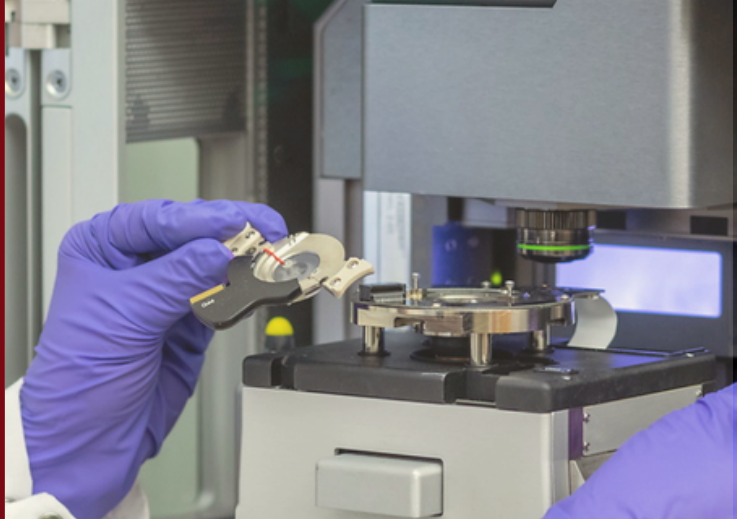


March 2023 Newsletter



**CAROLINA
AUTISM & NEURODEVELOPMENT
CENTER**

March Events

Disability Advocacy Day

- Wed. March 1, 9am-12pm
- South Carolina State House North Grounds
- Speeches, rally, walk
- Dr. Jane Roberts speaking ~9:30am

South Carolina Autism and Neurodevelopmental Disorders Consortium (SCAND) Research Symposium

- Fri. March 3
 - Symposium: 9-4:30
 - Social: 4:30-5:30
- Riverbanks Zoo & Garden, Columbia, SC

South Carolina State Museum (SCSM) Accessibility Morning

- Sat. March 11th, 9-11am
- SCSM

External Speaker Series - Dr. Sara Jane Webb

- Thu, March 16 - Fri, March 17

Community Working group

- Tue, March 21, 1:30pm (virtual)

In this Newsletter

- Page 2: **Updates:** From Steering Director
- Page 3: **Spring 2023 events**
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- Page 6: **Faculty spotlight:** Dr. Kristy Welshhans
- Page 7: **CAN in the community**
- Page 8: **Grant updates**
- Page 9: **Recruiting studies**

Save the dates!

CAN Research Roundup

April 25

Trainee Committee Publishing Panel

May 10



Caitlin Hudac
CAN Steering Director
chudac@mailbox.sc.edu



Dr. Webb shared an office @UW with Caitlin so she could have windows as a postdoc!



Caitlin and Dr. Webb @Baby Sibs Research Consortium in Nov 2022

Happy March! Lots of exciting programming ahead this Spring!

(1) Disability Advocacy Day: On March 1, CAN Research Center will be represented at the SC Partnership of Disability Organizations event on the north grounds of the SC State House. Stop by to visit Audrey and volunteers at our info table, hear Dr. Jane Roberts share a bit about CAN, or check in with Dr. Rob Hock's lab! We would love to show our support (page 4).

(2) SCAND Symposium: On March 3, we will host the annual state-wide South Carolina Autism and Neurodevelopmental Disorder (SCAND) symposium here in Columbia at the Riverbanks Zoo. Scientists, professionals, and trainees across disciplines will meet for a full day of talks, presentations, and discussions about the direction and goals of our work. I encourage you to read about our trainee award winners on page 5.

(3) Visiting Scholar: Sara Jane Webb: We also will have Dr. Sara Jane Webb from Seattle Children's Research Institute (and my own postdoc mentor!) visiting us on March 16 while she is here for the [IMB Conference on the Social and Emotional Brain](#) to give a talk on how we prepare and generate biomarkers for clinical trial treatments in autism and related disorders.

Trainees have an opportunity to have lunch with Dr. Webb on March 16 - email Audrey to reserve a slot!

(4) Visiting Scholars: Trudy Mackay and Robert Anholt: We are excited to host scholars from Clemson University on April 4: Dr. Trudy France Charlene Mackay and Dr. Robert Anholt! Dr. Mackay will give a talk. We'll have folks sign up for meetings soon!

Cheers,

Caitlin

1

Highlights from the Executive committee

3rd Wed.

The EX is excited to host SCAND here in Columbia - so we have been very busy preparing for this event. Make sure to check out the new SCAND website and see the agenda for March 3!
<https://www.scandconsortium.org/>

In addition, we are making progress on formerly establishing CAN as a USC "Center". This has led to some really great conversations about our mission, values, and goals. We are hoping to engage the entire group in a number of ways, including sending an interest survey in the upcoming weeks to gauge priorities. We also have a few creative ideas for a retreat. Stay tuned!



Spring 2023 Events

**March
01**

Disability Advocacy Day

Visit the North grounds of the South Carolina State House at 9am to unite to impact change and celebrate the contributions made by people of all abilities. Highlights include speakers, a rally, and a walk.

South Carolina State House North Grounds
9am-12pm



**March
03**

SCAND Research Symposium

Join CAN for this all-day event with researchers across South Carolina. There will be scientific talks, updates, and poster presentations.

Riverbanks Zoo & Garden
Symposium: 9am-4:30pm | Social: 4:30-5:30pm



**March
16-17**

External Speaker Series

Joining us from Seattle Children's & University of Washington, Dr. Sara Jane Webb will be giving a talk at the IMB conference on Social and Emotional Brain (3/17: [Link](#)). On Thursday 3/16, join the CAN trainee lunch with Sara (contact Audrey) or join other CAN small group meetings and activities (contact Caitlin).



**April
04**

External Speaker Series

Joining us from Clemson University Department of Genetics and Biochemistry, Dr. Trudy Mackay will present their work exploring the genetic basis of variation.

Russell 305
Time TBD



**April
21**

Autism's Got Talent!

This virtual talent show will feature videos of children with autism sharing their talents! Join us on the virtual Zoom platform to support autistic individuals and experience the many talents of our community members.

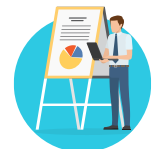
4-7pm
Check out the website here:
<https://www.esdlabsc.com/autisms-got-talent>



**April
25**

Research Roundup

Our annual research roundup will help us celebrate the end of the semester by sharing CAN research accomplishments. All CAN research labs are invited to sign up to give brief "flash" talks.



**May
10**

Trainee Committee Publishing Panel

Join the CAN Trainee Committee to learn from experienced reviewers on a publishing panel.



Disability Advocacy Day

Wednesday, March 1st | 9am - 12pm

South Carolina State House North Grounds



Unite to Impact Change!

The South Carolina Partnership of Disability Organizations (SCPDO) will be hosting the 34th Annual Disability Advocacy Day event on Wednesday, March 1, 2023.

Join us at 9 a.m. on the North grounds of the South Carolina State House to unite to impact change and celebrate the contributions made by people of all abilities.

**Dr. Jane Roberts
speaks ~9:30am!**

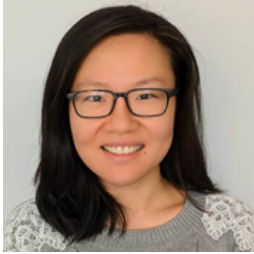
Events include a walk, a rally, and speeches by community partners, self advocates, and others. Be sure to make appointments to speak with your legislators about the issues that mean the most to you. Let your voice be heard!

Visit scpdo.org to learn more about Disability Advocacy Day and how you can get involved!



TRAINEE BEST RESEARCH PRESENTATION AWARD RECIPIENTS

2023 South Carolina Autism and Neurodevelopmental Disorder (SCAND) Symposium



Dr. Teresa Zhao

Medical University of South Carolina | Postdoctoral scholar in Neuroscience

Talk title: *Human-specific genes and their role in modifying brain function and behavior*



Deepa Tilwani

University of South Carolina | Graduate student in Computer Science

Talk title: *Interpretable Machine Learning for Predicting the Likelihood of Autism from Infant ECG Recordings*



Manasi Agrawal

University of South Carolina | Graduate student in Biological Sciences

Talk title: *DSCAM over-expression contributes to altered neuronal phenotypes in Down syndrome*

The SCAND Research Symposium on March 3rd will be hosted at the Riverbanks Zoo & Garden!



Match the member with their favorite zoo animal!

See answers pg. 8

Members

Mariana Uvalle	Anastasia Javoris
Dan Foster	Katie Wolfe
Kristy Welshhans	Elizabeth Dixon
Alexandra Hickey	Deanna Smith
Christian O'Reilly	Vignesh Narayanan
	Rob Hock

Zoo Animals

Elephant
Flamingo
Sea otter
Red panda

Penguin
Giraffe
Monkey
Meerkat
Panda
Gorilla
Frog



FACULTY SPOTLIGHT



Dr. Kristy Welshhans

Assistant Professor | Research Concentration - Neurobiology; Stem cells & Developmental Biology

Biological Sciences | College of Arts and Sciences

[Faculty Page](#) | [Lab Website](#)

PRIMARY RESEARCH GOALS:

Identify biological mechanisms that are changed during neural development in Down syndrome

Examine how local translation of mRNAs regulates connectivity formation in the developing brain

Train the next generation of scientists researching neurodevelopmental disorders

DR. WELSHHANS IS CURRENTLY...

Investigating the contribution of Down syndrome cell adhesion molecule (DSCAM) to altered connectivity formation in Down syndrome

Examining how local translation and adhesion are altered during brain development in Down syndrome

ACCOMPLISHMENTS

Received an NIH F32 NRSA as a postdoctoral fellow at Emory University School of Medicine

Currently funded by the Whitehall Foundation to examine how local translation regulates typical brain development

Received two grants from the Jerome Lejeune Foundation to examine the biological mechanisms leading to altered brain connectivity in Down syndrome

FUTURE DIRECTIONS

Dr. Welshhans and her team are about to start making brain organoids using induced pluripotent stem cells (iPSCs) from individuals with Down syndrome. This will allow them to understand aspects of human brain development that we couldn't study previously using 2-dimensional iPSC cultures.

FUN FACT

She enjoys spending time with her family (husband, two children, one dog, and one cat). They love to do outdoor activities, like hiking and mountain biking.

CAN in the Community



Follow us
@canresearchsc



Upcoming Community Events

Disability Advocacy Day

- March 1
- 9-12
- South Carolina State House

EdVenture Sensory Nights

- Fri, April 21
- 5:30-7:30pm

South Carolina State Museum (SCSM) Accessibility Mornings

- Every second Saturday!
- March 11th
- 9-11am

When tabling, you will interact with families by informing them about CAN, directing parents to relevant studies, encouraging registry sign-up, and meeting lots of children!

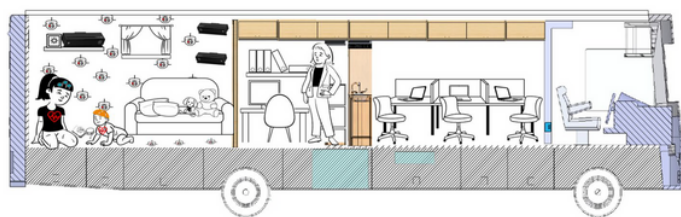
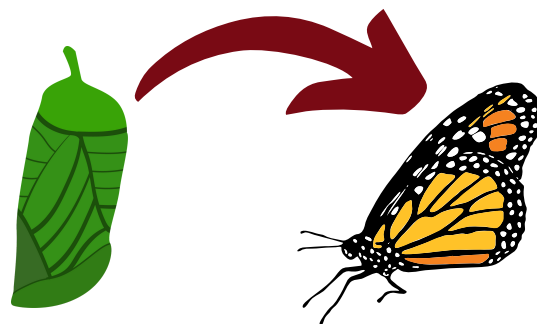
Interested in tabling?
Contact [Audrey](#)!

Grant Updates



Congrats to Dr. Jessie Bradshaw (PI) and colleagues for submitting a National Science Foundation (NSF) grant to acquire a Major Research Instrument that they are calling MONARCH: Mobile Observation System for Neurodevelopment Research.

Check out the all-star cast of CAN Members that are also involved: Dr. Jane Roberts (Co-PI), Dr. Christian O'Reilly (Co-PI), Dr. Caitlin Hudac (Senior Personnel), Dr. Vignesh Narayanan, Dr. Kristy Welshhans, Dr. Jeff Twiss, Dr. Pabitra Sahoo, Dr. Fiona Hollis, Dr. Ana Pocivavasek, Dr. Abigail Hogan, Dr. Jessica Klusek, and Dr. Elizabeth Will!



This was a huge effort in a short amount of time. We wish you luck!

Interested in having your grant aims reviewed by other CAN researchers? We have a new centralized process to facilitate scheduling a grant review.

<https://redcap.healthsciencessc.org/surveys/?s=N93FYKPAF7MXFNJN>

Favorite Zoo Animals - Answers

Match the member with their favorite zoo animal!



Answers

Mariana Uvalle: Frog
Dan Foster: Sea otter
Kristy Welshhans: Penguin
Alexandra Hickey: Red panda
Christian O'Reilly: Elephant

Anastasia Javoris: Monkey
Katie Wolfe: Panda
Elizabeth Dixon: Meerkat
Deanna Smith: Flamingo
Vignesh Narayanan: Giraffe
Rob Hock: Gorilla





RECRUITING STUDIES

Autism and Family Lab

Dr. Rob Hock is recruiting for his randomized controlled trial of Autism Parent Navigators, a prevention program for co-caregivers that targets parent mental health, parenting quality, ASD service engagement, child challenging behaviors, and child adaptive functioning. Participation eligibility includes a child diagnosed with ASD within the last 12 months, the child is between 18-months and 8 yrs, and parenting responsibilities are shared by another adult who lives in the same home

Contact: Hannah Behr, Research Coordinator
(803) 386-9451 | hbehr@email.sc.edu

Early Social Development (ESD) Lab

Dr. Jessie Bradshaw is recruiting babies between the ages of 0-36 months to participate in four studies. Participation includes a variety of developmental assessments and participants can receive between \$120 and \$200, dependent upon the study.

Contact: (803) 993 - 8356 | esdilab@mailbox.sc.edu

Developmental Dynamics Lab

Dr. Liz Will is recruiting infants with Down syndrome 12-months and younger to participate in a longitudinal study on early development and communication. Assessments, all of which involved play-based activities, will take 3-4 hours, once every 3-6 months, for ~2 years. Families will receive between \$40-\$200 for participation.

Contact: willea@mailbox.sc.edu

Family Experiences Lab

Dr. Jessie Klusek is recruiting mothers with a child with autism. The focus of the study is on the experiences of mothers of children with autism, and in identifying how language and cognitive features may be linked with normal variation in the FMR1 gene. Participation would involve completing some questionnaires, interviews, and language and cognitive tasks. Participation is in-person or virtual, takes 3-4 hours, and families will be compensated \$80.

Contact: (803) 576-7359
scfamilystudy@gmail.com

Community-Oriented Lab for Autism and Behavioral Interventions (COLAB)

Dr. Sarah Edmunds is recruiting families with toddlers (ages 2-5) for a study about emotional regulation that meet one of the following criteria:

- Have an ASD diagnosis
- Have some development concerns, but have no current diagnosis
- Have no development concerns

Families may receive a free diagnostic evaluation for their toddler and \$20 per visit.

Contact: (803) 386-1130 | COLAB@mailbox.sc.edu

**Don't see your study?
Contact the CAN program
coordinator, Audrey!**