

**IDAHO COLLEGE OF OSTEOPATHIC MEDICINE (ICOM)
STRATEGIC PLAN FOR RESEARCH & SCHOLARLY ACTIVITY
2021 – 2024**



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THIS DOCUMENT WAS REVISED BY THE ICOM RESEARCH COMMITTEE

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MISSION, PRIORITIES, AND GOALS

The ICOM mission acknowledges that research and scholarly activity are essential to academic excellence in health professions education. Congruent with its mission, ICOM is dedicated to a robust culture of research and the presentation of scholarly information to its students and the academic community. Research and scholarship endeavors are defined broadly to include biomedical sciences, clinical, public health, and medical education research, including research that investigates questions arising from the elements and applications of principles and practices of osteopathic medicine (OPP). ICOM has established policies and procedures designed to support research development and the scholarly productivity of its faculty, staff and students.

Such policies and procedures are a natural extension of ICOM's vision to be the nation's leader in the training of caring and expert osteopathic physicians and in support of our mission as operationalized in the following two goals and objectives:

- Goal 1 aims for ICOM to “educate osteopathic medical students in the art and science of osteopathic medicine using the most current research in clinical and biomedical sciences.”
- Goal 5 seeks for ICOM to “contribute to the fund of osteopathic medical knowledge through educational, scientific and clinical research and other scholarly activity.”

Building off of the institution's mission and goals, ICOM's research mission is summarized in the following statement:

Research Mission: The research mission at the Idaho College of Osteopathic Medicine is two-fold: to provide student doctors the necessary tools to become competent physicians in evaluating and producing medical research and to allow faculty and students to advance medicine and biomedical scholarship in Idaho, Montana, North Dakota, South Dakota, Wyoming and beyond.

The strategies to achieve these goals and fulfill this mission, including specific timelines and outcomes, were initially developed at a retreat in January 2019. During the retreat, a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis was completed to assess the current state of research at ICOM, and from this exercise, research objectives were established and action plans suggested. In the spring of 2021, primary and secondary objectives and action plans to achieve the mission were revised to reflect progress during the previous two years and propose new opportunities. The results of the SWOT analysis are kept in internal documentation.

Based on the completed exercises, three primary objectives were identified and are summarized in the following bullets:

- Develop research infrastructure and culture that allows ICOM to receive external grants, fulfill compliance responsibilities, and become a research leader in the five-state region
- Develop student research opportunities to have hands-on experience as evaluators and producers of biomedical research
- Develop collaborative research partnerships with local universities, health systems, and research groups

For each of these primary and secondary objectives were identified. Actions to take during the next three years to fulfill each secondary objective were created and performance indicators were proposed (Table 1).

This strategic plan outlines the primary and secondary objectives, action plans, and key performance indicators that will be used to fulfill ICOM's research mission. In addition, this document contains a progress report on resources, programs, opportunities, and incentives that ICOM is providing as of June 2021 to advance research and scholarly activity.

Table 1: 3-year research objectives, action plans, and performance metrics

Primary Objective	Secondary Objective	Action Plan	Performance Indicator
<ul style="list-style-type: none"> Develop research infrastructure and culture that allows ICOM to receive external grants, fulfill compliance responsibilities, and become a research leader in the five-state region 	<ul style="list-style-type: none"> Develop a culture of research for faculty 	<ul style="list-style-type: none"> Ensure scholarly activity is required for rank promotion Ensure protected time for research-focused faculty Provide start-up funds for faculty Provide seed grant funds for faculty Provide incentives for faculty to pursue external funding Provide research seminars and/or journal clubs for faculty development and collaboration Provide travel grants for research presentation Provide funding to cover manuscript page charges Provide training workshops and resources to allow faculty to learn about research compliance, responsible conduct of research, and research best practices Host an annual Research Day 	<ul style="list-style-type: none"> Number of active and completed research projects Number of publications in peer-reviewed journals, abstracts, and book chapters Number of presentations at regional, national and international meetings Annual expenditures for start-up, seed grants, travel grants, page charges Number of research seminars and journal clubs Awards or other evidence of research excellence including national or international recognition

<ul style="list-style-type: none"> • Develop research infrastructure and culture that allows ICOM to receive external grants, fulfill compliance responsibilities, and become a research leader in the five-state region 	<ul style="list-style-type: none"> • Maintain access to well-equipped research facilities. 	<ul style="list-style-type: none"> • Annually budget sufficient funds for (capital) equipment, supplies, service contracts, and laboratory upgrades • Develop a plan to access clinical examination rooms for clinical research • Maintain subscriptions to software necessary for research • Develop opportunities to access external animal facilities for research 	<ul style="list-style-type: none"> • Annual expenditures for research equipment, supplies, service contracts, and software • Performance of clinical research in clinical examination rooms
<ul style="list-style-type: none"> • Develop research infrastructure and culture that allows ICOM to receive external grants, fulfill compliance responsibilities, and become a research leader in the five-state region 	<ul style="list-style-type: none"> • Establish financial infrastructure, including internal accounting processes, to enable proper submission, receipt, management, and close-out of external grants 	<ul style="list-style-type: none"> • Develop internal accounting processes to properly manage external funds for research • Contract with Boise State University to provide expertise on research grant management for federal awards • Maintain access to database with external funding opportunities 	<ul style="list-style-type: none"> • Number of external grant proposal submissions and awards

<ul style="list-style-type: none"> • Develop research infrastructure and culture that allows ICOM to receive external grants, fulfill compliance responsibilities, and become a research leader in the five-state region 	<ul style="list-style-type: none"> • Develop compliance infrastructure to allow research using chemicals and biohazardous material and human subjects, and with federal agencies 	<ul style="list-style-type: none"> • Maintain ICOM Institutional Biosafety Committee to review research projects involving recombinant or synthetic nucleic acid molecules and other biohazards • Maintain agreement with Boise State University for access to their Institutional Review Boards for human subjects research • Maintain compliance with federal, state, and local regulations through policies, forms, and standard operating procedures • Maintain policies to address allegations of research misconduct and conflicts of interest on externally funded programs 	<ul style="list-style-type: none"> • Number of research projects reviewed by ICOM IBC • Number of research projects reviewed by Boise State University IRB
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<ul style="list-style-type: none"> • Develop student research opportunities to have hands-on experience as evaluators and producers of biomedical research 	<ul style="list-style-type: none"> • Develop research training opportunities at ICOM for students 	<ul style="list-style-type: none"> • Provide research seed grants for students working with a faculty mentor • Provide travel grants for research presentation • Provide training resources to allow students to learn about research compliance, responsible conduct of research, and best practices • Develop independent study course as academic credit for research activities • Develop clinical research opportunities in osteopathic principles and practice • Develop research instruction and opportunities during all four years 	<ul style="list-style-type: none"> • Number of seed grants for students working with a faculty mentor • Number of students engaged in research with ICOM faculty or community partners • Number of ICOM projects with student participation • Number of presentations at local, regional, or national meetings • Number of publications with student contribution from ICOM projects • Number of students completing Scholarly Activity / Research rotations
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<ul style="list-style-type: none"> • Develop student research opportunities to have hands-on experience as evaluators and producers of biomedical research 	<ul style="list-style-type: none"> • Development of a culture of research for student doctors 	<ul style="list-style-type: none"> • Integrate broadly the scientific method or evidence-based medicine into curriculum • Provide research seminars and/or journal clubs for student development • Provide resources for getting started with research • Explore large, longitudinal research project that can be integrated into student life • Provide annual Research Day 	<ul style="list-style-type: none"> • Number of hours for research/scholarly activity in the curriculum • Number of hours for research seminars and journal club sessions • Number of learning sessions with scientific method or evidence-based medicine
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<ul style="list-style-type: none"> • Develop collaborative research partnerships with local universities, health systems, and research groups 	<ul style="list-style-type: none"> • Expand research partnerships with local and regional hospitals, academic and research institutions, and private businesses 	<ul style="list-style-type: none"> • Establish internship programs with local colleges and universities • Establish internship programs with local healthcare providers • Develop clinical research opportunities for faculty and students with ICOM preceptors • Maintain national internship list • Network to provide local opportunities for student research presentation 	<ul style="list-style-type: none"> • Number of students placed in local and national internship programs • Number of internship programs established • Number of clinical research projects with collaborative partners or preceptors • Annual expenditures to support clinical research with ICOM preceptors and students • Number of student presenters at local research symposia
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PROGRESS REPORT:

RESOURCES, PROGRAMS, OPPORTUNITIES, AND INCENTIVES TO ACHIEVE OUR RESEARCH MISSION AS OF MAY 2021

This section describes ongoing activities, programs, resources, and incentives that are currently being offered to ICOM faculty and students.

Balance Faculty Workloads to Promote Research. ICOM considers teaching to be the primary responsibility of its faculty. Taking into account the faculty adequacy model (FAM), ICOM faculty are expected to fulfill their teaching obligations while remaining productive in the areas of research and scholarly activity. All full-time faculty are expected to engage in research and scholarly activity as described in the ICOM Employee Handbook, and rank promotion requires documentation of scholarly activity.

The allocation of time for scholarly activity by faculty type can be seen in the Faculty Adequacy Model. In general, faculty research appointments for biomedical sciences are 30% (20% for chairs); osteopathic principles and philosophy, 20%; clinical medicine, 10%. This system is designed to recognize the diversity that exists among faculty, their career objectives, and their unique contributions to the COM. Variations of the appointment percentages for research will be considered in the future. ICOM continues to evaluate its FAM with respect to research appointments and is working to ensure that research-focused faculty have protected time to pursue research and scholarly activity, up to time allocated in their research appointment. During the 2020-2021 academic year, additional faculty positions were created by the Board of Trustees to ensure protected research time for faculty.

Budget

In 2017 ICOM developed a 10-year research budget, which is shown in an accompanying document. This document continues to provide guidance to annual budgets. The 2021-2022 research budget includes funds for faculty start-up expenses, research 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, a funding opportunities database, and a research seminar series. The requirements in the research budget will continue to be evaluated on an annual basis.

Faculty Research Programs and Incentives

All faculty at ICOM are eligible to access start-up funds for research or scholarly activity. Faculty can apply to receive seed grants to develop their research and travel grants to present the results. The Impact Research Seminar Series and Journal Club provides faculty development in rigorous research. The annual Research Day provides an opportunity to present completed or in-progress work. Faculty who receive salary through an awarded grant are eligible to receive a financial incentive.

Facilities

Construction on our own BSL-2 research laboratory finished in January 2019. This tenant improvement provides approximately 1,674 total square feet of wet and dry bench research laboratory space for ICOM faculty and students to pursue laboratory research. This multipurpose lab space accommodates anticipated growth and meets faculty and staff recruitment needs. The space is located in rooms 148, 148A, 148B, and 148C (see Figure 1). Campus infrastructure and site utilities available in the lab include:

1. Electrical service
2. Plumbing
3. Lab Vacuum
4. Lab Air
5. Natural Gas
6. Wireless access
7. Data and Telephone

Clinical research is accommodated by twelve (12) examination rooms equipped with examination tables and standard clinic equipment for physical diagnosis located on the second floor of the ICOM building. This area provides approximately 3,300 square feet of clinical research space (see Figure 2 below). Total research space available (bench space and clinical space) is approximately 4,974 square feet. ICOM has established an ongoing relationship with Nautical Clinical Research to provide coordinating services to conduct clinical trials.

The ICOM library contains books, journals, electronic resources, and search software necessary to support both biomedical and clinical sciences research. Periodic review and maintenance ensure these contents remain sufficient and up-to-date.

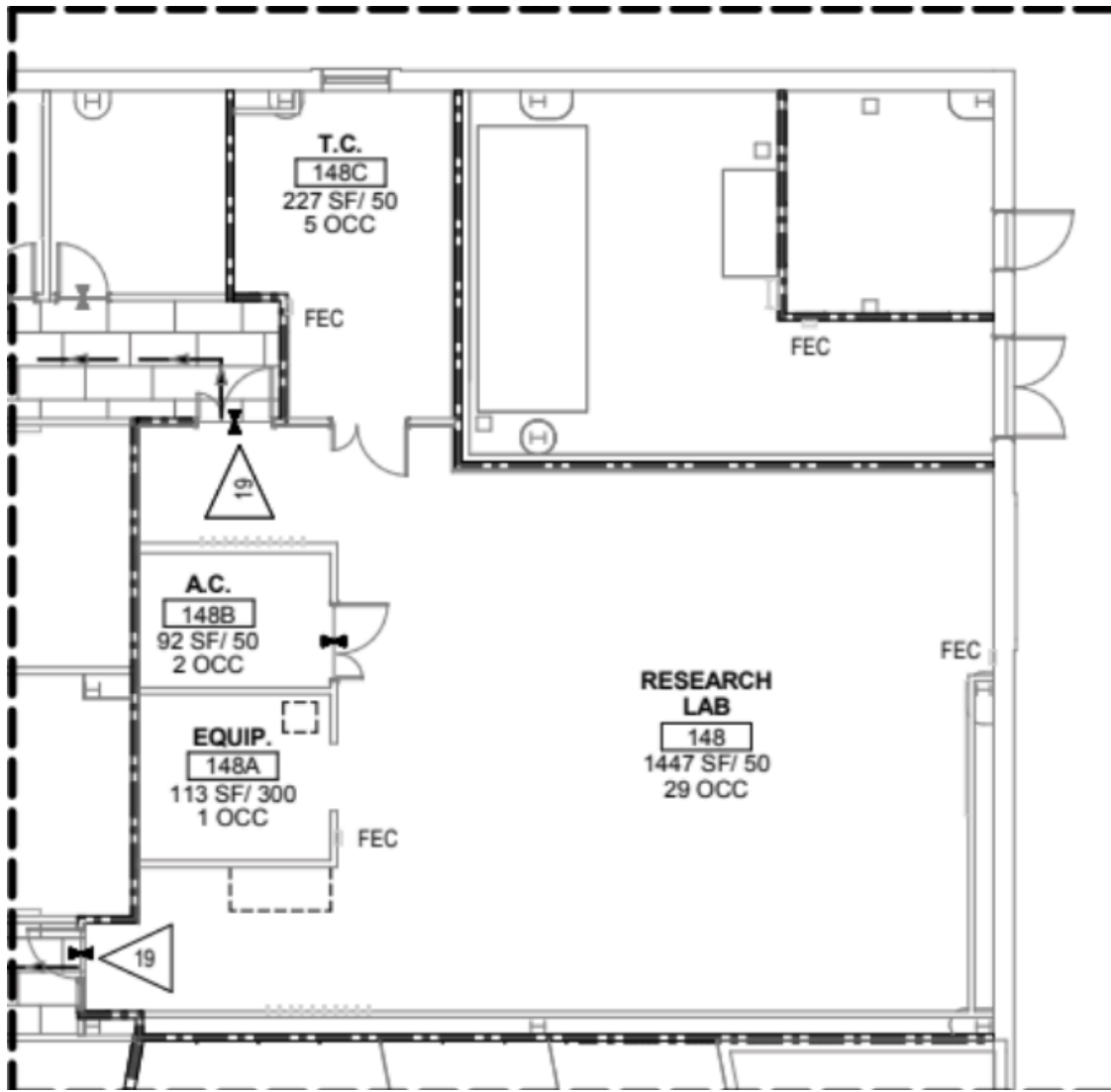


Figure 1: Wet and dry bench research laboratory space (Rooms 148, 148A, 148B, and 148C) currently under construction

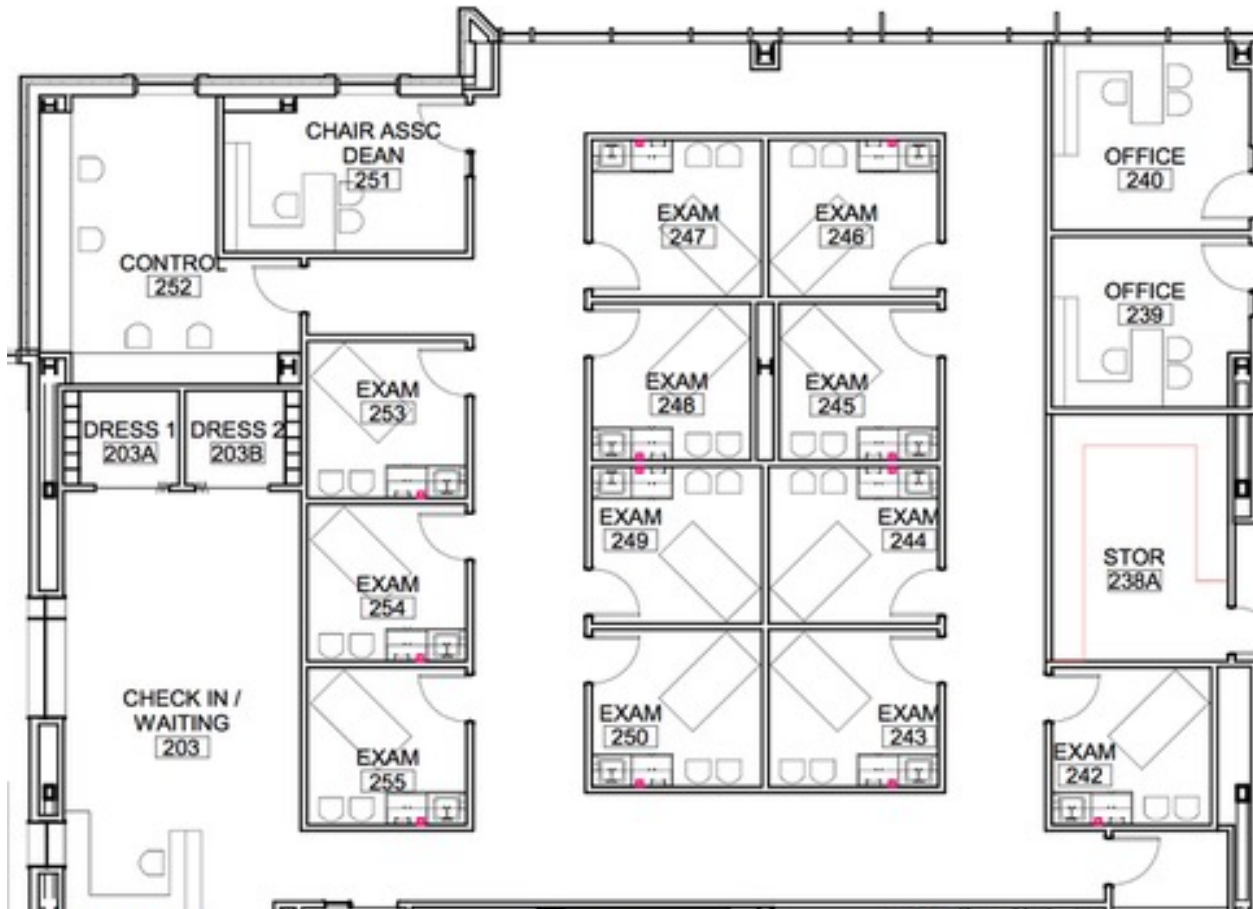


Figure 2: Multipurpose clinical examination rooms designated for clinical research.

Grant Proposals and Management

ICOM's Research Department submits external grants on behalf of ICOM faculty and students, and this process is governed by the Research Grant Submission policy. Research Department personnel works with accounting personnel to ensure funds from internal and external grants are managed properly. When expertise is needed on federal awards, ICOM has a contract with Boise State University's Office of Sponsored Programs to provide consulting assistance. ICOM provides a grants funding database to locate external opportunities of interest to ICOM faculty. Compliance with regulations regarding conflicts of interest in grant funding is maintained through a policy entitled Conflicts of Interest on Externally Funded Programs. Compliance with regulations surrounding research misconduct is maintained through a policy entitled "Responding to Allegations of Research Misconduct."

In 2021 the Internal Revenue Service granted non-profit status to the Mountain States Institute for Graduate Medical Education and Research. This 501(c)3 entity supported by ICOM allows ICOM faculty to apply for grant funding from public and private sources, thereby removing previous restrictions.

Research Compliance

The Institutional Review Board (IRB) oversees all research that involves human subjects. IRB approval will be required prior to initiation of all research conducted by ICOM biomedical and clinical faculty, staff, and students that qualifies as human subjects research regardless of the location at which the research is conducted. ICOM currently utilizes the Boise State University Institutional Review Board (IRB) to review a limited number of protocols exempt from the Common Rule regulations and is developing an agreement to review all types of protocols. ICOM also has a signed agreement with WIRB (Western Institutional Review Board), located in Puyallup, Washington, to review full-board and expedited protocols.

ICOM's Institutional Biosafety Committee (IBC) oversees all biosafety issues on campus related to the research and teaching activities of the faculty. The committee establishes and implements policies and procedures that comply with state and federal laboratory safety guidelines, including National Institutes of Health (NIH)-funded research that involves recombinant DNA, as well as the use of other biological, chemical and physical agents in the laboratory. The IBC has the authority to assess hazards, determine needed safeguards, inspect laboratories, and suspend activities it determines are conducted in a manner inconsistent with applicable policies. ICOM maintains its own IBC with three ICOM faculty members, two community members, and the Laboratory and Safety Compliance Manager.

ICOM will not be sponsoring research that involves animals on its own campus and thus has not entered into a partnership with a local IACUC. Also, ICOM will not be sponsoring research that involves radiation on its campus and thus has not entered into a partnership with a local radiation safety committee.

ICOM developed and maintains 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. The Laboratory Access and Safety policy ensures best practices are followed to prevent accidents, spills, and harm.

ICOM provides compliance training in the ethical and responsible conduct of research through CITI.

Research Personnel

ICOM's Research Department and Research Committee are 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 facilitates faculty and student mentorship, training, and research collaboration; provides assistance in seeking funding sources; reviews and documents grant proposals and awards including competitively funded ICOM research seed grants; and facilitates review by compliance bodies. The Research Committee is an advisory body that proposes research policy, oversees the implementation of internal grant funding, and supports a culture of faculty and student research and scholarship. The Research Committee is composed of ICOM administration, faculty, and students, as well as a researcher from the local community.

ICOM Research Department is led by a Chair, who directs research and scholarly activities for the COM. In addition to administrative responsibilities, the Chair mentors faculty and students in grant writing, research compliance, and finding research opportunities. ICOM also employs a full-time Laboratory and Safety Compliance Manager, who oversees laboratory operations and research compliance and operations, assists faculty and students in research projects, and assists the Chair of the Research Department with administrative responsibilities.

Research Policies

ICOM has developed multiple policies to direct the development of research and scholarly activity. Policies on research misconduct and conflicts of interest are described in the Research Compliance section. Other policies include Research Training and Compliance, Laboratory Access and Safety, Off-campus research, Mycoplasma Testing of Tissue Culture Cell Lines, Research Grant Submission, and Approval of External Letters of Support for Research Activities.

Research Software

ICOM provides access to SurveyMonkey, a survey platform used by faculty and students. ICOM also provides annual subscriptions to statistical software and evaluates regular requests for software that fulfills niche requests.

Research Training

In addition to training in ethical and responsible conduct of research provided through CITI, ICOM provides faculty and student access to Research to Publication, a research methodology and publishing training program specifically designed for physicians. ICOM also provides periodic research training in cooperation with the Professional Development Committee, and maintains documents for assisting faculty and students writing research proposals. A Research LibGuide, which comprehensively guides faculty and students through the process of developing a research project, is in development as of June 2021.

Student Research and Training Opportunities

ICOM provides student funding through its annual budget process for mentored research and travel grants. Funding is also provided for an annual Research Day, at which students have the opportunity to present, and both journal clubs and research seminars. The seminar series is entitled the Impact Research Seminar Series and speakers focus on making research applicable to student doctors. Two journal clubs currently operate: one developed by students that focuses on lowering the entry barrier for students to understand research and another led by faculty which focused on rigorous evaluation of published articles.

In addition to research opportunities with ICOM faculty, ICOM supports or facilitates research internships with Boise State University, Idaho State University, the Idaho Urological Institute, and Saint Alphonsus Health System. ICOM also provides a national listing of research opportunities to its students. ICOM students have previously received prestigious summer research opportunities, including the National Institutes of Health, Fred Hutchinson Cancer Research Center, and Icahn School of Medicine at Mt. Sinai.

ICOM students have opportunities to learn about research and scholarly activity during all four years of their education. First- and second-year students receive didactic learning sessions in the scientific method and can receive credit for completing a research project with an ICOM faculty member through enrolling in a Research Independent Study special topics course. During the third year, all ICOM students complete a mandatory rotation in scholarly activity. The SCRO 3751 rotation will enhance and improve students' knowledge and skills in medical research and scholarly activity. Through this rotation, OMS-III students will be expected to gain understanding of ethical and responsible conduct of research, biostatistics, evaluating the validity of published research, and will develop either a research project or case report. Fourth year students have the option to take an elective to finalize a research or scholarly project previously initiated.

Student opportunities are advertised through a dedicated page on ICOM's website.

The following documents are available for site review:

Policies

- Approval of External Letters of Support for Research Activities
- Conflict of Interest on Externally Funded Programs Policy (in ICOM Employee Handbook)
- Faculty Research Incentive Program for Salary Recaptured from Grants and Contracts
- Laboratory Access and Safety
- Mycoplasma Testing of Tissue Culture Cell Lines
- Off-Campus Research
- Research Grant Submission
- Research Training and Compliance
- Responding to Allegations of Research Misconduct

Compliance Documents

- ICOM Biosafety Manual
- ICOM Bloodborne Pathogen Exposure Control Plan
- ICOM Chemical Hygiene Plan

Funding Programs

- ICOM Faculty Research Start-up Funds Application
- ICOM Faculty Research Travel Grant
- ICOM Research Seed Grant
- ICOM Student Research Travel Grant
- Mentored Research Grant
- 10-year Research and Scholarly Activity budget

Forms

- Article Processing Fees Request
- General Use Capital Equipment Request
- [Research Lab Ordering](#)
- ICOM Conflict of Interest Disclosure
- ICOM IBC Project Review Form
- ICOM Research Project Review
- Inter-Institutional Collaborative Research Proposal
- Laboratory Process and Safety Improvement
- [Request for Research Software](#)

Statements, Plans, and Charter

- ICOM Research Strategic Plan
- ICOM Student Participation in Research (in Academic Bulletin)
- Institutional Biosafety Committee Charter
- Research Committee Charter

Training and Development Documents and Activities

- How to Access CITI Training
- Required CITI Training for Faculty and Students
- Student Doctor Research Proposal Checklist
- Guidelines on Writing a Proposal or Grant
- The Catalyst (research newsletter)

Syllabi

- Research Independent Study RIS9001
- Research Independent Study RIS9002
- Research Independent Study RIS9003
- Scholarly Activity SCRO3751
- Scholarly Activity SCRO4751

Standard Operating Procedures

- Biohazardous Waste Disposal, including Recombinant Nucleic Acids
- Centrifuge Use
- General Lab Practices
- Laboratory Glassware
- Operation of STERIS Autoclave
- pH meter Use

Agreements

- Boise State Service Agreement for Research Grants Management
- Memorandum of Understanding between ICOM and Boise State for Student Research Internship
- WIRB Institutional Review Board Authorization

Lists

- [Laboratory Equipment](#)