

FACILITIES AND RESOURCES: University of Cincinnati College of Medicine Department of Internal Medicine (DOIM)

Starting in 2011-2012, the DOIM initiated targeted internal investments and programs to support promising MD, MD/PhD and PhD investigators at every level of their career. The overall objective was to support faculty based on a tripartite missions of patient care, teaching, and research. First, to establish a critical mass of investigators, the DOIM increased from 191 faculty in 2011 to 320 faculty in December 2021. The DOIM is currently home to 9 divisions, 112 residents, 80 fellows and 373 staff. Second, a Research Governance Committee (RGC) was put in place that consisted of 2-3 researchers from each Division; the RGC was charged with improving the research culture and disseminating information. The RGC defined specific goals and monitored progress with reports provided at monthly DOIM Staff and Leadership meetings. Third, the DOIM created internal funding for “unsponsored research” and made a concerted effort to identify and nominate faculty for recognition and awards, both internal and external. Discrete and targeted mechanisms to dispense bridge funding and pilot internal grant funding programs were established to support junior and senior faculty while promoting collaboration between divisions and departments. Fourth, a program was developed for mentorship, training and faculty development at all levels. Specifically, the DOIM created a junior faculty club (J-club) involving 10-12 of the research-oriented junior faculty (J-club). As a part of participating in the club, an individual development plan was required, and members were encouraged to apply for internal and NIH developmental awards.

Administratively, it is divided into 4 areas: educational, clinical, research and veterans affairs. Physicians within the Department are part of the UC Health University of Cincinnati Physicians group practice, providing comprehensive clinical services in primary care and all medical subspecialties. New clinical practice programs include a diabetes center, sleep center and heart and vascular center. The Department is deeply committed to its research mission and to the training of future clinical investigators and researchers in foundational, clinical, translational, outcomes and other health care-associated research areas. Faculty research is often interdisciplinary and collaborative between clinical and basic scientists, including projects with investigators at Cincinnati Children’s Hospital Medical Center, the Cincinnati VA Medical Center, the James L. Winkle College of Pharmacy, and the College of Education, Criminal Justice and Human Services. The Department has particular research strengths in: cancer, with numerous collaborators across the Academic Health Center, including the CCHMC Hematology Oncology Unit; cardiovascular health, including a Cardiovascular Center of Excellence; digestive diseases, including the Hepatology Research Group, one of the premier research groups involved in the study of HCV and HBV co-infections in the context of HIV; diabetes and obesity; infectious diseases, including the AIDS Clinical Trial Unit; outcomes research; rare lung diseases including LAM and pulmonary alveolar proteinosis; and sickle cell disease, including participation in national clinical trials of the Sickle Cell Research Network.

In 2016, to assist in the implementation of the research mission of the DOIM, an “Academic Research Service” (ARS) administrative unit was created consisting of a senior business administrator, research manager, administrative assistant, grant writer/educator, grant matcher/web designer and a 25% FTE biostatistician from the Division of Bioinformatics. The goal was to provide comprehensive services related to the preparation and submission of all types of grants and manuscripts for investigators within the DOIM without being redundant to other services already offered by the College of Medicine. Best practices were identified by coordinating with existing efforts within the Pulmonary Division and partnering with existing initiatives within Divisions and the Academic Health Center. Representative activities included weekly Grand Rounds, annual departmental research retreat, individual division-sponsored talks, monthly faculty-staff meetings and educational opportunities offered by affiliated organizations such as the UC Heart, Lung and Vascular Institute housed largely within the DOIM.

In 2015 the department chair convened a faculty development cabinet to create a departmental IDP template for research-active faculty and to outline the expectations of mentoring for junior faculty. All junior faculty were expected, with the assistance of their division director and the associates chairs for research, clinical affairs, and education, to identify a mentoring committee composed of 2-3 senior faculty. To further support mentoring, in the spring of 2017 a junior-faculty peer-mentoring group (J-club) was

established. For the time span of Spring 2017 to Spring 2021, 12 of 23 participants received major grant funding (~\$100k). In 2019, a research regulatory service component was formed to provide support services to clinical researchers in the areas of regulatory training, monitoring visits and audits, IRB submissions, and maintenance of required regulatory documentation. A research financial services component of ARS was initiated in the same year and was charged with assisting in the financial management of clinical trials, including budgeting projections, set up of trial accounts, invoicing of sponsors, effort allocations and contracting with sponsors. Regulatory services, laboratory services, and financial services were all provided for a fee such that they did not require a departmental cost beyond their establishment. As of 2019, approximately 46% of research-oriented faculty (51 of 112) have used some feature of ARS services and a program involving ten training sessions devoted to the full scope of how to maximize the probability of obtaining funding. Laboratory processing service was established and managed by the ARS. Eventually, five of six divisions conducting clinical research have been utilizing this service. Finally, major responsibilities were to organize a yearly research symposium and publish an Annual Report highlighting the research accomplishments of the DOIM and offering a means to foster collaborations.

As of FY21, DOIM holds 172 total grants, ~ 21% of which are held by primary investigators with R01 awards. The total award amount is \$119 million. Investigators are supported with intramural funding such as distinguished research achievement awards, junior and senior pilot awards, challenge awards, bridge funding, submission incentive awards and others. This investment of \$2.7 million has seen a return of \$22 million in external awards and one of the goals is to foster the awarding of external K awards from the NIH. During FY19 through 22, 5 NIH sponsored K career development and three CCTST sponsored KL2/CT2 grants were awarded to junior investigators in the Department of Internal Medicine. **Figure 1** demonstrates the increase in funding from FY15 to FY21; of note, the submission success rate increased from less than 20% to over 40%.

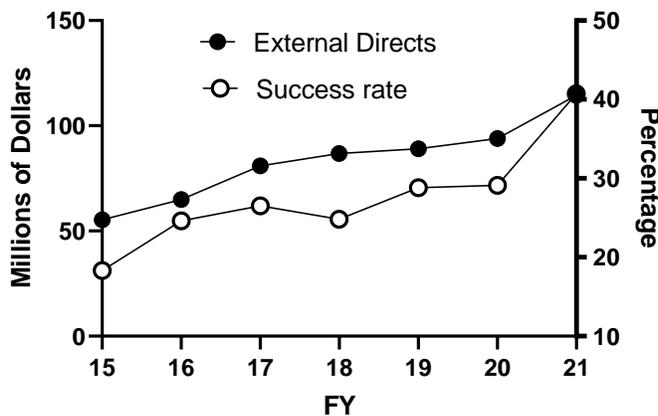


Figure 1. Departmental extramural funding research holdings and extramural grant submission success rate from FY15 to FY21. Over this 6 year period, total holdings increased over two fold from ~\$55.4M to ~\$114.5M and success rate increase from ~20 to ~40%.