

The CIAC-II subcommittee reviewed the following materials as part of their assessment of the CMMG:

- CMMG self-study
- CIAC-II report from the 2017 CIAC-II review
- OVPR Guidelines for center reviews
- CMMG faculty funding summary data
- A fiscal year breakdown of cost and count of funded and not funded grant proposals provided by OVPR out of COEUS (requested by the committee)

The committee conducted a site visit at which CIAC-II subcommittee members received a tour of the center facilities from the director and met with the center's doctoral and masters students, postdoctoral researchers, non-tenured faculty, tenured faculty, genetic counseling graduate program staff and instructors, and center leadership.

The subcommittee report recommending that the charter for this Institute be renewed for a period of six years was submitted to and approved by the full CIAC-II committee. The full committee submitted a final report to the Vice President for Research and to the Policy Committee of the Academic Senate. The Policy Committee of the Academic Senate received the report and prepared a recommendation for a three-year renewal due to concerns with the lack of cross-disciplinarity within the center, the loss of clinical faculty in significant areas critical to CMMG areas of expertise, and the need to address degree programs located in the medical school that fall under CMMG that do not seem to be a sufficient focus for a university-supported CIAC-II center.

CMMG STRENGTHS INDICATED BY CIAC-II

CMMG remains well-justified as a center, fostering interdisciplinary interactions and collaborations between basic and clinical scientists that would be difficult to achieve within the traditional university departmental structure. However, the decline in clinical faculty is of significant concern with respect to both the translational research and student training.

CMMG's funding record remains strong, with the total grant portfolio of over \$15M in 2023, with 30 active research awards (down from 34 in 2016) and 1 active fellowship from multiple sources. The significant decline in total funding (from \$28M in 2016) is due to the fact that the 2016 numbers included 50% of all funds obtained by joint members, which is not represented in the current accounting (grants from joint faculty are not credited to CMMG). However, publication output has increased substantially, from 370 to 536 papers published over the last charter period, while patents have declined from 16 to 9. Impressively, half of the faculty have their salaries obtained from extramural funding.

CMMG has successfully recruited 2 new faculty members from outside the University during the charter period, with 3 additional offers outstanding, a reduction from 6 new faculty members in the previous charter period.

The PhD in Molecular Genetics and Genomics and the MS in Genetic Counseling remain outstanding programs. The curriculum for the PhD program was completely revamped, program objectives are articulated, and an annual assessment plan is in place. The MS in Genetic Counseling has also made some changes to the curriculum. The addition of the (relatively) new MS program in Molecular Genetics and Genomics (2016) and associated AGRADE (2021) program, in addition to curricula for various certificate courses, and a soon-to-be-launched MD MS program are laudable and attest to the seriousness with which CMMG considers its teaching and training mission. The Medical Genetics and Genomics Residency Program (2 years) and Medical Biochemical Genetics and Genomics Fellowship (1 year) remain active and accredited; however, the Pediatrics-Medical Genetics and Genomics Residency program (4-years) is not accepting new applicants due to the lack of board-certified Clinical Geneticists and genetic counselors in the Obstetrics and Gynecology Department at WSU/DMC. Current residents are performing rotations at Henry Ford. While these are strengths identified by the CIAC-II committee, there will be a need to work with the Academic Senate and Provost to address concerns they have raised.

The open lab plan of the majority of lab space helps to foster easy interaction among members of different research groups and allocated space can be expanded or contracted based on extramural funding. In addition, the administrative staff are highly lauded for their high degree of competence and responsiveness to the needs of CMMG members and students.

CMMG WEAKNESSES INDICATED BY CIAC-II

The loss of clinical faculty and the failure to replace them is a major weakness that undermines the mission of CMMG in terms of both translational research and training.

CMMG membership remains limited to the School of Medicine, limiting the potential for enhanced interdisciplinarity that could be achieved with a more diverse membership.

There remains no “center grant” and no clear drive to acquire one. There are also no training grants.

The loss of members to retirement and other institutions has continued. One of the two new faculty hired, Iris Sun, will be leaving in the Fall to join a different institution. The incipient loss of the Director of Division of Clinical Genetics (Dr. Feldman) to retirement creates a large vacancy in the clinical expertise and reduces the ability of the MS in Genetics Counseling program to function effectively.

The facilities are not well maintained in terms of function and cleanliness, reducing the ability to perform cutting-edge research in a safe and sanitary environment. This is not a fault of CMMG, but rather reflects ongoing issues at WSU relating to Facilities, Planning, and Maintenance and the age of the building.

The quantity of students admitted to the PhD program is limited by the support structure, in turn limiting research productivity and the ability to acquire and renew multiple research grants.

CIAC-II RECOMMENDATIONS FOR NEXT CHARTER PERIOD

- Recruit outstanding faculty and research-oriented physician scientists to replace lost faculty by expanding in areas of strength while continuing to incubate translational advances. Hiring of faculty at all levels should be conducted using best practices to ensure candidates are evaluated either with race/gender blinding or deliberate steps in place to account for apparent differences in productivity due to bias, thereby maximizing opportunities to increase diversity.
- Hiring of clinical faculty in genetics is absolutely essential to the programmatic success of CMMG, but would also contribute to the programmatic success of other Centers on campus, including MPSI and IOG. WSU may want to consider a “cluster hire” in this area. In the area of “23 and me,” clinical genetics is becoming more important to the population we serve and WSU should strive to be, if not at the forefront, at least not too far behind.
- Join with other units to put together a T32 in (1) computational biology and genomics and (2) metabolism and inflammation. Expectations of “Training Grants” and “Center Grants” should be evaluated in the context of available resources and feasibility. In this era of shrinking departments and centers, it becomes more and more important to focus on a limited number of strengths and leverage resources and expertise in other departments/centers on campus. A working group should be established to assess feasibility and of training or center grants in the general areas of genetics/genomics and metabolism/metabolomics that might span different departments and centers, identify suitable leaders to direct the writing, and provide support in the form of personnel to assist with data collection and access to professional reviewing/advising to maximize the chances of success.
- Obtain philanthropic support and interdisciplinary grants to provide future financial stability and growth. A clear plan or mechanism for targeting philanthropic support should be developed and implemented.

ACADEMIC SENATE RECOMMENDATIONS SUPPORTED BY INTERIM VICE PRESIDENT FOR RESEARCH FOR NEXT CHARTER PERIOD

The Academic Senate supported a conditional rechartering for three years to provide an opportunity for addressing specific weaknesses:

- Within three years, the center will work with the medical school to ensure that there is appropriate acknowledgment of the degree programming belonging to the medical school, with clear medical school faculty review, assessment and approval of the

curricular and PhD and MS degree programs, and appropriate center website statements outlining the center's more limited role in aiding and providing depth of expertise to those programs.

- Within three years, the center will make energetic efforts to secure philanthropic and grant support that allows it to sponsor joint faculty appointments that provide depth of expertise in the areas covered, especially clinical faculty critical to the programmatic success of the center and faculty in schools and colleges outside the medical school.
- The center will, within three years of the rechartering grant, put forward an appropriate T32 training grant and/or center grant application, utilizing the expertise of joint and affiliated faculty to assess feasibility, assign primary authorship responsibility and work with the staff support provided by the Office of the Vice President for Research to ensure the possibility of a competitive grant application.