CLEMSON UNIVERSITY

SCHOOL OF HEALTH RESEARCH

Fall Information Exchange

October 26, 2018
• 8:00 – 8:10 Welcome and Introductions
• 8:10 – 8:20 Embedded Scholars Updates
  – Jeffrey Anker, PhD, Faculty Fellow, Spring/Summer 2018
  – 2019 Faculty Fellows
• 8:20 – 8:30 Update from CUOSP at GHS: Seed Grants and GHS Research Focus Areas
  – Cancer Care Delivery, Diabetes, Enhancing the Practice of Medicine, and Transformative
• 8:30 - 8:50 Collaboration Opportunity Spotlight
  – Dr. Desmond Kelly,
    Chief Medical Research Officer, Greenville Health System Health Sciences Center
    Vice Chair for Academics, Pediatrics
• 8:50 – 9:10 CUSHR Updates
  – Lawrence Fredendall, Ph.D., CUSHR Appointment Committee
• 9:10 – 9:30 CUSHR Virtual Tour, Coffee and Conversation
Welcome

Windsor Westbrook Sherrill, PhD
Associate Vice President for Health Research
Professor, Public Health Sciences
Chief Science Officer, Greenville Health System
Dr. Leslie Hossfeld is the new dean of the College of Behavioral, Social, and Health Sciences. She comes to Clemson from Mississippi State University where she served as professor and head of MSU’s department of sociology.
Introductions: Research Directors – USCSOMG and CU Nursing

Rich Goodwin, Ph.D.
University of South Carolina School of Medicine Greenville

Lucia Gonzales, Ph.D.
Clemson University
School of Nursing
Embedded Scholars Update
Building Collaboration

Models of Faculty Embedded Scholarship

**EMBEDDED POSTDOCTORAL SCHOLARS**
- Junior Faculty
- 1-2 years full time within a department at GHS

**FACULTY FELLOWS**
- Senior Faculty “Sabbatical Model”
- 3 days per week at GHS for one summer and academic term

**NAMED PROFESSORSHIPS**
- Senior Faculty
- 3 years of direct and continued partnership with GHS

Embedded Scholarship Research Continuum
Dr. Arya will investigate multi-drug resistant (MDR) bacteria along with physician decisions regarding treatment.

Dr. Britt will investigate human resilience via employee responses to stressors in the health workplace.
CUSHR Embedded Fellowship Experience

Jeff Anker, PhD

Clemson Chemistry Department & BioEngineering

Jan-Dec 2018
Aims

• Current work: sensors on orthopedic devices
  • Mechanical: fracture healing
  • Chemical: Infection (extend to cancer and others)
  • Collaborate on sheep studies + retrospective clinical study

• Learn what physicians see to better speak their language
  • Shadow surgeries,
  • Attend morning briefings,
  • Shadow radiography techs,
  • Shadow radiologist

• Form collaborations + help others network

• Grant applications (CDMRP infection, NIH spine; planned hip)

• NEW: Imaging Consortium & Symposium
GHS Collaborators

Orthopaedics

Tom Pace, MD
Joints

Kyle Jeray, MD;
Vice Chair Academics & Research

Kyle Jeray, MD;
Vice Chair Academics & Research

Radiology

Ron Cowley, MD, PhD.

Mike Devane, MD

Oncology

Stephanie Tanner,
MS Clemson BioEngineering
Research Co-ordinator

Jeff Edenfield, MD

CUSHR

Timothy McHenry, MD
Spine
Sliding hip screw (SHS)


- 4.5M SHS surgeries worldwide \(\rightarrow\) estimated 21M in 2050.

- Many frail patients for whom additional surgery is problematic: \(~20\%\) 1-yr mortality \(\rightarrow\) 56% if readmitted within 1 mo.

- 5% hardware failure rate (20% with comorbidities).

**Goal:** Quantify construct stiffness to track fracture healing, inform rehabilitation + adjunctive therapy and avoid catastrophic failures.
Load X-ray of dynamic hip screw in fractured femur mimic

Load-indicating pin

0 N

+500 N

X-ray of dynamic hip screw in fractured femur mimic

SHS Radiographic Sensor
SHS Radiographic Sensor

~0.8 mm/kN
Sheep Study
Surgeons Tom Pace & Kyle Jeray
(Also: John DesJardins BioE, John Parrish GSRC)
Sheep SHS study: First Radiographs week 1, Aug 2018

(Shorter screw; trimmed to make less stiff)
Week 2

Week 8

Works!
More gain helpful
Sliding Hip Screw Failure Timeframes
Retrospective Clinical Prepilot Study

Questions: When do we see indications, how rapidly progressing, how often should we monitor currently or with new sensor?
Prepilot: what/how to measure indications (angle, migration, radiolucency) 10 failure/10 controls
Future: Chemical Sensing with Plain Radiography
Jeff Endenfield (oncology), Mike Devane, Ron Cowley, Matt Gevaert (Kaytech)

Implant Infection

- at pH < pK_a, the gel contracts
- pH > pK_a, the gel swells

pH-indicating gel
- Tungsten rod
- Scale holes

pH 4, pH 7

30 min response rate, 0.07 pH unit interobserver precision, 0.26 intersample/month/trial variation

Next, switch to hip and screw; animal model

Functional biopsy marker


pH-sensing clip

Imaging Consortium

- Ron Cowley (Radiology): How do we bring functional radiology to GHS and ability to do research and animal studies in conjunction with Clemson
  - Traumatic Brain Injury, Addiction, Epilepsy, Dementia etc.
- Investigating
  - CT, MRI at Clemson Godley Snell Animal Facility and research instrument at GHS
  - C-arm (promised; hopefully site at Godley Snell, rad survey)
  - S10 PAT planned
- Wallace R. Roy Functional Radiology Symposium
  - March 16th
Example schedule
8:30-8:45 Intro remarks (GHS Kelly, Clemson Tanju?, Windsor)
9-9:30 Andre Holodny, MD/PhD, Chair Neuroradiology Sloan Kitterling; Neuroanatomy
9:30-10:00 John Gore, PhD, MRI/imaging Vanderbilt Imaging Center Director;
10:00-10:20 John Absher, MD; Tissue bank/genomics research.
10:20-10:40 coffee&tea break tea/coffee/muffins/Stacks
10:40-11:00 Lance Feldman, MD; Addiction
11:00-11:30 Chris Whitlow, MD/PhD Chief Neuroradiology Wake Forest; head injury,
11:30-12:00 Mark Bolding, PhD UAB MRI Imaging + ultrasound modulation
12:00:12:20 Panel discussion with speakers
12:20-12:30 Group photo
12:30-2:00 Lunch  + Posters (Posters also at reception)
2:00-2:30 Ge Wang, PhD, (RPI). Machine learning + imaging CT design
2:30-3:00 Changqing Li, PhD (UC Merced), CT&Radioluminescence imaging
3:00-3:20 Jeff Edenfield, MD or Nichole Bryant, MD, (GHS oncology), Cancer
3:20-3:40 coffee&tea break
3:40-4:00 Matt Gevaert, PhD (Kaytech), Cancer
4:00-4:20 Jeff Anker, PhD, (Clemson) sensing with X-rays
4:20-4:40 Scott Porter, MD (GHS orthopedics) orthopedic/oncology
4:40-5:00 Naren Vyvahare, PhD, (Clemson), imaging cardiovascular treatment
5:00-5:20 Panel discussion with speakers
5:20-5:30 Poster Awards &Concluding remarks
5:30-7:00 Reception, Posters& Drinks
Summary

• Learned about orthopedic surgery, implants, physicians
• Formed collaborations with surgeons, oncologists, radiologists
• Animal experiments, clinical data, grant applications
• Forming imaging consortium (C-arm promised)
  • Talk to me about needs/desires!
• Symposium
Questions?
CUSHR Update:

Funding Opportunities

Hagan Walker, MS/MBA
Greenville Health System
Office of Sponsored Programs
Healthy Greenville 2036 – Round 3

Greenville Health Authority – Healthy Greenville 2036

• FY19 Request for Proposals notification opened October 1
  – Website: https://www.ghs.org/healthygreenville/

• Focus Areas – Community Health Needs Assessment
  – Access to Healthcare
  – Social Determinants of Health
  – Mental/Behavioral Health
  – Healthy Eating and Exercise

• Proposals should be responsive to the Robert Wood Johnson Foundation County Health Rankings
  – See guidelines for this list
Healthy Greenville 2036 – Round 3

Greenville Health Authority – Healthy Greenville 2036

• Successful applicants will:
  – Have a track record of results on previous projects or programs;
  – Propose an existing or new program/project that aligns with our goals and addresses at least one of Healthy Greenville 2036’s key measures of success;
  – Provide anticipated outcomes for the project or program;
  – Provide a detailed budget for their project or program;
  – Be a financially sustainable program and organization; and
  – Submit their letters of intent and applications by deadline.

**Projects must serve the citizens of Greenville County.**
Healthy Greenville 2036 – Round 3

Greenville Health Authority – Healthy Greenville 2036

Deadlines:

• Letter of Intent due November 12, 2018, 11:59pm
  – Description of project /program idea
    • Including which of Healthy Greenville 2036’s goals and measures of success that your idea will address.
  – Anticipated outcome (at least one)
  – Collaborative partners, if applicable.
  – Total budget request and description of how funds will be used

• If the project is invited to submit full application (decisions issued after 1/8/19)…
  – Full Proposals due March 1, 2019
Greenville Health System – Seed Grants

Greenville Health System - Research Seed Grants

• Transformative
  – Population health or health system performance
  • Including quality of care, access to care, patient experience with care and other patient-relevant outcomes

• Diabetes
  – Prevention and intervention efforts broadly related to diabetes mellitus
  • Including delay of disease onset or progression, improved diagnosis or treatment, and enhanced quality of care

• Cancer Care Delivery Research
  – Investigation of how social factors, financing systems, organizational structures/processes, health technologies, and health care provider and patient behaviors affect cancer care access, quality, and cost

• Enhancing the Practice of Medicine
  – Supports research intended to enhance clinical team member well-being and practice re-design
Eligibility
• All applications must include an investigator from GHS AND an investigator from a GHS HSC partner (Clemson, University of South Carolina, and/or Furman)

Deadline
• Monday, December 3, 2018 at 4:00 pm (EST)

Submission Process
• Email the application as a single PDF document to the GHS Office of Sponsored Programs: ResearchGrants@GHS.org

More Information:
• Website: https://hsc.ghs.org/seed-grants/
Questions? Contact Us

Greenville Health System
Office of Sponsored Programs
Clemson Nursing Building
605 Grove Road
Greenville, SC 29605
Email: ResearchGrants@GHS.org
Website: http://hsc.ghs.org/grants/

Hagan Walker Claire Stam
Director, GHS OSP Grant Administrator
(864) 455-1120 (864) 455-1121
HWalker3@GHS.org CStam@GHS.org
HSC Research and Scholarship - A Shared Model

CU Nursing Building
GOAL 2:
Lead life changing health services research and scholarship
The Clinical Research Environment

Communities and Families We Serve

Primary Care Medical Homes

Emergency Departments

Outpatient Specialty Services

Inpatient Services

Home / Long Term / Community Care Continuum
HSC Strategic Goals – Research and Scholarship

• **Strategy 1:** Engage investigators and ensure productive, mutually beneficial collaborative partnerships between GHS and its university partners.

• **Strategy 2:** Provide research education that prepares HSC academicians, clinicians and students to successfully engage in health sciences research

• **Strategy 3:** Support health sciences research through a responsive and efficient administrative structure

• **Strategy 4:** Ensure all research conducted meets acceptable standards of quality and compliance

• **Strategy 5:** Communicate the scholarly mission, vision, and impact of HSC throughout the organization, with university partners, and among the national academic/research community

• **Strategy 6:** In collaboration with the Transformative Health Institute and the HSC Innovation Council, create a plan to support research and scholarship that fuels innovation and accelerates business development

• **Strategy 7:** Establish an interinstitutional team to explore the feasibility of expanded research facilities within the HSC complex

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GHS Health Sciences Center Partners

[Logos of participating institutions]
CUSHR Highlights
Partnering to Transform Health Care: Embedded Scholarship

**Doctoral Students**
- Clemson doctoral students engaged and funded by GHS research projects
- PHS, School of Education; Industrial Engineering; Math Stats

**Embedded Postdoctoral Scholars**
- Junior Faculty
- 1-2 years full time within a department at GHS

**Faculty Fellows**
- Senior Faculty
- 3 days per week at GHS for one summer and academic term

**Named Professorships**
- Senior Faculty
- Direct and continued partnership with GHS

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**Embedded Scholarship Research Continuum**
CUSHR Faculty Fellows

FACULTY FELLOWS

- Senior Faculty
- 3 days per week at GHS for one summer and academic term

Joel Williams, PhD
Pediatric Gastroenterology and Pediatric Endocrinology

Sarah Griffin, PhD
Partnering with Kerry Sease, MD
Bradshaw Institute for Community Child Health and Advocacy
CUSHR Faculty Fellows

Jeffrey Anker, PhD
Associate Professor, Chemistry

Dr. Anker’s fellowship focused on translation of non-invasive monitoring of fracture healing and the development of sensors to detect and monitor infections in orthopedic patients.

Goutam Koley, PhD
Professor, Electrical & Computer Engineering

Dr. Koley investigated correlations between environmental factors and incidence of asthma in the greater Greenville area, with a focus on high risk neighborhoods and schools.

Kristin Scott, PhD
Associate Professor, Management

Dr. Scott examined the impact of burnout and related interventions on not only employee wellbeing and job related behavior but also on critical metrics relevant to GHS leadership.
Embedded Scholarship: Named Professorships

Harriet & Jerry Dempsey Professors

Dan Simionescu, PhD
Bioengineering

Kevin Taaffe, PhD
Industrial Engineering

Rachel Mayo, PhD
Public Health Sciences

Jeffrey Anker, PhD
Chemistry

Marieke Van Puymbroeck, PhD
Recreational Therapy

Wallace R. Roy Professors

GHS Health Sciences Center Partners
Embedded Scholarship: Enabling Success in Collaborative Health Research

Dr. Joseph Singapogu, Clemson Bioengineering received the prestigious **K01 Award** for “CanSim: A novel simulator for training cannulation skills in dialysis care,” which utilizes a prototype developed for simulation by his collaborator and mentor, Dr. David Cull.

David Cull, MD is both Dr. Singapogu’s GHS clinical mentor for the embedded scholar program and one of his K award mentors.

Invention of Cannulation Device - David Cull, MD

Recipient of prestigious K01 Award

David Cull, MD
HSC Vice President of Academic Development
Assistant Dean of GME
GHS Department of Surgery

Joseph Singapogu, PhD

Embedded Scholar – Department of Surgery
Partnering to Transform Health Care: Innovative Research

Jennifer Hudson, MD
Pediatrics

Rachel Mayo, PhD
Public Health

TRANSFORMING HEALTH CARE FOR NEWBORNS

Babies born with opioid dependence are inescapable. They quit cold turkey at birth and start withdrawing within days. Jennifer Hudson, MD, sought a way to ease their agony. “I watched babies suffer,” says Hudson, director of newborn services at GHS. Symptoms of withdrawal hit hard several days after birth—massive weight loss, seizures, tremors, fever, vomiting, diarrhea, irritability, sleeplessness, breathing problems, apnea, rashes, and more. It’s called Neonatal Abstinence Syndrome, or NAS. By the time full-blown symptoms of NAS developed, the health of these babies deteriorated rapidly with complications that often led to months in intensive care. “It felt unethical,” she says. “I knew that another kind of treatment was needed.”

For the past eight years, under Hudson’s leadership, withdrawal treatment has started at birth for babies born at GHS, when mothers are known to have used long-acting opioids during late pregnancy. Rather than long stays in intensive care, these NAS babies typically go home after one week to bond with their families and continue to receive a slow medication wean at home. Outpatient physicians and visiting nurses monitor the four-week home treatment process. This makes for healthier babies, happier families, and lower costs, Hudson says.

Hudson’s data is currently under analysis by a team of researchers led by Rachel Mayo, PhD, and public health sciences professor at Clemson University, and including GHS’s Chief Science Officer Windsor Sherrill, PhD; Lili Chen, a biostatistician and epidemiologist in Clemson’s Department of Public Health Sciences; Lori Dickey, an economist with Clemson’s Strom Thurmond Institute; and Brad Dalton, a medical doctor and postdoctoral fellow at Clemson. Their work is supported in part by a $1.3 million grant from the South Carolina Department of Health and Human Services.
Helping elderly with dementia and memory loss and their Caregivers

James Davis, MD
Medical Director of GHS’s Memory Health Program & Ambulatory Geriatric Services

Cheryl J. Dye, Ph.D.
Professor in Public Health Sciences / Director of the Institute for Engaged Aging
Collaborating for Research Education: EPIC MEnTOR Program (T-35)

Medical Enrichment Through Opportunities in Research

Clemson University’s Eukaryotic Pathogens Innovation Center
Partnering with University of South Carolina School of Medicine Greenville
Clemson-based Medical Student Research Experiences
Improving Quality of CT Scans for lung cancer through a clinical decision support tool.
Partnership Helping Injured Soldiers through Infection Resistant Fracture Fixation Systems

John D. DesJardins, Ph.D.
Associate Professor in Bioengineering

Kyle Jeray, MD
Academic Vice Chair, Orthopaedic Surgery

Funded by Department of Defense

Engineering, Computing, and Applied Sciences
Orthopaedics and Neurosurgery

GHS Health Sciences Center Partners
Research Focus Areas in GHS Clinical Departments
Vice Chairs for Academics

Alfredo Carbonell III, DO
Surgery

Mike Devane, MD
Radiology

Jeffrey Edenfield, MD
Cancer Institute

Kacey Eichelberger, MD
OB/GYN

William Hand, MD
Anesthesiology

Desmond Kelly, MD
Pediatrics

Jennifer Knight, MD
Pathology

Alain Litwin, MD
Medicine

Phyllis MacGilvray, MD
Family Medicine

Eunice Peterson, MD
Psychiatry

Thomas Pace, MD
Orthopedics

Ron Pirallo, MD
Emergency Medicine

GHS Health Sciences Center Partners
Department of Anesthesiology
William Hand, MD FASA
Vice Chair for Academics
Phone: 864-313-7341
Email: whand@ghs.org

Departmental Research and Scholarship Focus Areas

- Implementation science/decision engineering
- Perioperative testing efficiency
- Pulse-pressure contour analysis
- Opioid stewardship
Department of Emergency Medicine

Ronald G. Pirrallo, MD, MHSA, Vice Chair for Academics
Email: rpirrallo@ghs.org
Phone: 864 361 6815

Departmental Research and Scholarship Focus Areas

- Patient Care
- Education
- Research
- Bio-Sensory Measurement
- Virtual Reality
- Clinical Environment: Prehospital & ED
- Clinical Performance Engineering Research Center

GHS Health Sciences Center Partners

- Greenville Health System
- Clemson University
- Furman University
- University of South Carolina
Department of Family Medicine
Vice Chair for Academics
Phyllis D. MacGilvray, MD, FAAFP
Phone: (910) 650-2819
Email: pmacgilvray@ghs.org

Departmental Research and Scholarship Focus Areas

- Population Health
- Leadership
- Medical Education
- Care Delivery Models
- Lifestyle Medicine
- Scholarship
Department of Medicine
Vice Chair for Academics: Alain Litwin, MD, MPH

Phone: 1-864-430-0911
Email: alitwin@ghs.org

Departmental Research and Scholarship Focus Areas

- Models of Health Care Delivery
- Population Health and Screening
- Pharmacotherapy Clinical Trials
- Prevention of Chronic Diseases
- Centers and Programs of Excellence
  - Geriatrics - Memory Health Program
  - Neurology - Stroke Center
- Translational Medicine - Biorepositories
- Leveraging Smartphone Apps and Technology

GHS Health Sciences Center Partners
Department of Obstetrics and Gynecology

Vice Chair for Academics: Kacey Eichelberger MD

Phone: 864-455-5032
Email: keichelberger2@ghs.org

Departmental Research and Scholarship Focus Areas

- Group prenatal care and the risk for preterm birth
- Optimizing medical therapy for women with endometriosis
- Optimizing outcomes for women with a short cervix at midgestation
- Reducing blood loss-related morbidity for women with cesarean delivery
Departmental Research/Education

Focus Areas

- Comparative Effectiveness (SC Center for Effectiveness Research in Orthopaedics)
- Clinical and Patient-Reported Outcomes
- Biomechanics/Biomaterials
- Prospective Randomized Clinical Trials in trauma, hand, sports, shoulder and elbow, and joint replacement.
Department of Pediatrics
Desmond Kelly, MD Vice Chair for Academics

Phone: 864-454-2420
Email: dkelly@ghs.org

Departmental Research and Scholarship Focus Areas

- Drug Exposed Newborns and Infants
- Obesity, Healthy Eating, Exercise
- Diabetes
- Eosinophilic Esophagitis
- Asthma and Cystic Fibrosis
- Sleep Disorders
- Autism
- ADHD and Neurofeedback
- Determinants of Child Development
- Interprofessional Workforce Development

GHS Health Sciences Center Partners

[Logos of GHS, Clemson University, Furman University, University of South Carolina]
Department of Psychiatry
Eunice Peterson, MD
Phone: (864)455-5777
EPeterson2@ghs.org

Departmental Research/Education

Focus Areas:
- Mental Health in the Community
- Mental Health Integration in Primary Care
  - ECHO education
  - Outcomes development
Departmental Research Focus Areas

- Reducing variation in measurement of lung cancer & hepatic lesions
- Enhancing lung cancer screening rates
- Clinical decision making in appropriate ordering of advanced imaging
- Comparison of totally implantable venous access ports (TIVAP)
Department of Surgery
Alfredo M. Carbonell, D.O., Vice Chair of Academics
acarbonell@ghs.org

BETTER TOGETHER: Leveraging Partnerships for Research Success

Departmental Research/Education Focus Areas

- Bariatric surgery macro-economics, inequalities, & access to care
- Hernia surgical outcomes
- Hernia mesh fixation and explant analysis
- Anti-inflammatory hernia mesh coatings
- OR traffic effect on air flow and microbial load
- Vascular access surgery (AV Fistula) for hemodialysis
- AV fistula cannulation simulation
- Vascular aneurysm tissue bank analysis
- Shock and sepsis
- Tissue adhesives
- Robotic OR lighting
- Microvascular stent/fixation devices for facial bone reconstruction
- *Clemson Bioengineering Senior Design Project

GHS Health Sciences Center Partners
Collaborative Inquiry

Research with clinical applications

Clinical Research Environment

Population Health Challenges

Collaborative research to transform health care

GHS Health Sciences Center Partners

GREENVILLE HEALTH SYSTEM

Clemson University

Furman University

University of South Carolina
Questions?
Lawrence Fredendall, PhD
Professor, Management
GHS HSC Campus Research Director, Clemson University
Chair, CUSHR Appointment Committee
COB: Lawrence Fredendall, Management, Chair

COS: Susan Chapman, Biological Sciences
    Kerry Smith, Genetics and Biochemistry

CAFLS: Margaret Condrasky, Food, Nutrition, and Packaging Science

CAAH: Anjali Joseph, Architecture

CBSHS: Margaret Ann Wetsel, Nursing
    Tom Britt, Psychology
    Windsor Westbrook Sherrill, Public Health Sciences

CECAS: Kevin Taaffe, Industrial Engineering
    John DesJardins, Bioengineering

Spring Faculty Scholar Applications due March 30, 2019
CUSHR 2018 Faculty Scholars

Kaileigh Byrne
Psychology

Job Chen
Psychology

Brandi Crowe
Parks, Recreation and Tourism Management

Nathan McNeese
Computing

Sachin Rustgi
Plant and Environmental Sciences

M. Gabriela Sava
Management

Hyewon Shin
Nursing

Laura Stanley
Industrial Engineering

Kathleen Valentine
Nursing

Mary Ellen Wright
Nursing
Nursing

Ellen Kennedy    Health Resources and Services Administration (HRSA)
via Clemson University

*Caring for Sexual Assault Survivors (C-SAS): Expanding the SANE Workforce in Upstate South Carolina*

Funding will support efforts by GHS and the Clemson University School of Nursing to recruit, train, certify, and retain SANE nurses to provide patient-centered sexual assault care to children and adults at GHS in Greenville, Laurens, Pickens and Oconee counties.
SCRA – Laura Stanley (CU), Robert Morgan, MD (GHS)

• RELIEVE (viRtual rEaLity IntErVEntion) – An Immersive Technology Intervention for Managing Acute Pain and Anxiety

• Funding will support Dr. Morgan for assisting with experimental research design, virtual reality scenario development for reduction of anxiety and pain and facilitation of research in the clinical setting.
Notice of Solicitation: Technology-enabled Population Health Grants

Award Type: Grant

Estimated Number of Awards: up to 3

Maximum Grant Amount: up to $100,000, inclusive of 20% indirect costs (if applicable)

Solicitation Period: October 23 - December 17, 2018

Performance Period: Not to exceed 12 months

Submission Deadline: December 17, 2018 at 5:00 PM EST

SCOPE

The Technology-enabled Population Health Research Alliance develops and deploys technology-based solutions to address population health challenges, improve health outcomes and equity, utilize population health data, and provide health workforce development.

The SACT is requesting applications of collaborative, multidisciplinary teams involving multiple Constituent Institutions and industry that will provide near-term, measurable outcomes in health, create potential commercial viability or industry validation, and serve unmet needs of the citizens of South Carolina.

Information Session Webinar

SCRA will host a Question and Answer webinar on October 31. The session will also be recorded and subsequently posted on the SCRA website.

Below is the link to register for the webinar:

Information Session: October 31, 2018 at 11:00 AM - REGISTER NOW

Contact:

Paul Dudley
Program Manager, Academic Programs
paul.dudley@scra.org
Award Spotlight: Health-related R-Initiative Award Recipients - Clemson Research Fellows

(matching support for Postdoctoral / Research Faculty)

1. **Study of Structural Dynamics and DNA Binding of FoxP Transcription Factors**
   PI: Dr. Hugo Sanabria, Physics and Astronomy
   Project Team:
   Dr. Weiguo Cao, Genetics and Biochemistry
   Dr. Emil Alexov, Physics and Astronomy

2. **Discovering Biophysical Mechanisms of Pathogenic Parasites**
   PI: Dr. Joshua Alper, Physics and Astronomy
   Project Team:
   Dr. Kimberly Paul, Genetics and Biochemistry
   Dr. Lukasz Kosubowski, Genetics and Biochemistry

3. **International Industry-Institute Collaboration**
   PI: Dr. Amy Lawton-Rauh, Genetics and Biochemistry

4. **Polymersome Delivery of CRISPR-Based Therapies for Brain Diseases: Towards a Center for Nanobiopharmaceutical Systems**
   PI: Dr. Mark Blenner, Chemical and Biomolecular Engineering
   Project Team:
   Dr. Angela Alexander, Bioengineering
   Dr. Jessica Kelly, Chemical and Biomolecular Engineering
Clemson University Division of Research

Clemson R-Initiatives

– [Clemson University SEED program](http://www.clemson.edu/research/r-initiatives/) – due Nov. 30
– [Clemson Faculty SUCCEEDS](http://www.clemson.edu/research/r-initiatives/) – due Feb 27, 2019
– [Clemson Research Fellows](http://www.clemson.edu/research/r-initiatives/) – due Sept 13, 2019

For more information visit [http://www.clemson.edu/research/r-initiatives/](http://www.clemson.edu/research/r-initiatives/)
Substance Abuse and Mental Health Services Administration (SAMHSA)

**EMPOWER = Educating Medical Providers on Ways to Engage Recovery**

Interdisciplinary Education for Medical Students from USC and Nurse Practitioner Students from Clemson University School of Nursing

**Topic:** Provision of Medically Assisted Therapy in the Treatment of Addiction

**Lead Team:** Alain Litwin, MD, Greenville Health System
Mary Ellen Wright, PhD, APRN, CPNP-BC  Clemson School of Nursing
Lauren Demosthenes, MD  USC School of Medicine Greenville
NIH Center of Biomedical Research Excellence (COBRE) Award

*South Carolina Translational Research Improving Musculoskeletal Health*

**PI: Hai Yao, PhD, Bioengineering**

South Carolina COBRE for Translational Research Improving Musculoskeletal Health (SC-TRIMH) will enhance and expand the Biomedical Research capacity at Clemson to promote multidisciplinary, collaborative, and translational research in bone and joint diseases.

**Scientific cores:**
- Multi-scale Computational Modeling Core
- Advanced Fabrication and Testing Core
- Preclinical Assessment Core
South Carolina Translational Research Improving Musculoskeletal Health
PI: Hai Yao, PhD, Bioengineering

Junior Investigators

Project 1: Hugo Sanabria, PhD: Physics and Astronomy
Modulation and inhibition of the osteoclast-specific V-ATPase for bone resorption

Project 2: Will Richardson, PhD: Bioengineering
Predicting collagen turnover for tendon repair across diverse loading environments

Project 3: Tong Ye, PhD: Bioengineering
Development of nonlinear endomicroscopy: toward assessing articular cartilage repair in vivo

Project 4: Melinda Harmon, PhD: Bioengineering
Effect of component alignment on soft tissue conditions during total knee replacement

Project 5: Fei Peng, PhD: Materials Science and Engineering
Development and validation of embedded micro wireless strain sensor array for in vivo characterization of contact stress distribution in hip replacement
• Community Health Symposium, Creating a Healthier Greenville: Clinical and Public Health Partnership
  – Nov. 16, 2018 from 1 - 5 p.m.
  – Younts Conference Center on Furman's Campus

• Science on Tap
  – Meets last Tuesday of each month from 6:30 - 7:45 PM at Coffee Underground, Greenville, SC
  – Meets second Thursday of each month from 6:30 – 7:45 p.m. at Viva Wine Bar, Pendleton, SC
  – More information on Clemson University Life Sciences Outreach Center website

• HSC Research Education Series
  – Nov. 29, 2018 from 12:30 - 1:30 p.m.
  – Room CC2 at Greenville Memorial Hospital

• Southeastern Symposium on Mental Health: Reducing Mental Health Disparities Through Sustaining and Strengthening Healthy Communities: Increasing Knowledge through Research, Education and Practice
  – May 17 - 18, 2019
  – Hyatt Regency Downtown, Greenville SC

• Conference on the Value of Play
  – March 31 - April 3, 2019
  – Clemson, SC

• International Association for Human Caring Conference
  – May 30 - June 2, 2019 in Greenville, SC
  – Abstract submissions due Nov. 15
  – More information at humancaring.org
Thank you for the great turnout at the 2018 CUSHR Mixer on September 12th.
CUSHR events are designed to provide opportunities for you to connect with research collaborators from across the University and among our external partners. ALL HEALTH RESEARCHERS ARE WELCOME!
Mark your calendar now for 2019
CUSHR Mixer - September 18, 2019
CUSHR Announcements: Upcoming Events and Save-the-Dates

• CUSHR Faculty Scholars
  – Applications due March 30 to cushr@clemson.edu

• Roy Professor Seminar
  – March 16, 2019

• Southeastern Symposium on Mental Health 2018
  – May 18 & 19
  – Hyatt Regency Downtown, Greenville SC

• 2019 GHS HSC Research Showcase
  – April 12, 2019
  – Greenville, SC
The Research Experience Enrichment Program

Summit - 2018

Save the date - November 30th

Location information will be sent out via email calendar invitation

The REEP summit aims to introduce our research inquiries and inspire future collaborations in promoting healthcare delivery. We will recognize our students, faculty, and clinicians leaders that assumed responsibility in making our REEP successful.

Outline

- 14:00 – 15:00 Technical Demonstrations
  - IMotions – bio sensing technology
  - Sky Factory – light and view installations
- 15:00 – 16:00 Poster and Exhibit Open Floor
- 16:00 – 16:30 Honors and Awards Ceremony
- 16:30 – 16:45 Speaker
  
  Windsor Sherrill, PHD
  
  Associate Vice President for Health Research Clemson University
  
  Chief Science officer, GHS Health Sciences Center

- 16:45 – 17:00 Closing Remarks

REEP Summit
Friday, November 30, 2018
2:00 PM – 5:00 PM
Clemson Nursing bldg.
605 Grove Road
Greenville, SC 29605

Contact: Dr. Dotan Shvorin DShvorin@ghs.org
ERADICATING CANCER WITHIN OUR GENERATION
Multidisciplinary Research

FRIDAY OCTOBER 12
201 KINARD HALL
10:10AM - 11:00AM

MUSC Hollings Cancer Center visit rescheduled:
Last day of classes
December 7, 2018
• **Spring CUSHR Information Exchange**
  – Tuesday, Feb 5, 2:00-3:30 PM
  – Clemson Campus location TBD
  – Spotlighting:
    • Dr. Trudy Mackay and Clemson’s Center for Human Genetics
    • Dr. Laura Stanley and her work with Virtual Reality