College of Osteopathic Medicine

ELEMENT 8.1 - RESEARCH AND SCHOLARLY ACTIVITY
ELEMENT 8.1: RESEARCH AND SCHOLARLY ACTIVITY STRATEGIC PLAN

Research Vision of Sam Houston State University College of Osteopathic Medicine (SHSU-COM)
The vision for the College of Osteopathic Medicine is to establish local, regional and national recognition as an osteopathic medical school with a vital and well-supported research program for its students, faculty and staff. The strategic goal of recruiting and retaining a strong faculty with FTE committed to scholarship represents the commitment of the College to support scholarly activity in all its constituent disciplines, and to do so in a manner that supports, and does not detract from, the instructional mission of COM.

As stated in Element 1.2 Strategic Plan, SHSU-COM’s GOAL is to Create a Strong Scientific Foundation for Evidence Based Medicine Through Research and Scholarly Activity.

AIMS:
1. Generate an environment supportive of research and scholarly activity.
2. Incorporate training and expectations for student research
3. Provide support, resources, and time for faculty to engage in scholarly activity

SHSH-COM supports its commitment to research, scholarship, and innovation by:
1. providing financial support for:
   (a) Research/scholarship FTE assignment for faculty (Element 7.1a)
   (b) Supporting the development of curricular content to address Scientific Methods (Element 6.5)
   (c) Internal Grants for faculty and students (merit-based)
   (d) Faculty attendance at scientific meetings, and organizational memberships ($5,000/faculty annually)
   (e) Research presentations and invited speakers
   (f) Organization of Research Day including presentation of student projects
   (g) Support for a well-equipped research laboratory available for faculty/staff and student use with oversight by a research lab manager
   (h) Research/Scholarship training opportunities

2. creating and supporting the COM Research Advisory Council whose membership includes faculty/staff, COM students, and SHSU faculty from main campus.
3. encouraging and supporting participation of osteopathic medical students in the scholar projects of faculty, and to engage faculty in projects that are initiated by students.
4. strengthening the development of faculty research/scholarship professional identity by creating and promoting faculty development opportunities available within COM, the SHSU campus, and beyond.
5. utilizing research support services available at the SHSU Office of Research and Sponsored Programs (ORSP), SHSU Office of Research Administration (ORA), Institutional Review Board (IRB), Institutional Animal Care and Use Committee (IACUC), Institutional Biosafety Committee (IBC), and the SHSU vivarium.
6. seeking collaboration with the ORSP Proposal Development Team at SHSU to identify funding opportunities and support for grant writing.
7. facilitating collaborative opportunities with clinical partners
8. providing access to literature resources including peer-reviewed journals available through the SHSU library.
9. fostering the development of scholarship of all types – including but not limited to:
   o Osteopathic Principles and Practices/Osteopathic Manipulative Medicine
   o Rural and/or underserved health
   o Biomedical Science
SHSU-COM Internal Grants

Each academic year, COM internal grant awards for approved student and faculty research projects will be awarded by the Research Advisory Council (RAC). The application, review, awarding, and administration of these grants align with established grant programs at Sam Houston State University (SHSU).

For the academic year 2019-2020, $158,000 was awarded as indicated in the table below. Competition for funds was divided into New and Established Investigator groups, and awards included projects from all five COM departments: Osteopathic Principles and Practice, Clinical Anatomy, Physiology and Pharmacology, Molecular and Cellular Biology, and Primary Care and Clinical Medicine.

<table>
<thead>
<tr>
<th>New Investigator Submitted Grants:</th>
<th>Funds Requested</th>
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<tbody>
<tr>
<td>1 Dr. Zhao Developing and Evaluating an Innovative Integrate HEENT and Immune System Course in Osteopathic Medical School Curriculum</td>
<td>$5,000.00</td>
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<tr>
<td>2 Dr. Elshabrawy (1) Investigating the role or receptor-type protein tyrosine phosphatase Z1 (PTP-Z1) in rheumatoid arthritis (RA)</td>
<td>$20,000</td>
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<tr>
<td>4 Dr. Rode Plasma Levels of 20-HETE in patients diagnosed with COVID-19</td>
<td>$25,000</td>
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<tr>
<td>5 Dr. Gustowski Impact of Philosophy-based Education on Critical Thinking and Communication in First-Year Osteopathic Medical Students</td>
<td>$2,775</td>
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<tr>
<td>6 Dr. Lord The Effects of Gamification on Patient Adherence to a Physician Prescribed Treatment Plan (requested: $26,540)</td>
<td>$20,775</td>
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<tr>
<td>7 Dr. Sollman Investigating the effect of COVID-19 pandemic on the opioid epidemic in rural East Texas</td>
<td>$20,000</td>
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<tr>
<td>8 Dr. Reynolds Osteopathic Medical Student Study Skills and Resource Usage in Clinical Anatomy</td>
<td>$5,000</td>
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<td>TOTAL for New Investigators</td>
<td>$98,500.00</td>
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<table>
<thead>
<tr>
<th>Established Investigator Submitted Grants:</th>
<th>FUND</th>
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<tbody>
<tr>
<td>2 Dr. Alvarez Assessment of diabetic drug prescriptions in rural- and urban-east Texas populations</td>
<td>$29,500</td>
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<tr>
<td>3 Dr. Griffin Physical and Functional Mapping of Ebf1-NF-κB Interaction Domains</td>
<td>$30,000</td>
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<tr>
<td>TOTAL for Established Investigators</td>
<td>$59,500</td>
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$158,000.00
SHSU Campus Wide Internal Grants

Sam Houston State University's campus wide internal grant program is designed to support SHSU faculty members and researchers in turning unique concepts into innovative research projects, and to assist them in obtaining additional external funding for their professional development and research. For the academic year 2019-2020 SHSU Office of Research and Sponsored Programs reported distribution of internal funding for twenty-six proposals (57% of proposals submitted) for a total of $178K. In addition to the internal grant programs, ORSP provided strategic support to 12 individual faculty adding an additional $100K of research support.

SHSU Internal Grant Program consists of:

1. New Faculty Program Grants – intended to provide partial, start-up support for tenure track faculty within their first 3 years of employment at SHSU. The funds are intended to assist faculty in developing a long-term, sustainable scholarly program at SHSU that will secure a positive tenure review.

2. Individual Scholarship Program – intended to support creative activities and/or research for tenured/tenure track faculty across all academic disciplines. Funds are intended for a single project with clear deliverables/products that will enhance the scholarship portfolio of the applicant.

3. Pilot Studies for Future Funding – intended to support pilot projects that will help scholars submit a competitive proposal to an external sponsor.

4. Interdisciplinary Collaborations Program – intended to support collaborative projects among SHSU faculty.

Timeline for Student Participation in Extracurricular Research/Scholarship 2021
Biomedical research laboratory space consists of the following:

- The flex research laboratory bay: research lab bay is an open concept lab that consists of 10 bays that can be simultaneously used by up to 20 investigators. Each bay functions as an individual research area, including basic and specialized equipment that allows complex cell culture and molecular analyses.
- Work stations around the perimeter of the room (including computer/printer stations that interface with SHSU network).
- Laminar hoods consisting of biosafety cabinets class II (2A) for cell culture and microbiologic research.
- Access to Autoclaves, automatic dishwashers, and nanopure water systems.
- State of the art core equipment including: Bio Rad X-ray Auto Film Processor, Bio Rad Real Time PCR Detection System, Dichroic Bio Tek Plate Reader, Thermo Fisher Nano Drop Spectrometer, Olympus BX53 Fluorescence Microscopes (#2), block and air-cycling PCR stations, ultra-fast centrifuges, sonication stations, digital liquid nitrogen (for cryo-storage) systems, Western blot station, shakers and imaging equipment.
- Dedicated spaces for specialized tasks including: fume hood exhaust system, tissue culture, dark room for fluorescence microscopy, -80 freezers and refrigerators, and reagent storage.
- Back up generator to ensure uninterrupted operation of vital equipment, including freezers and refrigerators.
- Inspected and maintained safety equipment (showers, eyewashes) and safety protocols (Biosafety Level 2).