2023 Annual Meeting

Education and Outreach Update

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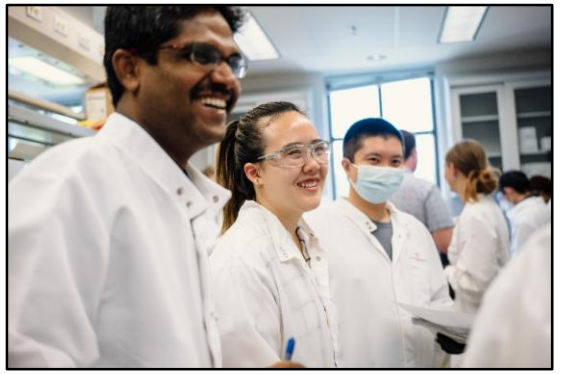
GlycoMIP
NSF Materials Innovation Platform

Education and Outreach Strategy

Grow a diverse community of glycomaterials users and scientists:

- ✓ Target users and prospective users
- ✓ Engage students and postdocs; train the next generation of scientists
- ✓ Serve needs of faculty, especially at non-R1 and MSIs/HBCUs
- ✓ Connect with industry



Create value through unique, targeted offerings:

- ✓ Focused content with high-quality delivery, high impact
- ✓ Evaluation and feedback; continuous improvement
- ✓ Follow-up

Education and Outreach Activities

Undergraduate Students

Summer/ Academic Year Research Experiences

GlycoMIP SURF/UGR

2021: 1/1

2022: 2/1

GlycoSE

2023: 2/1

VT MAOP

2021: 1
2022: 2
2023: 2-3

UGA TAP

2022: 2

VT NSF REU

2022: Proposal Submitted (CHEM)

Users/Prospective Users Graduate Students, Postdocs, Industry

Summer Schools

2021: June 7-11
2022: June 13-17

2023:
June 12-16 @ VT
Sep 11-14 @ UGA

Online Resources

Informational Videos (5)

Tutorials (2)

Planned:

User Testimonials

Informational Videos

Scientists on Screen

One per Quarter

Virtual Format

Short Courses/ Symposia

2023: 2 (ACS)

Planned:

GSC In-Lab Instrument Training Series

Major Accomplishment: Summer Schools

2021: 100% virtual, 4-½ day event (15 instructors)

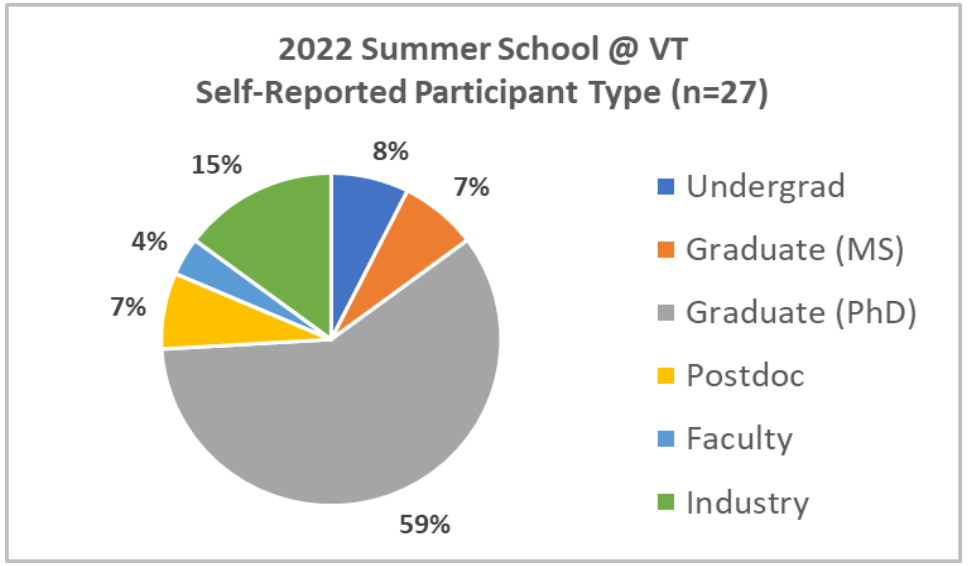
- 299 registered, 191 participated
- 108 unique orgs (49% international)

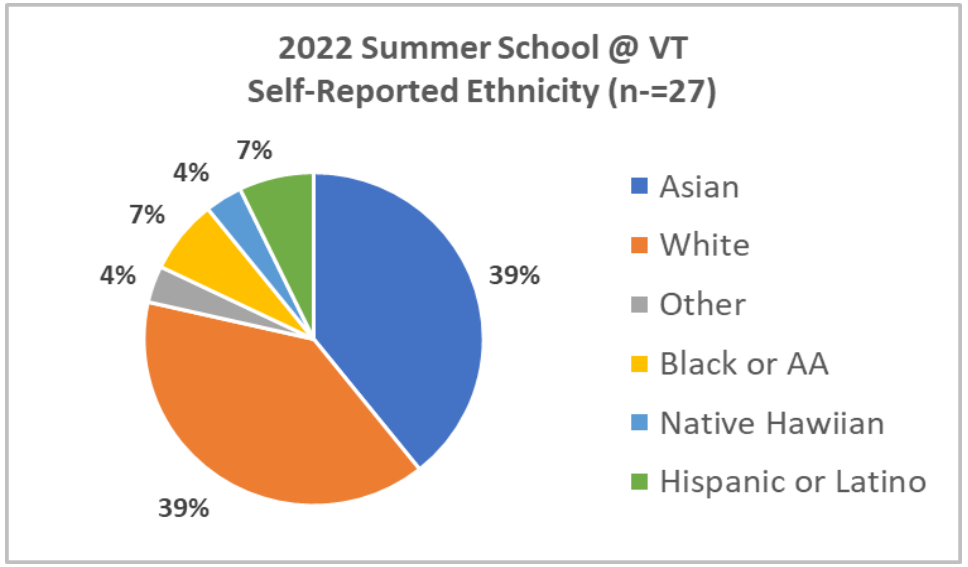
2022: 100% in-person, 4-½ day event (14 instructors)

- 22 full participants (plus VT students for lectures)
- 81% students and postdocs
- 12 universities/orgs; 5 were HBCUs/MSIs (42%)
- 7 travel awards to HBCU/MSI attendees
- 7 user projects with Summer School participants

Evaluations (100% returned)

- ✓ 96% Agreed or Strongly Agreed that *"Summer School advanced my knowledge of glycomaterials and showed me how GlycoMIP can support my/my organization's research needs."*
- ✓ 100% Agreed or Strongly Agreed that *"Summer School enhanced my awareness of GlycoMIP and its capabilities to advance glycoscience research."*





Major Impact 1: Summer Schools

2021: 100% virtual, 4-day event

- 300 regist
- 15 instruc

2022: 100% in

- 42 applic
- 10 VT stu
- 14 instruc
- 12 univer
- 7 travel a
- 7 user pr

Evaluations

- ✓ 96% Ag *advance me how research*
- ✓ 100% Agreed or Strongly Agreed that *"Summer School enhanced my awareness of GlycoMIP and its capabilities to advance glycoscience research."*

2023 Summer Schools

June 12-16 @ VT (35 applications)

September 11-14 @ UGA

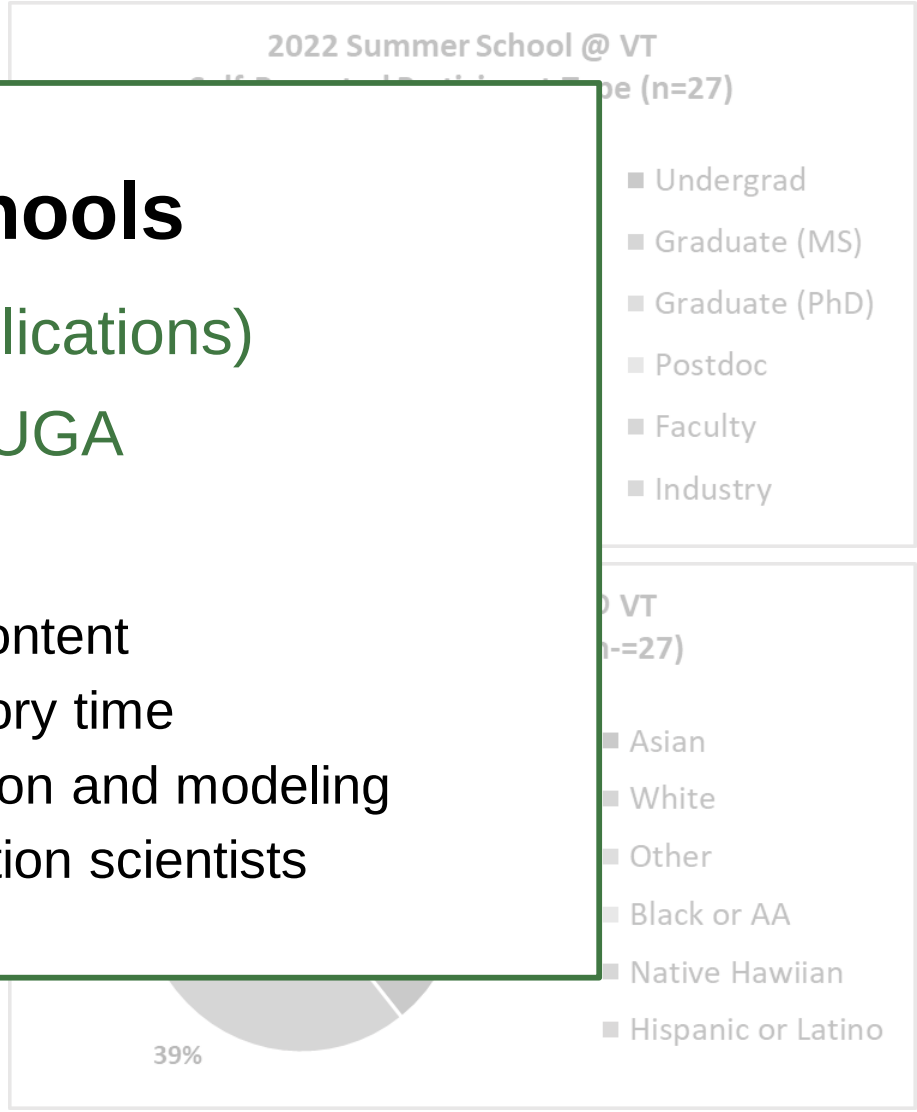
Featuring:

Complementary course content

Extended hands-on laboratory time

Expansion of materials characterization and modeling

Focus on users and next generation scientists



Major Accomplishment: Scientists on Screen

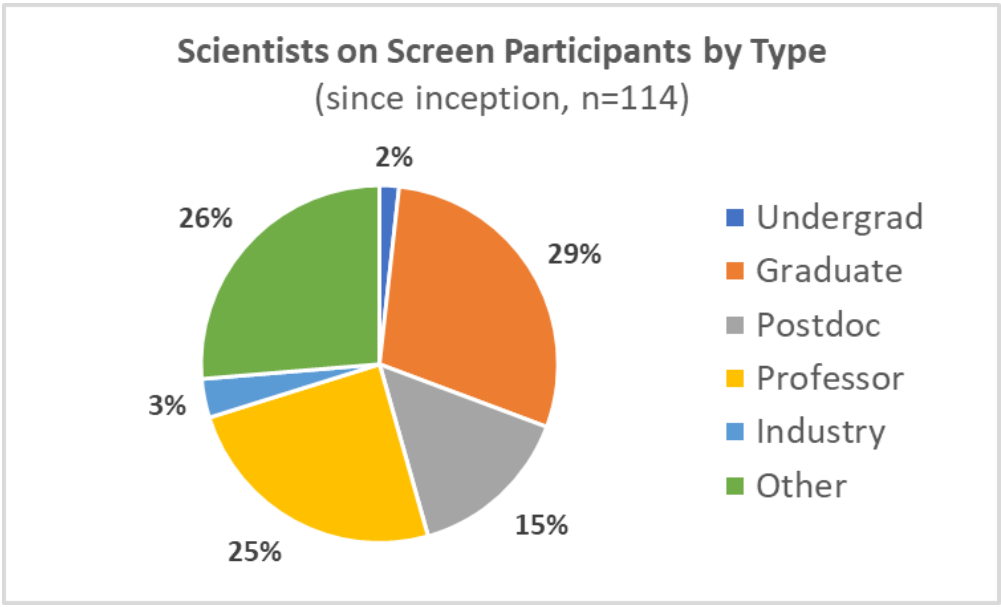
Technical Manager:
Brady Hall (VT)

A quarterly journal-club event; invited author(s) give an overview of their journal paper followed by Q&A and discussion.

Events:

- ✓ Fall 2021: John Matson and Kevin Edgar, VT
- ✓ Winter 2022: Kamil Godula, UCSD
- ✓ Spring 2022: Heung Sik Hahm, Emory University
- ✓ Summer 2022: Srinivasa Raghavan, U Maryland
- ✓ Fall 2022: James D. Sterling, Keck Graduate Institute
- ✓ Winter 2023: Xuefei Huang, Michigan State University

- ✓ (Planned) Spring 2023: Breeanna Urbanowicz, UGA



6 events held to-date
24 individual universities/orgs
114 total participants:
46% students and postdocs
3% industry

Major Accomplishment: HBCU/MSI Outreach

Program Coordinator:
Lauren Mills (VT)

Targeted events and activities with HBCU/MSI faculty and students to connect, understand and support needs in glycomaterials education and research.

Getting Started: Online events in 2022 planned and facilitated by Lauren Mills

Participating MSIs/HBCUs (13):
Clayton State
Florida A&M
Florida Atlantic
Florida International
Fort Lewis College
Georgia State
Hampton
Howard
Morgan State
National University
UT-El Paso and UT-Rio Grande Valley
Virginia Commonwealth

Impact:

- ✓ User Projects (FAMU, Georgia State, Hampton, VCU)
- ✓ Discussions about future user projects (Fort Lewis and UT-RGV)
- ✓ Provided lecture content to faculty member (Clayton State)
- ✓ Initial planning for an HBCU/MSI centered glycomaterials journal club (VT and Clayton State)
- ✓ Scientists on Screen participation (Georgia State, Morgan State, UT-RGV)
- ✓ Summer School applications and participation (FAMU, FAU, FIU, Howard, National, UT-EP, UT-RGV)
- ✓ VT MAOP Participants (FAMU, Hampton, Howard)
- ✓ PREM Seed Grant (Maren Roman and Alan Esker with FAMU)

New Efforts: Industry Outreach

Targeted engagement with private sector leaders and scientists to connect, understand and support needs in glycomaterials education and research.

Getting Started: Participation in 2022 VT-Summer School, establishment of a contacts list, facility tours and visits

VT-Summer School Participants:

2022:
CP Kelco (3)
IFF (2)

2023 (offers sent):
Apeel (1)
Chrysalis (1-*potential*)
Pfizer (2)

Contacts List:

- ✓ 46 US-based companies identified w/ a glycomaterials focus
- ✓ 20/46 have a direct personal contact w/ GlycoMIP member
- ✓ Begun connecting with companies to understand their needs

Tours and Visits:

- ✓ Provided tours for industry scientists (P&G)
- ✓ Planning VT facility tour for Bioprincipia CEO and CTO
- ✓ Planned visit to IMCS after annual meeting

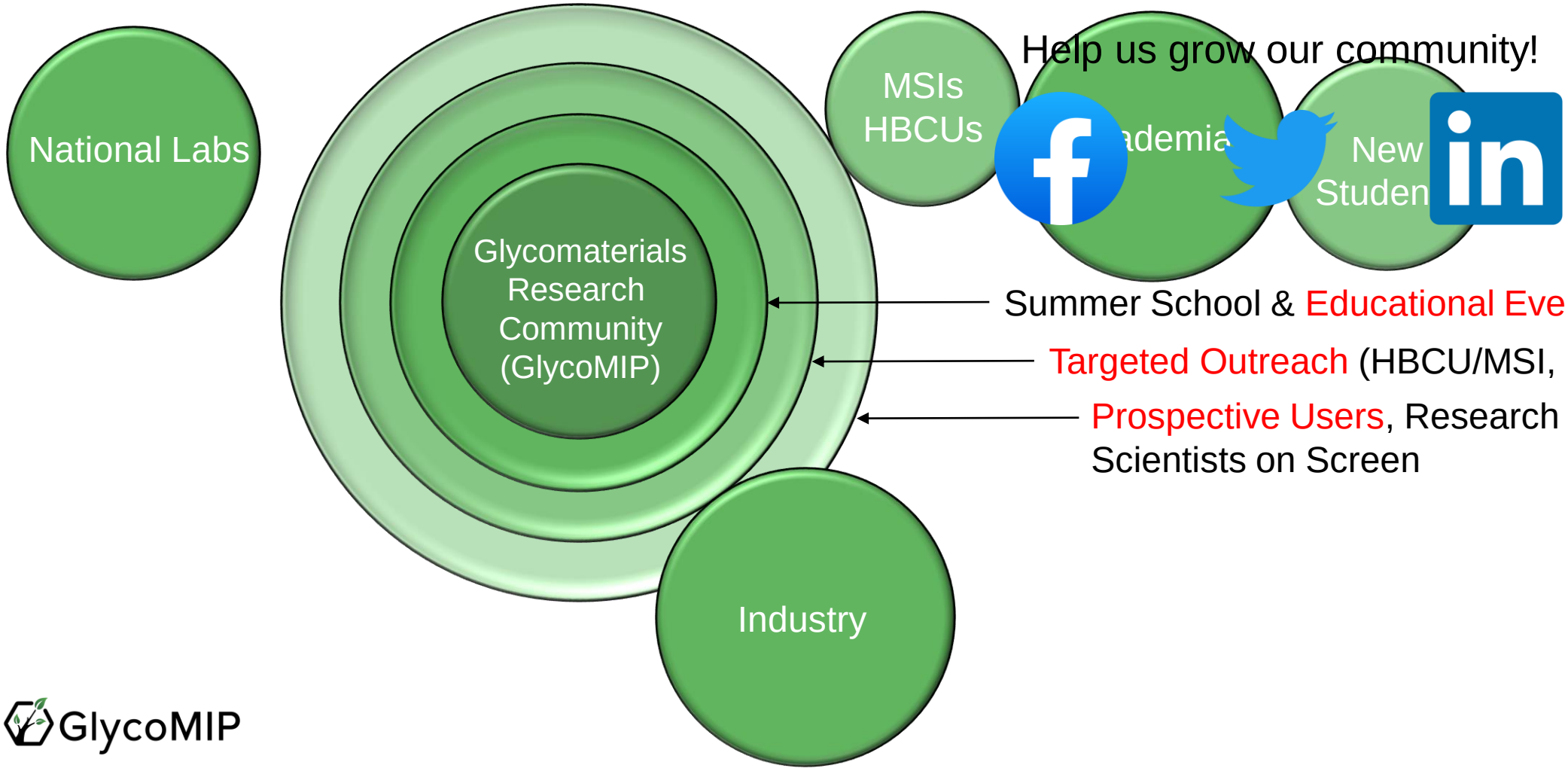
New Efforts:
Spring ACS Symposium, GSC In-Lab Training

Spring ACS All-MIP Symposium and Lunch:

- ✓ Wednesday, March 29, 2023 at the Westin Indianapolis
- ✓ Technical Session w/ speakers from all four MIPs
- ✓ User presentations by GlycoMIP, BioPACIFIC MIP
- ✓ Lunch immediately following with MIP-specific roundtable discussions

In-Lab Instrument Training Series for GlycoMIP Scholars:

- ✓ Planning has started for a Fall 2023 rollout
- ✓ Survey out to GlycoMIP Scholars to survey interest
- ✓ Instrument-specific training sessions taught by scientific staff members

Education and Outreach Vision

- Vision: Through our education and outreach activities, we will integrate these glycomaterial islands into an interconnected community and continue to create high-value events that advance glycomaterials literacy, broaden access to research methods, and train the next generation of glycoscientists