

University of New England College of Osteopathic Medicine

The University of New England College of Osteopathic Medicine (UNE COM) has continued to improve its biomedical, clinical, and educational research capacity and increase its research productivity. It was one of the first two colleges of osteopathic medicine to receive an 'Exceptional Outcome' 10-year accreditation in 2017, following COCA's review (UNE COM granted Accreditation with Exceptional Outcomes). This is the highest level of accreditation a COM can receive.

I. The UNE COM Research Infrastructure

UNE COM has established/improved its research infrastructure significantly in recent years in order to continue to 1) support faculty/staff in research and scholarly activities, 2) improve the research culture within UNE COM, and 3) promote/facilitate student participation in research and scholarly activities.

1. *Associate Dean for Research and Scholarship*

The Office of the Associate Dean for Research and Scholarship (ADRS) was created in August 2018. A full-time Coordinator for the Research and Scholarship office was created at this time. The ADRS meets, advises, and develops a research and scholarship plan for UNE COM medical students integrating research and scholarship principles into the curriculum to foster inquiry and lifelong learning. The ADRS also supports developing research and scholarship into our preclinical and clerkship sites at UNE COM. Research and scholarship opportunities are constantly being developed for our medical students with the various Centers of Excellence at UNE [e.g., 1) the *Center for Excellence in the Neurosciences*, 2) the *Center of Biomedical Research Excellence (COBRE) for the Study of Pain and Sensory Function* (funded by NIH/NIGMS), 3) the *Center for Excellence in Teaching & Learning*, 4) the *Center for Excellence in Aging and Health*, 5) the *Center for Excellence in Digital Health*, 6) the *Center of Excellence in Public Health*, 7) the *Center for Excellence in Collaborative Education*, and 8) the *Maine Concussion Management Initiative* are all closely related to UNE COM's research mission] and through external partnerships. Much of our medical students' research and scholarship interactions are with our Biomedical Science Faculty and Faculty within other UNE Colleges.

The Office of the ADRS provides organizational support for our two separate UNE COM medical student fellowship programs (i.e., the Peter Morgane Student Research Fellowship program and the Carmen Pettapiece Student Research Fellowship program). The Morgane fellowship is supported by the ADRS Office and the UNE COM Research and Scholarship Committee (RSC). The ADRS and Coordinator manage budgetary funds to support this fellowship program. The Pettapiece fellowship is supported by the UNE COM Student Government Association (SGA), which is associated with the UNE COM Office of Recruitment, Student, and Alumni Service (RSAS). The Office of the ADRS is in charge of two annual events, 1) the Fall UNE COM Research Forum and 2) the program for student research at the Maine Osteopathic Association's (MOA) winter symposium. With assistance from the RSC, the Office of the ADRS, facilitates and helps medical students with poster development, clinical case presentations and publications, and all other research publication endeavors. All medical student research, faculty research, and scholarship is tracked yearly in coordination with the Departments of Biomedical Sciences, Primary Care, Osteopathic Manipulative Medicine, and Clinical Affairs for the UNE COM Dean, COCA Accreditation, and the UNE Board of Trustees. The ADRS and Coordinator mentor faculty and medical students regarding IRB procedures and applications for research and scholarship that are submitted to the UNE IRB for approval. Implementing an UNE COM Research & Scholarship Resources SharePoint site has provided all medical students access to research and scholarship content and information. This SharePoint site is updated monthly with new content and policies related to research and scholarship activities. Fourth-year medical students can apply for an elective research credit that needs to be approved by the ADRS and Clinical Education. The ADRS also serves on appropriate College and University research committees and activities to represent UNE COM and create/promote productive working

relationships. The ADRS serves on the Dean's Leadership Team (DLT) to advise the Dean on all aspects of UNE COM research and scholarship activities and the development of new opportunities for research and scholarship with external partners.

2. *The UNE COM Research and Scholarship Committee*

UNE COM created the Research and Scholarship Committee (RSC) in October 2008. In 2018, the ADRS was hired and appointed as the administrator for this committee and a non-voting member (ex officio). The UNE COM RSC is a standing committee of the college and comprises six to nine members, with a chair and a vice-chair appointed by the committee members. The committee reports to the COM Faculty Assembly (COMFA), and the ADRS reports to the Dean's Leadership Team. The ADRS, COM Research & Scholarship Committee, and a Coordinator help to identify research, fellowship, and presentation opportunities for faculty and medical students and disseminate this information across UNE COM. The RSC holds regular monthly meets year-round, and maintains meeting minutes. The goal of the RSC is to provide a faculty voice and administrate matters pertaining to UNE COM research and scholarship. The mission of RSC is "through the collaborative efforts and creativity of the committee members, our mission is to advance and administer the research and scholarship agenda within the UNE COM to include UNE's Centers of Excellence where appropriate and develop opportunities for research and scholarship education and practice." The UNE COM RSC has five main functions:

1. Assist in formulating recommendations and policies including processes or procedures designed to enhance research and scholarship within UNE COM.
2. Develop as appropriate non-degree-granting research endeavors to advance student training in research.
3. Foster and facilitate mentoring of UNE COM students in a variety of research and scholarship activities.
4. Administer and implement the Peter Morgane Student Research Fellowship Program and annual Fall UNE COM Research Forum.
5. Advise the ADRS office on the new medical student research SharePoint site and information related to the functions of this committee.

RSC achieves these functions by working with the UNE COM ADRS, UNE COM faculty and staff, UNE COM students, and the Office of UNE's Associate Provost for Research and Scholarship. In addition, the ADRS and RSC prepare and distributes a list of "[Faculty Research Interests](#)" to prospective and current UNE COM students to show potential research opportunities that UNE COM students could have, thus further encouraging student participation in research.

3. *UNE COM Research Honors Distinction Program*

Charged by the UNE COM Curriculum Advisory Committee, the UNE COM Research and Scholarship Committee has completed the *UNE COM Research Honor Distinction Program* draft policy, which is in effect beginning in 2022-2023. UNE COM students can apply to be considered for the Research Honors Program before May 1 of the end of their 2nd year of medical school. The UNE COM Research Honors Program will recognize medical students who have conducted meaningful clinical, basic, translational, or medical education research and met the requirements \ the Research Honors Designation can integrate the latest scientific evidence in their practice and critically evaluate their approach to medicine/health. The objectives of the Program include 1) Encouraging students to consider and test novel approaches to scientific or clinical problems; 2) Foster analytical thinking skills necessary for rational and effective decision-making in future physicians; 3) Providing an opportunity for UNE COM students to pursue research and to relate their findings to clinical scenarios; 4) Provide guidance and mentorship for UNE COM students regarding careers that integrate research and clinical service; 5) Teach the techniques of data interpretation necessary for dissemination as a presentation or publication, and 6) Generate an understanding of the impact of biomedical research on patient care. Specifically, students in the Honors Program are expected to obtain entrance level knowledge and skills in clinical and basic science research

regarding research design and development, procedural considerations, basic data analysis, author a paper suitable for presentation at a professional conference or publication, or other mechanisms for presentation or publication of the paper.

4. *The UNE COM Seminar Series*

Many individual colleges and centers at UNE host research seminar series. The UNE COM Seminar Series was run by RSC until 2019. It is now administered by the Chair of Biomedical Sciences, who takes the lead in organizing/coordinating this COM series. The COM research seminar series is sponsored by the Department of Biomedical Sciences in UNE COM and occasionally by the Center for Excellence in the Neurosciences. At these seminars, UNE COM faculty and students hear research talks from research-active scientists/scholars on a year-round basis. In addition, other seminars or research activities relevant to the COM, including those hosted by other colleges and centers within and outside of UNE, are also announced to all COM faculty and students via emails and virtual postings. It should also be noted that UNE COM encourages student clubs to invite and co-sponsor external speakers, further increasing COM students' overall interest in research seminars and research in general. Lastly, UNE COM is dually accredited by the American Osteopathic Association and the Maine Medical Association's Council on Continuing Medical Education to provide physicians with continuing medical education (CME).

5. *The UNE Office of the Associate Provost for Research and Scholarship (UNE's Office of Research & Scholarship (R&S))*

UNE COM has worked closely with UNE's Associate Provost for Research and Scholarship and made the leading effort to strengthen UNE's research infrastructure, enhance collaborations among various UNE programs, and secure extramural funding. UNE's Office of R&S was established in 2008 in response to UNE's fast-growing research and scholarly activities. UNE's Office of R&S oversees all of the University's Centers and Institutes for R&S-related activities, the Office of Sponsored Programs, the Office of Research Compliance, Core Research Facilities and Services, and a variety of faculty mini-grant mechanisms (additional details in later sections). The UNE's Office of R&S provides leadership to the UNE community in building research and scholarship activities, policies, and infrastructure.

II. Major UNE COM Research and Scholarship Programs

In line with osteopathic principles, a couple of decades ago, UNE COM critically evaluated its research strength and determined that UNE COM could make significant contributions to advancing knowledge and developing osteopathic medicine in the following research areas. Since 2009, UNE has established several research centers to coordinate university-wide efforts in advancing research and scholarship activities in focused areas. These centers were built on the existing strengths of faculty and educational programs and were designed to promote collaborative research and scholarly activities across the University. Importantly, increased research activity across UNE have resulted in UNE's recent promotion to R2 status (denoted as high research activity) by the Carnegie Classification of Institutions of Higher Education.

1. *Neuroscience Research in collaboration with the Center for Excellence in the Neurosciences (CEN)*

The CEN remains one of the most vibrant centers within the UNE community and is well-known by the neuroscience research community and the local community. The mission of the CEN is to foster creativity and collaboration among people who have a passion for understanding the complexities of the nervous system and applying this knowledge to improve human health, productivity, and quality of life. Significant numbers of UNE COM faculty members are affiliated with the CEN. As members of the CEN, COM faculty actively conduct extramurally funded research, provide high-quality training to postdoctoral fellows, Ph.D., Master's, medical, and undergraduate students, and other health professional students in neuroscience research. CEN faculty also participate in K-12 outreach events. UNE COM's

leadership role in neuroscience research is reflected by the fact that the inaugural and current CEN directors are UNE COM faculty members.

2. *Chronic Pain Research in collaboration with the Center of Biomedical Research Excellence (COBRE) for the Study of Pain and Sensory Function*

UNE's COBRE for the Study of Pain and Sensory Function was established in 2012 through a \$10 million National Institute of Health (NIH) grant from the National Institute of General Medical Sciences (NIGMS) with Dr. Ian Meng, a faculty member in UNE COM, as the Program Director. The Center's mission is to significantly contribute to the scientific understanding of the neurobiology of chronic pain, and facilitating the discovery and development of novel therapies. The Center's primary focus is to support several junior scientists as they establish independent, extramurally funded research programs. The Center has supported eleven principal investigators (PIs) since its establishment, including seven junior PIs from UNE COM, with NIH R01-size funding for each PI (ranging from \$136,000 to \$250,000 per year). The Center has also supported numerous pilot projects led by additional UNE faculty (seven from UNE COM) (ranging from \$ 25,000-50,000 per investigator per year), ten postdoctoral fellows, nine Ph.D. students, eight master's students, and numerous undergraduate student researchers. Moreover, numerous UNE COM students have been engaged in research with these COBRE investigators across UNE. With the COBRE funding, two core facilities have been developed: 1) the *Behavioral and Genotyping Core* and 2) the *Histology and Imaging Core* that allow researchers across the University and outside of UNE access to specialized instrumentation and equipment to carry out cutting-edge research, as well as the necessary training and expertise for using these instruments and equipment. As a result of the robust support from the COBRE, faculty members affiliated with the COBRE have yielded a total of ~\$13.9 million in extramural awards, 93 peer-reviewed publications, over 250 poster presentations, and over 85 oral presentations.

3. *Center for Excellence in Aging and Health (CEAH)*

The Center for Excellence in Aging and Health (CEAH) was conceived in 2017 and launched in 2018 with the hiring of the Founding Director. CEAH is a university-wide center that engages faculty and students in applied learning and research on healthful aging. CEAH is committed to looking beyond the deficit model to meet, know, and celebrate the lives and legacies of aging Mainers. UNE COM students have been engaged in research and scholarly projects through the UNE Legacy Scholars Program. Adults aged 55 years and older volunteer to support our faculty and students in conducting inclusive research on aging and focused on making a difference. The Program has already enrolled 340 participants in the registry and longitudinal study, providing more than 200 volunteers for research and teaching projects at UNE thus far. The goals for the CEAH at its fifth anniversary in 2023 are equally ambitious as those set for the CEAH's first year. The CEAH aspires to have 2,000 older adults actively engaged as de-identified data sets in support of exploratory studies and student projects, with approximately 200 variables being presently collected on an annual basis.

The UNE COM Division of Geriatrics has three signature research projects (Learning by Living Nursing Home Immersion, 48 Hour Hospice Home Immersion, and the Falls and Proprioception-Balancing Act) and a myriad of another funded research. The Learning by Living Nursing Home Immersion is known internationally for "admitting" medical students into nursing homes to live the life of an elder resident for two weeks, complete with diagnoses that warrant standard procedures of care such as toileting, bathing, eating pureed foods, and relying on staff for transfers. The 48 Hour Hospice Home Immersion research project "immerses" students into a local 18-bed acute care hospice home for 48 hours, sleeping in a bed where others have died before. Students are integrated into the interprofessional staff team. During this intensive research, students care for patients, provide family support, and upon a patient's death, conduct post-mortem care. Both projects utilize ethnographic-biographic research designs. Balancing Act is evidenced informed for increasing balance and reducing falls. This NIH funded project focuses on older adults with vision impairment. Other funded projects include 1) Oral Health research for nursing home

residents living in the six Maine Veterans Homes, 2) the Thriving in Place (TIP) Project in the greater Sanford area to find ways for older adults to age optimally in their homes, 3) osteoporosis research focused on cost-effectiveness of fracture prevention in rural women, and 4) older adult veteran support research.

It should also be noted that recently UNE became the first University in northern New England and the fifth in the nation to be officially recognized as an Age-Friendly University (AFU) by the international Age-Friendly University Global Network, which Dublin City University leads with support in the United States from the Association for Gerontology in Higher Education, highlighting the role higher education plays in meeting the challenges and opportunities of an aging population.

4. *The Center for Excellence in Public Health (CEPH) and the Maine Area Health Education Center (AHEC)*

CEPH works to create a world where everyone has fair and just opportunities for health. CEPH advances health equity by engaging UNE faculty, professional staff, students, and community partners to generate new knowledge, contribute to best practices, and expand local self-sufficiency for health while creating learning opportunities for students. Two HRSA funded grants involved UNE COM Students in Community Health:

a) The Primary Care Training and Enhancement (PCTE) grant program:

The PCTE is administered by the Health Resources and Services Administration (HRSA). The HRSA-PCTE Program aims to strengthen the primary care workforce by supporting enhanced training for future primary care clinicians, teachers, and researchers and promoting primary care practice — particularly in rural and underserved areas. From 2016–2021, preceptors and students trained at Penobscot Community Health Care built new competencies as recommended by the Advisory Committee on Training in Primary Care Medicine and Dentistry. This includes providing integrated care with other health professionals, creating team-based practice models like the Patient-Centered Medical Home, and building population health management skills integral to practice transformation. UNE students include 25 physician assistant students, 160 osteopathic medical students, 70 pharmacy students, and 30 preceptors. Additional students include UNE dental, physical therapy, and social work students.

b) HRSA PCTE Champions Grant: Northern New England Clinical Champions Program:

The purpose of the Northern New England Clinical Champions Program (NNE-CCP) is to strengthen the primary care workforce by establishing fellowship programs to train community-based primary care physician and physician assistant champions to lead healthcare transformation and enhance teaching in community-based settings in the tri-state region of ME, NH and VT. These three rural states have been some of the hardest-hit areas in New England, and in the country, for opioid addiction and death. As a result, the primary clinical focus will be to reduce the impact of opioid use in these target communities.

From 2018 to 2023, NNE-CCP partnered with FQHCs serving rural and underserved populations. Cohorts last up to two years and have up to eight fellows participating in each cohort, except for the last one-year cohort with four fellows. Our clinical affiliates are approved sites located within Health Professional Health Areas (HPSAs). The NNE-CCP coordinates with other HRSA-funded initiatives and builds on the success of UNE's current Bangor-based PCTE program to strengthen the primary care workforce of PCPs, PAs, and pharmacists in rural and underserved areas of Maine. The ADRS has established community health projects at Eastern Maine Medical Center and the FQHCs as a way for UNE COM students to publish abstracts and present posters at UNE and regional and national meetings.

5. *Interprofessional Education*

The Center for Excellence in Collaborative Education (CECE) is UNE's hub for interprofessional education (IPE) and collaborative practice. Recognized as a national IPE leader, UNE is the only

Institution in New England that is part of the National Center for Interprofessional Education and Practice's prestigious Innovation Network. CECE's mission is to prepare students to work collaboratively across disciplines to achieve more successful outcomes as clinical and community team members. IPE touches every health profession's program at UNE and, increasingly, many of the arts, sciences, research, and humanities programs. It fosters an inclusive environment where students, faculty, and community partners learn together to advance effective health practices and improve the quality of life for all people. The IPE-focused centers have transformed UNE's education in various health professions, including UNE COM, in its preclinical and clinical phases and have promoted/facilitated collaboration between various health profession programs. UNE COM is also committed to interprofessional education and research. Optional opportunities include an array of choices, including but not limited to:

- 1) Earning an Interprofessional Practice Honors Distinction
- 2) Participating in the prestigious AHEC Scholars Care for the Underserved Pathway program, which includes a variety of seminars and Rural Health Immersions
- 3) Working on a Point of Dispensing Public Health Emergency Preparedness Exercise and Vaccine Clinics for Underserved Populations
- 4) Service-learning activities include preparing discharge kits for residents leaving a Maine prison and developing brief instruction modules on Medication-Assisted Treatment and Stigma for officers in a county jail.

6. *Maine Medical Center Research Institute (MMCRI)/Maine Health*

In 2020, UNE COM developed a research initiative with MMCRI and Maine Health. MMCRI supports and encourages a broad spectrum of research at Maine Medical Center, from basic laboratory-based to translational research, and works to apply basic discoveries to medical problems. MMCRI also performs clinical research to directly apply new drugs, devices, and treatment protocols to patients, and health services research, aimed at using research methods to help improve and evaluate health care delivery programs and new technologies. Successful medical research is a complex process requiring the close collaboration of basic scientists, physicians, epidemiologists and data analysts, state-of-the-art instruments, resources to protect the interest of patients who volunteer to participate in clinical trials, and a strong commitment on the part of the Institution. This has been highly successful, and from 2020 to 2022, over 30 UNE COM medical students have participated in research at Maine Health and MMCRI.

III. Research Supporting Offices

UNE COM faculty/staff/students receive support/services from the following offices to conduct intramurally and extramurally funded research activities and to ensure compliance with all regulations in conducting all research and scholarly activities.

1. *Office of Sponsored Programs*

The Office of Sponsored Programs aims to facilitate the University's goal of becoming a significant research institution by providing faculty with the highest quality research support services while also protecting the University's interests by reviewing all proposals for external funding agencies. This Office also initiates and implements research-related policies and procedures, provides training and outreach, and serves as a liaison between the University and its sponsors. The Office's major functions and responsibilities are detailed on the Office's web site <https://www.une.edu/research/office-sponsored-programs/office-sponsored-programs>

2. *Office of Research Compliances*

The [Office of Research Compliance](#) was established to ensure all research activities performed at UNE comply with all applicable federal and state mandates. Promoting ethically responsible research is of utmost importance in facilitating a culture of compliance. The Office, overseen and supported by the Director of Research Integrity, works with various compliance committees including the [Institutional](#)

[Review Board \(IRB\)](#), the [Institutional Animal Care and Use Committee \(IACUC\)](#), and the [Institutional Committee on Biosafety \(IBC\)](#) to help ensure both the ethical conduct of research and the protection of the rights and welfare of humans and animals in research performed at UNE. Currently, the IRB oversees approximately 350 active protocols, with UNE COM faculty or personnel responsible for 5-8% of those protocols. In a given month, the IRB receives anywhere from 25-45 submissions, including initial submissions, renewals, and amendments. The IACUC oversees approximately 100 protocols, with the UNE COM faculty or personnel responsible for 60-75% of those protocols at any time. In a given month, the IACUC receives anywhere from 15-30 submissions from investigators, including initial submissions, renewals, and amendments. The IBC has over ten active exempt protocols involving UNE COM faculty and staff.

IV. Research Facility

All UNE COM faculty, who conduct basic bench research, have assigned lab space and have access to shared major equipment for their research needs. Over the last several years, the UNE COM research faculty have benefited from UNE's overall improvement in its research facilities. These improvements are reflected by the renovated research space both on the fourth floor of Stella Maris Hall and on the second floor of the Pickus Center for Biomedical Research building and growing numbers of core facilities supported by the UNE's Office of R&S and extramural funding.

1. *Research Space Renovation*

Research space renovations were made in response to UNE's fast growth in biomedical research and the recent hiring of research faculty within UNE COM, and were supported by both UNE's Office of R&S and UNE COM. The fourth floor of Stella Maris Hall was completely renovated in 2012-2013 and now provides research space for three UNE COM faculty who conduct microbiology and drug development research, the COBRE Behavioral Core, and a shared certified radiation room for projects using radioactive materials. The second floor of the Pickus Center for Biomedical Research building was partially renovated to fit the needs of the COBRE histology and imaging core and two new UNE COM faculty who conduct research in cancer immunology and developmental biology. UNE COM evaluates its needs in research space annually and further renovations will be made to accommodate future research needs.

2. *Core Research Facilities and Services*

[Core Research Facilities and Services](#) at UNE and within the [COBRE](#) were established through both internal funding and external grants to provide the University community and other scientific institutions with access to state-of-the-art equipment and training. The purpose of the Cores is to make technology and expertise available to all students, faculty, staff, and external researchers. The Cores are shared facilities categorized into centralized labs, organized by areas of technology and scientific study, and are managed by highly qualified and trained facility managers. UNE currently hosts the following core facilities:

- [Genomics, Analytics & Proteomics Core \(GAPC\)](#): Provides researchers with state-of-the-art technologies, technical support and educational programs in genomics, analytics, and proteomics.
- [Histology & Imaging Core](#): Provides service, training, and specialized instrumentation related to tissue processing, sectioning, staining, immunohistochemistry, microscopy, and image analysis. Moreover, this core also provides training and services related to three specialized microscopes, a confocal microscope, a two-photon confocal microscope, and an atomic force microscope.
- [Behavioral and Genotyping Core](#): Provides services, training, and apparatuses for a variety of animal behavioral assessments, as well as genotyping genetically modified animals.

In addition, with the help from UNE COM, the University Office of R&S, and the CEN, the Department of Biomedical Sciences has purchased significant numbers of additional equipment (including maintenance contracts in some cases) that are shared by all faculty within COM and that are made

available to other faculty within the UNE community. Frequently, decisions on equipment purchase (including some of the UNE core equipment mentioned above) are made according to the needs of the faculty member, as recommended by the Chairs of Biomedical and Clinical Sciences

V. Time Allocation and Funding support for Faculty Research

1. Time and Effort Allocation

To ensure faculty have protected time to pursue research and scholarship activities, UNE COM has been innovative and flexible when assigning percentage effort (teaching, research, and service) to its faculty. Responsibilities for individual faculty are reflected by the times/efforts that are assigned to perform their responsibilities and are determined based on individual faculty members' strengths and individual departmental needs. To maximize research productivity, UNE COM also established a faculty research track. This initiative allows UNE COM to recruit faculty members predominantly funded externally and willing to provide teaching services to UNE COM students. As a result, within UNE COM, there is a mix of research-dominant faculty and teaching-dominant faculty. More details can be found in the Appendix C section on "College of Osteopathic Medicine College RPT Standards" within the [UNE Faculty Handbook](#).

2. Policy on Distribution of Facilities and Administrative Recovery Funds

To recognize the need to strategically invest in research and provide incentive for PIs to increase their research productivity, UNE continues to have a unique policy to distribute the Facilities and Administrative Recovery (F&A, sometimes referred to as "indirect costs") from external grants (published in the "Attachment 7 Policy on Distribution of F&A Recovery Funds" within the [UNE faculty Handbook](#)). The equation can be seen here.

F & A Recovery (100%) = General funds (25%) + Office of R&S (40%) + Dean (10%) + PI (25%)

As a result, individual PIs would obtain additional funding to support their research program, and the Office of R&S would be able to help contribute to new faculty start-up packages, shared research resources, faculty mini-grants, and other strategic investments designed to increase research volume and improve the administrative faculty support. In addition, budget relief, which results from grant-funded faculty salaries, remains within the college, providing further incentives for increasing faculty participation in research at the college level.

3. Faculty Start-up Funding

Through working with the UNE Office of R&S, UNE COM has also been able to provide generous start-up funding for its new faculty members who are research-intensive. Over the last several years since the 2010 COCA visit (2010-2016), the start-up funding per research-intensive faculty (who has 60% or above for total effort in research) ranges from \$50,000 to \$400,000 with an average of \$190,000 per faculty. In the years prior to 2010, the highest start-up UNE COM provided was \$150,000.

4. Funding Support for Research Initiatives

Besides individually negotiated start-up and F&A recovery received by the COM Dean that can be used to support faculty research, all of the UNE faculty, including the COM faculty, have the opportunity to apply for external and internal grants administered through the UNE Office of R&S and various Centers. Grants Activity Reports listing all currently extramurally funded or pending projects can be viewed with an UNE ID and password through the [UNE Research site](#).

The following internal grant mechanisms are most relevant to UNE COM faculty/staff. UNE mini-grants, provided by UNE's Office of R&S, support junior faculty in developing a research and scholarship program and senior faculty in pursuing a new direction or beginning a project that has not been previously funded. Research areas include Natural Sciences, Medicine, Humanities and the Creative and Fine Arts, and Social Sciences and Public Health. SoTL mini-grants provided by the Center for Excellence in

Teaching and Learning (CETL) encourage faculty to investigate a teaching component to advance teaching practice and student learning.

COBRE pilot project grants, provided by the COBRE Center for the Study of Pain and Sensory Function, support faculty pilot projects related to understanding the neurobiology of pain. Projects should acquire preliminary data for NIH R01/R15/R21/SBIR/STTR or comparable grant applications and publications in peer-reviewed journals.

Core facility grants: CEN has developed additional funding opportunities to support individual researchers to take advantage of the resources within UNE's core facilities.

VI. Osteopathic Postdoctoral Training Program in Research (OPTI)

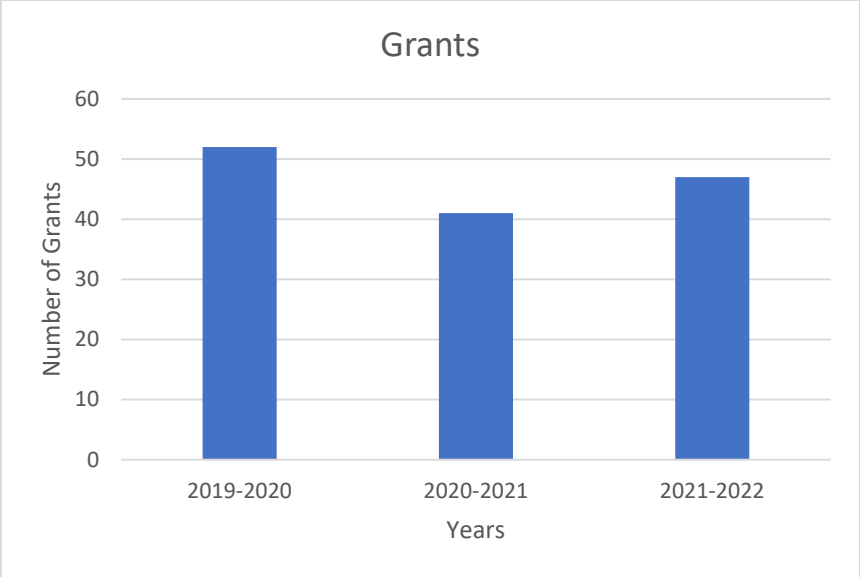
UNE COM's Northeast Osteopathic Medical Education Network (NEOMEN) is a robust research support tool for its residents. An online research methodology course, available asynchronously, vetted, and proctored by UNE COM professors, exists for those residents being first introduced to research. Each Institution runs its own IRB for research on its campus and provides specific research requirements to its residents. Once a year, NEOMEN hosts a research forum open to both UNE COM students and NEOMEN residents. It has consistently grown in size and is now mandated by many of the NEOMEN sites for residents during their final post-graduate year. The forum is unique in that all abstracts are reviewed and corrections sought before acceptance, but if corrections are made, all abstracts are accepted. Original research is emphasized through a cash award for the top three resident and student category winners. A lecture on the state of research or specialized research topics is given as part of the awards ceremony. Finally, significant faculty research occurs at each of our NEOMEN sites, and students and residents participate, but infrastructure and administration are health-institution specific and not NEOMEN-centric.

VII. Productivity of Research and Scholarship Activities

The combination of the UNE COM faculty's passion and dedication in research, and UNE COM's consistent support for research and scholarship activities has resulted in tremendous accomplishments for its faculty in various areas. UNE COM faculty have demonstrated their ability to make significant contributions to advancing knowledge and developing osteopathic medicine through scientific research. Research productivity of UNE COM faculty is highlighted in the following areas.

1. Federal, State and Contract Grants

Fifty-two UNE COM faculty led grants in 2019-2020, 41 grants in 2020-2021 and 47 grants in 2021-2022. These awards represent federal (NIH, NSF and HERSA), state grants and private contractors. The total grant award for UNE COM was \$284,176,805 during the period of June 2019 to May 2022.



2. *Student Scholarly Activities*

Over 50% of our UNE COM medical students participated in research and scholarly activities.

