



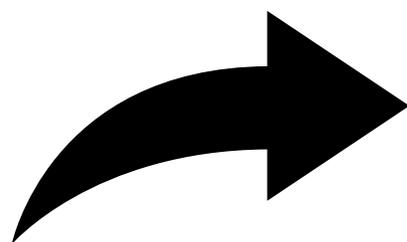
CANLAB
NEWSLETTER
2021

**CLINICAL AFFECTIVE
NEUROSCIENCE LABORATORY**

2021 – A YEAR IN REVIEW



Swipe to see the 2021 highlights from the
**CLINICAL AFFECTIVE
NEUROSCIENCE LABORATORY**

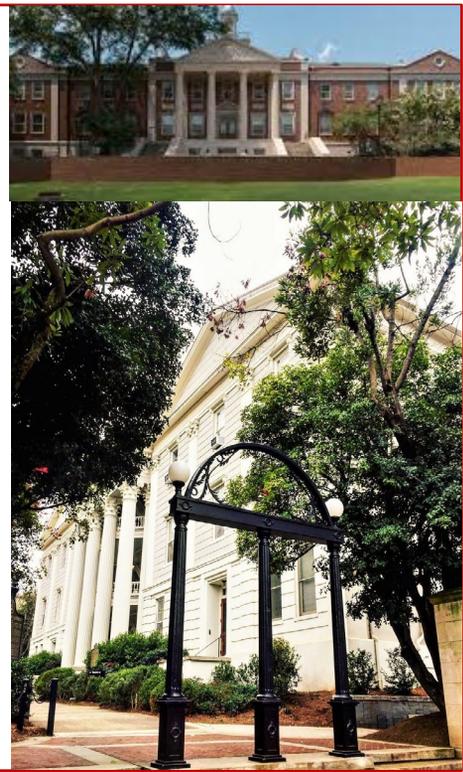




CANLAB

Clinical Affective Neuroscience Laboratory

#1 We said goodbye to four wonderful CAN Lab members this year. Undergraduate RA Will McAfie graduated from UGA with a B.A. in Psychology and is now living the good life while searching for a job. Full-time research coordinator Kelsey MacDonald accepted a position at the Center for Child Health, Behavior, and Development at Seattle Children's Hospital. Undergraduate RA Alexis Holland graduated from UGA with a B.A. in Psychology and is now preparing for medical school while undertaking internships in TX. Sayli Narkhede completed her position as a data scientist and is now working in industry.



Ashley Zollicoffer



Delaney Collins



Sierra Jarvis



Gifty Ayawvi

#2 Four new full-time research coordinators joined our ranks: Ashley Zollicoffer, Laney Collins, Gifty Ayawvi, and Sierra Jarvis. Ashley has a master's degree in Community Psychology from Florida A&M University and works on the GAINS R01 clinical high-risk study. Delaney has a B.S.W. From the University of Wisconsin- Eau Claire and works on the ProNET grant evaluating biomarkers and clinical factors associated with psychosis risk. Gifty graduated from UGA with a B.S. in Psychology and works on the CAPR and Emotion Regulation grants. Sierra has a B.S. in Psychology from Brigham Young University and works on ProNET.



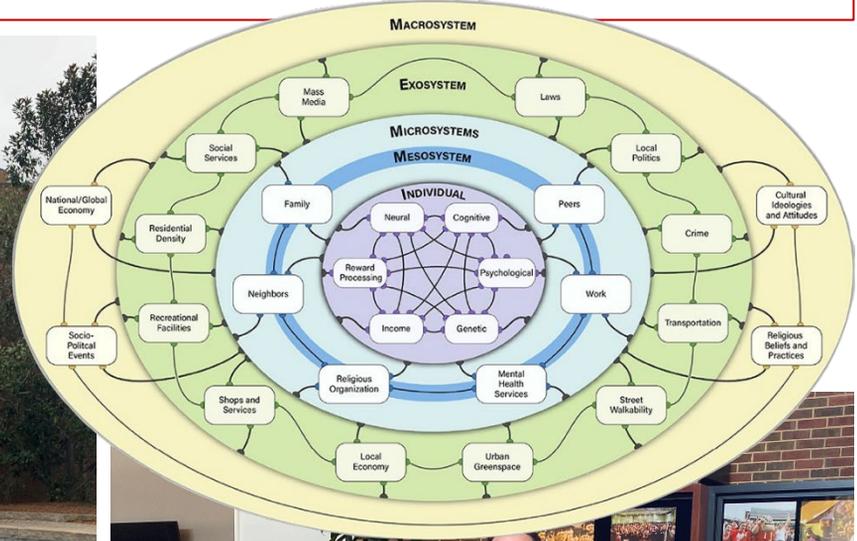
CANLAB

Clinical Affective Neuroscience Laboratory



#3 For the 2nd year we completed a NAMI Walk, organized by lab manager Anna Knippenberg. Together the CAN Lab raised over \$750 to help support mental health advocacy, education, and provide free community resources to people impacted by mental illness and their families. Dr. Michael Spilka was the CAN Lab's top fundraiser!

#4 Sydney James and Luyu Zhang transitioned from full-time coordinators to first year Ph.D. students in clinical psychology in the CAN Lab. Both Sydney and Luyu's interests involve testing hypotheses related to the bioecosystem model of negative symptoms in schizophrenia. Sydney's work focuses on evaluating cultural components of the broader macrosystem using digital phenotyping, network analysis, and cultural scales. Luyu's work focuses on interactions between microsystem level social factors and neural processes underlying negative symptoms using fMRI, digital phenotyping, environmental coding, and social network analysis.





CANLAB

Clinical Affective Neuroscience Laboratory

#5 We welcomed many new furry friends into the lab! We love all the CAN Lab pets – old and new!



...in other news, 2021 was the year we defeated the ants that invaded the lab.



#6 The CAN Lab celebrated many big accomplishments in 2021! Graduate student Ivan Ruiz matched for clinical internship at the Eastern Kansas VA Hospital in Leavenworth, KS. Graduate student Ian Raugh defended his Master's Thesis. Graduate student Lisa Bartolomeo was awarded an F31 grant from NIMH to study the positivity offset as a mechanism of avolition in schizophrenia using fMRI and digital phenotyping. Graduate student Luyu Zhang was awarded the Presidential Graduate Fellowship for exceptionally qualified students in UGA's doctoral programs. CAN Lab director Dr. Greg Strauss was promoted to Associate Professor with tenure and made an associate editor at Schizophrenia Bulletin.

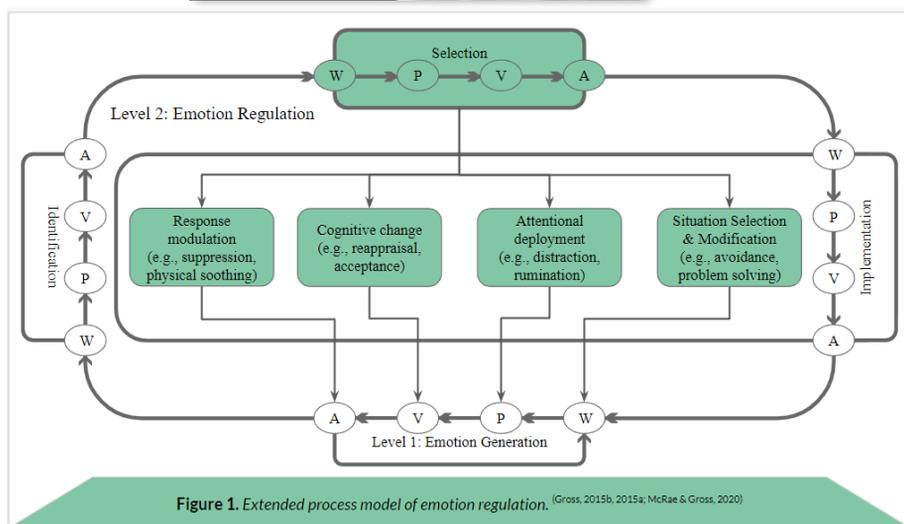
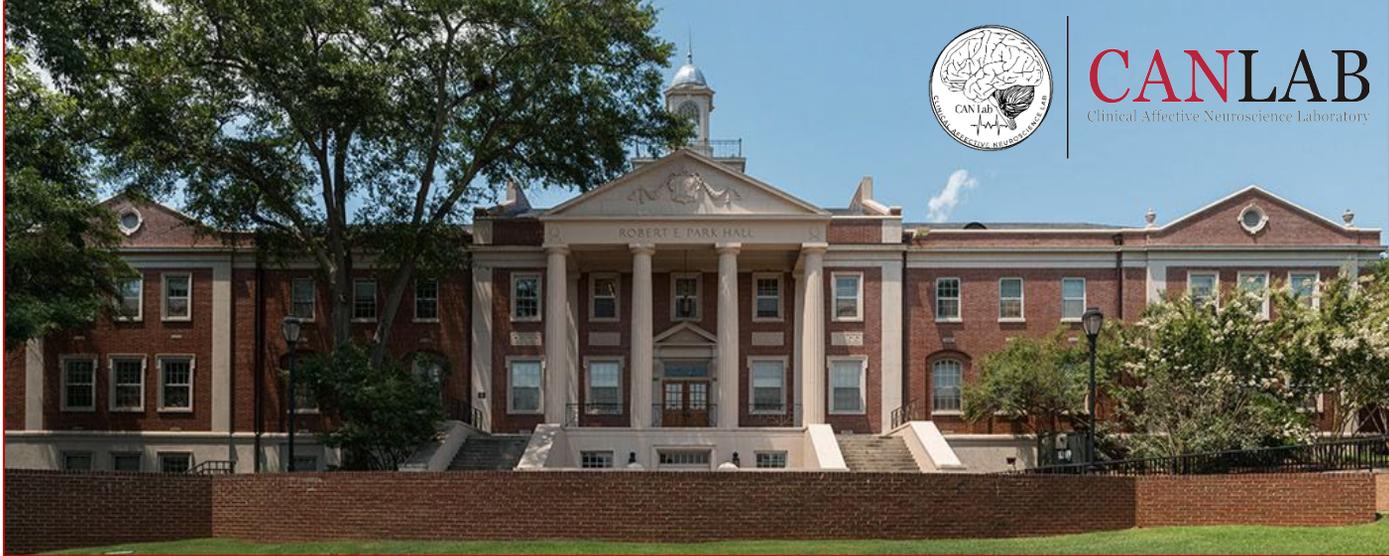


Figure 1. Extended process model of emotion regulation. (Gross, 2015b, 2015a; McRae & Gross, 2020)

Deconstructing Emotion Regulation In Schizophrenia: The Nature Of Abnormalities At The Selection Stage



Ian M. Raugh, B.A.
Under the supervision of Dr. Gregory P. Strauss



#7 Drs. Michael Spilka and Lauren Luther joined the CAN Lab as postdoctoral fellows. Dr. Spilka received his Ph.D. in clinical psychology from the University of Calgary, completed his clinical internship at St. Joseph's Healthcare in Hamilton, and clinical postdoctoral fellowship in neuropsychology at the University Health Network in Toronto. His methodological background is in fMRI, eye tracking, and neuropsychological assessment. Dr. Luther received her Ph.D. from IUPUI, completed her clinical internship at UIC Psychiatry, and a 2-year postdoc fellowship in neuroimaging at Harvard Medical School. Her research interests focus on the development of novel interventions for mechanisms underlying negative symptoms in schizophrenia.



#8 We discovered that lab manager Jason Levin can dribble a bowling ball and do a wheelie on a unicycle.

#9 The CAN Lab published > 20 papers in 2021 in conjunction with many collaborators throughout the world. A few key highlights include: Dr. Strauss published a new environmental theory of negative symptoms, the bioecosystem theory, that identifies direct and indirect environmental processes that interact with person-level neural and psychological factors to cause and maintain negative symptoms. In collaboration with Drs. Alex Cohen, Brian Kirkpatrick, and Vijay Mittal, multiple papers were published on digital phenotyping measures of negative symptoms, including studies on in vivo video-based facial and vocal affect assessment, Ian Raugh's paper on adherence and tolerability, and data scientist Sayli Narkhede's machine learning paper on geolocation, accelerometry, and EMA predictors of negative symptoms. Along with collaborators Wing Chung Chang, Vijay Mittal, and Tina Gupta, multiple papers were published on the structure of negative symptoms and factors predicting secondary sources in those at clinical high-risk for psychosis. Findings supported the line of work we had published in schizophrenia on the validity of the 5-factor conceptualization. Multiple papers were published on reward processing deficits underlying negative symptoms in those at clinical high-risk for psychosis, such as effort-cost computation, reinforcement learning, and value representation. Undergraduate Kendall Clay published her honors thesis focusing on defeatist performance beliefs as a mechanism of negative symptoms in schizophrenia and psychosis risk syndromes. The multi-site CAPR consortium (Computerized Assessment of Psychosis Risk) published a protocol summarizing the methods of the R01 and initial pilot data on cognitive mechanisms underlying psychosis risk. Initial findings from the UGA PACE study (coordinated by Kelsey Macdonald and Alysia Berglund) examining symptom changes resulting from the COVID-19 pandemic were published that provide evidence for elevations in negative symptoms during the pandemic that may result from environmental resource restriction.



A
P
P
Y



H
O
L
I
D
A
Y
S



#7 The lab completed 4 grants in 2021, including an R21 focusing on emotion regulation in youth at clinical high-risk for psychosis (coordinated by Kelsey Macdonald, Gifty Ayawvi, and Lisa Bartolomeo), an R21 examining whether the failure of effort to become a secondary reinforcer underlies negative symptoms in schizophrenia (coordinated by Luyu Zhang), a NARSAD grant exploring reward processing mechanisms underlying negative symptoms in those at clinical high-risk for psychosis, and Ivan Ruiz's NIMH Diversity Fellowship exploring cognitive effort as a mechanism of avolition in those at risk for psychosis. The CAN Lab is one of 26 sites participating in the NIMH ProNet grant (coordinated by Laney Collins and Sierra Jarvis), which is a longitudinal investigation of biomarkers underlying transition to psychosis that is part of the aMpSCZ initiative. Dr. Strauss is leading efforts related to the assessment of negative symptoms and exploration of their underlying mechanisms. Data collection continued for the multi-site CAPR (Computerized Assessment of Psychosis Risk) consortium R01 and the GAINS R01 (Georgia and Illinois Negative Symptom Study). The GAINS study completed phase 1, which included a 3 year study developing novel negative symptom assessment tools for those at clinical high risk for psychosis, including digital phenotyping measures, a clinical rating scale, and a questionnaire. The clinical rating scale, the NSI-PR, will be validated in its final form in the last 2 years of the R01 during the longitudinal validation phase. The lab also continued data collection for an R61 study conducted in collaboration with Drs. Lawrence Sweet, Dean Sabatinelli, and Susanne Schweizer. The R61 is a clinical trial exploring the efficacy of a novel cognitive training app for improving emotion regulation in schizophrenia. Lab manager Anna Knippenberg and postdocs Michael Spilka and Lauren Luther have led lab efforts in data collection and fMRI data analysis. New grants were received by Dr. Lauren Luther (APF) and Lisa Bartolomeo (F31), which will examine a novel treatment for negative symptom and mechanisms underlying negative symptoms using fMRI outcome measures in 2022.

The lab is grateful to all the participants who donated their time and effort to complete our studies, as well as the AMAZING staff at the Owens Institute for Behavior Research without whom this research would not be possible. Cheers to 2022!