

RTNN Delivers Take-out Science



Maude Cuchiara, Holly Leddy, and Phillip Strader
MNT-eSIG, July 27, 2020



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

Duke
UNIVERSITY

NC STATE
UNIVERSITY



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

Duke
UNIVERSITY

NC STATE
UNIVERSITY

The Research Triangle Nanotechnology Network

Partnership between 3 Research-1 Universities:

North Carolina State University

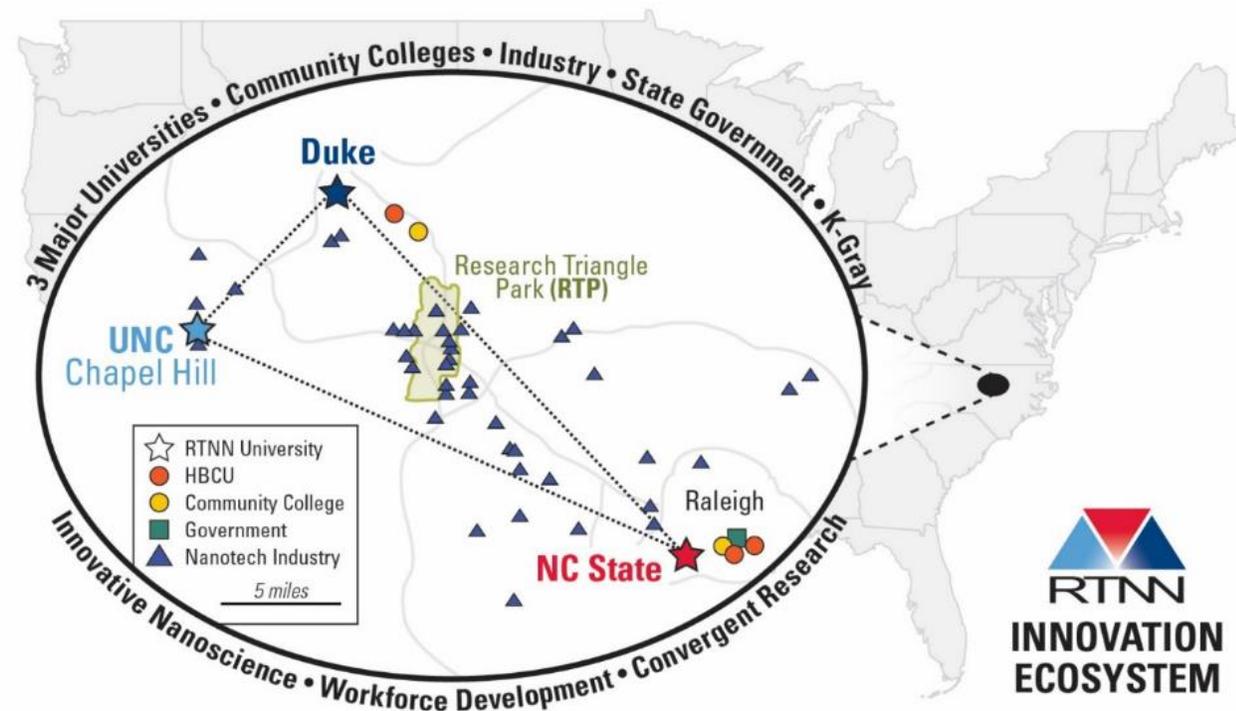
Duke University

University of North Carolina at Chapel Hill

Bring together nanotechnology core facilities

One of 16 sites in the National Nanotechnology Coordinated Infrastructure

Large focus on education and outreach



Take-out Science Brings Microscopes to You

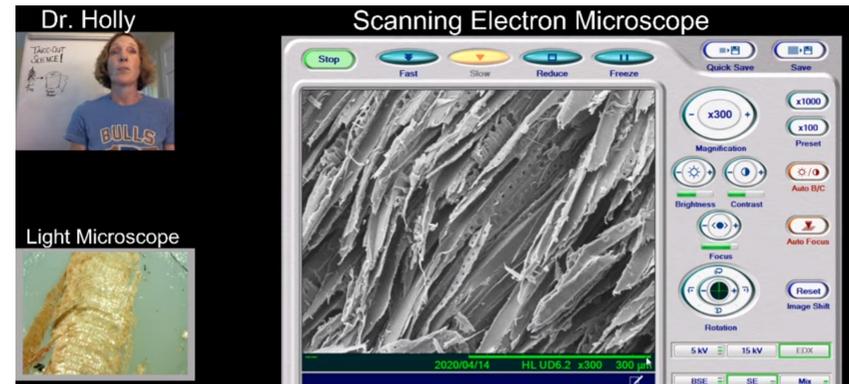
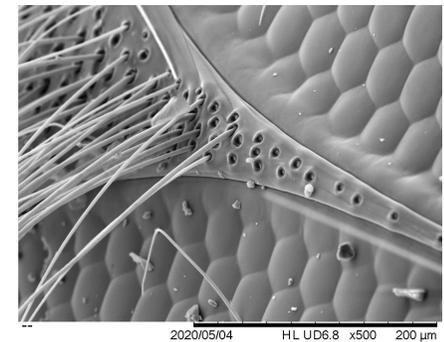
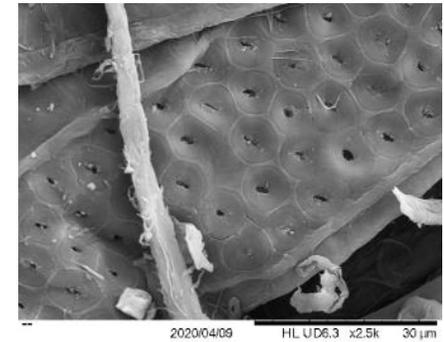
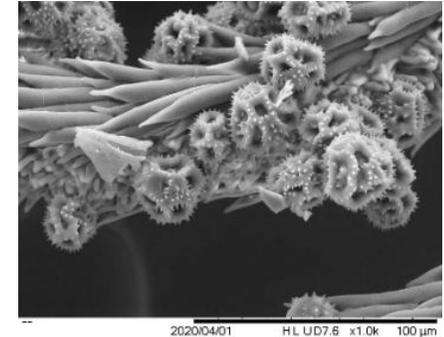
Live YouTube broadcast from home of RTNN staff member, Holly Leddy

June the Science Dog makes regular appearances

Viewers observe samples in light and scanning electron microscopes, learn how instruments work, and compare capabilities

New theme weekly (e.g. housefly, pollen, toilet paper, animal hair)

Advertised broadly through RTNN, NNCI, and RAIN networks



Dr. Holly
Taking your questions now! www.go.ncsu.edu/takeout-science
email: rtnanonetwork@ncsu.edu Twitter: @RTNNSocial
Research Triangle Nanotechnology Network
A partnership between Duke University, NC State University, and UNC Chapel Hill

Utilize Multiple Methods to Engage Participants

Online engagement through website and social media

Guess the sample based on an SEM image and title hint (e.g. *Supplies are Limited; Roar, No Claws for Concern*)

Suggest weekly theme

Guest hosts and expert Q&A

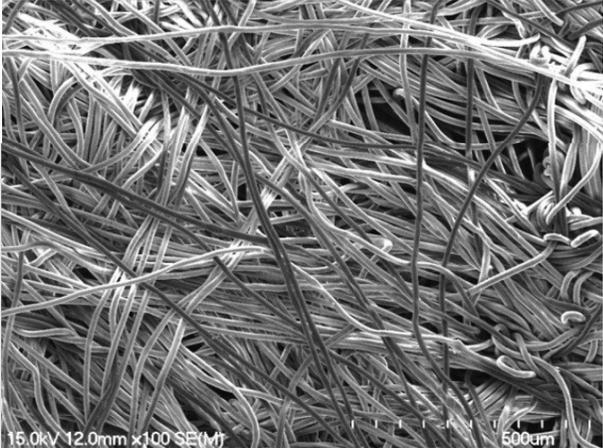
Partner with NNCI colleagues

Episode focused on audience samples (e.g. flaxseed, wasp nest)

 Research Triangle Nanotechnology Network
April 20 · 🌐

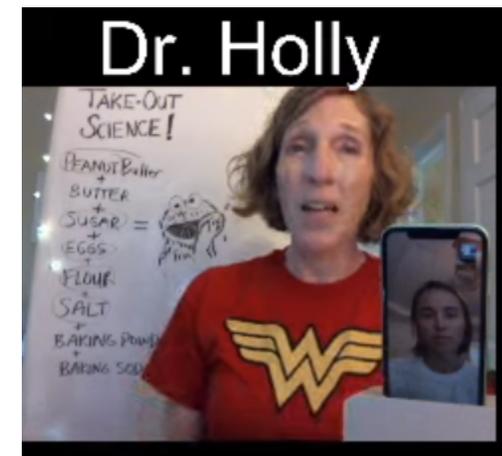
RTNN Take-Out Science Week 4: Say it, don't spray it.
Can you guess?

In Week 4, we will see the item pictured below. Do you know what it is? Submit your guess via email (rtnanonetwork@ncsu.edu), or in the comments section below.



16.0kV 12.0mm x100 SE(M) 500um

605 People Reached 46 Engagements Boost Unavailable



Q&A with Katie Cannon of Carolina Tiger Rescue

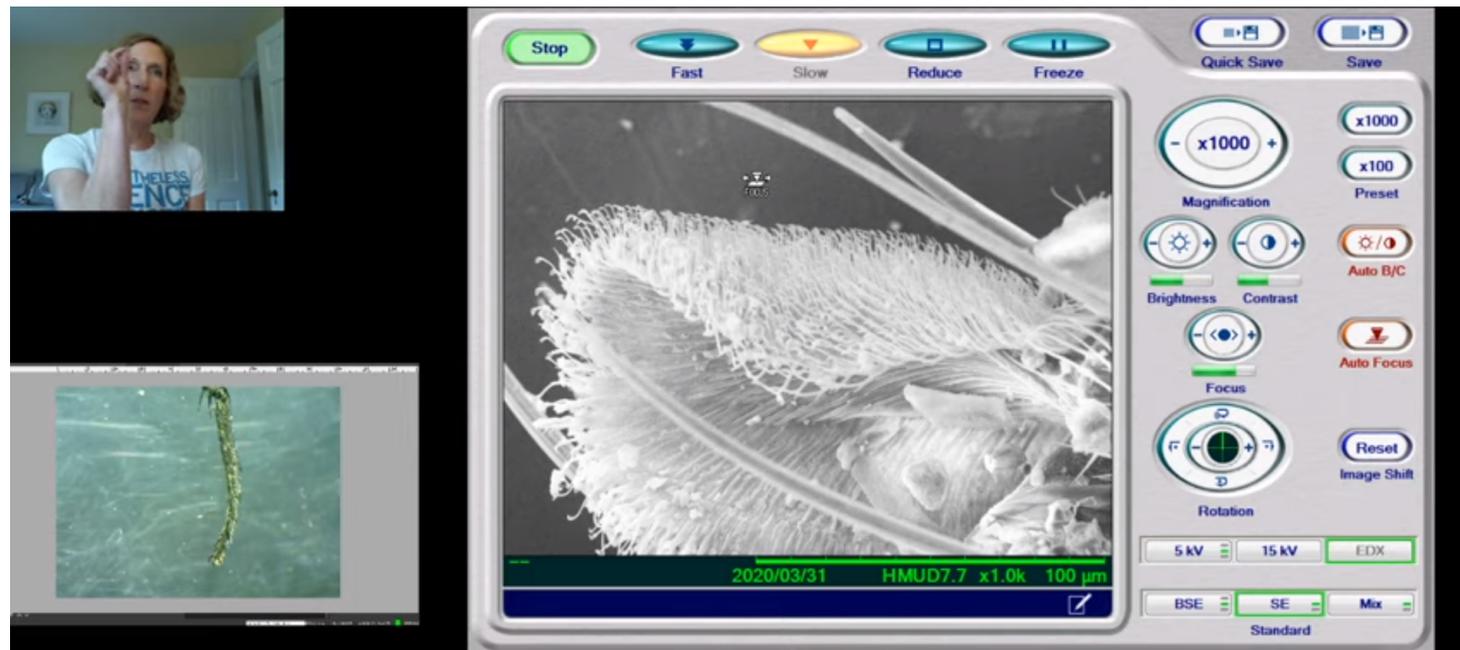
Posted on May 7, 2020 by Maude Cuchiara



In the May 5th episode of Take-out Science, Katie Cannon, the education director at [Carolina Tiger Rescue](#), joined us as we looked at hairs from some of their big cats. We asked Katie a few questions during and after the program; her answers are shared below. [Watch the episode](#) to see how big cat hair looks under the scanning electron microscope and learn more about the animals they came from.

Spanish Subtitles Attract a Broad Audience

In collaboration with Hitachi, continuously adding Spanish subtitles to the YouTube videos
Currently working with Hitachi to broadcast episodes in Spanish



Research Triangle Nanotechnology Network

A partnership between Duke University, NC State University, and UNC Chapel Hill

pequeños pelos y esos pequeños extremos planos ^{NNSocial}

Program Receives Positive Feedback

>4,000 views of 13 episodes on
YouTube

Viewers from across the United States

Emails and pictures from our fans

Technical collaborations

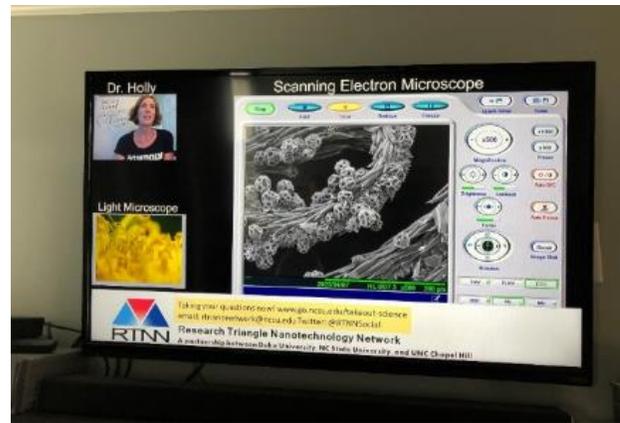
"Love your live broadcasts. So fun."

"I am so thrilled with all the connections to our curriculum here today! "

"Thanks for sharing these amazing tools and images! This certainly will encourage others to see how incredible science is!"

"My teenage sons and I are really enjoying your 'take-out' science lessons! Thanks for doing this! It makes our quarantine time more fun and interesting."

"This was a great presentation! I had a light microscope when I was younger as well. I remember always wanting to see objects through an electron microscope when I got older. Seeing the small properties of different objects is fascinating. "



Current and Future Work

Reach out to educators to obtain constructive feedback

Resume live episodes when school begins

Continue producing short episodes on different nano-focused science topics in collaboration with peer NNCI sites

Host live sessions with individual teachers and classrooms to further engage students



Questions?

Contact Us

Maude Cuchiara, maude_cuchiara@ncsu.edu

RTNN website has all of our educational activities: www.rtnn.org

Take-out Science Page contains links to all episodes:

<https://go.ncsu.edu/takeout-science>