Welcome to the quarterly newsletter of the Institute for Innovations in Developmental Sciences (DevSci)! In each issue, you will find exciting updates and information relevant to our community of scholars including: feature articles, research highlights, award announcements, and member spotlights.

We hope that you enjoy this new way to keep you informed of DevSci news and events. If you would like to suggest content to be featured in an upcoming issue of the DevSci Digest, please contact us at devsci@northwestern.edu! We look forward to hearing your feedback!
DevSci Institute launched a pilot program, the DevSci Undergraduate Research Methods Intensive Summer Series (RMISS) in Spring and Summer 2021 to support faculty-affiliates and their undergraduates joining labs as entering researchers. This program, spearheaded by DevSci Associate Director Jessica Horowitz has a two-pronged approach, designed to both serve as a scaffold for those students interested in working in DevSci affiliate labs with little research experience and to ensure that faculty researchers benefit from added support and guidance for their undergraduate trainees. Dr. Horowitz, along with postdoctoral fellows Drs. Eric Finegood (IPR), Alexa Freedman (IPR) and Emily Willroth (MSS) and doctoral student Amanda Nili (Clinical Psychology, FSM) created an eight-session weekly intensive summer seminar series and subsequent poster symposium presentation in mid-August for over 25 students. Several faculty and staff colleagues served as guest lecturers on topics such as Best Practices as an entering Research Assistant, Developmental Methods and Assessments, How best to integrate Scholarly Research information, and Successful Poster Presentation formats for both in-person and remote options.

A special congratulations goes to one of our undergraduate student poster presenters, Natalie Turner, who was a finalist for the Fletcher Undergraduate Research Grant Prize award for her summer research, mentored by Dr. Leigha MacNeil and Roshaye Poleon.

Our partner in this new program, Office of Undergraduate Research (OUR), will be hosting a (zoom) session for DevSci/MSS faculty interested in learning more about undergraduate research support at the university level and how to specifically engage students in DevSci-related research. The talk “Faculty Engagement of NU undergrad researchers: How the Office of Undergrad Research and DevSci can help” will be on December 7th at 12:00 noon.

In January, similar to last year, OUR will offer a special Research Speed Networking event for interested faculty & undergraduate students.

In addition to RMISS, the team created and generated a DevSci Research Resources website https://devsci.northwestern.edu/researchresources/ a robust site that provides useful information for anyone getting started in research (or those who need a little brushing up) plus useful links and videos. This website serves as an active and growing site for DevSci-related research, so please contact us with any ideas or suggestions.

Natalie Turner
Neuroscience Major, Junior
Finalist for the Fletcher Undergraduate Research Grant Prize award
Strategic Planning Update

Throughout the past year, DevSci has engaged in a series of activities in order to develop a Strategic Plan which will support its continued growth and sustainability through 2025. Below you can find a recap of the strategic planning activities to-date.

Strategic Planning Timeline:

- In April and May 2021, DevSci hosted a series of small focus groups for both faculty and trainee members. Participants shared their thoughts regarding DevSci’s strengths and discussed opportunities for growth or change.

- In early June 2021, DevSci community members participated in a survey which provided additional feedback and insight regarding the Institute-at-large.

- On June 17th, over 40 members of the DevSci community participated in an afternoon-long retreat designed to identify and prioritize goals for the Institute. Utilizing feedback from the focus groups and survey, participants engaged in a series of dialogues which resulted in DevSci’s Strategic Priorities.

- In October and November 2021 three Working Groups met to advance DevSci’s Strategic Priorities in the following areas: Expanding the Broader Impacts of DevSci (Co-Chaired by Drs. David Uttal & Ellen Wartella); Advancing the Developmental Sciences Workforce (Co-Chaired by Drs. Malika Shah & Sarah Pila); Research Resources for Developmental Sciences (Co-Chaired by Drs. Susanna McColley & Claudia Haase)

In the coming months, the goals and initiatives developed by the Working Groups will be shared with the broader DevSci community for additional feedback. The finalized Strategic Plan will be disseminated in early 2022.

Questions about the Strategic Planning Process? Contact DevSci Director of Strategic Communications, Dr. Niki Woitowich at nicole.woitowich@northwestern.edu

Upcoming Events

THURSDAY DEC. 2ND, 2021
DevSci Holiday Gathering & Scientific Exchange
“National Healthy Brain & Child Development Study: It Takes a (Northwestern) Village!”
Hybrid Event:
In-Person Location - 625 N. Michigan Ave, 27th Floor Conference Room / Remote option via Zoom | 3:30 - 6PM
RSVP to attend in-person by Nov. 30th

TUESDAY DEC. 7th, 2021
DevSci Developmental Matters
“Faculty Engagement of NU Undergraduate Researchers: How the Office of Undergraduate Research and DevSci Can Help”
Remote attendance via Zoom | 12 - 1PM

TUESDAY JAN. 11TH, 2021
DevSci & Office of Undergraduate Research - Research Speed Dating
Remote attendance via Zoom | 12 - 1:30PM

JOINING THE DEVSCI TEAM

Matt Zellner  
DevSci Ambassador
Matt Zellner is a second year PhD student in Communication Sciences and Disorders. He is interested in developing and implementing interventions to help young children on the autism spectrum communicate more effectively, with a focus on interventions that include parents and siblings.

Alex Torrez  
Program Assistant 3
Alex is from California where they graduated from the University of California, Berkeley. Prior to joining DevSci, Alex worked with the University of California, Berkeley bridges’ team to promote equity in higher education through community organized recruitment and retention efforts.
Racial Bias in Preschool Discipline

In the United States, race-based disparities persist across school disciplinary practices and impact even the youngest children. A recent study by Drs. Terri Sabol, Onnie Rodgers, Laurie Wakschlag and colleagues published in the *Annals of the New York Academy of Sciences* found that Black preschool-aged children receive more behavioral complaints from childcare providers compared to white children, despite demonstrating no differences in disruptive behaviors in a laboratory-based setting. In addition, the study explored how the effects of early-childhood behavioral complaints influenced school-aged outcomes. They found that behavioral complaints were associated with poor performance on cognitive verbal and reasoning tasks, declining grades, and lower elementary school engagement. Taken together, these findings provide further insight into how classroom-level discipline practices are influenced by racial bias and demonstrate their role in shaping children's' engagement and cognition over time.

Read the full article here:

Language - Cognition Link Can Be Forged with Sign Language

Infants rely on their senses (sight, smell, taste, hearing, and touch) to learn about the world around them. In particular, exposure to human language can help shape infants’ cognitive development, beginning as early as 3 to 4 months of age. Prior work by Dr. Sandy Waxman and colleagues found that spoken language is linked to object categorization - an important cognitive tool which allows us to process and store information. Yet an important question remained: Is the link between human language and cognition limited to spoken language? Dr. Miram Novak, along with Waxman and colleagues, answer that question in a recent study published in the journal *Cognition*. They found that exposure to Sign Language can support object categorization in infants who are 4 months old, but that by 5-to-6 months of age this ability is lost in hearing infants. This work suggests that human language, in either spoken or visual form, can help infants form important cognitive pathways during a precise period of development.

Read the full article here:

Do you have an upcoming publication, presentation, or report you would like to see featured in the DevSci Newsletter? Please contact us at devsci@northwestern.edu
DevSci Launches Mental Health, Earlier T32 Training Grant

In July 2021 DevSci Institute welcomed their inaugural cohort for Mental Health, Earlier T32 Postdoctoral Training Grant (NU-MHE T32), funded by the National Institute of Mental Health (NIMH). The NU-MHE T32 Training program spearheaded by Drs. Laurie Wakschlag, Stewart Shankman, and Associate Director of the NU-MHE T32 Training Program Dr. Jessica Horowitz, aims to support the launch of the next generation of neurodevelopmentally-oriented mental health researchers poised to accelerate the pace of clinical translation by developing a unique transdisciplinary training approach to Research Domain Criteria (RDoC) dissemination and application.

The NU-MHE T32 Training Program fellows will receive core training on neurodevelopmental mechanisms of psychopathology within lifespan and environmental contexts through the NU-MHE T32 RDoC Seminar, developed with the help of Aislinn Sandre. Fellows’ training will also be complemented by the exposure to topics through annual Kick-off Training Events and DevSci Affiliated Guest Speakers across three intersecting thematic spheres: (1) Applied computational and other advanced data science methods, (2) Intervention and prevention/implementation research and strategies, (3) The intersection of mental and pediatric health. Notably, Fellows will choose one of the three intersecting thematic spheres’ to develop deep knowledge through support by their selected faculty mentor team and individual research focuses.

We must find better ways to study the entirety of pathology – the mind and body as a single entity – There's not a single cause for a pathology, whether it's mental or physical. Thus, it's necessary to conduct research that encompasses and builds from the perspectives of many disciplines so that we can better understand the cause earlier and greatly improve the quality of treatment patients receive.

Stewart Shankman, PhD
Chief and Professor of Psychiatry and Behavioral Sciences (Psychology), Feinberg School of Medicine
Meet the Fellows

DevSci Launches Mental Health, Earlier T32 Training Grant

Kali Woodruff Carr, PhD  
Mental Health, Earlier T32 Postdoctoral Fellow

Kali received her PhD from the Department of Communication Sciences and Disorders in 2021. Kali’s research examines the intersection of early language, learning, and mental health—and the biological mechanisms that underlie these behaviors across the lifespan. She is currently investigating how infants’ neural activity can be used to predict mental health risk factors and disordered language development in early childhood. The T32 Training Program will provide Kali with the skills to develop sophisticated models of developing neural and behavioral networks to trace emerging disordered language and psychopathology. Her work aims to inform and improve preventative, individualized interventions that will have a meaningful impact on reducing the public health burden of disordered language and psychopathology.

Kali’s Mentorship Team

Sandra Waxman, PhD  
Elizabeth Norton, PhD  
Laurie Wakschlag, PhD

Kate received her PhD from the Department of Psychology at the Weinberg College of Arts & Sciences in 2018. Prior to joining DevSci’s MHE T32 Training program she was a postdoctoral trainee in the Adolescent Development and Preventive Treatment (ADAPT) program. Kate’s research program examines biomarkers (i.e., structural brain features and structural/functional connectivity) of emerging psychopathology in adolescence. These emerging symptoms are happening in the context of a greater neurodevelopmental context and would benefit from an expanded perspective that incorporates a rich context of early affective, cognitive, and motor development. The T32 Training Program will provide Kate with the skills to expand this work in longitudinal datasets. Her aim will be to provide critical insight into the etiology of psychopathology and to explain the heterogeneity of deficits within psychopathology.

Kate’s Mentorship Team

Katherine Damme, PhD  
Dan Mroczek, PhD  
Vijay Mittal, PhD  
Laurie Wakschlag, PhD

Aislinn Sandre, Bsc & PhD Canidate  
Mental Health, Earlier T32 Teaching Fellow

Aislinn is a PhD student at McGill University and is currently completing her pre-doctoral residency at St. Joseph’s Healthcare Hamilton. Aislinn joined the MHE T32 Postdoctoral Training team this Fall. Aislinn’s research focuses on understanding who is most vulnerable to depression, and how this occurs. Specifically, she studies the effect of environmental and familial influences on neuro-affective function in infancy, and how these effects on the brain increase risk for depression in adolescence and adulthood. Her work integrates multiple physiological methods, including EEG, ERP, cortisol and heart rate.

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DevSci Digest

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There is an interdisciplinary clarion to activate researchers and include more diverse representation, leadership, and perspectives of diverse groups. In order to do that, it is our due diligence to engage community members and leaders in all stages of the research development process.

The NU site will be led by Drs. Elizabeth Norton and Laurie Wakschlag and engage a transdisciplinary team of DevSci researchers including Drs. Marquita Lewis-Thames, Emily Miller, Suenna Massey, Sheila Krogh-Jespersen, Ashish Premkumar, Lisa Masinter, Matt Davis, Renee Edwards, and Yudong Zhang. Lawyer and bioethicist, Seema Shah, will advise the team and co-lead the national consortium’s working group on Ethics and Law. In addition, the study will partner with maternal-child health experts from Alliance Chicago health network, the John H. Stroger Jr. Hospital of Cook County, and other community partners.

To learn more about the HBCD Study, we invite you to attend our Scientific Exchange on December 3rd which will feature flash talks from study researchers.

**Holiday Gathering & Scientific Exchange**

**NATIONAL HEALTHY BRAIN & CHILD DEVELOPMENT (HBCD) STUDY: IT TAKES A (NORTHWESTERN) VILLAGE!**

*Thursday, December 2nd 3:30PM - 6PM | 625 N. Michigan Ave, 27th Floor Lakeshore Conference Room*

*This is a hybrid event offering in-person or via zoom attendance | Speakers begin at 4-5:15PM, Reception 5:15-6PM*

**Celebrate with us In-person or Online!**

RSVP in-person or Remote by Nov 30th

if attending in person please respond through attached google form

Holiday snacks will be provided

**Event Moderated by**

Laurie Wakschlag, PhD & Elizabeth Norton, PhD

Featuring Flash Talks from the HBCD Research Team

HBCD is an NIH consortium charting early typical-atypical brain & behavioral patterns & their shaping by prenatal risk/resilience processes.

The NU HBCD team is boundary-spanning. Come join us as we think together about the “art” of team science advancing our Healthier, Earlier mission.

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**Grant Spotlights**

“Marquita Lewis-Thames, PhD

HBCD Co-Investigator
Assistant Professor of Medical Social Sciences, Feinberg School of Medicine
“I am a firm believer that advances in healthcare require interdisciplinary collaboration. This project includes an amalgamation of experts in obstetrics, pediatrics, perinatal psychology, implementation science, community health, health services interventions, and digital health, which brings the opportunity for significant innovation.

The COVID-19 pandemic has transformed healthcare delivery, and this is particularly evident within the fields of obstetrics and pediatrics which have transitioned towards more of an urgent care model of care. To address these changes in healthcare delivery, Drs. Emily Miller and Craig Garfield were recently awarded an NIH R01 to develop and test a digital health intervention designed to bridge gaps in obstetric and pediatric care for new families over the first year of life. This randomized controlled trial, aptly named Baby2Home, will evaluate if the intervention improves maternal, paternal, and infant health service utilization over a child’s first year of life. It aims to improve maternal and paternal patient reported outcomes, and reduce racial/ethnic and income-based disparities in preventive health services utilization.

Emily S. Miller, MD, MPH
Baby2Home Primary Investigator
Assistant Professor of Obstetrics and Gynecology (Maternal Fetal Medicine) and Psychiatry and Behavioral Sciences, Feinberg School of Medicine

Craig F. Garfield, MD
Baby2Home Primary Investigator
Professor of Pediatrics (Hospital-Based Medicine) and Medical Social Sciences
Connect with us!

Do you have research or content you would like to see featured in our Newsletter?
Do you know of a DevSci member whose work should be amplified or recognized?

Please contact us at devsci@northwestern.edu

To become an affiliate member of the Institute for Innovations in Developmental Sciences please email us at devsci@northwestern.edu or visit us online!

See You Again Soon!