I discussed her significant comorbidities and how some patients do not perfectly fit into algorithms," Rosner said. "She presented to USA Health a few months after surgery with various medical problems that were not directly related to her cancer but may have been exacerbated by her surgery."

The case highlighted other issues such as how socioeconomic status and living in rural Alabama contributed to the patient's limited access to care and follow-up treatment, Rosner said.

Stuart McFarland, student assembly president, said many students already had started preparing for the case symposium before COVID-19 restrictions prevented medical students from clinical rotations in the hospitals. McFarland said the assembly decided the best way to proceed was to host the symposium online in lieu of traditional poster presentations.

"Due to the limitations of small computer screens instead of posters, we went with short oral presentations with PowerPoint presentations," McFarland said. "This style was new to many of us. I believed the added challenge forced us to think outside the box and resulted in excellent presentations."

Rosner said the format, in which participants were separated into four Zoom rooms, seemed to work well. "Although we were not able to see everyone's poster presentation as in years past," he said, "it was nice to listen and focus more clearly on a select few."

McFarland added, "Because of the new format we also needed significantly more judges. I was very grateful for all the faculty members who stepped up and offered their expertise."

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