Chelsea McGinnis, on behalf of the Office of the Vice-Dean Research, College of Medicine
University of Saskatchewan
2014–2019
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Executive Summary

Background
The Office of the Vice-Dean Research (OVDR) presents the 2018/2019 Research Productivity Report for the College of Medicine (CoM), using data from previous years for comparison. This internal report will serve as a baseline to aid in defining a range of criteria and benchmarks to measure our research productivity as a medical college.

Measuring our research productivity using bibliometrics and funding data, the report focuses on research-active faculty of the CoM and provides data broken down by College and then department/division/school. The data thus compiled are presented in descending order by number of faculty per department/division/school. All information is up to date as of May 1, 2019.

CoM Research Productivity
The collected bibliometrics data signify that overall, the CoM research community is demonstrating improved research impact indicators, as well as an overall increase in funding awards (including dollar amounts as well as number of research projects awarded). See section 2 for details.

CoM Research Funding and Research Projects Awarded
CoM researchers received a total of $28,701,019 in research funding in 2018/2019, an increase from $22,740,805 in 2015/2016. This increase is associated with higher number of new awards (366 new awards in 2018/2019 versus 232 new awards in 2015/2016) and a higher number of individual faculty receiving awards (269 individual faculty in 2018/2019 versus 128 in 2015/2016).

Publications, Citations and H-index
CoM faculty published 1112 scholarly articles in the year ending 2018, an increase from 1015 at the beginning of the 5-year publication trend (2014). In 2018, the average number of publications per researcher per year increased to 3.6 publications compared to 3.3 in 2014.

Gathered data indicate an increase in total faculty citations from 35,959 in 2014 to 38,399 in 2018. The average number of citations per researcher per year also rose, from 116.4 in 2014 to 124.3 in 2018.

Ending the 2018 calendar year, CoM researchers had an aggregate 5-year h-index of 2911, with a 9.4 5-year average h-index per faculty.
1. Methodology and Descriptions

1.1 Research-Active Faculty

In May 2018, the OVDR requested that Department Heads determine the number of research-active faculty in their department/division/school based on three indicators: 1) research funding, 2) student/trainee research supervision and 3) research dissemination activities (peer-reviewed publications and presentations). Based on these criteria, Heads submitted a list of research-active faculty to the OVDR. Staff then confirmed that the submitted faculty held primary academic appointment at the College (using FileMaker and consulting the Dean’s Office as necessary) and requested that research-active faculty submit a link to a current, public Google Scholar profile. Staff verified each Google Scholar profile as public, current and active.

Based on the information gathered, this report includes data from 309 identified research-active faculty from 17 departments, schools and divisions.

1.2 Awarded Research Funding, Research Projects Awarded and Number of Faculty Awarded

The Research Funding and Research Projects Awarded data presented in this report were collected from the University of Saskatchewan Data Warehouse and UView Portal. Data are restricted to funding administered through the University of Saskatchewan and include fiscal years 2015/2016, 2016/2017, 2017/2018 and 2018/2019. Per the financial reporting standards used by the University of Saskatchewan, fiscal years run from May 1 to April 30.

Research Funding and Research Projects Awarded include sub-transfers, travel awards, and awards from other institutions where CoM faculty are a Co-Investigator. Number of Projects Awarded is the total number of new research projects awarded for a fiscal year, whereas Number of Faculty Awarded is the total number of faculty that received research awards. Number of Faculty Awarded are corrected to omit duplicates, as faculty often receive multiple awards in the same fiscal year.

1.3 Research Impact

Measuring research impact can be difficult because not all impacts are direct, and the time between the execution of research projects and the benefits of the research findings can be significant, unpredictable, and differ for different types of research.

For the purposes of this report, when the term impact is used, it is in reference to how health research at the CoM reaches and influences the wider academic community by articulating and distributing the research findings of faculty via publications, citations, h-indices (bibliometrics) and research projects.

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1 Departments of Medicine; Academic Family Medicine; Anesthesiology, Perioperative Medicine and Pain Management; Surgery; Anatomy, Physiology and Pharmacology; Biology, Microbiology and Immunology; Community Health and Epidemiology; Pathology and Laboratory Medicine; Pediatrics; Psychiatry; Medical Imaging; Emergency Medicine; Obstetrics and Gynecology; Ophthalmology; Physical Medicine and Rehabilitation; Division of Oncology and the School of Rehabilitation Science.
that have received funding from internal and/or external sources. This report uses bibliometrics (discussed in section 1.4) and research income and awards to determine impact.

1.4 Bibliometrics: Publications, Citations and H-index

Bibliometrics are research productivity indicators based on scientific publications, used to highlight research productivity and impact.

The OVDR recognizes that bibliometrics used in our analysis may not effectively measure important research output such as authentic community engagement, or the impact of altmetrics. Bibliometrics are employed in this inaugural report in order to set a baseline of data for the College and each department/school/division to measure against.

Publications, Citations and H-index findings presented throughout this report are derived from Google Scholar profiles submitted to the OVDR from verified research-active faculty. The report focuses on 5-year publications, citations and h-index data, quantified on an annual basis by calendar year: January 1 to December 31.

There is no mechanism at this time to acquire h-indices for a specific year.

1.4.1 Publications

The act of submitting research findings to scholarly journals and then having them published is a tangible researcher productivity output as publications per year are easily measurable. This report refers to scholarly journal articles vetted by a group of experts, academics (peers) or other scholars as publications. All publications information has been sourced from Google Scholar profiles submitted by research-active faculty in the CoM.

1.4.2 Citations

Measuring the number of citations a publication receives is a means to track and quantify the influence a publication has in its relevant academic field. The term citation applies to scientific articles that have been peer-reviewed and published in scholarly journals and then cited in the work of other researchers.

1.4.3 H-index

The Hirsh index (h-index) is an author-level metric that measures the impact of a researcher, rather than the scientific journal in which they are publishing. Both the productivity and citation impact of the publications of a particular scholar are taken into account to reach the h-index, and it is based on the set of the scientist's most cited published articles in congruency with the number of citations received by that researcher on other publications. For more information about h-index, please access the University Library Research Guides.

1.5 Figures

Data figure scales in section 2. allow space for the maximum amount of funding dollars, number of research projects awarded, publications and citations as a College.
For consistency, data figures throughout the remainder of the report (section 3. onward) use an identical scale wherein the maximum of each axis per figure has been set using the greatest recorded value of each data set across each department/division/school.
2. College of Medicine

2.1 Introduction

Initial evidence suggests CoM researchers are increasing both dollar amounts and number of research projects funded through external and internal initiatives. In addition, gathered data show an increase in number of faculty receiving awards. Based on 309 identified research-active faculty in the College, bibliometrics convey accelerating research productivity since 2014.

2.2 Research Funding

As demonstrated in Figure 2.2, researchers in the CoM received awards totaling $28,540,559 ending in the most recent fiscal year (2018/2019). Included in this total are $9,267,556 in Tri-Agency\(^2\) funding, $12,136,839 in other external\(^3\) funding and $7,427,800 in internal\(^4\) funding.

2.2.1 2016/2017 Funding

The significant increase in Other External Funding in 2016/2017 is a result of two predominant factors:

1) Dr. Nazeem Muhajarine was the recipient of a $16.6M grant from Global Affairs Canada to support research focused on decreasing maternal and newborn deaths in childbirth and improving access to health care for Mozambican women.

2) The CoM received $29M in Saskatchewan Centre for Patient-Oriented Research (SCPOR) funding, a joint initiative from the Federal and Provincial Ministries of Health.

![Figure 2.2: College of Medicine Awarded Research Funding](image)

Based on 309 verified research-active faculty

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\(^2\) Tri-Agency funders include CIHR, NSERC, and SSHRC.

\(^3\) Other External funders include provincial, industry, individual, other universities, and not-for-profit organizations.

\(^4\) Internal funding includes any funding source within the University of Saskatchewan.
2.3 Research Projects Awarded
Figure 2.3 displays growth in both number of new research awards and number of faculty awarded over the past four fiscal years. This includes 366 new awards in 2018/2019 compared to 232 in 2016/2016. The number of CoM faculty receiving new awards is also increasing year over year, up to 269 in 2018/2019 from 128 in 2015/2016.

**Figure 2.3: College of Medicine Research Projects Awarded**

Based on 309 verified research-active faculty

2.4 Publications, Citations & H-index
Figure 2.4 exhibits the total number of publications per CoM faculty since 2014. In total, researchers in the CoM published 1,112 scholarly articles ending in the most recent calendar year (2018), 97 more than in 2014. Data also indicate an overall increase in average publications per calendar year. In 2018, the average number of publications per researcher per year increased to 3.6, compared to 3.3 in 2014.

**Figure 2.4: 5-Year College of Medicine Publications**

Based on 309 verified research-active faculty

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College of Medicine  
Report on Research Impact  
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Figure 2.5 indicates an increase in total citations from 35,959 in 2014 to 38,399 in 2018. The average number of citations per researcher per year also rose from 116.4 in 2014 to 124.3 in 2018.

**Figure 2.5: 5-Year College of Medicine Citations**

Ending in calendar year 2018, CoM researchers had an aggregate 5-year h-index of 2,911, with a 9.4 5-year average h-index per faculty.

**2.5 CoM Summary**

The data presented in the preceding section signify that overall CoM researchers are demonstrating upward consistent advancements in bibliometric indicators as well as overall increasing performance of funded research activities (dollar amounts and number of research projects awarded).
3. Department of Medicine

3.1 Research Funding

Ending in the most recent fiscal year, Department of Medicine (DoM) researchers acquired a total of $4,546,314.22, an increase from $3,632,225 since 2015/2016.

**Figure 3.1: Department of Medicine Research Funding**

![Research Funding Chart]

Based on 49 verified research-active faculty

3.2 Research Projects Awarded

As outlined in Figure 3.2, over the past four fiscal years DoM researchers have increased total awards received from 41 in 2015/2016 to 79 in 2018/2019. The number of faculty award recipients rose from 20 in 2015/2016 to 44 in 2018/2019.

**Figure 3.2: Department of Medicine Research Projects Awarded**

![Research Projects Awarded Chart]

Based on 49 verified research-active faculty
3.3 Publications, Citations and H-index

Figure 3.3 displays total publications for the department, from 277 in 2014 to 274 in 2018. Average publications per faculty also declined slightly from 5.7 in 2014 to 5.6 in 2018.

**Figure 3.3: Department of Medicine 5-Year Publications**

Based on 49 verified research-active faculty

Figure 3.4 exhibits year-over-year ascending total and average citations for DoM researchers, from 9,923 total in 2014 to 11,049 in 2018, and average citations from 202.5 in 2014 to 225 in 2018.

**Figure 3.4: Department of Medicine 5-Year Citations**

Based on 49 verified research-active faculty

DoM faculty have a combined 5-year total h-index of 621. The average 5-year total h-index per faculty is 12.7.
4. Department of Academic Family Medicine

4.1 Research Funding

Ending in fiscal year 2015/2016, the Department of Academic Family Medicine (DAFM) held a deficit of $2,692 in research funding and increased overall research funding dollars to $300,666 in 2018/2019.

Based on 33 verified research-active faculty

4.2 Research Projects Awarded

As outlined in Figure 4.2, over the past four fiscal years DAFM researchers have demonstrated an overall increase from 1 to 4 research projects awarded, as well as faculty award recipients, from 1 in 2015/2016 to 3 in 2018/2019.

Based on 33 verified research-active faculty
4.3 Publications, Citations and H-index

Displayed in Figure 4.3, since 2014, the total number of publications for the department has fallen from 30 to 23 in 2018. Average publications per faculty also decreased slightly from 0.9 in 2014 to 0.7 in 2018.

**Figure 4.3: Department of Academic Family Medicine 5-Year Publications**

Based on 33 verified research-active faculty

Figure 4.4 exhibits year-over-year ascending citations for DAFM researchers, up from 245 in 2014 to 316 in 2018, and average citations from 7.4 in 2014 to 9.6 in 2018.

**Figure 4.4: Department of Academic Family Medicine 5-Year Citations**

Based on 33 verified research-active faculty.

DAFM faculty have a combined 5-year total h-index of 71. The average 5-year total h-index per faculty is 2.2.
5. Department of Anesthesiology, Perioperative Medicine and Pain Management

5.1 Research Funding

Ending in fiscal year 2015/2016, the Department of Anesthesiology, Perioperative Medicine and Pain Management held a zero balance in research funding, increasing to $190,145 in 2018/2019.

*Figure 5.1: Department of Anesthesiology, Perioperative Medicine and Pain Management Research Funding*

Based on 28 verified research-active faculty

5.2 Research Projects Awarded

As outlined in Figure 5.2, over the past four fiscal years researchers in the Department have increased total awards from 0 to 8 between 2015/2016 and 2018/2019, and from 0 faculty awarded in 2015/2016 to 6 in 2018/2019.

*Figure 5.2: Department of Anesthesiology, Perioperative Medicine and Pain Management Research Projects Awarded*

Based on 28 verified research-active faculty
5.3 Publications, Citations and H-index

Displayed in Figure 5.3, since 2014, the total number of publications for the Department has risen from 17 to 23 in 2018. Average publications per faculty also increased slightly from 0.6 in 2014 to 0.8 in 2018.

Figure 5.3: Department of Anesthesiology, Perioperative Medicine and Pain Management 5-Year Publications

![Graph showing total publications and average per faculty from 2014 to 2018.]

Based on 28 verified research-active faculty.

Figure 5.4 exhibits year-over-year ascending citations for Department researchers from 263 in 2014 to 320 in 2018 and average citations from 9.4 in 2014 to 11.4 in 2018.

Figure 5.4 Department of Anesthesiology, Perioperative Medicine and Pain Management 5-Year Citations

![Graph showing total citations and average per faculty from 2014 to 2018.]

Based on 28 verified research-active faculty.

Faculty belonging to the Department have a combined 5-year total h-index of 78. The average 5-year total h-index per faculty is 2.8.
6. Department of Surgery

6.1 Research Funding

Ending in the fiscal year 2018/2019, the Department of Surgery held a total of $1,293,355 in research funding, up from $488,072 in 2015/2016.

**Figure 6.1: Department of Surgery Research Funding**

Based on 26 verified research-active faculty

6.2 Research Projects Awarded

As outlined on Figure 6.2, over the past four fiscal years researchers in the Department of Surgery have demonstrated an overall increase in research projects awarded, from 16 to 21 awards from 2015/2016 to 2018/2019. The number of faculty award recipients rose from 8 in 2015/2016 to 14 in 2018/2019.

**Figure 6.2: Department of Surgery Research Projects Awarded**

Based on 26 verified research-active faculty
6.3 Publications, Citations and H-index

Displayed in Figure 6.3, since 2014, the total number of publications for the Department of Surgery has risen from 95 to 108 in 2018. Average publications per faculty also increased from 3.7 in 2014 to 4.2 in 2018.

**Figure 6.3: Department of Surgery 5-Year Publications**

Based on 26 verified research-active faculty.

Figure 6.4 exhibits year-over-year ascending citations for Department of Surgery researchers from 2,203 in 2014 to 3,727 in 2018 and average citations from 84.7 in 2014 to 143.3 in 2018.

**Figure 6.4: Department of Surgery 5-Year Citations**

Based on 26 verified research-active faculty.

Faculty belonging to the Department of Surgery have a combined 5-year total h-index of 236. The average 5-year total h-index per faculty is 9.1.
7. Department of Anatomy, Physiology and Pharmacology

7.1 Research Funding

Ending in fiscal year 2015/2016, the Department of Anatomy, Physiology and Pharmacology (APP) held a total of $2,701,998 in research funding, which increased to $1,306,668 in 2018/2019.

**Figure 7.2: Department of Anatomy, Physiology and Pharmacology Research Funding**

![Graph showing research funding over years.](image)

Based on 25 verified research-active faculty.

7.2 Research Projects Awarded

As outlined in Figure 7.2, over the past four fiscal years researchers in the Department of APP received 25 awards in 2015/2016, which fell to 24 in 2018/2019, while the number of faculty award recipients remained at 12.

**Figure 7.2: Department of Anatomy, Physiology and Pharmacology Research Projects Awarded**

![Graph showing number of awards and faculty awarded over years.](image)

Based on 25 verified research-active faculty.

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Data for the Department of APP includes amalgamated data for years preceding the merger, including departments of Anatomy and Cell Biology; Physiology; and Pharmacology.

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7.3 Publications, Citations and H-index

Displayed in Figure 7.3, since 2014, the total number of publications for the Department of APP has declined from 100 to 84 in 2018. Average publications per faculty also decreased from 4.0 in 2014 to 3.0 in 2018.

**Figure 7.3: Department of Anatomy, Physiology and Pharmacology 5-Year Publications**

[Graph showing publication trend from 2014 to 2018, with a decrease in both total and average publications per faculty.]

Based on 25 verified research-active faculty.

Figure 7.4 exhibits a decrease in year-over-year citations for Department of APP researchers, from 4,683 in 2014 to 4,258 in 2018 and average citations from 187.3 in 2014 to 170.3 in 2018.

**Figure 7.4: Department of Anatomy, Physiology and Pharmacology 5-Year Citations**

[Graph showing citation trend from 2014 to 2018, with a decrease in both total and average citations per faculty.]

Based on 25 verified research-active faculty.

Faculty belonging to the Department of APP have a combined 5-year total h-index of 367. The average 5-year total h-index per faculty is 14.7.
8. Department of Biochemistry, Microbiology and Immunology

8.1 Research Funding

Ending fiscal year 2015/2016, the Department of Biochemistry, Microbiology and Immunology (BMI) held a total of $2,868,028 in research funding, which rose to $6,314,213 in 2018/2019.

Figure 8.1: Department of Biochemistry, Microbiology and Immunology Research Funding

Based on 25 verified research-active faculty

8.2 Research Projects Awarded

As outlined in Figure 8.2, researchers in the Department of BMI have received an increase in awards from 18 to 36 between 2015/2016 and 2018/2019, and 18 to 19 faculty award recipients.

Figure 8.2: Department of Biochemistry, Microbiology and Immunology Research Projects Awarded

Based on 25 verified research-active faculty

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6 Data for the Department of BMI includes amalgamated data for years preceding the merger, including departments of Biochemistry; and Microbiology and Immunology.
8.3 Publications, Citations and H-index

Displayed in Figure 8.3, since 2014, the total number of publications for the Department of BMI has declined from 90 to 72 in 2018. Average publications per faculty also decreased slightly from 3.6 in 2014 to 2.9 in 2018.

Figure 8.3: Department of Biochemistry, Microbiology and Immunology 5-Year Publications

Based on 25 verified research-active faculty.

Figure 7.4 exhibits a decrease in year-over-year citations for Department of BMI researchers, from 4,220 in 2014 to 3,376 in 2018 and average citations from 168.8 in 2014 to 159 in 2018.

Figure 8.4: Department of Biochemistry, Microbiology and Immunology 5-Year Citations

Based on 25 verified research-active faculty.

Faculty belonging to the Department of BMI have a combined 5-year total h-index of 335. The average 5-year total h-index per faculty is 13.4.
9. Department of Community Health and Epidemiology

9.1 Research Funding

In the fiscal year 2015/2016, the Department of Community Health and Epidemiology (CH&E) held a total of $1,163,188, which rose to $5,305,357 in 2018/2019.

**Figure 9.1: Department of Community Health and Epidemiology Research Funding**

Based on 18 verified research-active faculty

9.2 Research Projects Awarded

As outlined in Figure 9.2, researchers in the Department of CH&E have increased total awards from 16 to 37 between 2015/2016 and 2018/2019, and faculty award recipients remained stable at 12 from 2015/2016 to 2018/2019.

**Figure 9.2: Department of Community Health and Epidemiology Research Projects Awarded**

Based on 18 verified research-active faculty
9.3 Publications, Citations and H-index

Displayed in Figure 9.3, since 2014, the total number of publications for the Department of CH&E has increased from 75 to 108 in 2018. Average publications per faculty also risen from 4.4 in 2014 to 6.0 in 2018.

**Figure 9.3: Department of Community Health and Epidemiology 5-Year Publications**

![Chart showing total publications and average per faculty from 2014 to 2018.

Based on 18 verified research-active faculty.

Figure 9.4 exhibits year-over-year citations for Department of CH&E researchers, from 3,990 in 2014 to 3,134 in 2018 and average citations from 221.7 in 2014 to 174.1 in 2018.

**Figure 9.4: Department of Community Health and Epidemiology 5-Year Citations**

![Chart showing total citations and average per faculty from 2014 to 2018.

Based on 18 verified research-active faculty.

Faculty belonging to the Department of CH&E have a combined 5-year total h-index of 202. The average 5-year total h-index per faculty is 11.2.
10. Department of Pathology and Laboratory Medicine

10.1 Research Funding

Ending fiscal year 2015/2016, the Department of Pathology and Laboratory Medicine held a total of $413,271 in research funding, which rose to $1,296,511 in 2018/2019.

**Figure 10.1: Pathology and Laboratory Medicine Research Funding**

Based on 17 verified research-active faculty.

10.2 Research Projects Awarded

As outlined in Figure 10.2, researchers in the Department of Pathology and Laboratory Medicine have demonstrated an increase in total research projects awarded from 9 in 2015/2016 to 16 ending 2018/2019. The number of faculty award recipients rose from 7 in 2015/2016 to 8 in 2018/2019.

**Figure 10.3: Department of Pathology and Laboratory Medicine Research Projects Awarded**

Based on 17 verified research-active faculty.
10.3 Publications, Citations and H-index

Displayed in Figure 10.3, since 2014, the total number of publications for the Department of Pathology and Laboratory Medicine has increased from 51 to 78 in 2018. Average publications per faculty have also risen from 3.0 in 2014 to 4.6 in 2018.

**Figure 10.4: Department of Pathology and Laboratory Medicine 5-Year Citations**

Based on 17 verified research-active faculty

Figure 10.4 exhibits year-over-year citations for Department of Pathology and Laboratory Medicine researchers, from 2,160 in 2014 to 1,949 in 2018, and average citations from 127.1 in 2014 to 114.6 in 2018.

**Figure 10.4: Department of Pathology and Laboratory Medicine 5-Year Citations**

Based on 17 verified research-active faculty

Faculty belonging to the Department of Pathology and Laboratory Medicine have a combined 5-year total h-index of 206. The average 5-year total h-index per faculty is 12.1.
11. Department of Pediatrics

11.1 Research Funding
In the fiscal year 2015/2016, the Department of Pediatrics held a total of $1,141,490 in research funding, which increased to $1,326,889 in 2018/2019.

**Figure 11.1: Department of Pediatrics Research Funding**

Based on 15 verified research-active faculty.

11.2 Research Projects Awarded
As outlined in Figure 11.2, researchers in the Department of Pediatrics held 17 awards in 2015/2016, decreasing to 14 in 2018/2019. The number of faculty award recipients declined from 11 in 2015/2016 to 10 in 2018/2019.

**Figure 11.2: Department of Pediatrics Research Projects Awarded**

Based on 15 verified research-active faculty.
11.3 Publications, Citations and H-index

Displayed in Figure 11.3, since 2014, the total number of publications for the Department of Pediatrics has increased from 32 to 58 in 2018. Average publications per faculty have also risen from 2.1 in 2014 to 3.9 in 2018.

**Figure 11.3: Department of Pediatrics 5-Year Publications**

Based on 15 verified research-active faculty.

Figure 11.4 exhibits year-over-year citations for Department of Pediatrics researchers, from 1,112 in 2014 to 1,307 in 2018 and average citations from 74.1 in 2014 to 87.1 in 2018.

**Figure 11.4: Department of Pediatrics 5-Year Citations**

Based on 15 verified research-active faculty

Faculty belonging to the Department of Pediatrics have a combined 5-year total h-index of 131. The average 5-year total h-index per faculty is 8.7.
12. Division of Oncology

12.1 Research Funding

In the fiscal year 2015/2016, the Division of Oncology held a total of $4,983,985 in research funding, which decreased to $1,936,414 in 2018/2019.

**Figure 12.1: Division of Oncology Research Funding**

12.2 Research Projects Awarded

As outlined in Figure 12.2, in 2015/2016, researchers in the Division of Oncology received 42 total awards, which declined to 21 in 2018/2019. The number of faculty award recipients fell from 15 in 2015/2016 to 12 in 2018/2019.

**Figure 12.3: Division of Oncology Research Projects Awarded**

Based on 14 verified research-active faculty
12.3 Publications, Citations and H-index

Displayed in Figure 12.3, since 2014, the total number of publications for the Division of Oncology has increased from 51 to 71 in 2018. Average publications per faculty have also risen from 3.6 in 2014 to 5.1 in 2018.

**Figure 12.3: Division of Oncology 5-Year Publications**

![Graph showing total publications and average per faculty from 2014 to 2018.]

Based on 14 verified research-active faculty

Figure 12.4 exhibits year-over-year citations for Division of Oncology researchers, from 2,003 in 2014 to 2,123 in 2018, and average citations from 154.1 in 2014 to 163.3 in 2018.

**Figure 12.4: Division of Oncology 5-Year Citations**

![Graph showing total citations and average per faculty from 2013 to 2017.]

Based on 14 verified research-active faculty

Faculty belonging to the Division of Oncology have a combined 5-year total h-index of 149. The average 5-year total h-index per faculty is 10.6.
13. Department of Psychiatry

13.1 Research Funding

In the fiscal year 2015/2016, the Department of Psychiatry held a total of $1,615,484 in research funding, which increased to $1,974,275 in 2018/2019.

**Figure 13.1: Department of Psychiatry Research Funding**

Based on 14 verified research-active faculty

13.2 Research Projects Awarded

As outlined in Figure 13.2, researchers in the Department of Psychiatry have demonstrated increasing research projects awarded, from 20 in 2015/2016 to 34 in 2018/2019. The number of faculty award recipients rose from 10 in 2015/2016 to 12 in 2018/2019.

**Figure 13.2: Department of Psychiatry Research Projects Awarded**

Based on 14 verified research-active faculty
13.3 Publications, Citations and H-index

Displayed in Figure 13.3, since 2014, the total number of publications for the Department of Psychiatry has increased from 43 to 44 in 2018. Average publications per faculty have remained constant at 3.1 per faculty between 2014 and 2018.

Figure 13.4: Department of Psychiatry 5-Year Publications

Based on 14 verified research-active faculty

Figure 13.4 exhibits year-over-year citations for Department of Psychiatry researchers, from 1,438 in 2014 to 1,595 in 2018, and average citations from 102.7 in 2014 to 113.9 in 2018.

Figure 13.4: Department of Psychiatry 5-Year Citations

Based on 14 verified research-active faculty

Faculty belonging to the Department of Psychiatry have a combined 5-year total h-index of 151. The average 5-year total h-index per faculty is 10.8.
14. Department of Medical Imaging

14.1 Research Funding

In the fiscal year 2015/2016, the Department of Medical Imaging held a total of \( \$492,285 \) in research funding, which increased to \( \$1,803,794 \) in 2018/2019.

**Figure 14.1: Department of Medical Imaging Research Funding**

Based on 11 verified research-active faculty

14.2 Research Projects Awarded

As outlined in Figure 14.2, researchers in the Department of Medical Imaging have received increasing numbers of research projects awarded between 2015/2016 and 2018/2019, from 6 to 13. The number of faculty awarded also rose, from 4 to 6.

**Figure 14.2: Department of Medical Imaging Research Projects Awarded**

Based on 11 verified research-active faculty
14.3 Publications, Citations and H-index

Displayed in Figure 14.3, since 2014, the total number of publications for the Department of Medical Imaging has decreased from 43 to 35 in 2018. Average publications per faculty have also decreased slightly from 3.9 in 2014 to 3.2 in 2018.

**Figure 14.3: Department of Medical Imaging 5-Year Publications**

![Graph showing total publications and average per faculty from 2014 to 2018](image)

Based on 11 verified research-active faculty

Figure 14.4 exhibits year-over-year citations for Department of Medical Imaging researchers, from 1,392 in 2014 to 1,380 in 2018 and average citations from 126.5 in 2014 to 125.5 in 2018.

**Figure 14.4: Department of Medical Imaging 5-Year Citations**

![Graph showing total citations and average per faculty from 2014 to 2018](image)

Based on 11 verified research-active faculty

Faculty belonging to the Department of Medical Imaging have a combined 5-year total h-index of 109. The average 5-year total h-index per faculty is 9.9.
15. School of Rehabilitation Science

15.1 Research Funding

In the fiscal year 2015/2016, the School of Rehabilitation Science held a total of $318,478 in research funding, which increased to $815,846 in 2018/2019.

**Figure 15.1: School of Rehabilitation Science Research Funding**

Based on 11 verified research-active faculty.

15.2 Research Projects Awarded

As outlined in Figure 15.2, researchers in the School of Rehabilitation Science have demonstrated overall increasing total research projects awarded between 2015/2016 and 2018/2019, from 9 to 20, and faculty award recipients rose from 5 to 11.

**Figure 15.2: School of Rehabilitation Science Research Projects Awarded**

Based on 11 verified research-active faculty.
15.3 Publications, Citations and H-index

Displayed in Figure 15.3, since 2014, the total number of publications for the School of Rehabilitation Science has increased from 32 to 50 in 2018. Average publications per faculty have also increased, from 2.9 in 2014 to 4.5 in 2018.

**Figure 15.3: School of Rehabilitation Science 5-Year Publications**

Based on 11 verified research-active faculty

Figure 15.4 exhibits year-over-year citations for School of Rehabilitation Science researchers, from 694 in 2014 to 1,025 in 2018 and average citations from 63.1 in 2014 to 93.2 in 2018.

**Figure 15.4: School of Rehabilitation Science 5-Year Citations**

Based on 11 verified research-active faculty

Faculty belonging to the School of Rehabilitation Science have a combined 5-year total h-index of 102. The average 5-year total h-index per faculty is 9.3.
16. Department of Emergency Medicine

16.1 Research Funding

In 2015/2016, the Department of Emergency Medicine held a balance of zero research funding, which increased to $107,655 in 2018/2019.

**Figure 16.1: Department of Emergency Medicine Research Funding**

Based on 10 verified research-active faculty

16.2 Research Projects Awarded

As outlined in Figure 16.2, the Department of Emergency Medicine showed an increase in number of awards from 1 in 2015/2016 to 6 ending 2018/2019. The number of faculty award recipients rose from 1 in 2015/2016 to 4 ending 2018/2019.

**Figure 16.2: Department of Emergency Medicine Research Projects Awarded**

Based on 10 verified research-active faculty
16.3 Publications, Citations and H-index

Displayed in Figure 16.3, since 2014, the total number of publications for the Department of Emergency Medicine has increased from 16, to 47 in 2018. Average publications per faculty have also increased from 1.6 in 2014 to 4.7 in 2018.

**Figure 16.3: Department of Emergency Medicine 5-Year Publications**

Based on 10 verified research-active faculty

Figure 16.4 exhibits year-over-year citations for Department of Emergency Medicine researchers from 79 in 2014 to 579 in 2018, and average citations from 7.9 in 2014 to 57.9 in 2018.

**Figure 16.4: Department of Emergency Medicine 5-Year Citations**

Based on 10 verified research-active faculty

Faculty belonging to the Department of Emergency Medicine have a combined 5-year total h-index of 44. The average 5-year total h-index per faculty is 4.4.
17. Department of Obstetrics and Gynecology

17.1 Research Funding

In the fiscal year 2015/2016, the Department of Obstetrics and Gynecology had $25,495 in research funding, and in 2018/2019 held a balance of zero research funding.

**Figure 17.1: Department of Obstetrics and Gynecology Research Funding**

Based on 6 verified research-active faculty

17.2 Research Projects Awarded

As outlined in Figure 17.2, the Department Obstetrics and Gynecology showed a decrease in number of awards from 2 in 2015/2016 to 0 ending 2018/2019. The number of faculty award recipients declined from 2 in 2015/2016 to 0 ending 2018/2019.

**Figure 17.2: Department of Obstetrics and Gynecology Research Projects Awarded**

Based on 6 verified research-active faculty
17.3 Publications, Citations and H-index

Displaying in Figure 17.3, since 2014, the total number of publications for the Department of Obstetrics and Gynecology decreased from 37 to 17 in 2018. Average publications per faculty have also declined from 6.2 in 2014 to 2.8 in 2018.

**Figure 17.3: Department of Obstetrics and Gynecology 5-Year Publications**

![Graph showing the total publications and average per faculty from 2014 to 2018. The total publications decreased from 37 in 2014 to 17 in 2018. The average publications per faculty decreased from 6.2 in 2014 to 2.8 in 2018.]

Based on 6 verified research-active faculty.

Figure 17.4 exhibits year-over-year citations for Department of Obstetrics and Gynecology researchers from 961 in 2014 to 898 in 2018 and average citations from 161.2 in 2014 to 149.7 in 2018.

**Figure 17.4: Department of Obstetrics and Gynecology 5-Year Citations**

![Graph showing the total citations and average per faculty from 2014 to 2018. The total citations decreased from 961 in 2014 to 898 in 2018. The average citations per faculty decreased from 161.2 in 2014 to 149.7 in 2018.]

Based on 6 verified research-active faculty.

Faculty belonging to the Department of Obstetrics and Gynecology have a combined 5-year total h-index of 75. The average 5-year total h-index per faculty is 12.5.
18. Department of Physical Medicine and Rehabilitation

18.1 Research Funding

In the fiscal year 2015/2016, the Department of Physical Medicine and Rehabilitation held a research funding balance of $237,822, which decreased to $23,250 ending 2018/2019.

**Figure 18.1: Department of Physical Medicine and Rehabilitation Research Funding**

![Research Funding Graph]

Based on 5 verified research-active faculty

18.2 Research Projects Awarded

As outlined in Figure 18.2, the Department of Physical Medicine and Rehabilitation showed a decrease in number of awards from 5 in 2015/2016 to 2 ending 2018/2019. The number of faculty award recipients remained constant at 2 from 2015/2016 to 2018/2019.

**Figure 18.2: Department of Physical Medicine and Rehabilitation Research Projects Awarded**

![Research Projects Awarded Graph]

Based on 5 verified research-active faculty
18.3 Publications, Citations and H-index

Displayed on Figure 18.3, since 2014, the total number of publications for the Department of Physical Medicine and Rehabilitation has decreased from 9 to 8 in 2018. Average publications per faculty have also declined from 1.8 in 2014 to 1.6 in 2018.

**Figure 18.4: Department of Physical Medicine and Rehabilitation 5-Year Publications**

Based on 5 verified research-active faculty.

Figure 18.4 exhibits year-over-year citations for Department of Physical Medicine and Rehabilitation researchers, from 45 in 2014 to 134 in 2018 and average citations from 9.0 in 2014 to 26.8 in 2018.

**Figure 18.4: Department of Physical Medicine and Rehabilitation 5-Year Citations**

Based on 5 verified research-active faculty

Faculty belonging to the Department of Physical Medicine and Rehabilitation have a combined 5-year total h-index of 17. The average 5-year total h-index per faculty is 3.4.
19. Department of Ophthalmology

19.1 Research Funding

In the fiscal year 2015/2016, the Department of Ophthalmology held a research funding balance of $570,848, which decreased to zero ending 2018/2019.

Figure 19.1: Department of Ophthalmology Research Funding

Based on 2 verified research-active faculty

19.2 Research Projects Awarded

As outlined in Figure 19.2, the Department of Ophthalmology showed a decrease in number of awards from 2015/2016 to 2018/2019, from 1 to 0. The number of faculty award recipients also fell from 1 from to 0 in 2018/2019.

Figure 19.2: Department of Ophthalmology Research Projects Awarded

Based on 2 verified research-active faculty
19.3 Publications, Citations and H-index

Displayed on Figure 19.3, since 2014, the total number of publications for the Department of Ophthalmology has increased from 17 to 58 in 2018. Average publications per faculty have also increased from 8.5 in 2014 to 29 in 2018.

**Figure 19.3: Department of Ophthalmology 5-Year Publications**

![Graph showing the increase in publications from 2014 to 2018.](image)

Based on 2 verified research-active faculty.

Figure 19.4 exhibits year-over-year citations for Department of Ophthalmology researchers, from 176 in 2014 to 230 in 2018, and average citations from 88 in 2014 to 115 in 2018.

**Figure 19.4: Department of Ophthalmology 5-Year Citations**

![Graph showing the increase in citations from 2014 to 2018.](image)

Based on 2 verified research-active faculty.

Faculty belonging to the Department of Ophthalmology have a combined 5-year total h-index of 17. The average 5-year total h-index per faculty is 8.5.
20. Conclusion and Looking Forward

This is the first in-depth analysis of research productivity in the history of CoM. For this analysis, we used verified and conventional methods, tracking bibliometrics and funding data as the primary mechanisms for measuring researcher productivity. While these types of metrics can be effective for demonstrating the impact of research that has progressed to the level of publishing, and the economic influence of research awards for the University, they may overlook the value of community-engaged research or the significance of forging collaborative working relationships.

The OVDR Task Force on Research Metrics is working to compile research discipline-specific metrics to measure and recognize all of the distinct genres of health research that are performed in the CoM. This report serves as a baseline for benchmarking research productivity at the CoM, and some indices proposed and verified by our task force will be used to prepare future reports of CoM research output to reflect the diversity of health research.

In this report, the OVDR has outlined and highlighted research successes using bibliometrics and research funding dollars and awards. Looking forward, in order to maintain momentum it will be imperative to continue to invest in internal funding initiatives to engage and empower our students and faculty, creating increased accessibility to external awards and fostering a culture of research success and equity.