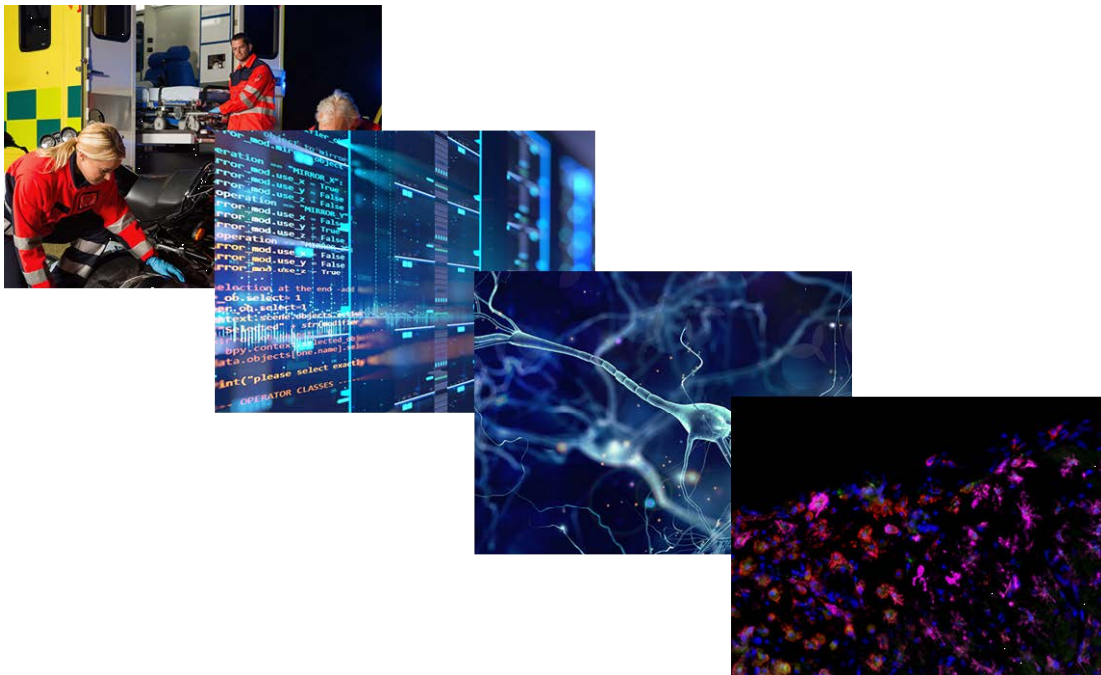# SHOCK, TRAUMA AND ANESTHESIOLOGY RESEARCH CENTER (STAR)

STRATEGIC PLAN

OVERVIEW

The Shock, Trauma and Anesthesiology Research Center (STAR) was established in 2009 as an organized research center (ORC) that includes research within the R Adams Cowley Shock Trauma Center, the Department of Anesthesiology, and the Charles "Mac" Matthias National Study Center for Trauma and Emergency Medical Systems. Its multidisciplinary research programs focus on trauma, critical care, resuscitation, surgical outcomes, patient safety and injury prevention.

MISSION STATEMENT

The mission of STAR is to establish a comprehensive research and education program specifically designed 1) to promote pre-clinical and clinical research that limit injury and improve patient outcomes related to trauma and critical care, 2) to facilitate research education and training, and 3) to provide leadership and service within the SOM, UMMS, the University of Maryland System, as well as to the broader research and patient community.

OUR VISION

1. To advance discovery and treatment in trauma and critical care through innovative research and training.

2. To promote unique and effective research training opportunities within its fields of expertise.

3. To provide leadership and service to enhance the missions of the SOM, UMMS and University of Maryland System- as well as broader research and patient support communities.

STRATEGIC PLAN

The STAR ORC is fully dedicated to conducting high quality and innovative research in shock, trauma, critical care, and patient outcomes research. In addition, our faculty play important educational and service roles within the SOM, UMMS, and the University of Maryland System. This plan delineates plans and strategies for enhancing our contributions in each of these areas.

RESEARCH

Goal 1: To enhance the productivity of current pre-clinical and clinical investigators

To achieve this goal, we will:

- Further enhance the research infrastructure support provided by the STAR administrative team, including pre-award and post-award grant management, financial support, 24/7 clinical research team support, patient data registry and information access improvements, equipment and facilities upgrades, and streamlined statistical support.

- Provide effective and consistent mentoring to faculty at all levels, as well as to fellows and students.

- Facilitate collaborations in STAR among investigators and between clinical and pre-clinical faculty to establish new research areas, particularly within areas of established strengths (see Goal 2).

- Facilitate new collaborations between STAR faculty and faculty at UMCP and UMBC- utilizing existing seed grant mechanisms as well as other potential matching fund mechanisms.

- Promote larger new research collaborations between STAR faculty and those at UMCP, such as in Transportation-Health, with a goal to establish MPower funding for a major new, bi-campus initiative.

- Encourage and facilitate larger MPI grant and program project level award submissions, particularly NIH.

- Improve the communication between the STAR and US Air Force Research (C-STARS) intramural research program, and expand research directions into new areas, such as human performance.

- Develop a new T32 training grant.

Goal 2: To enhance the research collaboration between clinical and basic researchers within STAR.

To achieve this goal, we will:

- Identify faculty facilitators to foster communication between clinical and basic science investigators.

- Create retreats and seminars that encourage awareness of colleagues' work and facilitate collaborative interactions.

- Enhance the existing STAR intramural funding mechanism to encourage the collaboration between clinical and basic researchers.

- Identify metrics (such as shared manuscripts and grant submissions) and consider incentives to encourage partnerships between clinical and basic science investigators.

Goal 3: To promote research collaboration between the STAR investigators and investigators at UMCP and UMBC.

To achieve this goal, we will:

- Develop strategic research partnerships between STAR UMCP faculty in the areas of Sports Medicine, Health & Human Performance; Transportation-Health; and in Engineering, Data Management and Physics.
- Promote inter-campus collaborations through joint seminars, focused workshops, shared students, selective joint appointments and interactive websites.
- Develop part-time faculty positions to encourage UMCP/UMBC faculty participation within STAR.

Goal 4: To increase federal research funding within STAR
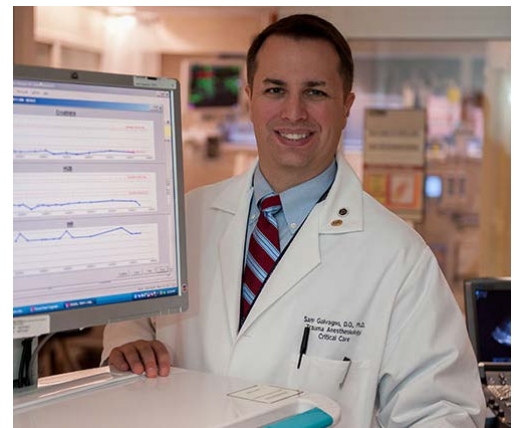
To achieve this goal, we will:

- Utilize existing MPower supported projects and future bi-campus seed projects to develop data to support new NIH and DOD grants
- Encourage faculty with existing NIH grants to collaborate with each other in complementary new areas and to encourage and foster new investigators to submit NIH and DOD proposals
- Continue to expand collaborations with funded faculty in other SOM departments and centers with the goal of developing data for NIH grants in entirely new areas. Current examples include projects examining brain-gut interactions, brain-lung and immune interactions, radiation oncology, systemic inflammation after hip fracture, and opioid addiction among trauma patients
- Take advantage of new NIH funding opportunities in dementia research to submit new grant supplements (in process) and targeted new NIH grants
- Partner with collaborating biotechnology groups to submit new U-grant awards

EDUCATION

Goal 1: To further enhance existing medical student and graduate student training within in the Shock Trauma Center and in the Department of Anesthesiology

To achieve this goal we will:

- Identify and encourage core faculty who are enthusiastic and effective educators.
- Incorporate translational research lectures and research rotation opportunities.
- Expand teaching by pre-clinical STAR faculty in medical school courses.

Goal 2: To recruit more residents with research backgrounds or MD/PHD degrees who have an interest in academic medicine

To achieve this goal we will:

- Involve research faculty in residency recruitment of selected candidates.
- Create opportunities for flexible training and expand existing research opportunities.
- Develop T32 research funding to facilitate translational research within STAR.

Goal 3: To include more integrated and effective research training within the clinical fellow program

To achieve this goal, we will:

- Establish a required research project for incoming Trauma and Anesthesia fellows, mentored by established faculty with translational research interests.

SERVICE

Goal 1: To continue to promote STAR faculty service to the SOM, UMB and UMMS, and the University of Maryland System, and also on a national and international level.

To achieve this goal, we will:

- Support the efforts of STAR-associated faculty to serve in important leadership roles within the SOM, UMMS and University of Maryland System.

- Encourage faculty to sit on NIH and other funding study sections and participate on journal editorial boards, as well as serve in leadership positions in scientific societies.

- Encourage faculty at all levels to serve on department level, SOM and UMB committees, as well as to participate in community service.