

Biomaterials Day 2021 at the University of Florida
Crosslinking Our Community
March 26, 2021

The student chapter of the Society For Biomaterials at the University of Florida held its tenth annual Biomaterials Day entitled “Crosslinking Our Community” on March 26th, 2021 virtually with the University of Florida community in Gainesville, FL. The one-day symposium consisted of oral presentations from both faculty and students, a student rapid-fire presentation session highlighting the work of postdocs and graduate and undergraduate students, and a demonstration of the University of Florida Student Chapter of the Society For Biomaterials outreach activity. The following report will highlight the purpose of Biomaterials Day, attendees, sponsors, speakers, feedback, and success stories throughout the event.

Purpose of the event: Biomaterials Day provides an interdepartmental environment to discuss current biomaterial research through internal and distinguished external guest speakers, industry representatives, student poster sessions, and student presentations. Foremost, Biomaterials Day at UF serves to enlighten a wide array of students about what biomaterials have to offer them and the potential career paths and other opportunities in both industry and academia. Secondly, the event was used to expand the biomaterials network at UF with other students and companies actively involved in the biomaterials field. Our event achieved this goal by bringing professors from different universities and representatives from biotechnology companies to discuss advances in biomaterials in the engineering and medical fields. The UF student chapter of SFB focused on promoting the interaction between students, leading scientists, and developers in order to move the field forward.

Participants: Biomaterials Day 2021 had a total of 109 registered attendees including students, professors, and industrial professionals. The majority of attendees were from different departments including: Materials Science and Engineering, Biomedical Engineering, Mechanical and Aerospace Engineering, Chemical Engineering, Agricultural and Biological Engineering, Chemical Engineering, Physiology, Electrical and Computer Engineering, Chemistry, and Biology. In addition, academic presentations were given by representatives from University of Michigan, New Jersey Institute of Technology, and the University of Arkansas. Industry representatives included participants from Anton Paar.

Sponsors: Sponsors for Biomaterials 2021 included: the National Society for Biomaterials, UF Office of Research, UF Department of Materials Science and Engineering, UF J. Crayton Pruitt Family Department of Biomedical Engineering.

Event Highlights: The symposium was kicked off by a welcome address given by Dr. Gregory Hudalla, the UF SFB Faculty Advisor and Associate Professor of Biomedical Engineering at UF. The day consisted of three talks given by faculty and researchers in the biomaterials field. We also had four student presentations given by Ph.D. students in Mechanical and Aerospace Engineering, Chemical Engineering, Materials Science and Engineering, and Biomedical Engineering. The event also featured a student on-demand rapid-fire presentation session with 26 presenters. In addition, all registered attendees were able to receive a physical and virtual

goodie bag containing a wide variety of informational pamphlets, the event's program, an SFB Biomaterials Day T-shirt designed by SFB students, a sticker with the 2021 student designed UF Biomaterials Day logo, and free student membership promotional code from the SFB National Chapter.

Speakers: The following speakers gave presentations during Biomaterials Day.

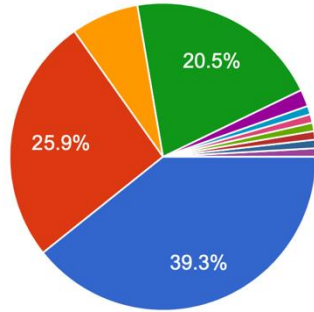
- Dr. Treena Livingston Arinzeh, New Jersey Institute of Technology, "*Functional Biomaterials for Tissue Regeneration*"
- Dr. Lola Eniola-Adefeso, University of Michigan, "*Leveraging the natural cellular and biomolecular interactions in blood for the design of targeted, anti-inflammatory particle therapeutics*"
- Dr. Shannon Servoss from the University of Arkansas, "*Peptoid microspheres: Characterization and Applications*"

Student Presentations: Four graduate students presented in our live student oral presentation session. Each student prepared and presented a 15-minute oral presentation. In the spirit of this year's theme, we selected student the four presenters so that each main department active in biomaterials research was included (BME, MSE, CHE, MAE). 26 students composed of undergraduate and graduate students, as well as postdocs, presented their research during our virtual on-demand rapid-fire session organized and held using Microsoft Teams.

Success Story: We feel that the biggest success of Biomaterials Day 2021 was organizing a virtual meeting after our scheduled ninth annual Biomaterials Day 2020 was cancelled due to COVID-19 restrictions that started in March 2020. By maintaining a presence at UF, we are hopeful to continue to host and organize future successful Biomaterials Day symposia. Now, with experience in virtual event organizing, we look forward to making our future events more accessible and open to the broader SFB student community.

Notes on UF SFB membership for 2020-2021: Following Biomaterials Day, UF SFB's mailing list has continued to be 500+ individuals. Graphs of registrants are provided below. We are happy to note that our executive board features 50/50 men and women as well as being 50% individuals from underrepresented minorities in STEM! Our outgoing President, Bryan James, was recently elected Secretary/Treasurer-elect of the national student chapter. Additionally, within the last few years, our organization has expanded to include other departments such as Mechanical Engineering, Chemical Engineering, Chemistry, and Biology. Additionally, our organization tends to gather more involvement from graduate students, however we have been successful in recruiting many active undergraduate members, and 3/6 positions of the outgoing executive board had been filled by undergraduates.

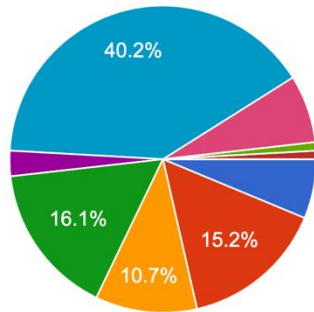
Department
112 responses



- Biomedical Engineering
- Materials Science and Engineering
- Mechanical and Aerospace Engineering
- Chemical Engineering
- Chemistry
- Agricultural and Life Science
- Department of chemistry
- Agriculture and life science Biology

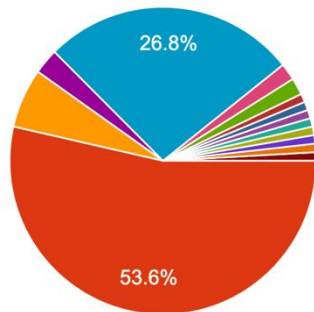
▲ 1/2 ▼

Please select which of the following applies to you
112 responses



- 1st year undergraduate
- 2nd year undergraduate
- 3rd year undergraduate
- 4th year (+) undergraduate
- Graduate-Master's student
- Graduate-PhD student
- Faculty
- Industry Representative
- Technician

How did you hear about Biomaterials Day?
112 responses



- Facebook
- SFB Email
- SFB General Body Meeting
- Flyers
- Material Advantage Email
- Department Mailing List
- Friend
- Friends

▲ 1/2 ▼

Feedback: We were successful in attracting over 100 participants for our tenth annual Biomaterials Day at the University of Florida. We were able to attract a diverse attendee list because our invited speakers included different and interdepartmental types of biomaterial researchers. In a feedback survey sent to attendees, there was extremely positive feedback. Overall, people were satisfied with the event and commented on how the event has grown and improved over the years. Several faculty members commented on how impressed they were with such a large-scale event that was organized by SFB student officers. Many of the criticisms were related to the change in format. For instance, several responders requested the return of the poster session. Certainly, this will be the case for future in-person Biomaterials Days. We did receive positive feedback in how we facilitated the on-demand talks. Another point was to include more live student talks. This year we introduced including graphical abstracts. Most responders liked this inclusion. One comment we received was that perhaps the graphical abstracts could be used for a contest rather than as a requirement. I think this is worth pursuing in the future.

Contact Information: The following people and their contact information were involved in the planning of Biomaterials Day.

- Bryan James, UF SFB President, National Secretary/Treasurer-Elect, bryan.james@ufl.edu
- Heather Ursino, UF SFB Vice-President, heather.ursino@ufl.edu
- Yan Pacheco, UF SFB Treasurer, yanp17@ufl.edu
- Justin Silberman, UF SFB Secretary, jsilberman@ufl.edu
- Sophia Saenz, UF SFB Industry Liaison, sophia.saenz@ufl.edu
- Melissa Gutierrez, UF SFB Social Media/Webmaster, mgutierrez2@ufl.edu
- Dr. Gregory Hudalla, UF SFB Faculty Advisor, ghudalla@bme.ufl.edu

I would like to take this opportunity to thank the Society For Biomaterials for making this event possible. Without the society's generosity, Biomaterials Day would not be possible. Thank you for your continuous support of the University of Florida Student Chapter!

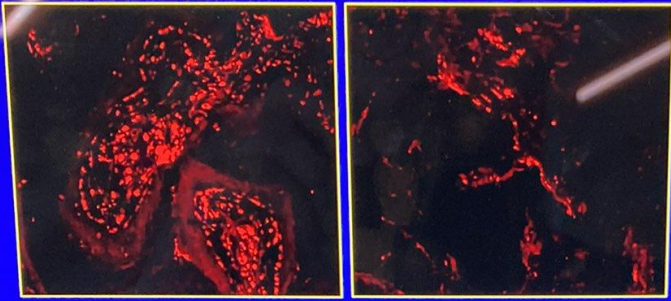
Report compiled by Bryan James

PHOTOS:

You are viewing arinze's screen View Options

Allo MSCs Persist in Defect

4 weeks 8 weeks



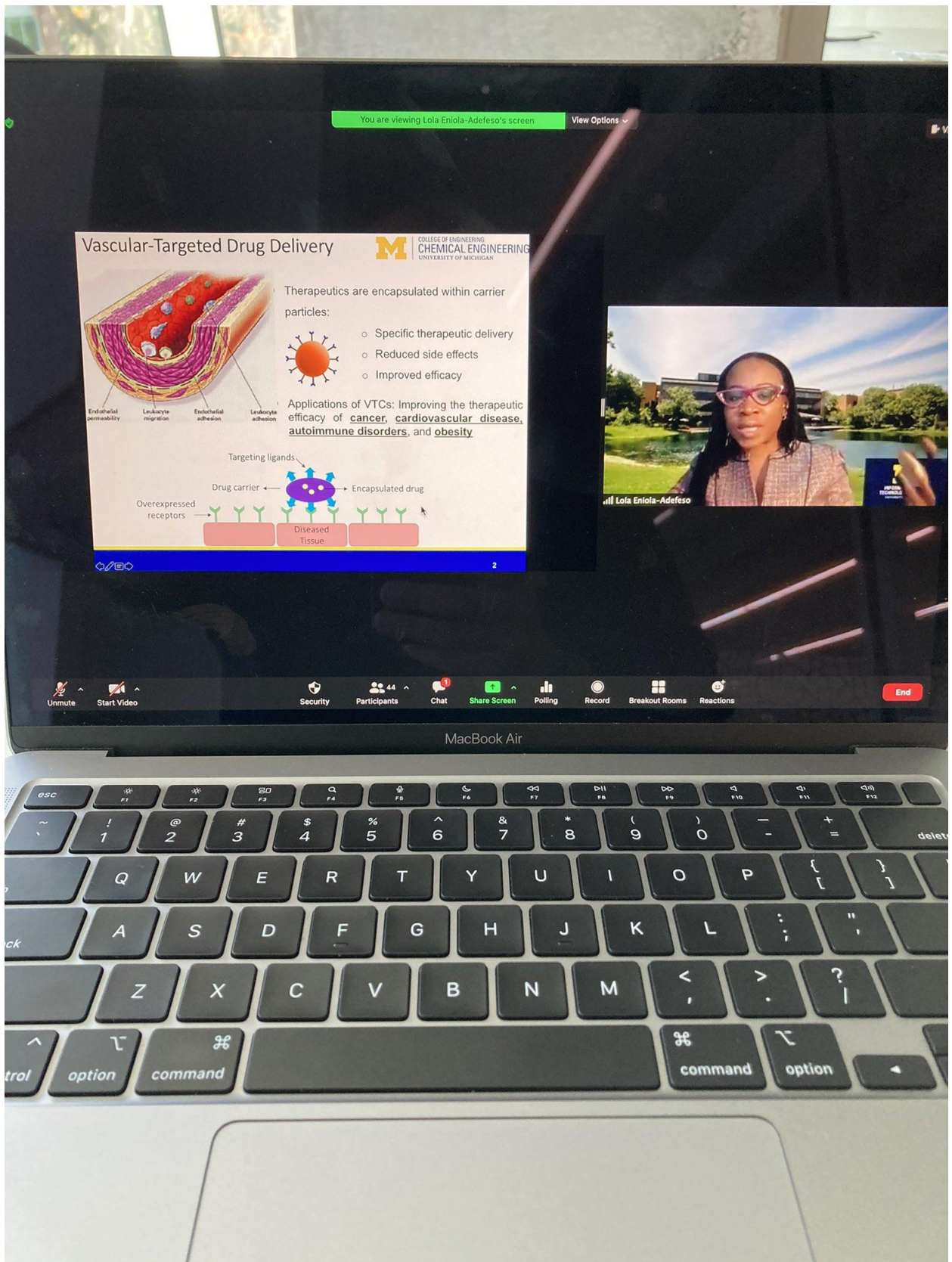
Dil Labeling, 20x obj

Unmute Start Video Security Participants 32 Chat Share Screen Polling Record Breakout Rooms Reactions End

MacBook Air

The image shows a Zoom meeting interface on a MacBook Air. The main screen displays a slide with a blue background and yellow text. The slide title is "Allo MSCs Persist in Defect". Below the title are two side-by-side fluorescence microscopy images. The left image is labeled "4 weeks" and the right image is labeled "8 weeks". Both images show red-stained cells in a defect. Below the images, the text "Dil Labeling, 20x obj" is visible. The Zoom meeting controls are at the bottom, showing options like Unmute, Start Video, Security, Participants (32), Chat, Share Screen, Polling, Record, Breakout Rooms, Reactions, and End. A small video window on the right shows a woman with the name "arinze" below her.

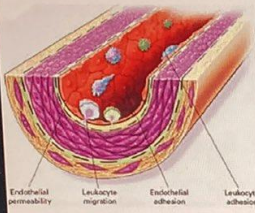




You are viewing Lola Eniola-Adefeso's screen View Options

Vascular-Targeted Drug Delivery

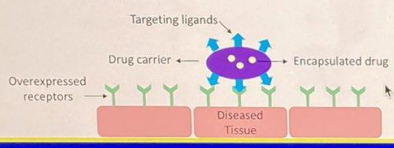
COLLEGE OF ENGINEERING
CHEMICAL ENGINEERING
UNIVERSITY OF MICHIGAN



Therapeutics are encapsulated within carrier particles:

- Specific therapeutic delivery
- Reduced side effects
- Improved efficacy

Applications of VTCs: Improving the therapeutic efficacy of **cancer, cardiovascular disease, autoimmune disorders, and obesity**



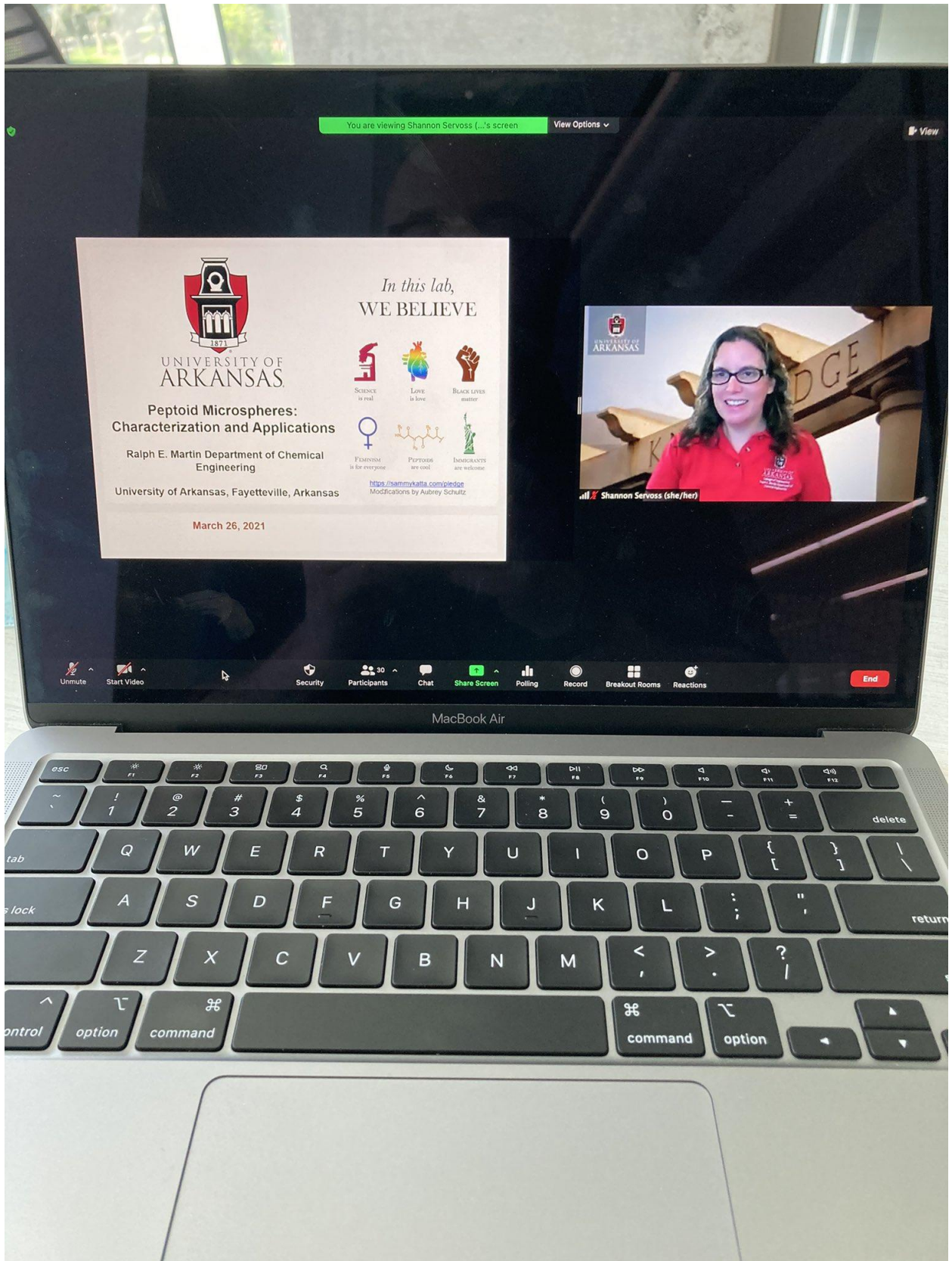
Targeting ligands
Drug carrier
Encapsulated drug
Overexpressed receptors
Diseased Tissue

2



Unmute Start Video Security Participants 44 Chat Share Screen Polling Record Breakout Rooms Reactions End

MacBook Air



You are viewing Shannon Servoss (...)'s screen View Options

View



UNIVERSITY OF ARKANSAS

Peptoid Microspheres: Characterization and Applications

Ralph E. Martin Department of Chemical
Engineering

University of Arkansas, Fayetteville, Arkansas

March 26, 2021

In this lab,
WE BELIEVE



Science
is real.



Love
is love.



Black Lives
matter.



FEMINISM
is for everyone.



PEPTOIDS
are cool.



INCLUSIVITY
are welcome.

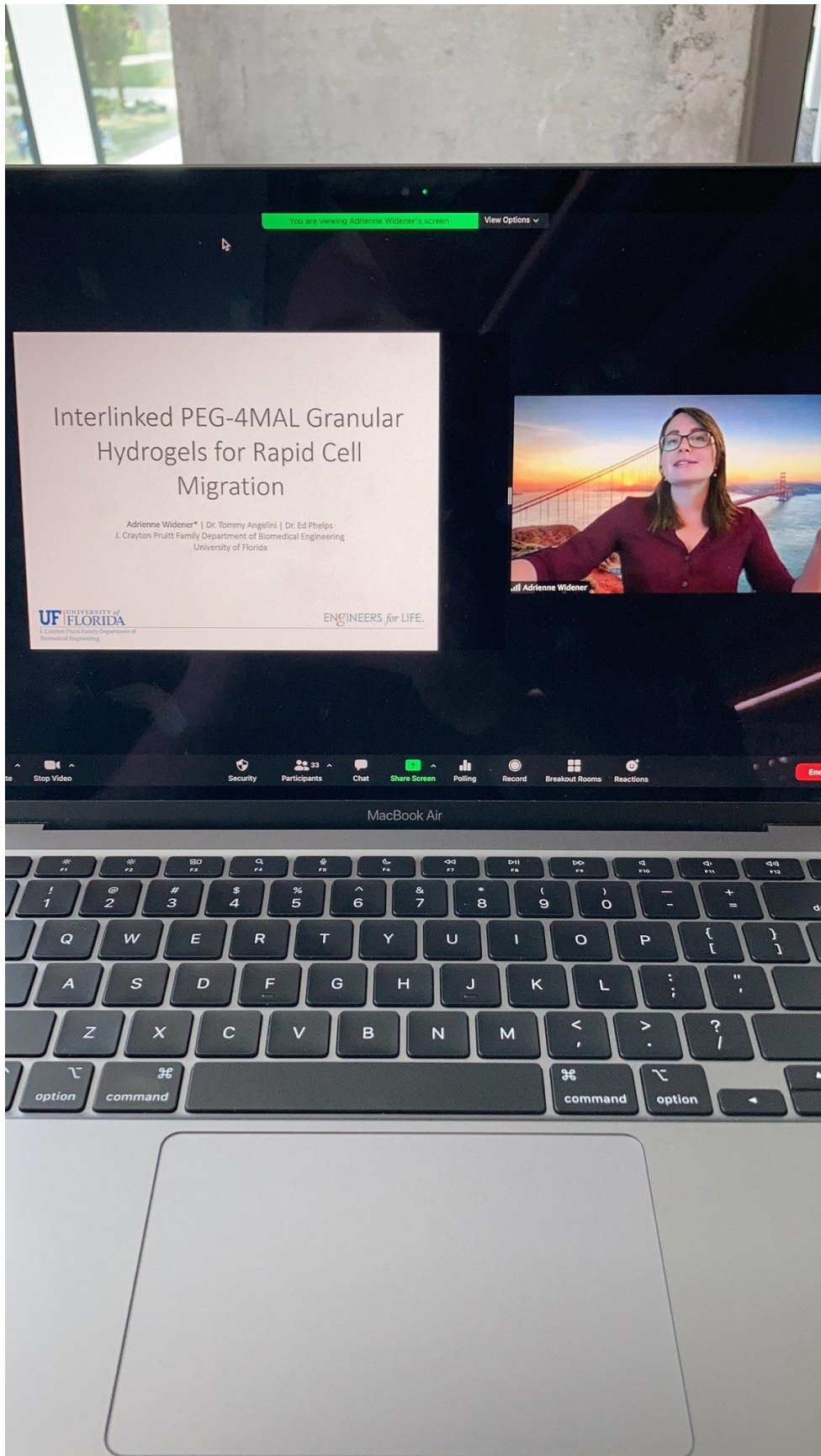
<https://raemykalita.com/pledge>
Modifications by Aubrey Schutz



Shannon Servoss (she/her)

Unmute Start Video Security Participants Chat Share Screen Polling Record Breakout Rooms Reactions End

MacBook Air



Interlinked PEG-4MAL Granular Hydrogels for Rapid Cell Migration

Adrienne Widener* | Dr. Tommy Angelini | Dr. Ed Phelps
J. Crayton Pruitt Family Department of Biomedical Engineering
University of Florida



ENGINEERS for LIFE.

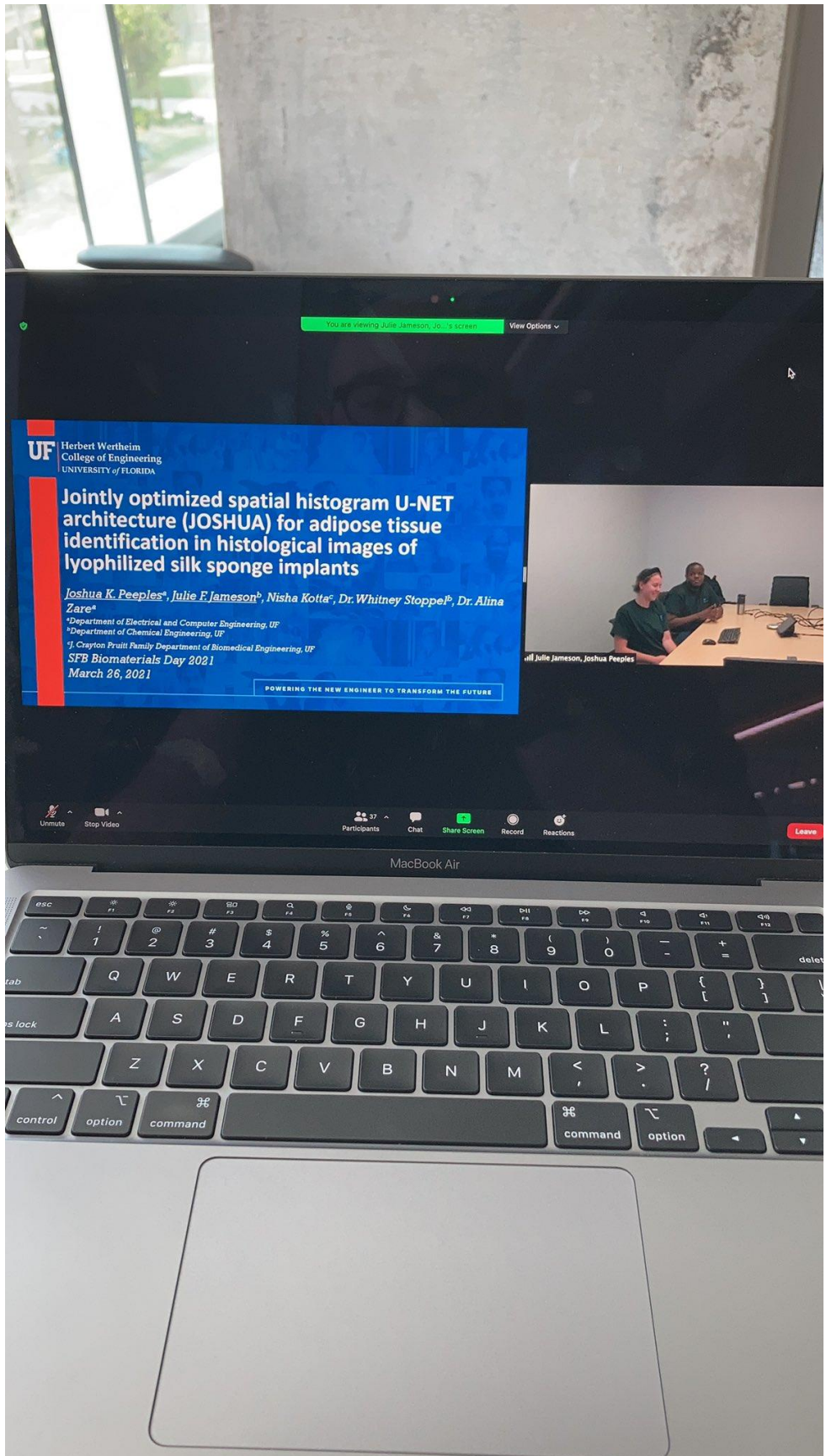


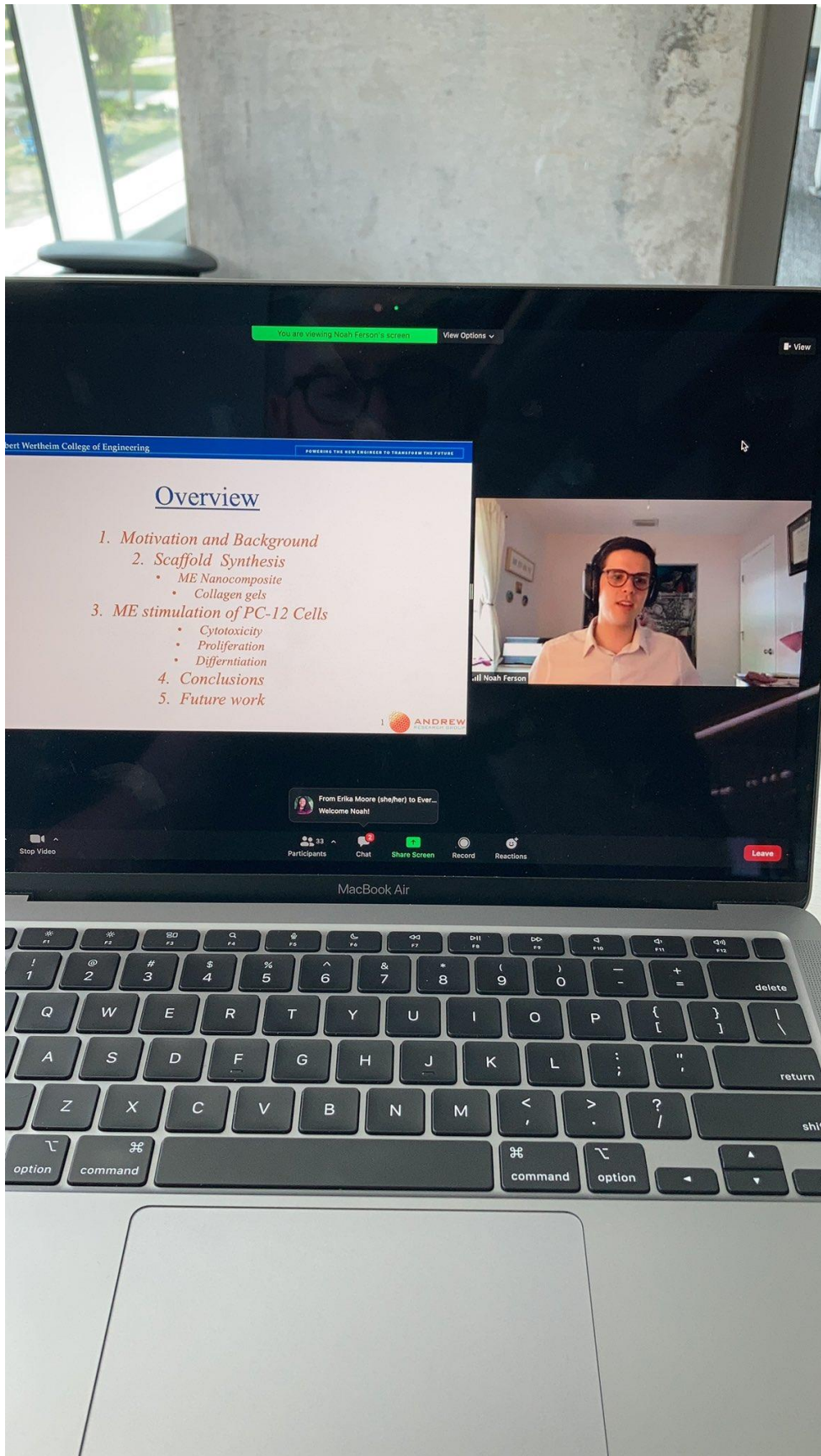
Adrienne Widener

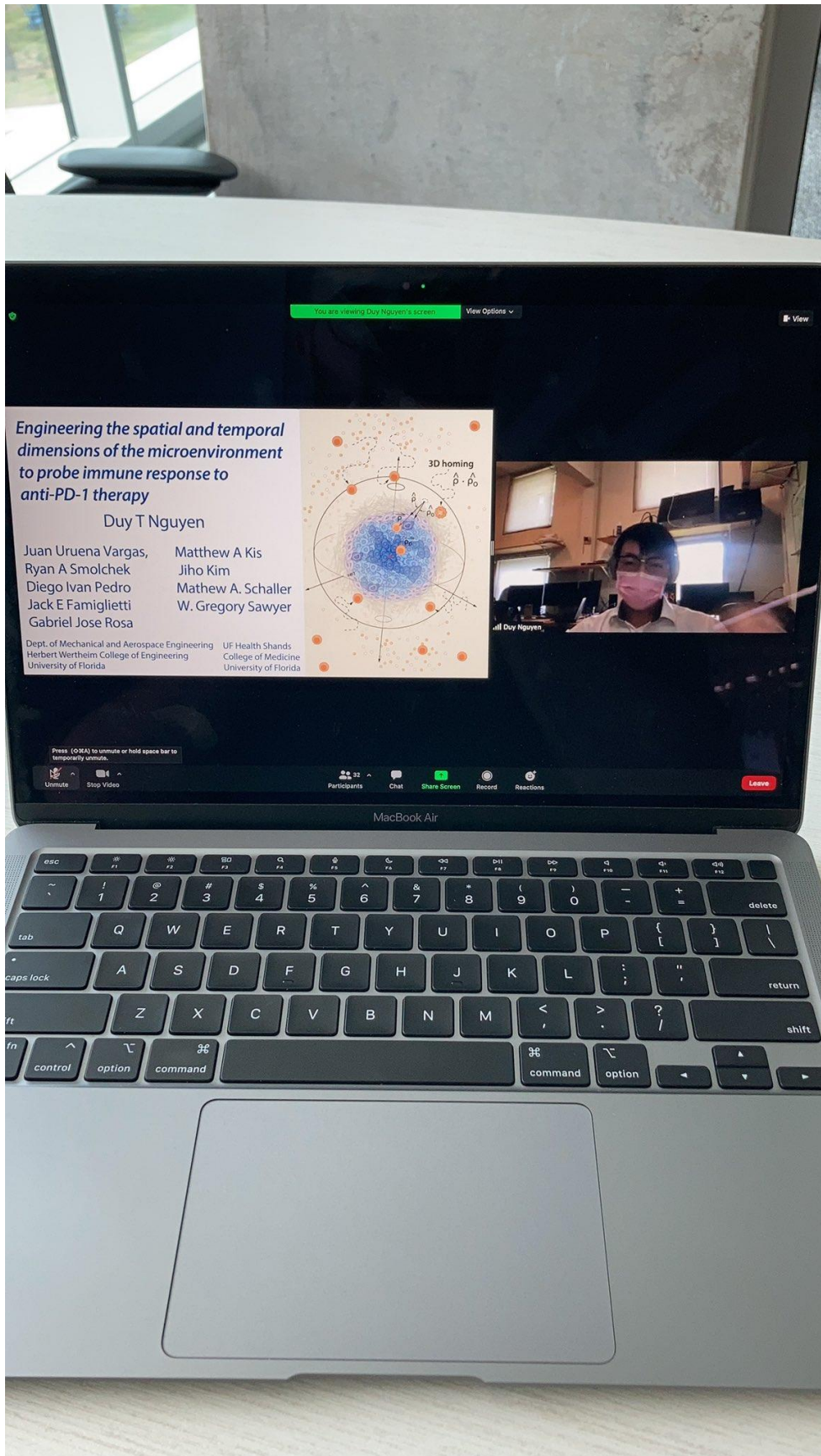


MacBook Air







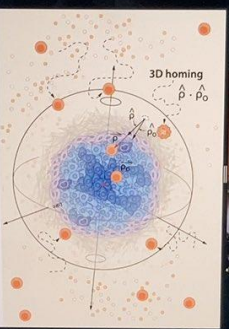


Engineering the spatial and temporal dimensions of the microenvironment to probe immune response to anti-PD-1 therapy

Duy T Nguyen

- | | |
|---------------------|--------------------|
| Juan Uruena Vargas, | Matthew A Kis |
| Ryan A Smolchek | Jiho Kim |
| Diego Ivan Pedro | Mathew A. Schaller |
| Jack E Famiglietti | W. Gregory Sawyer |
| Gabriel Jose Rosa | |

| | |
|---|--|
| Dept. of Mechanical and Aerospace Engineering Herbert Wertheim College of Engineering University of Florida | UF Health Shands College of Medicine University of Florida |
|---|--|



Press (OSX) to unmute or hold space bar to temporarily unmute.

Zoom meeting controls: Mute, Stop Video, Participants (12), Chat, Share Screen, Record, Reactions, Leave.

MacBook Air

List of Registered Attendees:

| First Name | Last Name | Email |
|-------------------|------------------|--------------------------|
| Aakanksha | Jha | aa.jha@ufl.edu |
| Ashma | Sharma | Aashmasharma@ufl.edu |
| Adeeb | Rashid | adeeb.rashid@ufl.edu |
| Adrienne | Widener | adriennejan25@ufl.edu |
| Alexander | Kwiatkowski | akwiatkowski@ufl.edu |
| Arinola | Lampejo | alampejo@ufl.edu |
| Ali | Lateef | alilateef@ufl.edu |
| Aljae | Lewis | aljae.lewis@ufl.edu |
| Annabel | Jacobs | annabel.jacobs@ufl.edu |
| Annika | Dasher | annikadasher@ufl.edu |
| Ashma | Sharma | ashmasharma@ufl.edu |
| Ben | Keselowsky | bgk@ufl.edu |
| Bing | Ren | Bing.ren@ufl.edu |
| Bryan | James | Bryan.james@ufl.edu |
| Bryce | Shirk | bshirk@ufl.edu |
| Bethsymarie | Soto Morales | bsotomoraes@ufl.edu |
| Caroline | Hamric | chamric@ufl.edu |
| Charlene | Nguyen | charlene.nguyen@ufl.edu |
| Christina | Nguyen | christinnguyen@ufl.edu |
| Jackie | Cicalese | cicalesej@ufl.edu |
| Chris | Palles | cpalles@ufl.edu |
| David | Rodriguez | David.Rodriguez1@ufl.edu |
| Daniel | Bister | dbister@ufl.edu |
| Deanna | Bousalis | dbousalis@ufl.edu |
| Walker | Hagan | dhagan@ufl.edu |
| Eric | Hill | ehill1995@ufl.edu |
| Emmanuelle | Schue | emmanuelle.schue@ufl.edu |
| Gabriel | Fuentes | gabriel Fuentes@ufl.edu |
| Gionela | Lepage | glepagearcia@ufl.edu |
| Marion | Hagstrom | hagstrom.marion@ufl.edu |
| Hayden | Good | haydengood34@ufl.edu |

| | | |
|------------------|-----------------|---|
| Heather | Blackwell | Hblackwell@ufl.edu |
| Jerry | Holland | holland.j@ufl.edu |
| Miao | Huang | huangmiao@ufl.edu |
| Isabela | Torres | isabela.torrespe@ufl.edu |
| Jostin | Armada | jarmada@ufl.edu |
| jaya | kolli | jayakolli2@yahoo.com |
| Jessica | Boehlein | jboehlein@ufl.edu |
| Juan | De La Espriella | Jdelaespriella@ufl.edu |
| Jeffrey | Chen | jeffreychen@ufl.edu |
| Jessica | Aldrich | jessica.aldrich@ufl.edu |
| John | Garrison | john.garrison@chem.ufl.edu |
| Joshua | Peeples | jpeeples@ufl.edu |
| Justin | Silberman | jsilberman@ufl.edu |
| Jennifer | Simonovich | jsimonovich@ufl.edu |
| Julie | Jameson | julie.jameson@ufl.edu |
| Julie | Jameson | julie.jameson@ufl.edu, jpeeples@ufl.edu |
| Kari | Ross | kariross5911@ufl.edu |
| Kenedi | Mills | kenedimills@ufl.edu |
| Katherine | Lupone | klupone@ufl.edu |
| Kristi | Folden | KRISTI.FOLDEN@ANTON-PAAR.COM |
| Leah | Buch | leahbuch@ufl.edu |
| Laurie | Gower | lgowe@mse.ufl.edu |
| Chenyu (Charles) | Liang | liangc@ufl.edu |
| Liyong | Wu | liyongwu@ufl.edu |
| Lyndsey | Kelsey | lkelsey@ufl.edu |
| Madeline | Fuchs | madelinejfuchs@ufl.edu |
| Marisa | Pacheco | marisa.pacheco@ufl.edu |
| Mary | Kasper | marymai@ufl.edu |
| William | Mitchell | mitchell.w@ufl.edu |
| Melissa | Kolaci | mkolaci@ufl.edu |
| Erika | Moore | moore.erika@ufl.edu |
| Madison | Temples | mtemples@ufl.edu |
| Nagarajan | Rajagopal | nagarajanrrajago@ufl.edu |

| | | |
|-------------|----------------|--------------------------|
| Nina | Erwin | nerwin@ufl.edu |
| Duy | Nguyen | nguyenduy2308@ufl.edu |
| Nicholas | Abuid | njabuid93@ufl.edu |
| Noah | Ferson | noah.ferson@ufl.edu |
| Olivia | Lancaster | oliviarandell@ufl.edu |
| Parth | Patel | parthpatel1@ufl.edu |
| Paxton | Guerin | paxton.guerin@ufl.edu |
| Peter | Novotny | Peternovotny@ufl.edu |
| Qin | Luo | qin.luo@ufl.edu |
| Robert | Accolla | raccolla@ufl.edu |
| Asha | Rao | Raoa1@ufl.edu |
| Renjie | Liu | renjieliu@ufl.edu |
| Victor | Rivera-Llabres | riverallabres.v@ufl.edu |
| Melvin | Rodriguez | rodriguez.melvin@ufl.edu |
| Ryan | Smolchek | rsmolchek@ufl.edu |
| Ruwen | Tan | ruwentan@ufl.edu |
| Holly | Ryan | ryanh@ufl.edu |
| Stephanie | Herrera | s.herrera@ufl.edu |
| Senthikumar | Duraivel | senthilkduraivel@ufl.edu |
| Shornam | Gandhi | sgandhi1@ufl.edu |
| Sophia | Holliday | sholliday@ufl.edu |
| Shornam | Gandhi | shornamg@gmail.com |
| Shreedevi | Kumar | shreedevikumar@ufl.edu |
| Sofia | Goodrich | sl.goodrich@ufl.edu |
| Sabrina | Macias | slfreeman@ufl.edu |
| Samantha | Martinusen | smartinusen@ufl.edu |
| Kaidong | Song | songkd007@ufl.edu |
| Sophia | Saenz | sophia.saenz@ufl.edu |
| Suzanne | Lightsey | suzannelightsey@ufl.edu |
| Sydney | Yu | sydneyyu@ufl.edu |
| Talia | Abbate | t.abbate@ufl.edu |
| Tolulope | Ajayi | t.ajayi@ufl.edu |
| Tomas | Clavijo-Garcia | t.clavijogarcia@ufl.edu |

| | | |
|----------|---------------|-------------------------|
| Ruwen | Tan | tanruwen1994@gmail.com |
| Taylor | Lansberry | taylorlansberry@ufl.edu |
| Tryanni | Chiaravalloti | tchiaravalloti@ufl.edu |
| Tiffany | Conklin | tiffany.conklin@ufl.edu |
| Jonathan | Valentin | Valentinj@ufl.edu |
| Viviana | Pinzon | Viviana.pinzon@ufl.edu |
| Wendy | Chai | wchai@ufl.edu |
| Whitney | Stoppel | whitney.stoppel@ufl.edu |
| Xin | Tang | xin.tang@ufl.edu |
| Shornam | Gandhi | xin.tang@ufl.edu |
| Yong | Huang | yongh@ufl.edu |
| Yunxia | Chen | Yunxia.chen@ufl.edu |
| Hui | Zhou | zhouhui@ufl.edu |

List of All Abstracts:

Please see the 2021 Program Booklet for Abstracts.