

**Proposed Indiana University of Pennsylvania College of Osteopathic Medicine
(Proposed IUPCOM – Candidate Status – Seeking Accreditation)**

COCA Pre-Accreditation Element 8.1: Research and Scholarly Activity
Pre-Accreditation Submission 8.1-1: Research and Scholarly Activity Strategic Plan

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Mission, Priorities, and Goals

The proposed Indiana University of Pennsylvania College of Osteopathic Medicine (IUPCOM) mission, through its vision and values, acknowledges that research and scholarly activity are essential to academic excellence in health professions education. IUPCOM is dedicated to a robust culture of research and the presentation of scholarly information to its students and the academic community. As such, our research endeavors will be inclusive of scholarly investigative pursuits by faculty and learners that include biomedical science, clinical science, public health, and medical education research arenas – including research paradigms that focus upon the clinical development and application of the principles and practices of osteopathic medicine (OPP). IUPCOM will establish policies and procedures designed to support research development and the scholarly productivity of its faculty, staff and students. Such policies and procedures will extend IUPCOM’s vision to become a leader in leveraging our collaborative partnerships in emphasizing expertise in medical research, community outreach, and evidence-based clinical care to deliver timely, high-quality, and cost-effective medical care to our region’s and nation’s rural and under-resourced populations in support of our mission as operationalized in the following IUPCOM Values and IUPCOM Strategic Goals and Objectives:

Values

- Value 2 – Commitment to Osteopathic Principles: Emphasizing holistic and self-healing principles in research, teaching, and community service.
- Value 4 – Integrity and Inquiry: Fostering lifelong learning, innovation, and ethical practices through education and research.

Strategic Goal 4: Research and Innovation

Objective: Foster a culture of inquiry to advance rural healthcare solutions.

- Encourage faculty, staff, and community partnership and participation in discovery and translational science research to improve understanding of health systems science and the intersection of biomedical processes, life circumstances, and other influences of the human condition to advance understanding of human health and mechanisms of disease.
- Provide resident, faculty, and preceptor development, both in research training and support, to individuals in affiliated GME programs.
- Develop student research opportunities in medical education, basic science, and interprofessional clinical practice.
- Promote community-driven research and service initiatives to address local and rural health challenges throughout Pennsylvania.

IUPCOM's Research Mission is summarized in the following statement:

To provide medical students with the necessary tools to become physicians who are competent in developing, producing, evaluating, and disseminating medical research and peer-evaluated research outcomes and to allow faculty and students to advance medicine and biomedical scholarship throughout rural Appalachia.

The strategies to achieve these goals and fulfill this mission, including specific timelines and outcomes, will be developed at a retreat of the IUPCOM faculty and IUP/IUPCOM administration in spring 2027. During this retreat, a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis will be completed to assess the current state of research at IUP, and from this exercise, research objectives will be further established and action plans suggested. Primary and secondary objectives and action plans to achieve the mission, as presented below in a scaffolding of three (3) criteria, will be informed and revised to reflect progress during the previous two years and propose new opportunities. The results of the SWOT analysis will be kept in internal documentation.

Based on the outcomes of these exercises, the following four proposed primary objectives will be further informed, and any additional objectives will be identified:

- The IUPCOM will develop research infrastructure and culture that allows IUPCOM to receive external grants, fulfill compliance responsibilities, and become a research leader throughout rural Appalachia.
- With oversight by the Associate Dean of Pre-clinical Affairs, the IUPCOM will appoint a Director of Research who will oversee the Office of Research and its resources/projects.
- The IUPCOM will develop student research opportunities to have hands-on experience as evaluators and producers of biomedical research.
- The IUPCOM will develop collaborative research partnerships with other PASSHE schools and Pennsylvania universities, health systems, community clinical partners, and research entities.

This proposed strategic plan outlines preliminary primary and secondary objectives, action plans, and key performance indicators that will be used to fulfill IUPCOM's research mission.

3-Year Research Objectives, Action Plans, and Performance Metrics

Criterion 1a

Primary Objective

Develop research infrastructure and culture that allows IUPCOM to receive external grants, fulfill compliance responsibilities, and become a research leader throughout rural Appalachia

Secondary Objective

Develop a culture of research for faculty and learners

Action Plan

- 1.Ensure scholarly activity as a requirement for rank, promotion, and tenure
- 2.Ensure protected time for research-focused faculty
- 3.Provide start-up/seed grant funds for faculty
- 4.Provide incentives for faculty to pursue external funding
- 5.Provide research seminars and/or journal clubs for preceptor/faculty development and collaboration
- 6.Provide travel grants for research presentation
- 7.Provide funding to cover manuscript publication charges
- 8.Provide training workshops and resources to allow faculty to learn about research compliance, responsible conduct of research, and research best practices
- 9.Plan and host an annual Research Day

Performance Indicators

- 1.Number of submitted/approved grant proposals (individual and collaborative)
- 2.Number of active and completed research projects
- 3.Number of published peer-reviewed journal articles, abstracts, and book chapters
- 4.Number of presentations at regional, national and international meetings
- 5.Annual expenditures for start-up, seed grants, travel grants, page charges
- 6.Number of research seminars and journal clubs
- 7.Awards or other evidence of research excellence including national or international recognition

Criterion 1b

Primary Objective

Develop research infrastructure and culture that allows IUPCOM to receive external grants, fulfill compliance responsibilities, and become a research leader throughout rural Appalachia

Secondary Objective

Maintain access to well-equipped research facilities

Action Plan

1. Annually budget sufficient funds for capital and common equipment, supplies, service contracts, and laboratory upgrades
2. Develop a plan to access clinical examination rooms for clinical research
3. Maintain subscriptions to necessary research software
4. Initiate access to IUP animal research facilities

Performance Indicator

1. Annual expenditures for research equipment, supplies, service contracts, and software
2. Secured and maintained research laboratory spaces for IUPCOM faculty, staff, and student use
3. Performance of clinical research in clinical spaces

Criterion 1c**Primary Objective**

Develop research infrastructure and culture that allows IUPCOM to receive external grants, fulfill compliance responsibilities, and become a research leader throughout rural Appalachia

Secondary Objective

Establish formal access to the IUP financial infrastructure, including internal accounting processes, to enable proper submission, receipt, management, and close-out of external grants by IUPCOM researchers

Action Plan

1. Develop and maintain internal IUP accounting pathways and processes to properly manage external funds for IUPCOM researchers
2. Engage with IUP entities to receive expertise on research grant management for federal awards
3. Maintain access to database with external funding opportunities

Performance Indicator

1. Number of external grant proposal submissions and awards
2. Identified processes for IUP grant management

Criterion 1d**Primary Objective**

Develop research infrastructure and culture that allows IUPCOM to receive external grants, fulfill compliance responsibilities, and become a research leader throughout rural Appalachia

Secondary Objective

Develop access for IUPCOM researchers to compliance infrastructure to allow research using chemicals and biohazardous materials, animal subjects, human subjects, and with federal agencies

Action Plan

1. Develop and maintain engagement with the IUP research enterprise processes and oversight committees to formally review research projects involving recombinant or synthetic nucleic acid molecules and other biohazards
2. Develop and maintain and engagement with IUP Institutional Review Boards for human subject research and Institutional Animal Care and Use Committee for animal subject research
3. Develop and maintain compliance with federal, state, and local regulations through policies, forms, and standard operating procedures
4. Develop and maintain policies to address allegations of research misconduct and conflicts of interest on externally funded programs

Performance Indicator

1. Number of research projects reviewed by IUP IACUC
2. Number of research projects reviewed by IUP IRB

Criterion 2a

Primary Objective

Develop student research opportunities to have hands-on experience as evaluators and producers of biomedical research

Secondary Objective

Develop research training opportunities at IUPCOM for students

Action Plan

1. Provide research seed grants for students working with a faculty mentor
2. Provide travel grants for research presentation
3. Provide training resources to allow students to learn about research compliance, responsible conduct of research, and other research best practices
4. Develop and maintain research course as academic credit for research activities
5. Develop clinical research opportunities in osteopathic principles and practice
6. Develop and incorporate research instruction and opportunities into the academic program throughout all four years

Performance Indicator

1. Number of seed grants for students working with a faculty mentor
2. Number of students engaged in research with IUPCOM faculty or community partners
3. Number of IUPCOM projects with student participation
4. Number of presentations at local, regional, or national meetings
5. Number of publications with student contribution from IUPCOM projects
6. Number of students completing Scholarly Activity/Research in clerkships and fellowships

Criterion 2b

Primary Objective

Develop student research opportunities to have hands-on experience as evaluators and producers of biomedical research

Secondary Objective

Development of a culture of research for student doctors with focus on health disparities research and cultural competency alignment

Action Plan

1. Integrate broadly the scientific method or evidence-based medicine into curriculum
2. Provide research seminars and/or journal clubs for learner development
3. Provide resources for initiating research
4. Explore longitudinal research projects that can be integrated into learner training experience
5. Provide an annual "Research Day"

Performance Indicator

1. Number of hours for research/ scholarly activity in the curriculum
2. Number of hours for research seminars and journal club sessions
3. Number of learning sessions with scientific method or evidence-based medicine

Criterion 3

Primary Objective

Develop collaborative research partnerships with PASSHE schools and other Pennsylvania universities, health systems, community clinical partners, and research entities

Secondary Objective

Expand research partnership opportunities with local and regional hospitals, academic and research institutions, and private businesses

Action Plan

1. Establish collaborative programs with local colleges and universities
2. Establish internship programs with local healthcare providers
3. Develop clinical research opportunities for faculty and students with IUPCOM community preceptors
4. Network to provide local opportunities for student research presentation

Performance Indicator

1. Number of students placed in local and national internship programs
2. Number of internship/collaborative programs established
3. Number of clinical research projects with collaborative partners or preceptors
4. Annual expenditures to support clinical research with IUPCOM preceptors and students
5. Number of student presenters at local/regional/national research symposia

Strategic Plan Progress and Reports

Once established, research outcomes by IUPCOM faculty, staff, and students will be collected and presented in an annual research progress report to the Dean and for purposes of informing further development and stewardship of the college research enterprise. This work will also provide an opportunity for students and faculty to present at an annual COM Research Day, in collaboration with the university IUP Research week.

The proposed IUPCOM's considerations for its research program will be extended and influenced by ongoing examination and analysis of:

1. **Balanced Faculty Workloads to Promote Research** – IUPCOM considers teaching to be the primary responsibility of its faculty. As we develop and review our faculty adequacy model (FAM), IUPCOM faculty are expected to fulfill their teaching obligations while remaining productive in scholarly activity pursuits. All full-time faculty are expected to engage in research and scholarly activity (as will be described in the IUPCOM Employee Handbook) as further determined by individual rank, promotion, and tenure requirements. The allocation of time for scholarly activity by faculty type will be informed by the Faculty Adequacy Model to be developed and adopted. The model will be designed to recognize and accommodate the diversity that will exist among faculty, their career objectives, and their unique contributions to the COM. IUPCOM will continue to evaluate its FAM with respect to research appointments and will work to ensure that research-focused faculty have protected time to pursue research and scholarly activity, up to time allocated in their research appointment and as determined by IUP requirements.
2. **Budget** – The proposed research budget and progress data will provide guidance in consideration of future annual budgets. The proposed research budget and future iterations will include considerations of funds for faculty start-up expenses/seed grants, laboratory operations, capital equipment, mentored research grants for students, faculty and student travel for research presentation, an annual research day, compliance training, research training, publishing fees, stipends for student research internships, expenses associated with the development of collaborative clinical research projects, research software, and a research seminar series. The requirements in the research budget will be evaluated on an annual basis.
3. **Faculty and Student Research Programs and Incentives** – IUPCOM faculty will be eligible to access start-up funds for research or scholarly activity. A proposed research seminar series and journal club opportunities will provide faculty and student development in scholarship. An annual Research Day will provide an opportunity to present completed or in-progress work.
4. **Research Facilities** – Bench-top research facilities for use by IUPCOM faculty, staff, and students has been made available within the 143,000 square foot John J. and Char Kopchick Hall on the IUP campus. Total research space available (bench space, animal facility, and clinical space) for the IUPCOM program is approximately 15,368.44 square feet. IUPCOM has established an ongoing relationship with Nautical Clinical Research to provide coordinating services to conduct clinical trials. This building's construction was completed in 2023 and contains the following research-related spaces (please see response to Element 4.1.2 for facility floor plans):
 - a. 3 flexible classrooms
 - b. 2 multipurpose computer labs
 - c. 16 flexible teaching labs w/ shared instrumentation spaces
 - d. 43 research lab modules
 - e. 72 faculty offices
 - f. Collaboration spaces for group study, conference, tutoring
 - g. Student organization space
 - h. Identified space for IUPCOM researchers include common equipment, multipurpose, dedicated and collaborative laboratory spaces accommodate anticipated growth by meeting faculty, staff, and student recruitment needs. See Figures 1-3.
 - i. Microscope Room 106 (860 sq ft)

- ii. Laboratory Modules Rooms 250, 266-270, 258 (4800 sq ft)
- iii. Laboratory Module Room 358 (967 sq ft)
- iv. Laboratory Modules Rooms 442-454 (4451.44 sq ft)
- v. Animal Facility, Rooms 026A-N, 030, 038, 044, 046 (badge and key secured, 4300 sq ft)
 - 1. 12 holding rooms for rodents, avians, aquatic, and other species
 - 2. 6 animal procedure rooms
 - 3. 2 cage and miscellany storage rooms
 - 4. 1 shower and 1 attire changing room
 - 5. 1 cage washing room
- i. This facility provides wet and dry bench research laboratory spaces with:
 - i. Electrical service
 - ii. Plumbing
 - iii. Laboratory Vacuum, Air, Gasses
 - iv. Wireless access
 - v. Data and Telephone
- j. Clinical research on the IUP campus will be accommodated, in part, on the second floor of McElhaney Hall that holds twelve (12) examination rooms equipped with examination tables and standard clinic equipment for physical diagnosis dedicated to the IUPCOM program and its interprofessional partner programs. This area provides approximately 2500 square feet of clinical research space (please see Figure 4).
- k. Research in Osteopathic Principles and Practice will have the OMT laboratory space on the first floor of McElhaney Hall. Providing approximately 3000 square feet of research space, the laboratory will be equipped with OMT tables, stools, and other relevant equipment for both clinical and educational research paradigms.
- l. Research equipment for common shared use is distributed throughout the spaces mentioned above. Included are:
 - i. ventilation hoods, x16
 - ii. centrifuges, x 12
 - iii. -80° degree freezers, x8
 - iv. refrigeration, x 22
 - v. freeze driers
 - vi. balances, x 18
 - vii. mass spectrometer
 - viii. electron microscope
 - ix. confocal microscope
 - x. fluorescence microscope
 - xi. PCR and rtPCR equipment
 - xii. plate counters, x8

- xiii. gas chromatography
 - xiv. carbon analyzer
 - xv. fume hoods, x15
 - m. Research facilities in Kopchick Hall available for IUPCOM faculty, staff, and students. Included in these facilities are three dedicated laboratory research spaces for IUPCOM faculty and students; these include 1750 total SF of space in these spaces:
 - i. Room 258A (labeled '258' in the floor plan)
 - ii. Room 266A
 - iii. Room 454A
 - n. Multipurpose clinical examination rooms in McElhaney Hall designated for clinical research.
5. Library Resources – As a portion of its mission and goals, the IUP Libraries advance IUP's education and research mission by providing resources for its stake holders to explore, collaborate, and create knowledge in an inclusive and safe learning environment. The IUP library contains books, journals, electronic resources, and search software necessary to support both biomedical and clinical sciences research for faculty, staff, and students. Periodic review and maintenance will ensure these contents remain sufficient and up-to-date. The library also maintains significant relationships with other libraries for a broad interlibrary sharing system. The library also holds significant amounts of dedicated study spaces and rooms.
- a. Circulating Books, 388,319
 - b. Reference Collection, 23,677
 - c. Journals and Periodicals, 10,162 print / 80,148 electronic
 - d. E-books, 798,228
 - e. Audiovisual Materials, 7,628
6. Grant Proposals and Management – IUPCOM's Research Department, in coordination with the IUP Research Institute, will submit external grants on behalf of IUPCOM faculty and students, and this process will be governed by a Grant Submission policy. Research Department personnel will work with accounting personnel to ensure funds from internal and external grants are managed properly. When expertise is needed on federal awards, the IUP Research Institute will provide consulting assistance and sponsored program guidance. Compliance with regulations regarding conflicts of interest in grant funding will be guided and maintained by policy (e.g., Policy on Conflicts of Interest in External Funding). Compliance with regulations surrounding research misconduct will also be maintained through policy (e.g., Policy on Allegations of Research Misconduct).
7. Research Compliance – The IUP Institutional Review Board (IRB) will oversee all research that involves human subjects. IRB approval will be required prior to initiation of all research conducted by IUPCOM biomedical and clinical faculty, staff, and students that qualifies as human subjects research regardless of the location at which the research is conducted. IUPCOM will develop and maintain a *Biosafety Manual*, *Chemical Hygiene Plan*, *Bloodborne Pathogen Exposure Control Plan*, and various standard operating procedures, including *Biohazardous Waste Disposal*, to ensure compliance with local, state, and federal regulations. A *Laboratory Access and Safety* policy will ensure best practices are followed to prevent accidents, spills, and harm. IUPCOM will provide compliance training in the ethical and responsible conduct of research through the CITI Program.

8. Research Department, Committee, and Personnel – IUPCOM’s Research Department will be charged with fostering a culture of research and scholarly activity that will contribute to the advancement of knowledge in the fields of the biomedical sciences, clinical medicine, and osteopathic principles and practice. The Research Department will facilitate faculty and student mentorship, training, and research collaboration. It will provide assistance in seeking funding sources; review and document grant proposals and awards; and facilitate compliance review. The Research Committee will be an advisory body that proposes research policy, oversee the implementation of internal grant funding, and support a culture of faculty, staff, and student research and scholarship. The Research Committee will be composed of IUPCOM administration, faculty, and students, as well as a principal researcher from the local community. Overseen by the IUPCOM Associate Dean of Pre-Clinical Affairs, the IUPCOM Research Department and its director will guide research and scholarly activities for the COM. In addition to administrative responsibilities, the director will mentor faculty, staff, and students in grant writing, research compliance, and discovering research opportunities. The IUP Laboratory and Safety Compliance Manager, will oversee laboratory operations and research compliance, assist faculty and students in research projects and project development, and assist the director of the Research Department with administrative responsibilities.
9. Research Policies – All IUPCOM-focused research policies will be aligned and informed with those of the IUP Research Institute to aid in the development of research and scholarly activity within the COM.
10. Research Software – IUP will provide access to Qualtrics®, a survey platform currently used by faculty, staff, and students at the University. IUPCOM will provide annual subscriptions to statistical software and evaluate regular requests for software that fulfills niche requests.
11. Research Training – In addition to training in ethical and responsible conduct of research and research design, IUP will provide faculty and student access to *Research to Publication*, a research methodology and publishing training program specifically designed for physicians. IUP will also provide periodic research training in cooperation with the IUPCOM Professional Development Committee and maintain documents for assisting faculty and students with writing research proposals. The Research Committee will also be tasked with developing a comprehensive guide to assist IUPCOM researchers through the process of developing a research project.
12. Student Research and Training Opportunities – IUPCOM will provide student research funding through its annual budget process for support of faculty- and staff-mentored research and travel grants. There will also be support for an annual Research Day, at which students have the opportunity to present their scholarly work. Research seminar experiences are also anticipated through journal clubs and seminar series with a focus on making research applicable to medical students. IUPCOM students will have opportunities to learn about research and scholarly activity *during all four years of their education*. First- and second-year students will participate in didactic learning sessions in the scientific method and will complete a research project with an IUPCOM faculty or staff member. During the third and/or fourth year, all IUPCOM students will complete a mandatory rotation in scholarly activity. This research rotation experience will be dedicated to enhancing and improving the students’ knowledge and skills in medical research and scholarly activity. Through this rotation, OMS-III and IV students are expected to gain understanding of ethical and responsible conduct of research, biostatistics, evaluating the validity of published research, and develop either a research project or case report. Fourth year students will have the option to take an elective period to finalize a research or scholarly project previously initiated.

- a. In direct support of innovative research in osteopathic principles and practice, IUPCOM will support faculty-led student research opportunities to explore the efficacy of osteopathic manipulative treatment (OMT) for various conditions, investigate the underlying mechanisms of OMT, and examine the impact of osteopathic care on patient outcomes, particularly in musculoskeletal and other areas. Potential research areas of OPP focus include:
- b. 1. Efficacy of OMT for Specific Conditions:
 - i. **Musculoskeletal Pain:** Research can focus on the effectiveness of OMT for conditions like neck pain, back pain, headaches, and other musculoskeletal issues.
 - ii. **Neurological Conditions:** Studies can explore the potential of OMT in managing neurological conditions, such as vertigo and sciatica.
 - iii. **Other Medical Conditions:** Research can investigate the role of OMT in managing conditions like pregnancy-related discomfort, arthritis, and tendonitis.
- c. 2. Mechanisms of Action of OMT:
 - i. **Neuromuscular and Somatic Effects:** Research can delve into how OMT affects the nervous system, muscles, and joints, and how these changes translate into pain relief and improved function.
 - ii. **Physiological Effects:** Studies can explore the physiological effects of OMT, such as changes in blood flow, hormone levels, and immune function.
- d. 3. Patient Outcomes and Quality of Life:
 - i. **Pain Reduction and Functional Improvement:** Research can assess the impact of OMT on pain levels, functional capacity, and overall quality of life in patients with various conditions.
 - ii. **Long-Term Effects:** Studies can investigate the long-term effects of OMT, including its ability to prevent recurrence of symptoms and improve overall health.
- e. 4. Osteopathic Philosophy and Practice:
 - i. **Patient-Centered Care:** Research can examine how osteopathic principles, such as the body's ability to heal itself and the interconnectedness of the body, influence patient care and outcomes.
 - ii. **Integration of OMT with Other Medical Approaches:** Studies can explore how OMT can be effectively integrated with other medical treatments to optimize patient care.

IUPCOM Research Documents and Programs Slated for Development

- Policies
 - Laboratory Access and Compliance
 - Research Training and Compliance
 - Approval of Letter of Support for Research Activities
 - Off-Campus Research

- Grant Submission
- Responding to Allegations of Research Misconduct
- Compliance Documents
 - IUPCOM Bloodborne Pathogens Exposure Control Plan
 - IUPCOM Biosafety Manual
 - Chemical Hygiene Plan
 - Biohazard Spill Kit Instructions
- Funding Programs
 - IUPCOM Faculty Start-up Funds
 - Mentored Research Grant (students)
 - Anatomy Research Program (students)
 - IUPCOM Student Doctor Research Internship
 - IUPCOM Faculty Research Travel Grant
 - IUPCOM Student Research Travel Grant
 - 10-year Research and Scholarly Activity budget
- Forms
 - IUPCOM Research Project Review Form
 - Laboratory Process and Safety Improvement
 - Capital Equipment Request
 - Request for Research Software
 - IUPCOM Conflict of Interest Disclosure
 - General Use Chemical/Non-Capital Equipment Request
 - Article Processing Fees Request
 - IRB and IACUC Application Form for Submission and Approval
 - Collaborative Research Proposal
- Training and Development Documents
 - How to Access CITI Training
 - Required CITI Training for Faculty and Students
 - Research Impact Seminar Series
 - Research Impact Journal Club
 - Student Journal Club
 - Student Doctor Research Proposal Checklist
 - Guidelines on Writing Proposal or Grant
- Standard Operating Procedures
 - General Lab Practices
 - Centrifuge Use
 - Laboratory Glassware
 - Biohazardous Waste Disposal, including Recombinant Nucleic Acids
 - Operation of an autoclave
 - pH meter
 - Chemical Use, Handling, Labelling, Waste and Disposal
 - Laboratory Training
- Lists

- Common and Shared Laboratory Equipment

Research Committee Membership

- The IUPCOM Research Committee will be composed of:
 - IUP Vice Provost for Research and Innovation
 - Research Department Director
 - Research Committee Chairperson, IUPCOM Faculty
 - Laboratory Safety & Compliance Manager
 - Director, IUP Library Services
 - (2) Biomedical Faculty
 - (2) Clinical Faculty (one member from OPP department)
 - (1) Staff Member
 - (4) IUPCOM Students, OMS-I, II, III, and IV
 - Associate Dean of Clinical Affairs
 - Associate Dean of Pre-clinical Affairs
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Progress Updates

(Noted changes to this research strategic plan since submission for *COCA Candidate Status* in March of 2025)

1. By beginning development of a Memorandum of Understanding (MoU) with the Wimber Research Institute (WRI) in Wimber, Pennsylvania, IUPCOM has advanced its activities and relationship development to address the aims of “Strategic Goal 4: Research and Innovation” to:
 - a. foster a culture of inquiry to advance rural healthcare solutions and encourage faculty, staff, and community partnership and participation in discovery and translational science research, and
 - b. provide resident, faculty, and preceptor development, both in research training and support, to individuals in affiliated GME programs, and
 - c. develop student research opportunities in medical education, basic science, and interprofessional clinical practice.

The Windber Research Institute, now officially known as the Chan Soon-Shiong Institute of Molecular Medicine at Windber (CSSIMMW), is a private, nonprofit biomedical research center. Its Chief Executive Officer and Chief Research Officer, **Hai Hu, PhD**, has established a mission for the WRI dedicated to improving patient care by advancing translational cancer research and has developed a world-class biobank and informatics infrastructure to support its studies. The proposed IUPCOM and WRI have, at the time of this update, held four in-depth meetings toward development of this partnership and MoU on March 24, April 2, May 29, and June 13, 2025. There are several key focus areas and capabilities of interest in the proposed MoU that will benefit researchers and IUPCOM students in this research enterprise:

- Biobank: A central component of the institute is its extensive, College of American Pathologists (CAP) accredited biobank, which stores over 700,000 biospecimens from more than 35,000 donors.

- Informatics infrastructure: It has developed an in-house informatics system to manage the vast amount of clinical and molecular data associated with the biospecimens.
- Translational research: The institute specializes in translational research, which applies findings from basic science into treatments that benefit patients. While initially focused on breast cancer, its research has expanded to other types of cancer and other diseases.
- Proteogenomic analysis: Using cutting-edge technologies, the institute analyzes DNA, RNA, proteins, and metabolites to gain a comprehensive understanding of human cancers.
- Clinical Breast Care Project (CBCP): WRI was founded in 2000 as a partner in the U.S. Congress-mandated CBCP, a Department of Defense research program.
- Collaborators: The institute has a long history of collaborating with Walter Reed National Military Medical Center, the National Cancer Institute, and other major cancer research networks like the Applied Proteogenomic Organizational Learning and Outcomes (APOLLO) and the Oncology Research Information Exchange Network (ORIEN).
- Chan Soon-Shiong partnership: In 2015, the institute and the Windber Medical Center integrated with the Chan Soon-Shiong Institute of Molecular Medicine to expand their capabilities and focus on precision cancer treatment.
- Educational programs: Beyond research, CSSIMMW is involved in science, technology, engineering, and math (STEM) education initiatives for local students, offering classroom visits, job-shadowing, and facility tours.

In this regard, we anticipate this partnership and its several potential experiential elements will promote community-driven research and service initiatives to address local and rural health challenges throughout Pennsylvania. By providing medical students with the necessary research investigatory tools and experiences to become physicians who are competent in developing, producing, evaluating, and disseminating medical research and peer-evaluated research outcomes, these opportunities will allow faculty and students to advance medicine and biomedical scholarship throughout rural Appalachia.