



2019 - 2020

Annual Report



Center for Translational Behavioral Science

Florida State University College of Medicine

Annual Report

July 1, 2019 – June 30, 2020

Vision

Improving public health and health equity with sustainable team science approaches.

Mission

The mission of the Center for Translational Behavioral Science at Florida State University is to promote public health and health equity using a sustainable team science approach for the development and widespread implementation of behavioral and biobehavioral interventions across the translational spectrum. The Center will rely on a continuous cycle of interaction between basic behavioral and biomedical scientists, translational researchers, treatment providers, and communities to develop interventions reaching diverse and under-served populations in local communities and beyond.

Promoting Health Equity Through Team Science

Report prepared by Sara Green, MSW; CTBS Science Program Manager

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12/1/2020

The ultimate goal of the Center for Translational Behavioral Science (CTBScience) is to promote public health and health equity with sustainable team science approaches for the development and widespread implementation of behavioral and biobehavioral interventions across the translational spectrum. As such, CTBScience has developed this report in effort to identify the areas in which we are working to achieve this goal, as well as identifying the efforts made by center faculty, staff, and affiliates during the 2019 - 2020 reporting year, beginning on **July 1, 2019** through **June 30, 2020**. While 2020 has introduced a variety of significant societal challenges, it remains the mission of the center to continue promoting health equity through team science. In this respect, the efforts and accomplishments highlighted in this report were supported through a variety of internal and external funding, and generous support of the *FSU College of Medicine* and *Office of the Vice President for Research*.

Since the Center's opening, we have developed and maintained an impressive team of ambitious scientists from multiple disciplines. These faculty members contribute to the Center's mission through their own distinct research program initiatives and through the Center's three structural cores related to Management, Methods, and Technology. The range of disciplines for our faculty team members include clinical psychology, public health, epidemiology, statistics, and communications. As detailed in the remainder of this report, CTBScience has met and surpassed expected milestones as defined by the Florida Board of Governors, and has made significant contributions to dissemination, professional development of faculty and staff, student engagement in research, and building an impressive infrastructure that will allow for continued growth and meaningful community engagement.

While we hope this report will highlight the extensive efforts and accomplishments of our entire faculty and administrative team, we would be remiss to not address the current social, political, and public health environments that we find ourselves. Translational science depends on the ability for fluid communication of scientific innovations and advancements directly to the populations we seek to serve. It remains our primary goal to contribute toward improving health outcomes in our most vulnerable populations, and our growth as individuals, researchers, and a team as a whole relies on community engagement. To ensure this, CTBScience has developed targeted working groups, agency consortiums, advisory committees, and stakeholder networks.

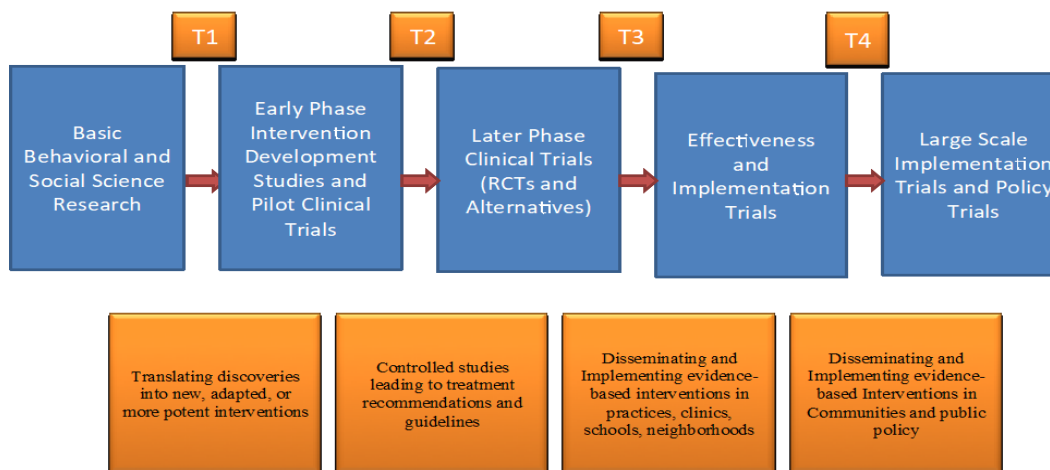
As Director of CTBScience, it is my duty and privilege to present this report to our collaborators and stakeholders. Throughout the next year, the Center will remain dedicated toward activities to achieve the Center's mission and continue efforts toward pursuing goal achievement related to the measurable outcomes outlined by the Florida Board of Governor's strategic plan.

Go Team Science!

Sylvie Naar, PhD
Distinguished Endowed Professor
Director, CTBScience
Florida State University College of Medicine
Department of Behavioral Sciences and Social Medicine

Annual Performance Measures

The ultimate goal of the Center for Translational Behavioral Research is to promote public health and health equity with sustainable team science approaches for the development and widespread implementation of behavioral and biobehavioral interventions across the translational spectrum. The goals below are for the life of the center and extend beyond the 5-year period of performance measures below.



Board of Governors' (BOG) Strategic Plan

1. Conduct behavioral and biobehavioral research with diverse populations across the translational spectrum.
2. Engage and integrate researchers and students from multiple disciplines across the university to develop innovative, transdisciplinary models that guide translational behavioral and biobehavioral research.
3. Submit MPI R01s and publish collaboratively to solidify a platform for center- type grant submissions.
4. Develop initiatives for behavioral and biobehavioral translational research in conjunction with other funded programs (CTSA, PBRN, Pharma).
5. Create feasible, sustainable, and testable structures for community engagement in collaboration with other university centers.
6. Support student-engaged research, including the development of training grants.

Potential Activities for the Center (as indicated by the Board of Governors)

By integrating across multiple disciplines to promote team science, the Center for Translational Behavioral Research will involve the following activities that could not be achieved with a single department or division:

1. Compete for extramural funding for translational behavioral research across the translational spectrum,
2. Contribute to the Clinical and Translational Science Award and Practice-Based Research Network,
3. Provide infrastructure and educational opportunities for translational behavioral research across the university including rigorous methodologies for early phase trials, expertise in recruitment and retention of high-risk populations, online research protocols, pragmatic trials utilizing electronic health records, and implementation science,
4. Develop focused projects for diseases disproportionately affecting Florida and the Southern United States such as HIV and cardiovascular disease.
5. Explore opportunities to integrate behavioral research into pharmaceutical trials.
6. Capitalize on NIH initiatives for Personalized Medicine

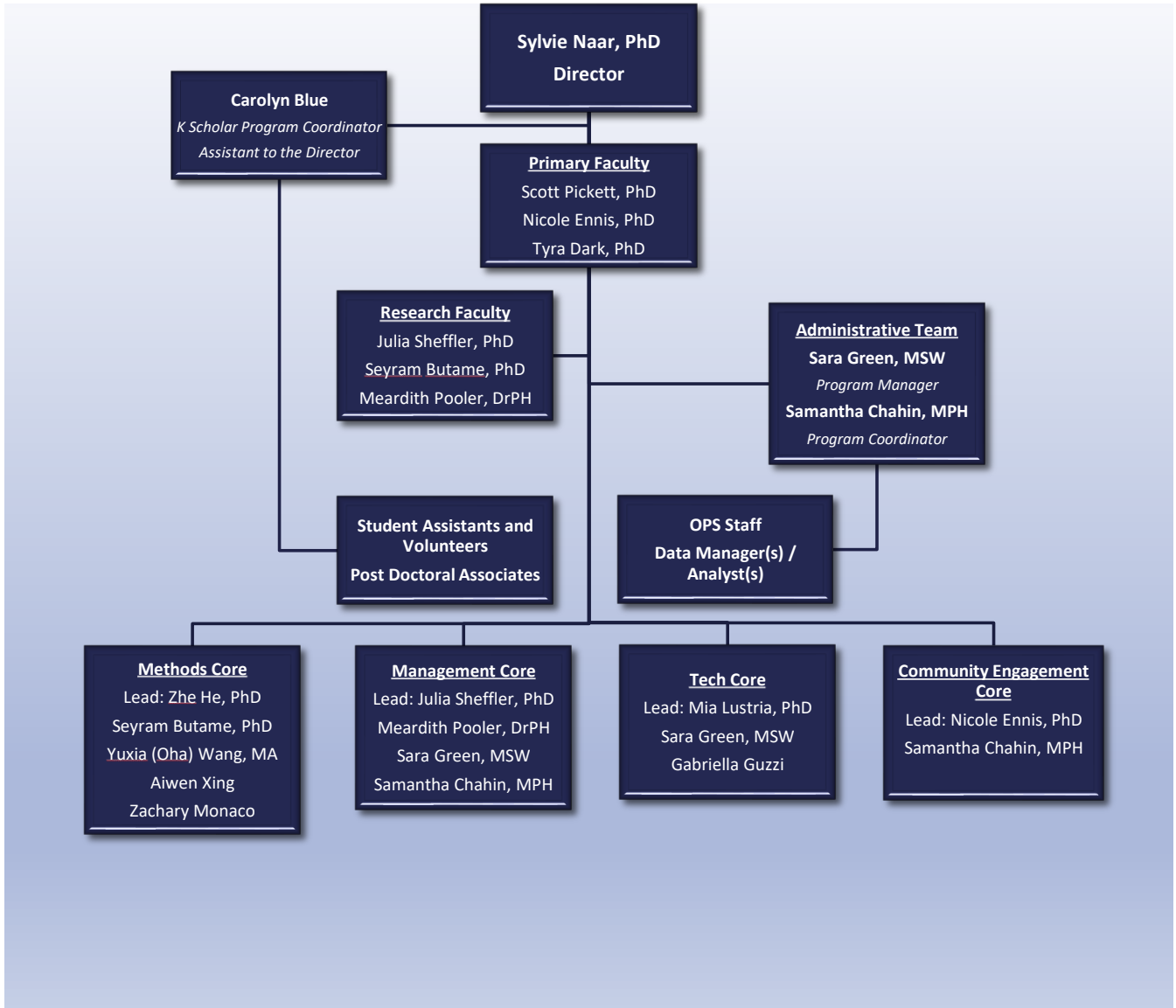
Performance Measure Objectives

Objective 1: Hire Center Staff

Measure: Staff hired according to budget plan

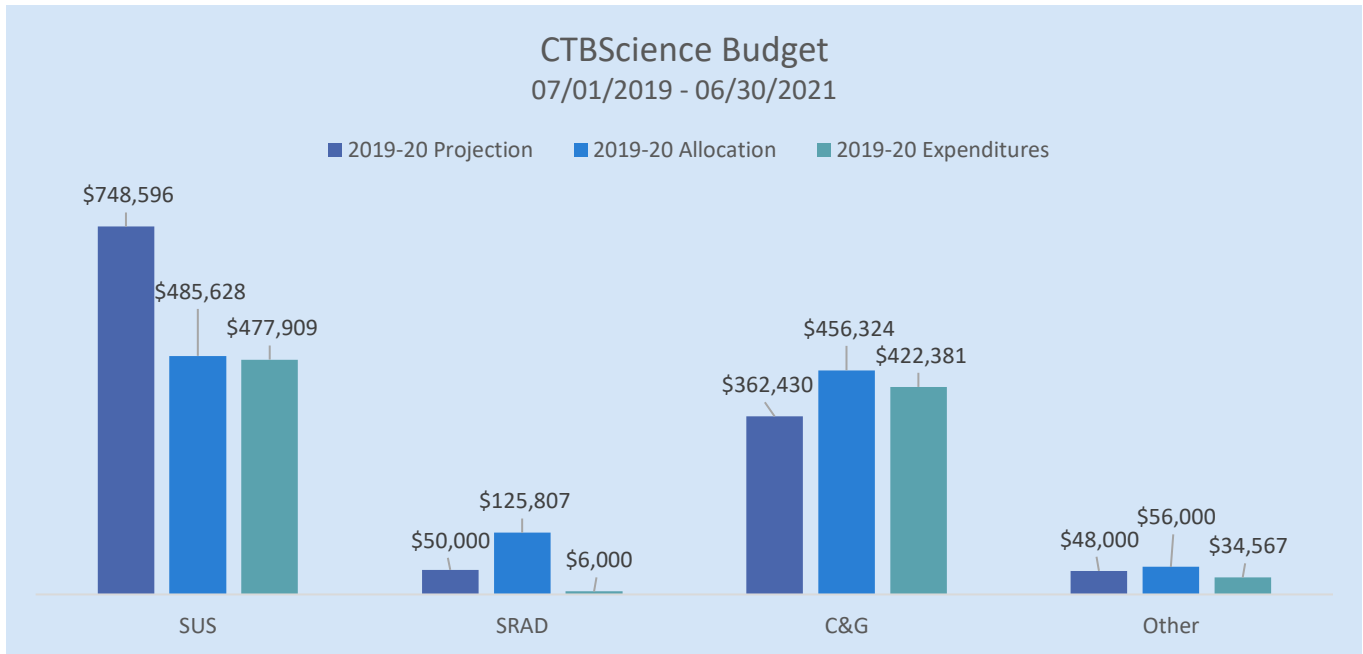
“The center will recruit diverse faculty from multiple disciplines in innovative translational research to improve health behaviors (Strategic Priority 3.0).” - “The center will ensure operational excellence while maintaining financial integrity... (Strategic Priority 6.0).”

CTBScience is comprised of 6 faculty members, 1 postdoctoral associate, 1 graduate research assistant, 3 full-time staff members, 5 part time staff members, and more than 20 graduate and undergraduate student research assistants.

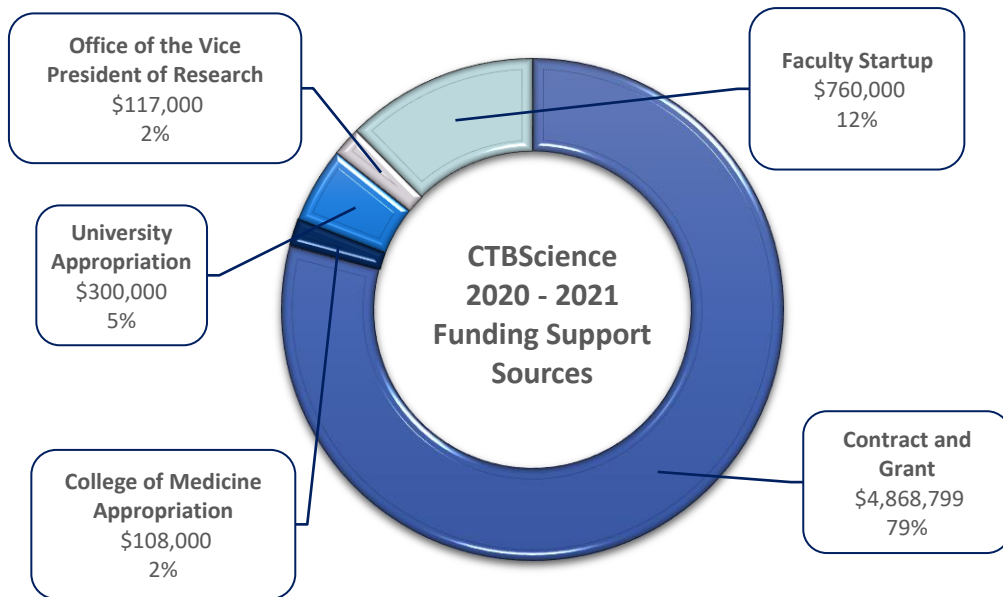


CTBScience has performed beyond expectations related to its original planned budget projection. Similar to the 2018 – 2019 reporting year, leadership at CTBScience has managed to utilize the generous support of the Florida State University Office of the Vice President for Research and the College of Medicine in order to fulfill its mission. The center has expanded its faculty and staff, research programs, and community collaborations while remaining fiscally responsible.

As highlighted in the chart below, CTBScience has managed to save a total of \$270,687 in projected E&G costs, and increased its other funding sources to a total of \$638,131; \$177,701 more than originally projected (\$460,430) in other support.



Moving forward, CTBScience will continue utilizing existing sources of support, as indicated:



Objective 2: Increase National and International Reputation

Measure: Number of MPI Grants and Co-authored research papers by two or more disciplines in the center

“The center will foster academic excellence and build the university's international reputation in expanding translational research to the behavioral domain to improve individual and public health. The center will take a transdisciplinary approach to develop new models and methods to solve critical health problems (Strategic Priority 5.0 and 8.0).”

A key component of the center’s approach involves efforts toward dissemination. Achieving this objective involves the number of manuscripts, presentations, and posters. As within the report, CTBS faculty have submitted **58** publications, and have presented at **16** domestic and foreign conferences or symposiums.

Adolescent and Emerging Adult Health Equity Program (Sylvie Naar, PhD)

1 book contract
24 publications
3 presentations

Intervention Research Advancing Care Equity (iRACE) (Nicole Ennis, PhD)

7 publications
1 presentation

Sleep, Trauma, and Emotional Processes Program (STEP) (Scott Pickett, PhD)

14 publications
9 posters / presentations

Community Health and Social Epidemiology Program (CHASE) (Tyra Dark, PhD)

3 publications
1 presentation

Integrative Science for Healthy Aging (Julia Sheffler, PhD)

10 publications
2 presentations

Objective 3: Increase Collaboration Across Multiple Disciplines

Measure: Number of internal and external collaborations with other faculty, research and clinical professionals, community agencies, and populations.

The center will bring together researchers from multiple disciplines for a common goal- to improve health by improving behaviors that impact health through team science approaches. The center will promote synergy across these disciplines to develop and test transdisciplinary models across the translational spectrum. These models will not only increase innovation and competitiveness for extramural funding, but, more importantly, it is clear that team science efforts are necessary to solve the complexity of modern health concerns (Spring, Hall, Moller, & Falk-Krzesinski, 2012).

Among its research programs and three cores, the center is comprised of researchers from disciplines including biostatistics, communications, epidemiology, public health, nursing, social work, and psychology. Further, the Center has actively engaged with community stakeholders and agencies to toward the mission of promoting health equity for underserved populations and enhancing strategic research initiatives. Additional details surrounding the extensive collaborations in and among CTBScience faculty and research programs can be found elsewhere in this report, and include:

- ❖ **The CTBScience Community Advisory Council**
- ❖ **The Scale It Up Florida Youth Advisory Council and External Partnerships**
- ❖ **The iRACE collaboration with CAN Community Health Centers**

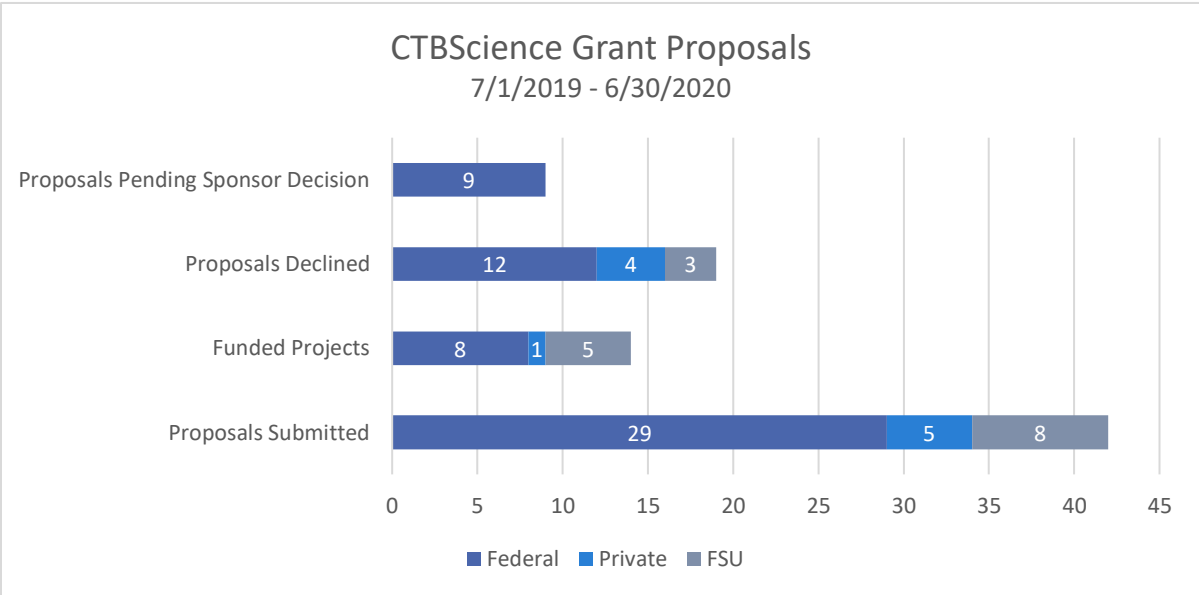
- ❖ The STEP program collaboration with north Florida agencies and communities related to natural disaster focused research and implementation
- ❖ Development and implementation of technology driven solutions and methods for dissemination and engagement

Objective 4: Increase Extramural Funding

Measure: Grants submitted, and grants awarded

“The center will focus on extramural funding agencies that support translational behavioral research including the National Institutes of Health, the Centers for Disease Control, the National Science Foundation, and the Patient-Centered Outcomes Research Institute. “The center will strengthen the public service mission by conducting translational behavioral research focused on reducing health disparities (Strategic Priority 7.0)”

The faculty at CTBScience successfully submitted a total of **42** grant proposals between July 1, 2019 through June 30, 2020. With 9 proposals already funded at the start of the reporting year, CTBScience faculty received a total of **5** new grant awards.



2019 - 2020 Awarded and Active Grants				
Faculty Name	Role on Project	Project Title	Sponsor	Mechanism
Scott Pickett	Co-PI	All-inclusive Hurricane Resilience to Bridge the Resilience Divide for Special Needs Populations Living in Rural Communities	FSU	CTSA Seed Award
Nicole Ennis	Principal Investigator	Feasibility of SBIRT for Underserved HIV+ Adults 50+ in Primary Care Settings	National Institutes of Health	K23
Seyram Butame	Principal Investigator	Preparation to Implement Novel Data to Care Initiatives to End the HIV Epidemic in Florida	University of Miami	Supplement
Sylvie Naar	Principal Investigator	Adolescent Medicine Trials Network for HIV/AIDS Interventions (ATN) Coordinating Center - EHR	University of North Carolina - Chapel Hill	Subaward
Sylvie Naar	Principal Investigator	Adolescent Medicine Trials Network for HIV/AIDS Interventions - Executive Committee	University of North Carolina - Chapel Hill	Subaward

Sylvie Naar	Principal Investigator	Scale it up: Effectiveness-implementation research to enhance HIV-related self-management among youth	National Institutes of Health	U19
Sylvie Naar	Principal Investigator	Implementing and Evaluating an AI Agent for Automated Behavioral Counseling	Michigan State University	Subaward
Sylvie Naar	Principal Investigator	Improving engagement in self-monitoring of dietary intake and physical activity among overweight/obese racial and ethnic minority young adults	Wayne State University	Subaward
Tyra Dark	Principal Investigator	Adolescent Medicine Trials Network for HIV/AIDS Interventions – Modeling Core	University of North Carolina - Chapel Hill	Subaward
Scott Pickett	Co-PI	Neuroendocrine Substrates of Dysregulated Sleep and Mood	FSU	CTSA Med Seed Award
Scott Pickett	Principal Investigator	The Development of a Sleep Laboratory to Increase Collaboration and Research Funding through the Acquisition of Sleep Assessment Equipment	FSU Council on Research and Creativity	Equipment and Infrastructure Enhancement Grant
Scott Pickett	Principal Investigator	Demonstrating the Feasibility and Effectiveness of The Skills fOr Life Adjustment and Resilience (SOLAR) Program in an Underserved, Low-Resource Hurricane Affected Region of the Florida Panhandle	FSU Council on Research and Creativity	Planning Grant
Sylvie Naar	Co-Investigator	Psychological and Substance Use Impacts of COVID-19 Perceived Threat in Racially Diverse Emerging Adults	FSU	Collaborative Collision
Tyra Dark	Co-PI	Exploring Clinical Health Big Data to Assess, Predict and Evaluate Sub-Cultural Immigrant Groups Health Risk	FSU	Health Big Data
Scott Pickett	Co-Investigator	Using The Arts As A Proactive Mental Health Strategy For Generation Z	National Endowment for the Arts	N/A
Julia Sheffler	Principal Investigator	Early phase feasibility trial: Examining the effects of diet on genetic and psychosocial risks for Alzheimer's disease	FSU	CTSA Med Seed Award
Julia Sheffler	Principal Investigator	EEG P300 Amplitude and Latency in Relation to Risk for Alzheimer's Disease and the Impact of a Ketogenic Diet	FSU	Institute for Successful Longevity
2019 - 2020 Pending Sponsor Decision				
Faculty Name	Role on Project	Project Title	Sponsor	Mechanism
Nicole Ennis	Principal Investigator	Medical Marijuana Use and Driving Performance: A Test of Psychomotor Function in Adults 50 and Older	National Institutes of Health	R21 Resubmission
Julia Sheffler	Co-Investigator	Creatine supplementation for vascular and functional health in aging	National Institutes of Health	R01
Julia Sheffler & Scott Pickett	Co-Investigator	Prenatal and Early Life Antecedents of Personality: An Intergenerational Lifespan Approach	National Institutes of Health	Supplement
Sylvie Naar	Principal Investigator	ATN Executive Committee	University of North Carolina - Chapel Hill	Subaward
Sylvie Naar	Principal Investigator	Adolescent Medicine Trials Network for HIV/AIDS Interventions (ATN) Coordinating Center - EHR	University of North Carolina - Chapel Hill	Subaward
Sylvie Naar	MPI	Implementation and Comparative Effectiveness of Clinical Pathways to Integrate Prevention and Treatment Practices for OUD, IDU, and HIV among Rural Probationers and Parolees in Missouri	National Institutes of Health	U01

Sylvie Naar	Principal Investigator	Innovations in Big Data and Implementation Science to End the Youth HIV Epidemic in Florida	National Institutes of Health	Supplement
Sylvie Naar	Principal Investigator	Early Phase Translation of Basic Science into Cancer-related Behavioral Treatment	National Institutes of Health	R25
2019 - 2020 Submitted				
Faculty Name	Role on Project	Project Title	Sponsor	Mechanism
Julia Sheffler	Co-PI	Stress-related Changes in Mitochondrial DNA Function as a Pathway to Late life depression and Cognitive Impairment in Black and Latinx Older Adults	Alzheimer's Association	LOI Accepted; AARG award
Julia Sheffler	Principal Investigator	Promoting Rural Health and Research Engagement through Community Partnership and Collaboration	FSU	Letter of Intent
Julia Sheffler	Co-Investigator	Financial Exploitation of Older Adults in the Context of COVID-19	FSU	Collaborative Collision
Julia Sheffler	Principal Investigator	Early Phase Translational Behavioral Research n Aging: Examining Outcomes Associated with a Ketogenic Diet Adherence Program for Individuals At Increased Risk for Alzheimer's Disease	National Institutes of Health	K23
Nicole Ennis	MPI	Decreasing Barriers and Increasing Access to Healthcare for Underserved Patients during COVID-19 and Beyond: A Comparative Effectiveness Study of Digital Telehealth Delivery	PCORI	Subaward
Nicole Ennis	MPI	Interactive Internet-based Motivational Interviewing Training for Community Health Workers to Maximize Impact on the HIV Care Continuum	National Institutes of Health	R01
Nicole Ennis	Principal Investigator	Testing Implementation of SBIRT_PN in the CAN Community Health System	National Institutes of Health	R01
Scott Pickett	Co-Investigator	The Mi-Heart Project: Assessing and Mindfully Reducing Cardiometabolic Risk in a High Poverty, Undeserved Community	American Heart Association	Letter of Intent
Scott Pickett	Co-Investigator	Responding to Public Librarians' and Community Mental Health Needs After Natural Disasters	National Institute of Museum and Library Sciences	Letter of Intent
Scott Pickett	Co-PI	Identification of Vulnerable Communities and Creation of a Community Mental Health Taskforce	FSU	Collaborative Collision
Scott Pickett	Principal Investigator	Examining the shared neurobiological mechanisms related to sleep disruption and pain following a brief, online mindfulness-based intervention	National Institutes of Health	R21
Sylvie Naar	Principal Investigator	Translating basic behavioral science into a just-in-time adaptive intervention for engaging youth living with HIV in mHealth	National Institutes of Health	R21
Sylvie Naar	Principal Investigator	Community Convening for Dissemination and Implementation of PCOR/CER to Improve the Sexual Health of Florida's SGM Youth	PCORI	Letter of Intent
Sylvie Naar	Principal Investigator	Feasibility of FLEX to Reduce Cardiovascular and Metabolic Risk: Personal Fitness Coaching and Adherence Support for Youth Living with HIV	National Institutes of Health	R34
Sylvie Naar	MPI	Clinical Trial of the Fit Families Multicomponent Obesity Intervention for African American Adolescents and Their Caregivers: Next Step from the ORBIT Initiative	National Institutes of Health	Subaward
Sylvie Naar	Principal Investigator	Youth-Provider Communication Intervention to Reduce Stigma Support Autonomy, and Achieve 90-90-90 Goals for Youth in Resource-Limited Setting	National Institutes of Health	R21

Sylvie Naar	Principal Investigator	Integrating Big Data and Implementation Science to End the Youth HIV Epidemic: Testing a State-Wide Youth Learning Health System Plus Healthforce Training Intervention (Y-LHS+)	National Institutes of Health	R01
Tyra Dark	Principal Investigator	Cognitive and cardiovascular outcomes among populations with comorbid Cardiometabolic Syndrome (Cmets) and anxiety	National Institutes of Health	R21

Objective 5: Increase Student Exposure to Translational Behavioral Research

Measure: Three graduate students and one postdoctoral fellow over the 5-year period.

“The center will improve undergraduate, graduate and professional education by providing student opportunities to assist in cutting-edge research in the behavioral domain in a team science environment (Strategic Priority 2.0).”

The center has engaged in a focused effort to incorporate students from various levels and disciplines into a wide variety of translational research projects. Not only has this approach enhanced student exposure, it has also impacted the progression of multiple active clinical translational research studies for each faculty member with ongoing projects. In the current reporting year, CTBScience faculty have selected student research volunteers from the Florida State University Undergraduate Research Opportunity Program (UROP), Directed Independent Study (DIS) program, College of Medicine Summer Research Fellowship program, as well as provided mentorship for multiple graduate and post-graduate level scholars.

Name	Student Category	Affiliation
Gabrielle Sehres	Medical Student	FSU College of Medicine
Joshua Hohlbein	Graduate	Oakland University
Alexandra Hospodar	Medical Student	Oakland University
Oluwatoyin Ibirokan	Medical Student	Oakland University
Ghania Moeen	Medical Student	Oakland University
Mustafa Polet	Medical Student	Oakland University
Alana Smith	Medical Student	Oakland University
Ashley Garcell	Undergraduate	FSU Undergraduate Research Opportunity Program
Madison Hedge	Undergraduate	FSU Undergraduate Research Opportunity Program
Robel Mechal	Undergraduate	FSU Undergraduate Research Opportunity Program
Jonathan Mesa	Undergraduate	FSU Undergraduate Research Opportunity Program
Juliette Sosa	Undergraduate	FSU Undergraduate Research Opportunity Program
Robert Larsen	Medical Student	FSU College of Medicine
Richard Sherman	Medical Student	University of Florida
Zachary Mannes, PhD	Graduate	University of Florida
Erin Ferguson, MS	Graduate	University of Florida
Victoria Rodriguez, PhD	Graduate	University of Florida
Erin Trifilio, PhD	Graduate	University of Florida
Adaixa Padron, MS	Graduate	University of Florida
Rachel Sweenie, MS	Graduate	University of Florida
Brooke Mallett	Undergraduate	FSU Undergraduate Research Opportunity Program
Diamond Taylor	Undergraduate	FSU Undergraduate Research Opportunity Program
Niah Washington	Undergraduate	FSU Undergraduate Research Opportunity Program
Elyse Duplantier	Undergraduate	FSU Undergraduate Research Opportunity Program

Valeria Burchard	Undergraduate	FSU Undergraduate Research Opportunity Program
Celina Meyer	Undergraduate	FSU Undergraduate Student
Taylor King	Undergraduate	FSU Undergraduate Student
Hollyn Saliga	Undergraduate	FSU Undergraduate Student
Melissa Meynadasy	Graduate	FSU College of Arts & Sciences, Psychology
Lauren Irwin	Graduate	FSU College of Arts & Sciences, Psychology
Emily Capote	Undergraduate	FSU Undergraduate Student
Alyson Urbaniak	Undergraduate	FSU Undergraduate Research Opportunity Program
Jordan Jankowski	Undergraduate	FSU Undergraduate Research Opportunity Program
Joshua Boyd	Medical Student	FSU College of Medicine

Strategic Planning and Next Steps

As CTBScience enters its third year of operation, the team is proud of the progress to date, and are looking forward to the continued growth and success of the center and team. To that end, the center will focus on continued maintenance and improvement of the existing strategies and initiatives through the utilization of our center's three cores and administrative team, and will focus on the following initiatives:

1. Research faculty and staff will begin incorporating the use of the already acquired pilot study data to propose projects for funding for full scale clinical trials.
2. The center's administrative team, in conjunction with the management core, will continue the development of policies, procedures, standards of practice, and organizational development. This will include engagement with both internal and external stakeholders related to enhancing transdisciplinary collaborations, community engagement, establishment of licensed materials and/or training courses to generate secondary revenue toward center sustainability.
3. Continue and expand the Center's effort toward junior faculty and student engagement through the Florida State Undergraduate Research Opportunity Program (UROP), Directed Independent Study (DIS) program.
4. Enhance external collaborations with a variety of Community Based Organizations (CBOs), Federal and State Agencies, and individual community and professional stakeholders.
5. The center will continue working with internal and external collaborators to enhance efforts toward strategic planning, with the overarching goal of center sustainment, faculty and staff development, and promoting further implementation of translational research.

CTBScience 2019-2020 News & Events

Equity Research Corner Open House Event November, 2019

The 2019 Equity Research Corner open house event was a success with over 100 attendees touring each of the participating research centers. We are so thankful for everyone who came to get involved!

The Equity Research Corner is a collaboration of research centers that address equity issues related to:

Health: Focusing on the biopsychosocial risk and resiliency factors to advance the health equity of individuals and communities through research and advocacy.

Social: Evaluating and understanding the social, institutional, and environmental barriers of vulnerable populations through research and policy work in pursuit of social justice and equity.

Education: Addressing the systemic and structural barriers across the spectrum of development and within systems of learning to promote and enhance equity in education.



The Centers and Institutes that participated in the Equity Research Corner Event:

- The Center for Translational Behavioral Science
- The Center for Indigenous Nursing Research for Health Equity
- The Florida Center for Reading Research
- The Learning Systems Institute
- The Health Equity Research Institute
- The Institute for Justice Research and Development
- The Florida Center for Interactive Media



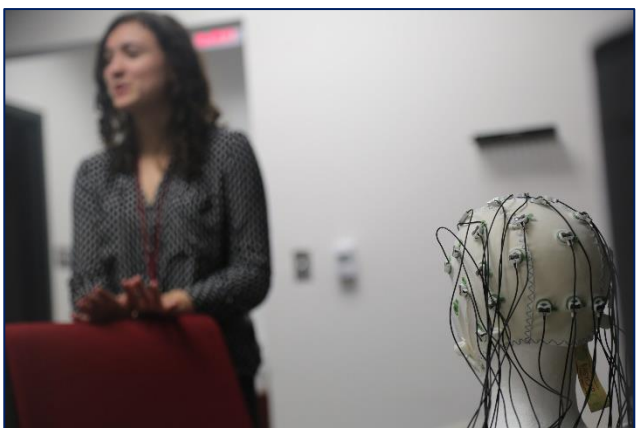


Drs. Zhe He, Mia Lustria, Seyram Butame, and Sara Green posing during the open house event.

Dr. Scott Pickett and Dr. Sylvie Naar enjoying the event.



Dr. John Lowe showcases the Center for Indigenous Nursing Research for Health Equity with open house visitors.



Dr. Carrie Pettus-Davis and Dr. Stephen Tripodi introducing the Institute for Justice Research and Development during opening remarks.

A student in Dr. Greg Hajcak's Depression and Anxiety laboratory discusses the use of EEG equipment in research.

Carolyn Blue Wins Outstanding Mentor Award

Carolyn Blue, CTBScience K Scholar Program Coordinator and former Senior Administrative Assistant received 2019 Outstanding Mentor Award from the Tallahassee Future Leaders Academy. The TFLA program is sponsored by the City of Tallahassee, which partners with area organizations, businesses and colleges to provide summer jobs for more than 200 local youth, ages 15-19. The program is devoted to providing community high school students with mentorship, work experience and professional development.



Blue's nominator wrote, "Under her mentorship, I learned about how research is conducted at Florida State University, the importance of an IRB (Institutional Review Board), and why there should be oversight of research projects." The nominator also described how Blue instilled the importance of a good work ethic, along with the training and knowledge they learned on the job. They also said Blue has a "heart of gold" and working with her was a "joy that will never be forgotten."

CTBScience at Instilling Hope 2020

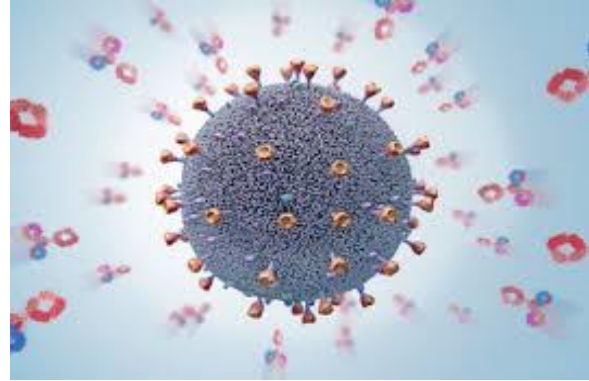


CTBScience hosted a table at the **2020 Instilling Hope Conference, hosted by Peace for the Big Bend** at the Florida State University Turnbull Conference Center on March 11, 2020. CTBScience used this opportunity to participate in the trauma and resiliency focused event to nurture partnerships with other agencies and community partners, and to highlight ongoing research.

Samantha Nagy, MS, also presented at the conference, highlighting Dr. Scott Pickett and the STEP Research Program's SOLAR implementation, a trauma focused intervention aimed at assisting those in the community impacted by Hurricane Michael.



CTBScience Response to COVID-19



Florida State University as whole has made considerable changes to daily operations in response to the Coronavirus pandemic.

CTBScience Center & Core Response

The CTBScience Core and Administrative teams have implemented a variety of tools, resources, and references to ensure continuity of center operations and clinical research.

Administrative Operations

The CTBScience Administrative team worked diligently to ensure that the progress of center growth and development was not stagnated. In addition to utilizing the Florida State University subscription to the Zoom video conference platform for ongoing collaboration and meetings, the Admin team also developed additional procedures and methods including:

- ❖ **Implementation of Asana project management software.** Utilization of this task management system allowed for continued collaboration amongst all center personnel and further enhanced the CTBScience framework and implementation methods for ongoing operations.

Management Core

The CTBScience Management Core, led by Dr. Julia Sheffler, provided faculty, staff, students, and volunteers a variety of adaptive measures related to clinical trial research continuity.

- ❖ **Attending weekly Research Continuity webinars** hosted by the Florida State University Office of the Vice President for Research
- ❖ **Providing weekly and monthly summaries** to center faculty and staff regarding University and College of Medicine policy and procedure changes
- ❖ **Collaborating with center faculty and staff** toward the development of a regulatory manual, as a centralized guidance toward clinical trial research with human subjects
- ❖ **Enhancing the partnership with the FSU Internal Review Board (IRB)** to ensure protocol sustainment and submissions met the requirements of COVID related protocol changes toward ensuring researcher and participant safety. Further, the Management Core has been integral in the University adapting their internal systems to external clinical trial research by developing system-based changes to engage with external clinical research sites and principal investigators.

CTBScience Research Response

Faculty Engagement

Protective Factors for Coping with COVID-19

Dr. Scott Pickett

*Florida State University College of Medicine Wellness Committee Special Presentation; Zoom Webinar
Spring 2020*

Coronavirus Focused Research

Psychological and Substance Use Impacts of COVID-19 Perceived Threat in Racially Diverse Emerging Adults

Dr. Sylvie Naar, Co-Investigator

Florida State University Collaborative Collision Award

Proposals Submitted

Increasing Healthcare Access for Underserved Patients During COVID-19 and Beyond: A Comparative Effectiveness Study of Digital Access Health Pods

Dr. Nicole Ennis, Principal Investigator

Patient Centered Research Outcomes Institute (PCORI) Letter of Intent

Financial Exploitation of Older Adults in the Context of COVID-19

Dr. Julia Sheffler, Co-Investigator

Florida State University Collaborative Collision Award

Identification of Vulnerable Communities and Creation of a Community Mental Health Taskforce

Dr. Scott Pickett, Co-Principal Investigator

FSU Collaborative Collision Award

Coronavirus Focused Publications

The interpersonal and psychological impacts of COVID-19 on risk for late-life suicide.

Sheffler, J., Joiner, T., Sachs-Ericsson, N.

The Gerontologist (2020)

Research Continuity

Adapting Clinical Trials to COVID-19

Due to the need to comply with social distancing and in order to ensure the protection of all participants in ongoing clinical trials, CTBScience investigators developed project specific adaptations to ensure continuity of research projects.

- ❖ **ATN Scale It Up – Dr. Sylvie Naar:** The Scale It Up project involves multiple external sites, operating out of HIV focused clinics on places like New York City, Detroit, Los Angeles, Philadelphia, and others. Based on the population density of these cities and the need to protect study participants, modifications were made to protocols to allow for viral loads to be submitted by participants through the mail with Dried Blood Spot kits, a new advancement in HIV testing and monitoring.
- ❖ **Early phase feasibility trial: Examining the effects of diet on genetic and psychosocial risks for Alzheimer’s disease – Dr. Julia Sheffler:** In-person neuropsychological assessments designed to assess thinking and memory in aging populations required protocol modifications to ensure the study could achieve its goals. As such, Dr. Sheffler adapted her study procedures and research assistant training to conduct these assessments over the phone. Dr. Sheffler also moved the full intervention program to an online format from in-person group meetings, transferred all assessments on online or virtual, and mailed out participant materials for the program.

Community Advisory Council *CTBScience - CAC*



The CTBScience Community Advisory Council (CTBS-CAC) is a group of area providers, professionals, and community members who have come together to enhance CTBScience's mission toward effective and valuable community engagement. Their engagement with CTBScience is founded in a collaborative partnership, wherein members attend CTBS-CAC tri-annual meetings in order to advise and assist with community engagement and outreach by reviewing community engaged program and research initiatives, as well as extending CTBScience's reach in the communities we seek to serve.

CTBScience Council Leaders



Nicole Ennis, PhD

CTBS – CAC Chair

*Associate Professor, FSU College of Medicine
Behavioral Sciences & Social Medicine
CTBScience Community Engagement Core Lead
iRACE Program Director*

Samantha Chahin, MPH

CTBS – CAC Secretary

*CTBScience Program Coordinator
FSU College of Medicine
Behavioral Sciences & Social Medicine*



CTBScience Community Advisory Council Members



Claudia Baquet, MD, MPH

Professor of Medicine (Ret.)

Dr. Baquet received her MD in 1977 from Meharry Medical College (Tennessee) and her MPH in epidemiology in 1983 from Johns Hopkins University School of Hygiene and Public Health. Her residency was in Pathology at St. Louis University and Wadsworth Veterans Administration Hospital in California. Her research focus includes: cancer disparities research; strategies for increasing access/participation of diverse communities in clinical trials; policy research on assuring equity and research translation strategies to assure research literacy in disparity communities. She is committed to mentoring students, junior investigators and community health professionals in health disparities research, bioethics and research ethics, community engagement and careers in medicine and public health.

Anne Swerlick

Senior Policy Analyst & Attorney - Florida Policy Institute

Since January 2017, Anne has worked with the Florida Policy Institute as a Senior Policy Analyst & Attorney specializing in health access and safety net program issues. She has over 40 years of experience as a public interest attorney, focusing on health, economic and social justice issues. Throughout most of her professional career, she worked as a legal services attorney representing indigent clients on a broad range of poverty law issues. Anne received her B.A. from the University of Virginia and her J.D. from the University of Virginia School of Law. She was admitted to the Florida Bar in 1977.



Walter Niles, Sr.

Director of the Office of Minority Health and Health Equity, Florida Dept. of Health

Walter W. Niles is a native Floridian, and resides in Tallahassee, FL. He attended Oakwood College (now Oakwood University) and has an advanced leadership degree from the University of Phoenix. Walter is an Affiliate Professor at the University of South Florida, College of Public Health and a Public Health Leadership Scholar at the University of South Florida and the Florida Department of Health Leadership Institute. He is a former Florida Sterling Award (Florida's equivalent to Baldrige Award) Examiner. Currently, employed by the Florida Department of Health at the state program office as the Director of the Office of Minority Health and Health Equity. Besides being the founding manager of the first Florida Department of Health Office of Health Equity (OHE), which was established in 2009, and is in the Community Health Division of the Florida Department of Health in Hillsborough County, Walter is a State of Florida Certified Contract Manager.

As a community activist, Walter is involved in numerous organizations. He is a board member of the Central Florida Behavioral Health Network, Inc. He also is actively involved in the following organizations: Executive Board, Hillsborough County Community Action Advisory Board, University of South Florida's Center for Leadership in Public Health Practice, Florida Public Health Association, Past Chair; Tampa Community Health Center Board of Directors, Past Chair, American Cancer Society's Black Public Education Committee. American Cancer Society's Black Public Education Committee, Hillsborough County Public Safety Committee, Executive member, Health Equity Coalition of Hillsborough County, NAACHO, Health Equity Leadership Committee, Hillsborough County Metropolitan Planning Organization Community Advisory Committee, Florida Medical Quality Assurance Institute Expert Panel.

Temple Robinson, MD

Chief Executive Officer, Bond Community Health Clinic

Dr. Temple Robinson is the Chief Executive Officer at Bond Community Health Center in Tallahassee, Florida. Prior to this appointment, Dr. Robinson was the Chief Medical Officer at Bond, with a total of 18 years dedicated to the Bond clinic. Dr. Robinson completed her medical training at the Meharry Medical College in Nashville, Tennessee and has dedicated her career in internal medicine to serving the Tallahassee area's most vulnerable populations.





Tomica Smith

IDid Creations, Inc., Owner

At a young age Tomica Archie Smith knew firsthand the power of encouraging and uplifting others. She has spent most of her career serving in Tallahassee's nonprofit community working with agencies such as DISC Village and Community Intervention Center. She joined the Capital Area Healthy Start Coalition in 2003 and implemented Smart Start, an innovative home visiting program funded by the Knight Foundation. Tomica then joined the City of Tallahassee as the first Executive Director of the Palmer Munroe Teen Center. She went on to develop the Big Bend's Navigator Project for the Affordable Care Act and assisted consumers with understanding and enrolling in the Health Insurance Marketplace. From 2017 to 2019 she returned to the Healthy Start Coalition as the Executive Director. Currently Tomica and her husband, Fredrick, are owners of IDid Creations, Inc., a small business specializing in information technology and marketing. Tomica earned a Bachelor's degree in Business Administration from the University of West Florida and a Master's of Science in Counseling Education from Florida A&M University.

Nathaniel Huhtha

Medical Student, 2nd Year

Nathaniel graduated magna cum laude from Florida State University in 2018 with a Bachelor of Arts in music as well as minors in biology and chemistry. As an undergraduate he volunteered with the Alzheimer's Project, where he learned he had an interest in working with the elderly community. Nathaniel also worked at North Star Reach, where kids with serious medical conditions could have a "spectacularly average" camp experience. As the leader for music and drama activities, he was able to combine his passions for music and medicine to produce positive change. After graduation, Nathaniel was selected to work as a clinical assisting student in the Dermatology Research and Practice Scholars program at Dermatology Associates of Tallahassee. That role allowed him to understand the needs of the Big Bend area and taught him how to work as a member of a health-care team. Nathaniel is currently a second-year medical student at the Florida State University College of Medicine. His interests include healthcare in rural communities and LGBTQIA+ health.



K Scholar Program



The Center for Translational Behavioral Sciences also houses the University's K Scholar Program. The K Scholar Program is a part of the National Institutes of Health Clinical and Translational Science Award (CTSA), a partnership between FSU and the University of Florida. Under the direction of Sylvie Naar, it is designed to create a community of postdocs, junior faculty, and mentors who work together to submit excellent K applications and set FSU's junior researchers on a path to independence.

2019 – 2020 K Scholar Program Highlights

August

- ❖ K Scholar Program coordinator hired
- ❖ Collaboration with UF Program Coordinator, Maria Gavidia, to share resources

October

- ❖ K applications submitted by four (4) FSU faculty
 - Samantha Goldfarb, COM, BSSM – K01
 - Bradley Gordon, Human Science, K01
 - Lucinda Graven, CoN, - K01
 - Julia Sheffler, COM, BSSM – K23
- ❖ Three (3) curriculums identified with teaching planned for 2020
 - Team Science
 - Responsible Conduct of Research
 - Clinical and Translational Research

November

- ❖ First meeting of K Scholar Program Internal Advisory Committee
- ❖ Enrollment opens for Team Science Training scheduled for Spring 2020

December

- ❖ K Scholar Bootcamp Presentation with Dr. Thomas Pearson, Executive Vice President for Research and Education at the University of Florida

January

- ❖ Team Science Workshop Series
 - 9 K scholars enrolled
 - 6 sessions held between Feb – April

February

- ❖ Presentations to Faculty and Postdocs
 - Responsible Conduct of Research documentation available at Office of Research website
 - Presentation to College of Nursing
 - Presentation to College of Education
- ❖ Biobehavioral Postdocs – Professional Development Meeting

March

Summary Statement Workshop

March 23, 2020

Drs. Sylvie Naar and Thomas Pearson reviewed NIH responses received by K Scholars, Drs. Julia Sheffler and Samantha Goldfarb from each of their October 2019 submission; both are planning to resubmit in July

April

- ❖ Review UF Online Intro to Clinical Translational Science Course (GMS7093) for FSU use
- ❖ Dr. Naar to modify UF online course for FSU and moderate monthly discussion starting Fall 2020

June

- ❖ Office of Research approved funding for Internal KL2 Award
- ❖ Mock Review Workshop held for July K submitters (Drs. Goldfarb and Sheffler)
- ❖ 15 Scholars identified with plan to submit a K

Strategic Planning and Next Steps

The K Scholar Program will continue to inform FSU faculty and postdocs of the opportunities available through the program. The Program will work to recruit additional scholars and work with them to submit successful K applications. K Scholars have access to:

- Campus/Zoom presentations of UFs monthly K College Sessions addressing grant writing skills and topics relevant to early stage investigators
- Information via the FSU K Scholar Program Listserv and Website
- Mock Review Workshops - planned for scholars 3 times annually, 4-6 weeks prior to their NIH submission/re-submission date: Feb/Mar, June/July, or Oct/Nov.
- RCR Training - FSU's Office of Research Compliance Programs, with assistance from the Office of Research Development, has developed a series of live, web-based interactive training sessions on the Responsible Conduct of Research. Plans are to provide training starting in September 2020. Attending all of the sessions fulfills the National Institutes of Health (NIH) requirement for 8 in-person contact hours. Participants who complete the entire program will receive a certificate of completion
- Clinical and Translational Research Training – Online UF Course with monthly modules review/discussion sessions moderated by Dr. Sylvie Naar, scheduled to begin in September – May. A certificate of completion is provided upon successful completion.
- Team Science Training - Seven modules are available for self-study on Canvas. The online modules can be completed in any order. A certificate of completion is provided upon successful completion of at least three modules.
- KL2 grant opportunities including Internal FSU KL2, a CTSA funded KL2, and the NIH Diversity Supplement funding opportunities

A key component of the development of early stage investigators is the services that mentors provide to their project. The FSU CTSA program supports the FSU Office of Research Development in establishing a Mentoring Academy to promote a culture of support for research mentoring and to provide training in optimizing mentoring relationships for mentors and mentees at all levels of their research careers. A tentative schedule has been created to hold four sessions in the Spring of 2021.

Center Facilities

This facility provides 6 faculty offices, 4 research core offices, a program manager office, two shared postdoc offices, offices for a research coordinator and research assistants, and a shared space for students and staff working with faculty. The center also houses 4 multifunctional participant spaces, 2 of which have the ability to function as working sleep laboratories equipped with state-of-the-art sleep diagnostic equipment, video monitoring / recording capability and 2 of which have the ability to be used as both assessment rooms and therapy rooms. Further, the center houses a conference room with video conferencing capabilities and a community space that functions as a group meeting room and/or classroom. Within its three cores (Management Core, Methods Core, and Tech Core), the Center has a dedicated clinical trials coordinator, administrative coordinator, grants contracts administrator, data manager, biostatisticians, and a communications expert as well as access to FSU's IT, library, and other administrative resources. The center also has a dedicated phlebotomy lab space, equipped with the necessary sample collection and sample storage equipment for human biological specimens. This facility hosts multiple research initiatives related to translational behavioral science including:

The Adolescent and Emerging Adult Health Equity program led by Dr. Sylvie Naar, focuses on developing and testing behavioral interventions to promote health equity among adolescents and emerging adults. The program includes several projects across the continuum of translation including early phase trials, clinical trials, effectiveness trials, and implementation trials. Studies are centered around improving health equity with behavioral interventions targeting the management of HIV, obesity, asthma, and diabetes.

Intervention Research Advancing Care Equity (iRACE) program, led by Dr. Nicole Ennis, focuses on intervention research to improve patient care among medically underserved populations through evidence-based behavioral interventions in the context of learning healthcare systems. Guided by a dissemination and implementation science framework, the program aims to understand and intervene on factors that influence health outcomes among patients coping with substance misuse, depression, HIV infection and other chronic conditions. This program investigates the influence of individual, social, and structural barriers using an interdisciplinary team approach.

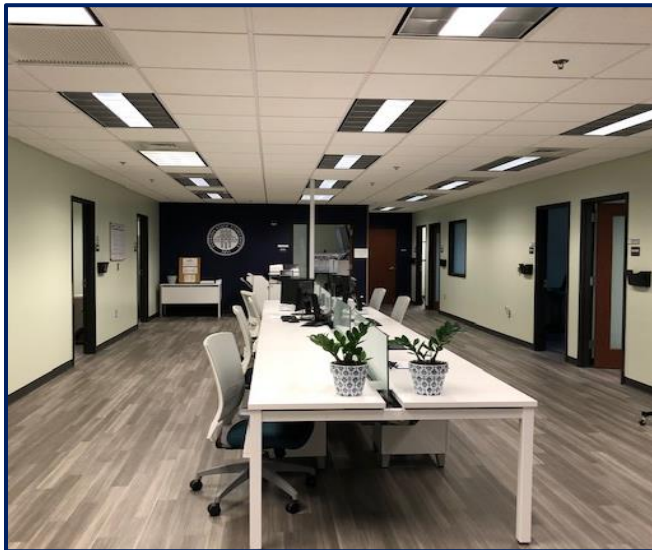
The Sleep Trauma and Emotional Processing (STEP) program led by Dr. Scott M. Pickett, examines the influence and interaction of vulnerabilities, such as maladaptive emotion regulation and sleep disruption, on negative mental and physical health outcomes. Primary vulnerabilities of interest are those associated with psychological trauma. Current projects utilize a variety of research designs from basic social and biomedical science to clinical trials.

The Community Health and Social Epidemiology (CHASE) program, led by Dr. Tyra Dark, investigates the impact of social conditions on community health. Social epidemiology assumes that the distribution of advantages and disadvantages in a society reflects the distribution of health and disease. As a social epidemiologist, Dr. Dark's research has focused on the unique health care needs and health economics of populations with complex chronic conditions (e.g., cardiometabolic syndrome in older adults and HIV/AIDS in young adults) and comorbid mental illness, and the role of race/ethnicity on delivery of care.

The CHASE program focuses on identifying how care is delivered to this population to uncover potential contributors of racial/ethnic disparities that can inform future policy or other cost-effective health care delivery interventions to improve outcomes and reduce observed disparities.

The Integrative Science for Healthy Aging (ISHA) program, led by Dr. Julia Sheffler, broadly involves the development and assessment of behavioral interventions for physical, mental, and neurocognitive health in older adults. We are especially interested in the interaction of biological, psychological, and social lifespan processes that influence functioning in older age. Through understanding these processes, this program aims to develop psychological and behavioral approaches to improve adherence and the long-term success of health behavior interventions for older adults.

****Before Renovations***

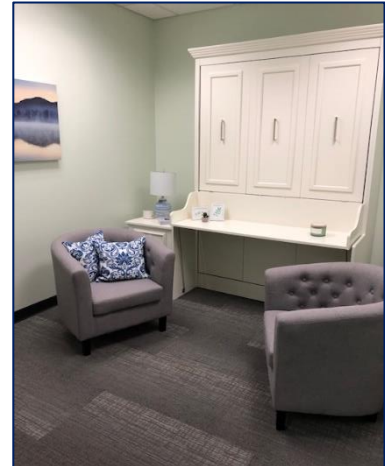


****After Renovations***

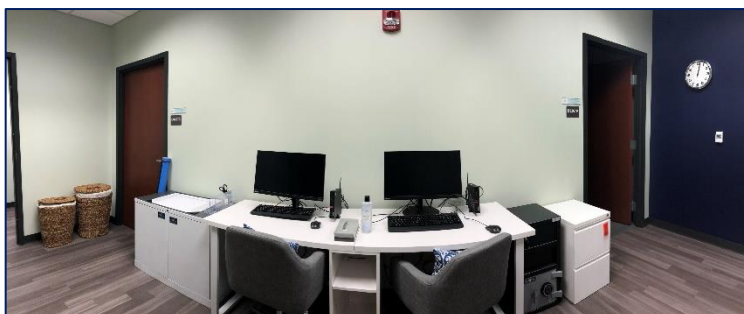
Research Participant and Program Lab Spaces

CTBScience has created multiple areas for which to conduct behavioral clinical trial research. Each of the areas serve as a multi-purpose/multi-functional space that can be utilized by Center investigators and their collaborators to conduct video and audio recorded interviews, evaluate various components of behavioral and sleep disorders, conduct a variety of assessments, collect and store biological samples, and provide an environment that fosters scientific engagement among faculty, staff, and students.

Dr. Scott Pickett and collaborators secured an internal Florida State University **Equipment and Infrastructure Enhancement (EIEG)** grant to outfit the **STEP Program Sleep Laboratory**. These two lab areas are fully furnished to simulate a bedroom that can be used during sleep study research. The bed in this room is also able to be stored in a wall cabinet, allowing for the space to be used as a participant room for other clinical trial studies. This area is also equipped with an observation station, directly outside of each sleep lab space. This space is equipped with:



Somt  PSG Type II Version 2.0 System unit 2GB: Includes Somt  PSG 2.0 System unit, 2 GB Flash Card, Carry Case, Somt  PSG EZ Vest, Adult Silicone Soft Tip Finger Oximeter Probe, Inductive Respiratory Bands (2), Nasal Cannula (2 ft. c/w female luer), Meditrace Mini Electrodes (30 pkg), and Somt  PSG v.2 Lead Kit.



Video Monitoring/Audio Equipment Sleep Lab: Includes Axis M3058-PLVE which is a 360°/180° fixed dome with 12 MP sensor and support for Forensic WDR, Lightfinder, and OptimizedIR illumination. Provides a complete 360° overview in up to 20 fps with WDR and 30 fps with WDR disabled.

CTBScience Phlebotomy Lab

The CTBScience Phlebotomy Lab has its own space for center investigators and collaborators to conduct research that involves the collection of biospecimens. This area is equipped with a variety of patient focused supplies and equipment, including:



Ultra-Low Temperature Freezer, Stirling Ultracold: Freezer features a 105L (3.7 cu.ft.) cabinet that delivers stable, uniform -20°C to 86°C storage. This freezer combines the performance of a unique free-piston Stirling engine with an efficient, thin-wall, non-CFC urethane foam and vacuum insulated cabinet; this permits high-performance, ultra-low temperature storage. The Stirling

integral control, alarm, and monitoring system includes an intuitive graphic user interface to display operating temperature, reserve cooling capacity, status functions, and performance metrics for field troubleshooting.

EBA 200 Centrifuge: High-performance clinical tabletop centrifuge for serology, blood, urine and pediatric applications. The EBA 200 is microprocessor-controlled with a touchpad LCD display and features a built-in, 8-place, fixed-angle rotor. Easy-Lift™ ergonomic lid features stay-in-place positioning and lid drop protection and is designed to limit repetitive stress injuries. Safety-Lock™ Lid is self-closing and auto-locking with steel lid locks which ensures a safe, tight closure of the centrifuge during operation.



CTBScience also has two meeting spaces, both equipped with video conferencing capabilities. Our **CTBScience Community Room** was designed to allow for a variety of in-person meetings, group research and intervention activities, and community engagement.

Management Core

“The Management Core will be responsible for recruitment and retention, regulatory activities, and the development of protocols and standard operating procedures.”

The Management Core (MC) for the CTBScience provides oversight, management, and coordination of all research and core-related activities. Specifically, the MC is responsible for fiscal management, institutional review processes, and community involvement, as well as for recruitment, enrollment, retention, program and lab development.

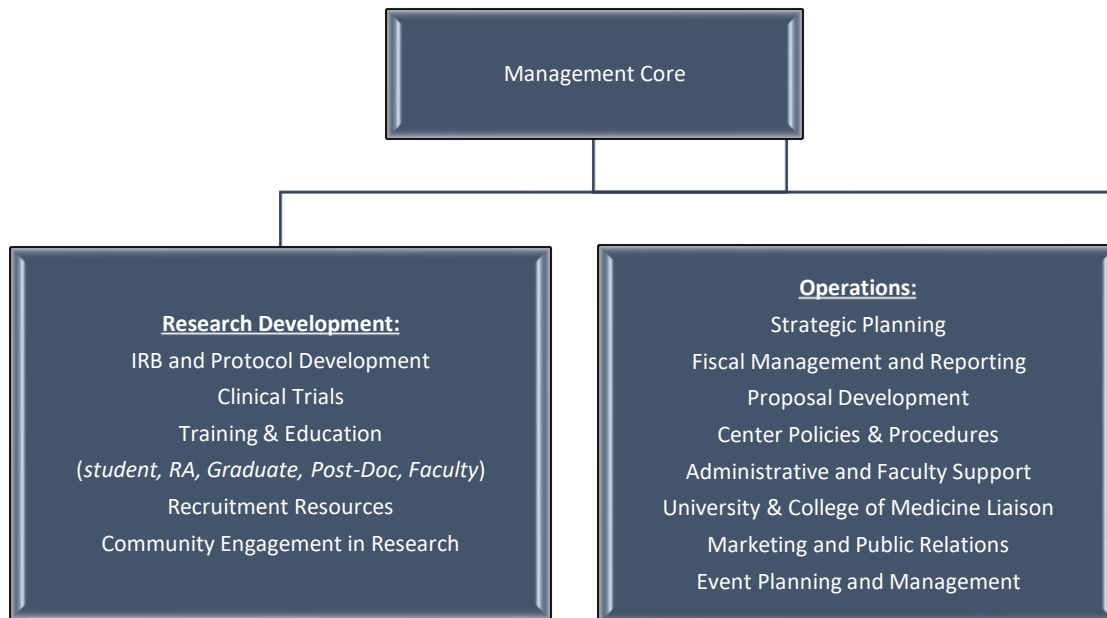


The MC also oversees the center's research assistants and facilitates the center's involvement with undergraduate and graduate students at FSU. Although center faculty work independently on research projects, the MC is available to assist in project development and regulatory aspects of research projects. A primary goal of the MC is to promote cohesiveness in the development of new center projects and to provide oversight to existing projects.

Core Personnel

Julia Sheffler, PhD; Management Core Lead
Sara Green, MSW; Program Manager

Samantha Chahin, MPH; Program Coordinator
Unam Mansoor, MPH, Clinical Research Associate



Clinical Trials and Protocol Development

Regulatory Guidance

Dr. Sheffler is responsible for overseeing the regulatory functions of the center including monitoring the status of required CITI training for all investigators and project personnel and maintaining up to date knowledge of the Florida State University’s IRB system and assisting faculty members with IRB protocol submission and approval. Dr. Sheffler is assisted by the center’s program manager regarding maintaining accurate tracking of regulatory items and producing reports.

Recruitment & Retention

The management core has developed a center registry that can be used by all center and affiliated faculty to recruit potential participants.

Protocol Development

The Management Core continues to provide support and resources for center faculty and staff related to development, data collection and reporting, new hires, research project planning and coordination, event planning and management, and other management related functions as needed.

Collaborations

The Management Core seeks to establish and maintain effective partnerships with both internal and external entities to ensure compliance with regulatory requirements, enhance structural and procedural capacity to conduct research, and develop policies and procedures toward compliance, development, collaboration, engagement, and leadership.

Center Development

Facilities & Equipment

In addition to leading the entirety of the center layout and design, the management core has been integral in the development of a fully functional phlebotomy lab and two sleep lab spaces with video monitoring capabilities and the option to convert the space to a clinical therapy / participant room. The center also has two conference rooms, both with video conference capability, and one as a convertible community engagement area for the center to host educational and training sessions, and group focused translational interventions with research participants.

Outreach and Community Engagement

The Management Core continues to assist with institutional and community engagement and collaboration, acting as a hub for collaborative efforts between center faculty and external partners, with ongoing planning to further enhance the center's presence among the University's various academic and research entities.

Program Development

Strategic Partnerships

In conference with applicable departments within the College of Medicine, the Florida State University Internal Review Board (IRB), the Office of Research, and internal faculty/staff, the center has continued developing policies and procedures related to budget processes and reporting, recruitment, training, development of faculty and staff members, and administrative procedures related to travel, purchasing, human resources, social media, and communications management.

Strategic Planning and Next Steps

The Management Core will continue to provide support to CTBScience faculty while working to develop additional tools for continued development, including a regulatory manual intended to guide faculty researchers throughout the regulatory process for ongoing studies, as well as developing position specific training materials for use by center research assistants. Additionally, the Management Core intends to merge with the Tech Core, to further enhance Tech Core capacity and expand on its supportive platform.

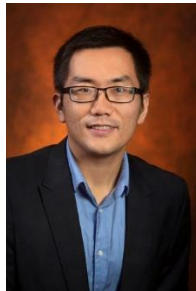
Methods Core

“The analytics core will be responsible for data management, analysis and manuscript preparation.”

The Methods Core will be responsible for research data management and analysis. We will provide biomedical informatics and big data expertise including machine learning, data mining, natural language processing, and biomedical ontologies/standards. We will also provide support to investigators to develop cohort identification queries over OneFlorida Data Trust, a state-level database with fine-grained clinical data for over 15 million Floridians.



The Methods Core will also collaborate with researchers from the Quantitative Methodology and Innovation Division of FCRR for work related to clinical trials analyses, power calculations, and related methodological applications.



Zhe He, PhD, Core Lead

*Associate Professor
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Core Personnel

Seyram Butame, PhD

CTBScience

Yuxia Wang, MPH

FSU College of Medicine

Jamie Quinn, PhD

Florida Center for Reading Research (FCRR)

Zachary Monaco

Data Manager

Aiwen Xing

Graduate Assistant

Ongoing Projects

Data-Driven Clinical Trial Design and Generalizability Assessment

National Institute on Aging (R21), Amazon, Eli Lilly and Company, FSU Council on Research and Creativity
Principal Investigator: Zhe He, Ph.D.

Specific Aims: Clinical studies are essential in evidence-based medicine. However, participant recruitment has long been a major concern. Although ~60% of new all cancer cases occur among older adults, they comprise merely 25% of participants in cancer clinical studies. Unjustified or overly restrictive eligibility criteria are the most important modifiable barriers causing low accrual, early termination, and low generalizability. This in turn can cause the studies to be underpowered and increase the likelihood of adverse drug reactions and toxicity when moved into clinical practice. We are developing data-driven methods and tools to assess the generalizability of clinical studies using the electronic data in clinical trial registries, public patient databases, and clinical data warehouses. This project aims to improve the representation of underserved population subgroups in clinical studies such as older adults with multiple chronic conditions.

Semantics-Powered Data Analytics and Machine Learning

Principal Investigator: Zhe He, Ph.D.

Specific Aims: Various healthcare information systems such as EHRs have integrated well-curated biomedical controlled vocabularies, e.g., the International Classification of Diseases (ICD) and RxNORM, as their vocabulary foundation. With rich medical concepts linked by hierarchical and associative relationships, these vocabularies and ontologies can also be utilized in health data analytics tasks such as natural language processing, data integration, and decision support. Opportunities exist for leveraging semantic methods to enhance these data science efforts. Our research and development effectively use biomedical ontologies and/or semantics methods to address important problems in biomedicine and fundamental problems in natural language processing such as word sense disambiguation, relation extraction, and temporal information extraction. In addition, we also seek to build effective machine learning models to predict health outcomes for patients such as mortality and readmission.

Cohort Discovery Over OneFlorida Data Trust

Principal Investigator: Zhe He, Ph.D.

Specific Aims: The OneFlorida Clinical Data Research Network (CDRN) is a collaborative statewide network that seeks to improve health research capacity and opportunities in the State of Florida through the facilitation of clinical and translation research in communities and health care settings. Its core resource - OneFlorida Data Trust, contains longitudinal and linked patient records of ~15 million Floridians from various sources, including Medicaid/Medicare, cancer registry, vital statistics, and electronic health records (EHR) from its clinical partners. The Data Trust follows the PCORnet Common Data Model (CDM), and contains detailed patient characteristics and clinical variables, including demographics, encounters, diagnoses, procedures, vitals, medications, and labs. We will help FSU investigators define cohort discovery queries over this rich clinical data warehouse to answer critical research questions.

Methods for Translational Behavioral Research (2014 NIH Workshop)

Specific Aims: The National Institutes of Health sponsored a cross-institute, two-day "Workshop on Innovative Study Designs and Methods for Developing, Testing and Implementing Behavioral Interventions to Improve Health" to review, evaluate, and disseminate a selection of innovative designs and analytic strategies for use in behavioral intervention studies. Experts from the behavioral, biostatistical and clinical communities reviewed the utility of new, innovative and potentially more efficient study designs and methods to develop, optimize, test and implement behavioral interventions across the translational targeting multiple behavioral risk factors (e.g., adherence, diet, physical activity, smoking). Presentations and discussions focused mainly on the development and preliminary testing of behavioral interventions on Day 1, with an emphasis on later-stages of development, including testing and implementation of interventions within clinical and community contexts, on Day 2.

Strategic Planning and Next Steps

Throughout 2019/2020, the Methods Core has maintained relationships and ties with researchers and faculty at several institutions through several projects. The institutional relationships include, but are not limited to, The Adolescent Medicine Trials Network for HIV/AIDS Interventions (ATN), The Center for Aids Research, Miami, F.L.; Hunter College's PRIDE Health Research Consortium, New York, N.Y.; University of Alabama at Birmingham, Birmingham, A.L.; University of Florida, Gainesville, F.L., the University of Miami, Miami, F.L.; and Wayne State University, Detroit, M.I.

Contributions from the Core have led to several manuscripts currently under review at journals such as AIDS Patient Care and STDs, Health Evaluation and the Health Professions, and the Journal of the International Association for Providers of AIDS Care. Further activity has also resulted in the submission of conference abstracts. For instance, Core member assisted in the development of submissions to the 23rd International AIDS Conference (i.e., AIDS 2020). The Core provides consultative services to the

various workgroups including the ATN's Analytic Core. A current slew of projects involves the development of a screener and a survey for a study on bioethical concerns in populations of youth lost to follow-up HIV care. Analysis of data collected in an implementation science study within Scale It Up (SIU), a U19 research program. Methods Core continued to provide data management and analytic services to Center faculty and affiliated researchers. Our team has been involved in the development of grant proposals submitted to several institutes and centers within the National Institutes of Health.

The Core Team continues to provide advice on the use of various analytical software packages including, SPSS (IBM Corporation), SAS (SAS Institute), and STATA (StataCorp). We are also looking to expand our data services to the area of data visualization and to the areas of data mapping with software such as Tableau and ArcGIS or QGIS respectively.

Technology Core

“The technology core will be responsible for supporting the technology needs of the center (such as, website and social platforms and other technology solutions), as well as providing technology support for behavioral interventions.”

Advances in information and communication technologies have led to the creation of increasingly innovative and interactive platforms to support the delivery of behavior change interventions. Despite these exciting developments, there is still limited evidence about the efficacy of these approaches and whether the benefits of these applications can trickle down to those who need the most assistance (i.e., the chronically ill, and those who have limited means, education, and access to healthcare services).



The Tech Core is responsible for supporting collaborations in eHealth intervention research by exploring potential partnerships with academic researchers, information technology designers and developers. It will also help identify resources to support the development and evaluation of eHealth interventions including technology to aid in assessment in behavioral trials.



Mia Lustria, PhD, Tech Core Lead

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Core Personnel

Sara Green, MSW; *CTBScience Program Manager*

Gabriella Guzzi, *Social Media Manager*

Initiatives

The Tech Core launched the CTBScience website in Summer 2019: <https://www.ctbscience.org>. In Fall 2019, we also launched various web platform pages to increase visibility of the Center:

- Facebook: <https://www.facebook.com/ctbscience/>
- Twitter: <https://twitter.com/CtbScience>
- Instagram: <https://instagram.com/CTBScience>

Additionally, the Tech Core has been instrumental in evaluating existing processes at the center and making recommendations and assisting with implementation of tech-centered tools to improve center efficiency and enhance existing systems.

Contracts and Grants Funded

The Adherence Promotion with Person-Centered Technology (APPT) Project: Promoting Adherence to Enhance the Early Detection and Treatment of Cognitive Decline

Funded by the National Institutes of Health (R01AG064529).

Total award \$554,286. (July 2019-June 2024).

Boot, W. (PI), Charness, N., Zhe, H., Carr, D., Charkraborty, C., Terracciano, A. with LUSTRIA, M. L. A. (Co-PI)

Data Visualization and Game-Based Approaches for Educating At-Risk Young Adults About Non-Medical Prescription Opioid Use

Funded by the College of Communication and Information, FSU (NC-2018-003).

Total award \$25,000.

(Nov. 1, 2018 to Dec. 31, 2019).

Wendorf-Muhamad, J. (PI), and LUSTRIA, M. L. A. (Co-PI)

Contracts and Grants Submitted:

Improving Engagement in Self-Monitoring of Dietary Intake and Physical Activity Among Overweight /Obese Racial and Ethnic Minority Young Adults

Submitted to the National Institutes of Health (sub-contract with University of Michigan).

Naar, S. (PI), LUSTRIA, M. L. A. (Co-PI).

Ongoing Projects

The Adherence Promotion with Person-Centered Technology (APPT) Project: Promoting Adherence to Enhance the Early Detection and Treatment of Cognitive Decline

National Institutes of Health

2019- 2024

The goal of this proposed project is to develop and evaluate a mobile-based adaptive and tailored support system to improve adherence to home-based longitudinal cognitive assessment among elderly with multiple chronic conditions. The project plans to incorporate mHealth behavior change strategies as part of its approach.

Role: Zhe He and Mia Lustria (Co-Investigators working with a team from the Institute of Successful Longevity)

Data Visualization and Game-Based Approaches for Educating At-Risk Young Adults About Non-Medical Prescription Opioid Use

FSU CCI Research Grant

2018-2019

The overarching goal of this project is to test the efficacy of three types of data visualization with various levels of interactivity (static, interactive and game-based) as potentially efficacious cost-effective and innovative approaches for educating young adults about opioid abuse and increasing their self-perceptions of risk.

Role: Mia Lustria (Co-Investigator working with a team from the School of Communication)

Strategic Planning and Next Steps

The Tech Core plans to continue to make improvements and updates to the Center website and web platforms. The vision is to create a functional website that can improve visibility of the Center and encourage collaborations and that can serve as a platform for recruiting potential study participants.

The Tech Core has also actively participated in the development of policies and procedures as they relate to the Center as a whole, developing methods for internal and external communications, public inquiries and requests, and virtual platforms for collaboration and information sharing.

The Tech Core also intends to seek out more opportunities for collaboration, particularly relating to the application of eHealth or mHealth technologies in translational behavioral research and interventions. These opportunities will involve collaborations with research projects, grant proposal submissions, and development of interactive media content for various stakeholder and community engagement.

Adolescent and Emerging Adult Health Equity Program



The Adolescent and Emerging Adult Health Equity Program focuses on developing and testing behavioral interventions to promote health equity among adolescents and emerging adults. The program includes several projects across the continuum of translation including early phase trials, clinical trials, effectiveness trials, and implementation trials. Studies have focused on improving health equity with behavioral interventions targeting the management of HIV, obesity, asthma, and diabetes among minority adolescents and young adults.

Colleagues & Collaborators



Sylvie Naar, PhD
Program Lead
Distinguished Endowed Professor
Director, CTBScience
Behavioral Sciences & Social Medicine
FSU College of Medicine
Sylvie.naar@med.fsu.edu

Program Personnel

Meardith Pooler, DrPH; Assistant in Research
Seyram Butame, PhD; Post-Doctoral Associate
Sara Green, MSW; Program Manager
Samantha Chahin, MPH; Program Coordinator
Avery George, Youth Outreach Coordinator

Samantha Nagy, Data Analyst
Zachary Monaco, Data Manager
Aiwen Xing, Graduate Assistant, Biostatistics
Taylor King, Undergraduate Student

External Collaborations*

Big Bend Cares
 University of Florida
 OneFlorida Clinical Research Consortium

Florida A&M University
 Florida Department of Health

*Additional collaborations are included under program initiatives

FSU Department Collaborators

Florida Center for Interactive Media (FCIM)
 Florida Center for Reading Research (FCRR)
 College of Communication & Information

College of Social Work
 Florida Health Equity Research Institute
 Center for Behavioral Health Integration

Mentorship

Henna Budhwani, PhD
Assistant Professor, University of Alabama
K01 Mentor

Angela Jacques Tiura, PhD
Assistant Professor, Wayne State University
K01 Mentor

Seyram Butame, PhD
Postdoctoral Associate, CTBScience

Julia Sheffler, PhD
Research Faculty I, CTBScience

Program News and Updates

Adolescent & Emerging Adult Research Program Welcomes:

Meardith Pooler-Burgess, DrPH, Assistant in Research

Dr. Meardith Pooler-Burgess received her Doctorate in Public Health in December 2019 and was hired as Assistant in Research Faculty in Dr. Naar's Adolescent and Emerging Adult Health Equity Program. Dr. Pooler-Burgess brings years of experience working in the public health sector, and her research interests and experience include issues related to Health disparities research, Minority health, adolescent and women's health, Cervical cancer and HPV prevention, Community-based research and engagement. Dr. Pooler-Burgess will oversee multiple aspects of the Adolescent and Emerging Adult Research Program, including the Scale It Up – Florida initiative and Bioethics – Lost to Follow Up youth study (part of the Scale It Up U19 project). Dr. Pooler-Burgess will also oversee the program's efforts related to community engagement, recruitment, and collaborations.



Avery George, Youth Outreach Coordinator

Our Youth Outreach Coordinator works closely with CTBScience faculty/staff to ensure best practices and efforts to promote, inform, and sustain Sexual Gender Minorities (SGM) health in Tallahassee and other Florida communities. The youth outreach coordinator works closely with the Director of CTBScience, Dr. Sylvie Naar, and the center's Assistant in Research, Dr. Meardith Pooler-Burgess, to carry out and inform Florida communities about ongoing and planned efforts of the center. The coordinator also provides ongoing feedback on center efforts, assists with program development and management, and supports research activities at the center that reflect and address the current needs and issues of youth in Florida.

Housing youth living with HIV: A partnership with the Florida Department of Health

Stable housing is closely linked with HIV outcomes. Young people are at risk for poor HIV-related outcomes as demonstrated by the suboptimal youth HIV treatment cascade. Young people are less likely to use services, thus engaging and retaining youth living with HIV in housing programs is a significant concern. We propose a multicomponent, developmentally tailored, evidence-based strategy to find, engage and retain youth in available housing services in the State of Florida.



Concepts

Early Phase (T1) Transdisciplinary Translational Behavioral Science

Clinical research and training programs focused on the translation of basic behavioral and social science research into new interventions to improve health.

Community-Engaged Dissemination and Implementation Research

A thematic area focused on community-engaged dissemination and implementation research (CEDI) research involving dissemination or implementation of evidence-based health interventions within clinical or community-based settings. It relies on stakeholder input at each stage of the research process utilizing and addressing bioethical concerns using mixed methods designs and community/stakeholder advisory groups.

Adolescents and Young Adults Living with or at-risk for HIV

The translation of behavioral interventions for the prevention and treatment of HIV in adolescents and emerging adults, includes T1 translation (the development of new intervention), T2 translation (clinical trials), T3 translation (effectiveness trials) and T4 I translation (implementation trials).

Preventing Comorbidity in Minority Young Adults

A theme focused on health behaviors (e.g. physical activity, sleep, substance use, and nutrition) that consistently underlie multicomorbidity in young adults of color, describe stressors and their relationship to health behaviors, to assess family history of comorbidity, and to assess pragmatic health outcomes. This project will look at young adults between the ages of 18-29 who self-identify as Black, Latinx or mixed race and live in the North Florida area.

Program Initiatives

Scale It Up – Florida

Advancements in research and health care for adolescents and young adults are the result of youth-focused research initiatives. *Scale It Up (SIU) Florida* is a youth-focused, community-based research network consortium focused on HIV and other sexual health issues in adolescents and emerging adults (age 13-29) in Florida. SIU Florida addresses the translation of behavioral interventions for the prevention and treatment of HIV in adolescents and emerging adults.



SIU Florida aims to:

- Conduct innovative, state-of-the-art implementation science to end the youth HIV epidemic in Florida.
- Promote bi-directional community-engagement to address sexual health issues among vulnerable youth populations with outreach, research, education, and advocacy
- Establish state-wide partnerships & collaboration opportunities with youth stakeholders, community-based organizations, and county health departments in Florida

Efforts to date include an array of stakeholder engagement initiatives to expand the SIU Florida community and increase reach of youth populations throughout the state. In collaboration with Florida Department of Health (FDOH) and FDOH County Health Departments (CHDs), the SIU Florida seeks to conduct state-of-the-art implementation science to end the youth HIV epidemic in Florida.

- Engagement & Support from FDOH central office/Surgeon General office
- Outreach to HIV coordinators at Ending the HIV Epidemic CHDs
- Broward, Miami-Dade, Duval, Hillsborough, Orange, Palm Beach, Pinellas,
- Establishment of a Youth Advisory Council throughout Florida
- Collaboration with FDOH for Ending the HIV Epidemic requests for applications
- Adolescent Trials Network for HIV/AIDS Interventions: Scale It Up

Members

Led by Dr. Sylvie Naar, Scale It Up- Florida team is comprised of faculty advisors with experience conducting HIV research with youth nationally for many years, in addition to expertise in community engagement, public health, health policy, and social work.

Meardith Pooler- Burgess, DrPH

Scale It Up – Florida, Co-Lead

Isa Fernandez, PhD

Scale It Up – Florida, Scientific Advisory Council

Claudia Baquet, MD

Scale It Up – Florida, Scientific Advisory Council

Avery George

Scale It Up – Florida, Youth Outreach Coordinator

Simone Skeen, MS

Digital Cohort Consultant

Youth Advisory Council

The leadership of the FLASH Network views the Youth Advisory Council (YAC) as an important element of forging cohesive collaboration and engagement across research communities concerned with HIV prevention and treatment among youth. YAC members work with FLASH leadership to determine how

best to inform the communities about the planned research, engaging in discussions with local staff and community representatives in advance of implementation and disseminate FLASH findings to their perspective communities.

Scientific Advisory Committee

SIU Florida Scientific Advisory Committee provides guidance and direction on current and upcoming SIU Florida research projects and initiatives focused on HIV and other sexual health issues in adolescents and emerging adults (age 13-29) in Florida. This Scientific Advisory Committee is led by Dr. Sylvie Naar and comprised of expert faculty advisors with experience conducting HIV research with youth nationally for many years, in addition to expertise in community engagement, public health, health policy, HIV and health disparity research. As leaders in their respective fields, members play a key role in the support, evaluation, and enhancement of the scientific basis of SIU Florida projects. The committee also advises on SIU FL partnerships and collaborative efforts geared to the overall mission of SIU FL.

The Scientific committee meets quarterly to review, discuss and advise on current and upcoming research project objectives, study design and methods, recruitment, community-engagement and dissemination strategies. Up to two SIU Florida youth representatives, Youth outreach coordinator and YAC Chair, are also invited to attend the quarterly scientific committee meetings to share and provide youth stakeholder feedback on research projects.

The SIU Florida Scientific Advisory Committee is comprised of 14 members, representing Florida Department of Health and eight academic institutions, including Florida State University, Florida A&M University, University of Central Florida, University of Florida, Nova Southeastern University, University of Miami, University of Maryland, and University of Pennsylvania.

Healthy Choices – HIV



Healthy Choices is an evidence-informed intervention.¹⁻⁸ Adapted from Motivational Enhancement Therapy (MET), Healthy Choices is comprised of four 30-45 minute sessions that can be led by paraprofessional staff or other provider types to encourage antiretroviral treatment adherence and reductions in alcohol use and other substance use for youth living with HIV. Healthy Choices has also been shown to improve sexual risk behaviors and depression. The sessions are delivered over 3 months, typically

week 1, week 2, week 8 and week 12. Other target behaviors relevant to self-management may also be addressed. The intervention is based on Tailored Motivational Interviewing (TMI). Motivational Interviewing (MI) is “a collaborative conversation style for strengthening a person’s own motivation and commitment to change”. Motivational Interviewing conversational style may also be thought of as guiding a person to change, rather than directing them to follow change. Healthy Choices is based on TMI, MI tailored with communication science studies of HIV clinic interactions to address target behaviors for persons living with HIV.

Goals of Healthy Choices-HIV

- To improve adherence to antiretroviral treatment and alcohol use
- To address other health behaviors in persons living with HIV for which self-management is relevant, such as, retention in care, substance use and sexual activity
- To provide developmentally tailored strategies to engage young people

Target Population

The intervention has been particularly successful with young people living with HIV (ages 16- 24) but may be delivered to older adults.

Tailored Motivational Interviewing (TMI) - HIV

TMI-HIV is an evidence-informed intervention comprised of brief single sessions that can be led by peer-level staff to encourage engagement and retention in care for PLWH at the time of initial linkage or at re-entry into care. Medication adherence and other target behaviors relevant to self-management may also be addressed. The intervention is based on Motivational Interviewing (MI), “a collaborative conversation style for strengthening a person’s own motivation and commitment to change”. MI conversational style may also be thought of as guiding a person to change, rather than directing them to follow change. TMI is MI tailored to address target behaviors for persons living with HIV. Tailoring is based on communication studies of HIV clinic interactions. TMI can vary from a single brief encounter to multiple sessions based on client need and organizational context. Sessions in home-based or office settings can last 45 minutes to an hour, while sessions in medical clinics or street-outreach contexts may take 15 minutes or less.



Goals of TMI-HIV

- To improve engagement and retention in HIV care, as well as adherence to antiretroviral treatment
- To address other health behaviors in persons living with HIV for which self-management is relevant, such as substance use and sexual activity
- To provide developmentally tailored strategies to engage young people

Target Population

People living with HIV (PLWH). The intervention has been particularly successful with young men of color.

Ongoing Projects

Adolescent Trials Network for HIV/AIDS Interventions Scale It Up Program

National Institutes of Health; U19

2016 - 2021

Principal Investigator: Dr. Sylvie Naar

Participating Sites:

University of Miami

Wayne State University

Medical University of South Carolina

University of North Carolina

City University of New York - PRIDE

University of California - San Diego

University of Alabama at Birmingham

Oregon Health Sciences University

Education, Training, and Research

Nova Southeastern

St. Jude Children’s Research Hospital

Children’s Hospital of Philadelphia

Children’s Hospital of Los Angeles

University of South Florida

State University of New York

Children’s National Medical Center

Oregon Social Learning Center

University of Michigan

San Diego LGBTQ Community Center

Specific Aims: Scale it Up - specifically focuses on the development, evaluation and implementation of interventions that are effective for improving self-management in at-risk and HIV+ youth. Scale It Up has assembled research teams who will develop, test and bring to practice self-management interventions that positively impact the youth HIV prevention and care cascades. These goals will be achieved by:

1. Designing, conducting and evaluating self-management interventions, involving 500 youth, grounded in the 5-component Self-Management Model and expeditiously moving them into practice.
2. Developing, deploying and disseminating new methods for implementation and implementation analysis with a strong theoretical foundation (EPIS).

3. Engaging with the other funded U19s to identify additional opportunities to advance the fields of implementation science and self-management science.

Bioethics Working Group

Scale It Up: Effectiveness and Implementation Research

The mission of the bioethics working group is to develop evidence-based strategies to address unresolved ethical complexities in the recruitment, consent, enrollment, and retention of minor adolescents and emerging adults in biomedical and behavioral HIV research. Resolving these ethical complexities will advance a broad program of research designed to address evidence gaps in HIV prevention and treatment for minor adolescents and emerging adults. This working group focuses primarily on dissemination and meets monthly to ensure collaboration between workgroup members. The working group reports to the ATN and is funded through the Scale It Up (U19) project.

Improving engagement in self-monitoring of dietary intake and physical activity among overweight/obese racial and ethnic minority young adults

Investigators: *Sylvie Naar, PhD., Mia Liza Lustria, PhD., Inbal Nahum-Shani, PhD.,*

The Center for Translational Behavioral Science (CTBScience) in partnership with Dr. Nahum-Shani at the University of Michigan have been exploring ways to drive engagement with self-monitoring health apps (mHealth) through the use of an engagement wrapper (eWrapper). The goal of the eWrapper is to encourage the use of mHealth apps by enhancing self-monitoring data collection with game design elements and strategies.

Adolescent Medicine Trials Network for HIV/AIDS interventions (ATN) Coordinating Center

National Institutes of Health; University of North Carolina at Chapel Hill

2018 - 2020

Funding for participation in the Executive Committee of the ATN, lead of the Community-Engaged Dissemination and Implementation Research Working Group, and protocol lead of an electronic health records initiative.

Role: Principal Investigator

Comparing the effectiveness of two alcohol+adherence interventions for HIV+ youth

National Institutes of Health, National Institute on Alcohol Abuse and Alcoholism

2013 – 2020 (NCE)

The goal is to conduct a comparative effectiveness trial in real-world clinic settings to test an efficacious intervention designed to reduce alcohol use and improve medication adherence and HIV-related health outcomes among HIV-positive youth.

Role: Principal Investigator

Motivational Enhancement System for Adherence (MESA) in Youth Starting ART

National Institutes of Health; National Institute for Mental Health

2015 - 2020

The goal of this study is to test a brief, 2-session, computer-based motivational intervention to prevent adherence difficulties among youth newly recommended to begin ART.

Role: Co-Investigator

Transforming and Translating Discovery to Improve Health, KL2 Program Director

University of Florida CTSA, through National Institutes of Health

2019 - 2024

Created as a result of a National Institutes of Health Clinical and Translational Science Award, a partnership between FSU and the University of Florida, the FSU K Scholar Program is designed to create a community of postdocs, junior faculty, and mentors who work together to submit excellent K applications and set FSU's junior researchers on a path to independence.

Implementing and Evaluating an AI Agent for Automated Behavioral Counseling
Subaward from Michigan State University

Pending Projects

Integrating Big Data and Implementation Science to End the Youth HIV Epidemic: Testing a State-Wide Youth Learning Health System Plus Healthforce Training Intervention (Y-LHS+)

National Institutes of Health, R01

The goal of this proposal is to build on our extensive work in implementation science, improvement science, structural interventions and pragmatic continua outcomes within the Adolescent Trials Network for HIV/AIDS Interventions (ATN) and translate to community settings in a state-wide initiative for greatest public health impact. We will test implementation strategies to support data-driven continuous improvement, and roll-out a developmentally tailored, culturally competent, and stigma reducing behavior change communication program (TMI). We propose testing a statewide Y-LHS+ healthforce training intervention derived from our preliminary studies to target all providers along the youth prevention and treatment continua in Florida's seven EHE counties (70 agencies). In addition to surveillance data, we will collect: a) interviews and surveys from 154 staff (two per agency plus two public health officials per county); b) provider standard patient interactions (N=490; average 7 per agency); c) youth surveys (N=120). The primary aim is to test the individual and combined impacts of a Y-LHS and Healthforce Training in the 7 Florida EHE counties using a supplemental multiple stepped wedge design in a hybrid type 2 trial.

Role: Principal Investigator

Implementation and Comparative Effectiveness of Clinical Pathways to Integrate Prevention and Treatment Practices for OUD, IDU, and HIV among Rural Probationers and Parolees in Missouri

National Institutes of Health, U01

Increasing system penetration of evidence-based practices designed to improve the HIV/HCV and OUD/IDU prevention and treatment cascades among those supervised by the probation and parole (P&P) systems has the potential to reduce HIV/HCV transmission, overdose, morbidity/mortality, and disengagement from care. Our study will develop and disseminate a clinical pathway for integration of HIV/HCV and OUD/IDU services, compare two models of delivery of evidence-based practices (enhanced standard care versus mobile delivery) in 13 vulnerable rural counties in Missouri, and evaluate intervention exploration, preparation, implementation and sustainment (EPIS). We hypothesize that centralized mobile delivery will enhance penetration and improve critical client outcomes over and above usual care, which will provide valuable information for resource allocation, training, and policy within the P&P system.

Role: MPI

Collaboration with Carrie Pettus-Davis, PhD, MSW, and the FSU Institute for Justice Research and Development

Innovations in Big Data and Implementation Science to End the Youth HIV Epidemic in Florida

National Institutes of Health, Adolescent Trials Network (ATN) Supplement

Addressing the following ATN EHE goals:

- Implementation science research to address one or more of the four pillars of the EHE: *addresses diagnose, treat, prevent and rapidly respond*
- Expansion of ongoing ATN efforts into EHE geographic areas to reach underserved youth populations: *focuses on Orange County, Florida*
- Build connections with health departments and other community-based partners in EHE geographic areas: *proposal developed in collaboration with Florida Department of Health and includes community-based partners in Orange County*

Role: Principal Investigator

Early Phase Translation of Basic Science into Cancer-related Behavioral Treatment

National Institutes of Health, R21

Behavioral interventions to improve cancer prevention and treatment hold promise for the promotion of health and the reduction of healthcare costs. The purpose of this course is to improve the strength of behavioral treatments by training 100 investigators from the behavioral and social sciences in the range of methodologies that can be used to develop and refine interventions their early phases of development. Ongoing training, evaluation, and dissemination will promote both innovation and reach and ultimately translation of effective treatments into clinical practice for public health impact.

Role: Principal Investigator

Improving engagement in self-monitoring of dietary intake and physical activity among overweight/obese racial and ethnic minority young adults

National Institutes of Health; R21

2019 - 2022

Improving engagement in self-monitoring of dietary intake and physical activity among overweight/obese racial and ethnic minority young adults.

Role: Co-Investigator

Strategic Planning and Next Steps

The Adolescent and Emerging Adult Health Equity research program seeks continual growth in early phase translation of basic behavioral and social sciences into new interventions and later phase translation of evidence-based behavioral interventions into public health strategies. The goal is to improve health equity in vulnerable adolescents and young adults with ongoing community engagement. The program plans to develop a community-engaged, public-academic research network focused on sexual health in these developmental periods across the state of Florida and leverage such a network for new projects and proposals. The program will also play a key role in implementation science with young people in the national End the HIV Epidemic Initiative.

Key Initiatives for 2020 – 2021

- Development of a Florida wide consortium of providers, patients, and other stakeholders to advance translation behavioral research and innovation in the field of HIV, particularly with adolescents and young adults
- Leverage the existing relationship with the Florida Department of Health toward implementing Tailored Motivational Interviewing strategies to improve access to housing for adolescents and young adults experiencing homelessness (as part of the federal HOPWA program)
- Development of a variety of participant registries to address multi-comorbidities among underserved, underinsured, and at-risk populations in the state of Florida.

***i*RACE** Intervention Research Advancing Care Equity



The goal of our intervention research is to improve patient care among medically underserved populations through evidence-based behavioral interventions in the context of learning healthcare systems. Guided by a dissemination and implementation science framework, we aim to understand and intervene on factors that influence health outcomes among patients coping with substance misuse, depression, HIV infection, and other chronic conditions. We investigate the influence of individual, social, and structural barriers using an interdisciplinary team approach.

iRACE Colleagues and Collaborators



Nicole Ennis, PhD
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Medicine, FSU College of Medicine

Program Personnel

Katie Kloss, BA - Research Assistant
Abbey Folsom, MS, CNS, LDN – Research Assistant

FSU Collaborators

Claudia Blackburn, MPH, RN, CPM
Assistant Professor, College of Medicine
Health Officer, Florida Department of Health

Iván Balán, PhD
Professor, College of Medicine

Sylvie Naar, PhD
*Distinguished Endowed Professor, College of
Medicine*

External Collaborators

Columbia County Health Department
Lake City, FL

Vaughn Bryant, PhD
University of Florida

Leon County Health Department
Tallahassee, FL

Shantrel Canidate, PhD
University of Florida

CAN Community Health
Jacksonville

Eugene Dunne, PhD
Brown University

Sherrilene Classen, PhD
University of Florida

Linda Cottler, PhD
University of Florida

Robert Cook, MD, MPH
University of Florida

Natalie Chichetto, PhD, MSW
Vanderbilt University

Jennifer Janelle, MD
University of Florida

Nabila El-Bassel, PhD, DSW
Columbia University

Student Mentorship

Undergraduate Research Opportunity Program (UROP)

Brooke Mallett

Graduate Student Mentorship

Zachary Mannes, PhD
Yale University

Erin Ferguson, MS
University of Florida

Victoria Rodriguez, PhD
University of Florida

Erin Trifilio, PhD
University of Florida

Adaixa Padron, MS
University of Florida

Rachel Sweenie, MS
University of Florida

Program News and Updates

New Program Initiatives

iRACE Lab Launches Partnership with CAN Community Health

CAN Community Health is a not-for-profit organization dedicated to the treatment, care, and continual wellness of people living with HIV. CAN has been serving the needs of the HIV community in Florida since 1992. Their mission is to inspire and contribute to the health and well-being of those affected by HIV, Hepatitis C, and other sexually transmitted diseases by providing the best care through outreach, integrated clinical practice, advocacy, education, and research. CAN Community Health provides HIV specialty care by board-certified Infectious Disease physicians. CAN Community Health and the iRACE Lab recognize that the substance use science-to-service gap needs to close for people living with HIV. Through this partnership, CAN and iRACE will explore best practices for bringing evidence-based behavioral interventions to people living with HIV using a co-located model. The implementation of evidence-based interventions within specialized HIV care settings is ideal given that integrated care has been shown to optimize health outcomes.



Dr. Ennis Becomes Chair of the CTBScience Community Advisory Council (CTBS-CAC)

The CTBScience Community Advisory Council (CTBS-CAC) is a group of area providers, professionals, and community members who have come together to enhance CTBScience's mission toward effective and valuable community engagement. Their engagement with CTBScience is founded in a collaborative partnership, wherein members attend CTBS-CAC tri-annual meetings in order to advise and assist with community engagement and outreach by reviewing community engaged program and research initiatives, as well as extending CTBScience's reach in the communities we seek to serve.

Invited Talks

Interactive Internet-Based Training for Community Health Workers.

HIV Center for Clinical and Behavioral Studies; New York, NY (virtual)

March 24, 2020

Our Community, Our Health (COH) Interactive Virtual Town Hall on The Future of HIV Treatments & Care

Moderated by Dr. Nicole Ennis

May 27, 2020 via Livestream

Our Community, Our Health (COH) is a town hall meeting that facilitates a two-way conversation between the community and researchers. This event is intended as a platform for sharing ideas about

health-research priorities, communicating research findings to the community, and integrating ideas for research from multiple stakeholders across the country. Dr. Ennis served as the moderator of the panel of health professionals, during an interactive town hall event focused on the future directions of HIV treatments, clinical care interventions, and preventative community health programs. The panel included representatives from the University of Florida Division of Infectious Diseases and Global Medicine and College of Nursing. We also welcome perspectives from the Florida State University Center for Translational Behavioral Science and College of Nursing.

American Psychological Association CEC Fall Meeting 2019

As a member of the American Psychological Association Continuing Education Committee, Dr. Ennis and her fellow committee members worked toward identifying, promoting, implementing, and evaluating research, development and innovations in continuing professional education. This service to the field affects all psychologists as post graduate learning/skill development is where majority of career development happens. Further, it is imperative that psychologists stay current on the science of the field to achieve the highest levels of success. This committee service is a 3-year term and meets every spring and fall. Dr. Ennis will continue this service through the Fall of 2020.

Program Initiatives

Ongoing Projects

Screening, Brief Intervention, Referral to Treatment with Peer Navigator (SBIRT-PN)

Principal Investigator: Nicole Ennis, PhD

National Institute of Drug Abuse, K23

2016 – 2021

This project is funded by the National Institute of Drug Abuse (K23DA039769) and uses the Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM) framework to pilot and evaluate SBIRT-PN in HIV primary care clinic settings. This research is relevant to public health because it addresses the fact that many effective interventions do not translate into meaningful outcomes that improve patient care. Both the National Institute on Drug Abuse (NIDA) and the Office of AIDS Research (OAR) have prioritized research that advances our knowledge of how interventions can be effective in real-world settings, this work contributes to that knowledge base.

Specific Aims: Although screening, brief intervention, and referral to treatment (SBIRT) is an evidence-based technique that has been shown in some health care settings to reduce substance use, evidence for efficacy of SBIRT in HIV care settings is limited. HIV+ individuals evidence a high prevalence of substance use but access to intervention is limited. Substance use increases risk for poor treatment adherence and is a recognized co-factor of HIV transmission. Therefore, there is a need to develop treatment options that are effective for HIV+ individuals. The implementation of these interventions within specialized HIV care settings is ideal as integrated care has been shown to optimize health outcomes. The primary study outcomes are feasibility and acceptability of the SBIRT model. Secondary outcomes include engagement in substance use treatment and reduction in alcohol and drug use. Individual reductions in alcohol and drug use can have significant effects on public health and safety when observed over a large population at risk for substance use problems. With wider dissemination statewide, a relatively low-cost intervention such as SBIRT could offer demonstrated benefits in this population.

HIV/Syphilis Co-infection Project (H.S.C.P.)

Principal Investigator: Nicole Ennis, PhD

The long-range goal of the current project is to evaluate interventions that decrease the burden of syphilis co-infection among men who have sex with men. This work is in partnership with the Leon County Department of Health.

Medical Marijuana and Driving Outcomes

Principal Investigator: Nicole Ennis, PhD

The long-range goal of this work is to improve our understanding of the consequences of medical marijuana use in later life. A study that examines older adults' pre-exposure to medical marijuana and systematically tracks medical marijuana initiation, dosage, and psychomotor functioning is needed. Thus, the current study will test medical marijuana use as the exposure variable in adults age 50 and older and simulated driving performance (i.e. errors in response time, attention, and executive functioning tasks that predict on-road performance) as the primary outcome. Medical marijuana use is increasing among adults 50 and older. Both the National Institute on Drug Abuse (NIDA) and the National Institute on Aging (NIA) have identified the need to understand how habitual use of medical marijuana affects psychomotor functioning in real-world tasks such as driving. The current proposal will address this question by examining medical marijuana use in the context of driving performance among adults 50 and older.

Proposals Submitted

Interactive Internet-Based Motivational Interviewing Training for Community Health Workers to Maximize Impact on the HIV Care Continuum

National Institutes of Health, R01

Role: MPI

Increasing Healthcare Access for Underserved Patients During COVID-19 and Beyond: A Comparative Effectiveness Study of Digital Access Health Pods

Patient-Centered Outcomes Research Institute (PCORI) Small Grant 2.5 million

Role: MPI

Testing Implementation of SBIRT-PN in the CAN Community Health System

National Institutes of Health, R01

Role: Principal Investigator

Strategic Planning and Next Steps

Our program is currently working to develop several projects addressing the needs of people living with HIV throughout the state of Florida in collaboration with our community partner, CAN Community Health. Our academic-community partnership leverages their community services and our academic resources to develop best practices to improve the continuum of care for those living with HIV/AIDS.

We have established the Florida Medical Cannabis Consortium (FMCC) to develop the infrastructure needed to conduct studies on the therapeutic benefits of medical marijuana for patients coping with chronic/life-limiting illnesses. FMCC's mission is to develop, support, and promote research, education, and best clinical practices for medical cannabis use in Florida using an interdisciplinary approach.

GOALS

- Connect the patient experience to research
- Data-driven policy implementation
Create an interdisciplinary team (researchers, physicians, scientists, pharmacists, etc.) in the state of Florida to develop the evidence base in our state.

STEP

Sleeping Trauma and Emotional Processing



The STEP (Sleep, Trauma, and Emotional Processes) program, led by Dr. Scott M. Pickett, examines the influence and interaction of vulnerabilities, such as maladaptive emotion regulation and sleep disruption, on negative mental and physical health outcomes. Primary vulnerabilities of interest are those associated with psychological trauma. Current projects utilize a variety of research designs from basic social and biomedical science to clinical trials.

STEP Program Faculty, Staff, and Research Collaborations



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Program Personnel

Samantha Nagy, Project Coordinator
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FSU Collaborators

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Choogon Lee
College of Medicine, Biomedical Sciences

External Collaborators

Andrea Kozak, PhD
Oakland University

Student Mentorship

Undergraduate Research Opportunity Program (UROP)

Ashley Garcell, Project MSTER, Interdisciplinary Medical Sciences: Clinical Professions Major
Madison Hedge, Project BioSleep, Behavioral Neuroscience Major
Robel Mechal, Project BioSleep, Biology Major
Jonathan Mesa, Project BioSleep, Biology Major
Juliette Sosa, Project Biosleep, Biology Major with minors in Chemistry and Psychology

Med Student Fellow

Robert Larsen, Project PASST

EMBARK Medical Student Research Mentor

Joshua Hohlbein, Oakland University William Beaumont School of Medicine
Alexandra Hospodar, Oakland University William Beaumont School of Medicine
Oluwatoyin Ibrinke, Oakland University William Beaumont School of Medicine
Ghania Moeen, Oakland University William Beaumont School of Medicine
Mustafa Polet, Oakland University William Beaumont School of Medicine
Alana Smith, Oakland University William Beaumont School of Medicine

Program News and Updates

New Program Initiatives

Project SOLAR

In collaboration with Whole Child Leon, Pediatric Behavioral Health Integration Program, we are implementing the Skills for Life Adjustment and Resiliency (SOLAR) program a community-based intervention, delivered by non-mental health community members, to reduce mental health symptoms and build resiliency and well-being in a hurricane affected community.

Project BioSleep

In a pilot feasibility study, we are examining the relationships between short sleep duration, stress, traumatic stress and biobehavioral markers of stress, metabolic, and immune functioning.

Invited Talks

Protective Factors for Coping with COVID-19

Florida State University College of Medicine Wellness Committee Special Presentation; Zoom Webinar
Spring 2020

Invited by Equality Florida to Provide Testimony Supporting Conversion Therapy Ban

Tallahassee City Council Meeting
Fall 2019

Program Initiatives

New Funded Awards

Using The Arts As A Proactive Mental Health Strategy For Generation Z

National Endowment for the Arts

Project Dates: July 1, 2020 – June 30, 2021

A randomized controlled trial will be conducted to determine the unique role of the arts as a proactive mental health strategy for college students in Generation Z. Arts-only, mindfulness-only, and arts-based mindfulness interventions as they compare to a nonintervention control group. These interventions will be delivered using a minimal contact, web-based approach. Psychological and physiological outcomes will be measured to determine if arts-related interventions activate unique and distinguishable mechanisms

of change compared to the mindfulness-only intervention and non-intervention control groups. In addition, protective effects will be assessed based on student participants' response to an acute academic stress simulation. Qualitative data in the form of transcribed exit interviews will be analyzed to characterize the unique needs of Generation Z students, along with level of engagement, intervention acceptance and satisfaction.

Role: Co-Principal Investigator

All-inclusive Hurricane Resilience to Bridge the Resilience Divide for Special Needs Populations Living in Rural Communities

Florida State University, Translational Health Research Seed Grant Rural Health/Panhandle Disaster Response Initiative

A gap between urban and rural hurricane resilience became more apparent after Hurricane Michael hit the Florida Panhandle. Response and recovery processes that had worked for large Florida cities like Miami were not effective in the rural areas most impacted by Michael. Likewise, within rural communities, significant differential vulnerabilities exist between the general population from those groups with special, unique and complex needs: low-income, homeless, elderly, minorities, and those that have serious physical or mental illnesses or disabilities. In the rural Panhandle, there are barriers to recovery categorized by the lack of governmental capacity to manage across functions, coordinate with nongovernmental service providers, and provide adequate resources for the needs of a diverse community. In order to address these "resilience divides," there is a need to better understand the factors that foster and support the efficacy of all-inclusive and equitable hurricane resilience for varying vulnerable population segments, and probe the underlying causes of disaster vulnerability in rural communities. This can be achieved by implementing living laboratories in real-life rural communities and settings, grounded in scientific exploration of the complex and nonlinear interactions among systems and through of the co-production of solutions with community leaders, residents, government, industry, and researchers.

Role: Co-Principal Investigator

Demonstrating the Feasibility and Effectiveness of The Skills fOr Life Adjustment and Resilience (SOLAR) Program in an Underserved, Low-Resource Hurricane Affected Region of the Florida Panhandle

Planning Grant; FSU Council on Research and Creativity

Project SOLAR focuses on the implementation of a community-based intervention to develop skills for resiliency and adjustment post-disaster. In partnership with public librarians in the Florida panhandle region affected by the events of Hurricane Michael in October 2018, this project will focus on assisting this underserved, low resource, and rural community by implementing the Skills fOr Life Adjustment and Resilience (SOLAR) program. This skills-based intervention will be delivered by public librarians working in affected communities.

Role: Principal Investigator

Neuroendocrine Substrates of Dysregulated Sleep and Mood

Florida State University College of Medicine, Department of Biomedical Sciences Award

Habitual short sleep and disturbed sleep are associated with dysregulated neuroendocrine and inflammatory functioning. Specifically, alterations in ghrelin, leptin, glucagon-like peptide-1 (GLP-1), interleukin 6 (IL-6), tumor necrosis factor alpha (TNF- α), cortisol, and adrenocorticotrophic hormone (ACTH) have all been associated with habitual short sleep and disturbed sleep. Altered secretion and/or biological responses to these molecules have also been observed in patients suffering from mood and other neuropsychiatric disorders. Moreover, these neuroendocrine factors also contribute to weight gain, neurometabolic functions, and obesity. This pilot proposal will leverage the interests and expertise of COM faculty members Gregg Stanwood (BMS), Scott Pickett (CTBS & BSSM), and James Olcese (BMS) and

allow them to initiate a translational research project focused on the neuroendocrine substrates of dysregulated sleep patterns and mood dysregulation.

Role: Co-Principal Investigator

The Development of a Sleep Laboratory to Increase Collaboration and Research Funding through the Acquisition of Sleep Assessment Equipment

Equipment and Infrastructure Enhancement Grant; FSU Council on Research and Creativity

Dr. Scott Pickett was awarded the Equipment and Infrastructure Enhancement Grant (EIEG) from the FSU Council on Research and Creativity for his proposal, "The Development of a Sleep Laboratory to Increase Collaboration and Research Funding through the Acquisition of Sleep Assessment Equipment." This award will allow Dr. Pickett's STEP Research Program to equip existing laboratory space with the necessary equipment and supplies to increase the ability of the CTBS to conduct research across each phase of the translational science spectrum, from basic behavioral research to patient and community-oriented implementation research, and to increase collaborations through the development of the only sleep laboratory on FSU's campus.

Role: Principal Investigator

Proposals Submitted

Counting Steps to Rural Health

National Institutes of Health, R01

Role: Co-Investigator

Rural Resiliency Hubs: A Planning Approach to Addressing the Resiliency Divide

National Science Foundation

Role: Co-Principal Investigator

SCC-CIVIC-PG Track B: A Collaborative, Mixed-Methods Approach to Designing Inclusive Resilience Hubs for Underserved Communities

National Science Foundation

Role: Co-Investigator

Prenatal and Early Life Antecedents of Personality: An Intergenerational Lifespan Approach

National Institutes of Health, R01 Administrative Supplement

Role: Co-Investigator

The Mi-Heart Project: Assessing and Mindfully Reducing Cardiometabolic Risk in a High Poverty, Underserved Community

American Heart Association, Letter of Intent

Responding to Public Librarians' and Community Mental Health Needs After Natural Disasters

Institute for Museum and Library Sciences, Letter of Intent

Identification of Vulnerable Communities and Creation of a Community Mental Health Taskforce

FSU Collaborative Collision Award

Examining the shared neurobiological mechanisms related to sleep disruption and pain following a brief, online mindfulness-based intervention

National Institutes of Health, R21

Completed Projects

Project M-STER

The purpose of this research project was to examine the impact of a natural disaster in adults 18 years or older who had been affected by the events of Hurricane Michael. Community experiences and needs, sleep disturbance, posttraumatic stress symptoms, and other psychosocial functioning measures were studied. Findings from this study will be analyzed and used to inform treatments that may be used to reduce distress in this population (see Project SOLAR).

Ongoing Projects

Examination of Habitual Sleep Trajectories across the First Two Years of College: Relation to Weight Gain Risk Behaviors and Outcomes

National Institutes of Health; National Heart, Lung, Blood Institute Academic Research Enhancement Award (Parent R15)

2016 - 2020

A longitudinal study examining sleep trajectories and obesity risk outcomes among college students in the first two years of college.

Role: Co-Investigator (Principal Investigator: Andrea Kozak)

Strategic Planning and Next Steps

With the multitude of newly funded research projects and initiatives that Dr. Scott Pickett has received, the 2020-2021 year will focus on the implementation and sustainment of these endeavors, toward acquiring necessary pilot data and preliminary findings to then turn into larger external grant applications.

With Dr. Pickett and his team's emphasis on community focused translational behavioral science, the program hopes to not only build a foundation for the continued success of the STEP lab, but also toward making positive and direct impacts on community outcomes.

Much to this end, the program has made significant strides toward establishing meaningful collaborations to not only enhance ongoing research initiatives, but also to develop center-wide recruitment tools, engage in center-wide programs aimed at engagement, dissemination, and outreach, and toward student engagement in research. These collaborations will be expanded in the 2020-21 year.

CHASE

Community Health and Social Epidemiology



Dr. Tyra Dark created the Community Health and Social Epidemiology (CHASE) program, housed within the Center for Translational Behavioral Science, to investigate the impact of social conditions on community health. Social epidemiology assumes that the distribution of advantages and disadvantages in a society reflects the distribution of health and disease. As a social epidemiologist, Dr. Dark’s research has focused on the unique health care needs and health economics of populations with complex chronic conditions (e.g., cardiometabolic syndrome in older adults and HIV/AIDS in young adults) and comorbid mental illness, and the role of race/ethnicity on delivery of care.

The CHASE program focuses on identifying how care is delivered to this population to uncover potential contributors of racial/ethnic disparities that can inform future policy or other cost-effective health care delivery interventions to improve outcomes and reduce observed disparities.

CHASE Colleagues & Collaborators



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External Collaborators

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Kit Simpson, PhD
Medical University of South Carolina

Amy Pennar, PhD
Wayne State University

Student Mentorship

Undergraduate Research Opportunity Program (UROP)

Anna Caballero

Depression and Anxiety's Independent Effect on Hypertension and Hyperlipidemia.

Carice Joseph

Does depression increase the risk for coronary heart disease?

Bridge to Clinical Medicine Program

Gabrielle Sehres, MS, MD Candidate, Class of 2023

Evaluating the Co-occurrence of Cardiometabolic Syndrome and Mental Illness.

Concepts

Positive Deviance Model:

The “Positive Deviance” approach seeks to identify factors that enable some members of the community (the “positive deviants”) to find better solutions to pervasive problems than their neighbors who have access to the same resources? With the goal of creating healthier, more equitable communities, CHASE embraces the positive deviance approach to identify and characterize groups that have more successful disease management, better health outcomes and related health care expenditures despite having higher risk profiles.

Health Services Research Focus:

Cost-effective behavioral treatments exist for pervasive risk factors; however, many of these treatments are not readily accessible to populations in most need. Intensive behavioral treatments and an evaluation of the cost effectiveness of these treatments are needed to prevent adverse health outcomes and progression to more expensive treatments or hospitalization.

Resource Distribution:

To facilitate the impact of this work directly into the community, future CHASE endeavors will facilitate community-based conversations which will inform interventions aimed at promoting successful disease management and healthcare delivery to vulnerable populations with co-morbid chronic conditions thus lowering overall healthcare expenditures. The CHASE program seeks to identify community health concerns.

Program News and Updates

Dr. Tyra Dark Appointed to the Florida State University President’s Council on Diversity and Inclusion

The President’s Council on Diversity and Inclusion is a standing body of faculty and staff throughout the university that work to ensure that FSU creates and maintains a diverse, inclusive, and equitable campus for all of our faculty, staff, students, and the communities in which we live and learn. The Council is led by a Steering Committee made up of members of the President’s Executive team. The Steering Committee provides guidance to the work of the larger Council and reviews proposals and projects developed by the workgroups. The Council’s primary charge is to advance initiatives that will allow the university to meet the goals outlined in the Strategic Plan that was approved by the Board of Trustees in October 2017.

Program Initiatives

Influence of Social Determinants on cognitive and cardiovascular outcomes among populations with comorbid Cardiometabolic Syndrome (CMetS) and anxiety project.

African Americans are more likely to live in areas where social determinants have negative consequences on health and as a result are disproportionately vulnerable to both cardiometabolic syndrome (CMetS)

and mental health disorders. Successful disease management strategies must be implemented to mitigate these disparities, and optimal treatment must address aspects of both CMetS and mental health disorders. For African American patients who often have limited access to medical care and culturally appropriate mental health services, a comorbid mental health condition can further exacerbate chronic conditions and widen racial disparities in health outcomes. CMetS and anxiety both confer a significant public health challenge, yet little is known about the progression of CMetS risk factors in individuals suffering from anxiety, and even less is known about the role of social determinants in this progression. Integrated care approaches that address the unique challenges and problems of people with both anxiety and CMetS in a culturally relevant manner will likely reduce adverse health outcomes and increase effective disease management. The long-term goal of this research is to better understand how social determinants contribute to the progression of CMetS indicators and cognitive function for individuals also suffering from anxiety.

Ongoing Projects

Adolescent Medicine Trials Network for HIV/AIDS Interventions (ATN) Coordinating Center – Modeling National Institutes of Health/University of North Carolina Subcontract
2020–2021

The Modeling Core utilizes a detailed health policy model of HIV in adolescents and young adults, using a novel approach to microsimulation modeling of HIV disease progression, patterns of care, and treatment outcomes among youth living with HIV in the US.

Role: Principal Investigator

Scale It Up: Cascade Monitoring

National Institute of Child Health and Human Development (PI: S Naar)

2016-2021

The purpose of this project is to examine the trends in treatment cascades in order to guide the new protocol development and to facilitate community engagement.

Role: Co-Investigator

Identifying the influence of genetic and social epigenomic factors on long-term comorbid outcomes on depression, and cardiovascular disease

FSU Health Big Data Collaboration

1/10/2020 – 12/31/2022

Our short-term goals for this project are to evaluate the cumulative impact of psychological factors (symptoms of stress, depression, anxiety) (1) on DNAm, and (2) blood pressure by linking clinical, social, and omics data sets. The rationale for this proposal is that, once knowledge is gained on the cumulative impact of symptoms of stress, depression, and DNAm on BP among minority populations, unique polyepigenetic biomarkers, and risk profiles for mental health and cardiovascular can be developed leading to new strategies for improving overall health.

Role: Co-Principal Investigator

Completed Projects

Evaluation of Florida’s Managed Medical Assistance (MMA) Program Demonstration

Florida Agency for Healthcare Administration (PI: J Harman)

2016-2019

The purpose of this project is complete an independent assessment of the MMA program. The goal of the evaluation projects is to provide an unbiased program evaluation that describes and analyzes recipient, service and program characteristics.

Role: Co-Investigator

**Adolescent Medicine Trials Network for HIV/AIDS Interventions (ATN) Coordinating Center – Modeling
National Institutes of Health/University of North Carolina Subcontract
2019 – 2020**

The Modeling Core utilizes a detailed health policy model of HIV in adolescents and young adults, using a novel approach to microsimulation modeling of HIV disease progression, patterns of care, and treatment outcomes among youth living with HIV in the US.

Role: Principal Investigator

Proposals Submitted

Cognitive and cardiovascular outcomes among populations with comorbid Cardiometabolic Syndrome (Cmets) and anxiety

National Institutes of Health, R21

Role: Principal Investigator

Strategic Planning and Next Steps

The CHASE program is planning next steps related to continuing community research and engagement, furthering contract and grant funding, and adding support positions. The program will hire a part-time community research assistant to assist with community focused research initiatives, as well as a central lab research assistant, and two or more Direct Independent Study (DIS) students.

K01 Mentored Research Scientist Development Award

Exploring and planning implementation strategies for integrating comorbid disease management in the community setting for underserved minority populations using mixed methods.

Planned October, 12th 2020 submission, NHLBI

Dark, T., Naar, S., Rust, G., & Simpson, K. (2020).

Study Objective: This K01 project will utilize the Exploration, Preparation, Implementation, Sustainment (EPIS) framework to understand the inner and outer contextual factors that affect scale up of treatments for comorbid mental health problems in cardiometabolic syndrome (CMetS) individuals and to develop strategies for adoption of proven, effective interventions within underserved minority populations. This K01 will address the following innovative research areas supported by the National Health, Lung and Blood Institute: (1) Epidemiological research that elucidates the mechanisms, etiology, pathogenesis, prevention, diagnosis and treatment of heart, lung, and blood diseases and sleep disorders and (2) Implementation (T4 translation) research that addresses strategies for sustained adoption of proven, effective interventions in communities, health systems, clinicians, patients and families for heart, lung, and blood diseases and sleep disorders. Specifically, we intend to connect the dots [close the gap] between the epidemiologic research that seeks to understand the complex drivers and mechanisms of disparities in outcomes related to comorbid cardiometabolic and mental health conditions and the interventional implementation science that will partner with communities to actually move the needle on reducing or eliminating these outcome disparities.

Integrative Science for Healthy Aging



The Integrative Science for Healthy Aging Program, led by Dr. Julia Sheffler, broadly involves the development and assessment of behavioral interventions for physical, mental, and neurocognitive health in older adults. We are especially interested in the interaction of biological, psychological, and social lifespan processes that influence functioning in older age. Through understanding these processes, this program aims to develop psychological and behavioral approaches to improve adherence and the long-term success of health behavior interventions for older adults. Currently, the lab is building a focus on pragmatic trials and use of electronic health records to improve the translation of promising interventions to clinical settings.

ISHA Program Faculty, Staff, and Research Collaborations



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Directed Independent Study (DIS)

Emily Capote

Celina Meyer

Taylor King

Hollyn Saliga

Graduate Student Mentorship

Melissa Meynadasy

Lauren Irwin

Program News and Updates

Dr. Julia Sheffler earned her **State of Florida License in Psychology** and is now an actively licensed psychologist. Dr. Sheffler plans to dedicate time toward providing therapy services with the **FSU BehavioralHealth™ at Apalachee Center** in the Fall of 2020.

Dr. Sheffler also joined the **American Psychological Association (APA) Division 20 leadership council for the Coping, Resilience, and Successful Aging special interest group**. APA's Div. 20 (Adult Development and Aging) strives to advance the study of psychological development and change throughout the adult years.

Dr. Sheffler was nominated for the Florida State University **Inclusive Teaching and Mentoring Award** for 2020. This award honors faculty who teach courses in which the learning environment is explicitly designed to be inclusive so that all students can flourish.

Celina Meyer and Emily Capote, two of Dr. Sheffler's undergraduate Mentees and current research assistants in the ISHA lab, was awarded the **FSU IDEA Grant** for their undergraduate honors thesis projects. The project is designed to assess the effects of childhood adversity on later emotion regulation and executive functioning in adulthood using EEG and neuropsychological assessments.

Program Initiatives

New Funded & Ongoing Projects

The Development of a Sleep Laboratory to Increase Collaboration and Research Funding through the Acquisition of Sleep Assessment Equipment

Equipment and Infrastructure Enhancement Grant; FSU Council on Research and Creativity

Dr. Sheffler served as a Co-Principal Investigator with Dr. Scott Pickett on the awarded Equipment and Infrastructure Enhancement Grant (EIEG) from the FSU Council on Research and Creativity for their proposal, "The Development of a Sleep Laboratory to Increase Collaboration and Research Funding through the Acquisition of Sleep Assessment Equipment." This award will allow Dr. Sheffler's ISHA Research Program and Dr. Pickett's STEP Research Program to equip existing laboratory space with the necessary equipment and supplies to increase the ability of the CTBS to conduct research across each phase of the translational science spectrum, from basic behavioral research to patient and community-oriented implementation research, and to increase collaborations through the development of the only sleep laboratory on FSU's campus.

Role: Co-Principal Investigator

Early phase feasibility trial: Examining the effects of diet on genetic and psychosocial risks for Alzheimer's disease

FSU Team Science for Translational Research Seed Grant, funded by the FSU Office of Research

Dr. Sheffler served as the Primary investigator on this study designed to develop a behavioral intervention for older adults at-risk for developing Alzheimer's disease (AD). This intervention is designed to help older adults learn about and adhere to ketogenic nutrition, which is an emerging potential therapeutic for AD. This study involved bringing together an interdisciplinary team to develop and test the proof-of-concept for this intervention and study protocol. This proof-of-concept was successful in a diverse sample, as we demonstrated the flexibility and feasibility of the KNA program, even during the COVID-19 pandemic and found pre-post improvements in cognitive functioning and self-reported improvements in energy, sleep, and alertness.

Role: Principal Investigator

EEG P300 Amplitude and Latency in Relation to Risk for Alzheimer's Disease and the Impact of a Ketogenic Diet

FSU Institute for Successful Longevity Planning Grant

Dr. Sheffler and Dr. Hajcak served as co-PIs on this planning grant designed to enhance the assessment of the aforementioned nutrition adherence intervention through the use of neurophysiological assessment. This study focused on identifying neural correlates of MCI and AD in addition to examining potential effects of the dietary intervention on the P300 ERP. Use of ERPs may provide a more sensitive and unbiased assessment of cognitive functioning for use in future studies.

Role: Principal Investigator

Pending Support

Pragmatic trial of a Ketogenic Nutrition Adherence Program for Older Adults with Mild Cognitive Impairment

FSU K Scholar Multidisciplinary Program

2020 - 2021

This proposal builds on prior proof-of-concept studies to complete a pilot pragmatic trial of Dr. Sheffler's ketogenic nutrition adherence program through the FSU SeniorHealth clinic using a centralized telehealth approach. The proposed project would assess the program using electronic health records and the EPIS model to assess the program's feasibility and acceptability in a real-world setting. This application also includes additional career training to enhance Dr. Sheffler's research independence.

Role: Principal Investigator

Early Phase Translational Behavioral Research in Aging: Examining Outcomes Associated with a Ketogenic Diet Adherence Program for Individuals at Increased Risk for Alzheimer's Disease

National Institutes of Health, National Institute on Aging; K23 Resubmission

2021 – 2026

The goal of this project is to expand upon the currently funded feasibility trials in order to fully pilot test the effectiveness of the ketogenic diet adherence program for older adults at risk for Alzheimer's disease. This is a 5-year project that involves additional training of the PI.

Role: Principal Investigator

Prenatal and Early Life Antecedents of Personality: An Intergenerational Lifespan Approach

National Institutes of Health, R01 Supplement (*recommended for funding*)

This proposal is designed to: (1) extend the existing project to include a new, underrepresented population, rural older adults, (2) to further examine how personality, emotions, and stress may be unique in rural individuals, and (3) to assess how these psychological and social factors influence inflammation and neuropsychological functioning in rural middle-aged and older adults.

Role: Co-Investigator

Creatine supplementation for vascular and functional health in aging

National Institutes of Health, R01

The objective of this proposal is to study the effects of acute and chronic (5 days, 1 month and 6 months) creatine monohydrate supplementation, in comparison to placebo, on measures of macro- and micro-vasculature function, biomarkers of oxidative stress, physical function, and cognitive performance.

Role: Co-Investigator

Completed Projects

Is it possible to bolster resilience by increasing emotional regulation in later life? Examining the neural correlates of emotion regulation and resiliency among older adults

Florida State University, Institute for Successful Longevity.

This project examined the relationship between emotion regulation and resilience by 1) using electroencephalogram (EEG) to examine the neural correlates of emotion regulation in older adults, and determining if these neural correlates differentiate participants who score low, moderate, and high on measures of emotion regulation and resilience; 2) testing an intervention program designed to enhance emotion regulation in older adults; 3) determining if emotion regulation skills training leads to an increase in resiliency in older adults; and 4) determining if self-reported changes in emotion regulation skills (after intervention) are reflected in the EEG measures of the neural correlates of emotion regulation.

Role: Co-Investigator

Proposals Submitted

Promoting Rural Health and Research Engagement through Community Partnership and Collaboration

Florida State University, Translational Health Research Seed Grant Rural Health/Panhandle Disaster Response Initiative

Role: Co-Investigator

Stress-related Changes in Mitochondrial DNA Function as a Pathway to Late life depression and Cognitive Impairment in Black and Latinx Older Adults

Alzheimer's Association, Letter of Intent

Role: Co-Principal Investigator

Financial Exploitation of Older Adults in the Context of COVID-19

FSU Collaborative Collision Award

Role: Co-Investigator

MI-CBT Nutrition Program for People Living with Dementia and their Care Partners

National Institute on Aging, IMPACT Award Mechanism

Role: Principal Investigator

Strategic Planning and Next Steps

In the coming year, the primary goal of the program is to obtain NIH funding to increase the scale and reach of the current projects, and to add additional focus on pragmatic trials and recruitment of under-represented populations in research. Dr. Sheffler has resubmitted a patient-oriented K23 award to the NIA to expand the existing ketogenic nutrition adherence program and additional KL2 awards to expand the program as a pragmatic trial. Dr. Sheffler also plans to work toward an additional NIH R21 submission to examine other adherence interventions in older adults targeting stress and inflammation. The program currently has a full laboratory of students who are engaging in program research, assisting in Dr. Hajcak's EEG laboratory, and working at the center as a whole. Four of these students were involved in the UROP program, two students are paid research assistants, and the remaining were Directed Individual Study students. The program will work to continue funding at least one part-time research assistant in the coming year. Further, the program plans to boost recruitment of minority populations in research through community outreach and both internal collaborations at FSU and external community partnerships. At this stage, the Integrative Science for Healthy Aging Program is growing at an exciting pace, and we hope to continue our growth through NIH, foundation, and internally funded grants.

Affiliations & Acknowledgements

In addition to the transdisciplinary collaborations in research and dissemination, the center has established a diverse community of affiliated faculty members, community members, and community agencies. The following affiliated faculty members are invaluable to the center's research goals and community focused initiatives.

FSU Affiliated Faculty Members

College of Medicine

Jeff Harman, PhD

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Cynthia Vied, PhD

Research Faculty

Translational Science Laboratory

Jessica De Leon, PhD

Assistant Professor

Family Medicine and Rural Health

Gregg Stanwood, PhD

Associate Professor

Biomedical Sciences

George Rust, MD, MPH, FAAFP, FACPM

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Behavioral Sciences and Social Medicine

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Professor

Director of The Risk for Anxiety and Depression Lab

Pam Keel, PhD

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The Office of Clinical Research Advancement

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CTBScience Publications and Presentations 2019 – 2020

Adolescent and Emerging Adult Health Equity Program – Dr. Sylvie Naar

Books, Manuscripts & Publications

Assessing the Best Fit Implementation Model for Motivational Interviewing in Jamaica.

Budhwani H and Naar S.
Health Equity (In press)

Managing Outliers in Adolescent Food Frequency Questionnaire Data

Carcone AI, Lee M, Ko L, Kulik N, Ellis D & Naar S.
Journal of Nutrition Education and Behavior (In press)

Tailored Motivational Interviewing (TMI): Translating Basic Science in Skills Acquisition in a Behavioral Intervention to Improve Community Health Worker Motivational Interviewing Competence for Youth Living with HIV

Naar S, Pennar A, Wang B, Brogan Hartlieb K, & Fortenberry D.
Health Psychology (Under review)

Adolescent sexual minority males, relationship functioning, and condomless sex

Starks TJ, Dellucci TV, Lovejoy T, Robles G, Jimenez R, Cain D, Naar S & Feldstein Ewing S.
Journal of Adolescent Health (In press)

Comparative Effectiveness of Community vs Clinic Healthy Choices Motivational Intervention to Improve Health Behaviors Among Youth Living with HIV: A Randomized Trial

Naar S, Robles G, MacDonell K, Dinaj-Koci V, Simpson KN, Lam P, Parsons JT, Sizemore KM, & Starks TJ.
JAMA Open Network (2020)

Adolescent Trials Network (ATN)- Scale It up (SIU): TMI Project -Tailored Motivational Intervention (TMI) Effectiveness Trial in Multidisciplinary Adolescent HIV Care Settings: Implementation at an Adolescent HIV Clinical Site in Philadelphia.

Tanney MR, Desir KC, Lehman BM, Goldberg J, Todd L, & Naar S.
Journal of Adolescent Health, 66(2, Supplement), S124-125

Adolescent HIV Healthcare Providers' Competencies in Motivational Interviewing Using a Standard Patient Model of Fidelity Monitoring

MacDonell KK, Pennar AL, King L, Todd L, Martinez S & Naar S.
Aids and Behavior, 23:10, 2837-2839 (2019)

Provider Behaviors that Predict Motivational Statements in Adolescents and Young Adults with HIV: A Study of Clinical Communication Using the Motivational Interviewing Framework

Carcone AI, Naar S, Clark J, MacDonell K, & Zhang L.
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iRACE Program – Dr. Nicole Ennis

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STEP Program – Dr. Scott Pickett

Manuscripts

***A model of post-traumatic stress symptoms on binge eating through emotion regulation difficulties and emotional eating**

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Appetite

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A Model of Posttraumatic Stress Symptoms on Binge Eating through Emotion Regulation Difficulties and Emotional Eating in Women.

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CHASE Program – Dr. Tyra Dark

Publications

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Presentations

Using electronic health records (EHR) to measure youth treatment cascade improvements in hybrid implementation trials

Presentation at ATN Adolescent Medicine Trials Network for HIV/AIDS Intervention, ATN Adolescent Medicine Trials Network for HIV/AIDS Intervention, Washington DC. (National)

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Integrative Science for Health Aging – Dr. Julia Sheffler

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Examination of the differential effects of psychopathology on cardiometabolic syndrome in a nationally representative population.

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A longitudinal analysis of the relationships between depression, fatigue, and pain: The influence of a collaborative care intervention.

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Examination of the Diagnostic Utility of Subjective Memory Complaints

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Presentations

Multi-sample assessment of stress reactivity as a mediator between childhood adversity and mid-to late-life Outcomes

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Adult Stress as a Mediator between childhood adversity and late-life outcomes.

Symposium presentation at the Emotions International Conference, Tilburg, Netherlands (2019)