

## Pharmacy (MS/PhD) GRADUATE PROGRAM REVIEW

Site visit date: May 22-23, 2017

Review report submitted: June 13, 2017

### Overall Recommendation: Expand

- Increase financial support exclusively for the first year graduate students from University funding\*, which is essential to assure success of these students in the Program. Subsequent years of graduate support could be partially derived from the faculty research grants for future continuation. The remaining support would be made by the University\* in forms of (GRA/GTA) to assure the continued success of this graduate program. To share the burden of support for graduate students, the University and the College are encouraged to explore possible industry-sponsored fellowships, endowed-fellowships from alumni, and NIH training grants.
- To provide a soothing and calm working environment for the faculty, students and staff, the University\* needs to know and understand the importance of maintaining the working conditions of all major equipment. Reproducibility of data is absolutely vital to the reputation of the graduate program. The maintenance of equipment and working conditions at the College of Pharmacy campus sites needs to be supported with funding sources provided by the University.
- To increase national profile and ranking through focused branding in the improvement for the Pharmaceutical Services Graduate Program through website, social media, and visibility at national and international conferences.
- To increase real world practical working knowledge, incorporate current regulatory understanding and issues as part of the graduate learnings and show how these topics underpin Drug Development (e.g., database resources; Inactive Ingredient Database).
- Provide a critical mass of quality faculty and graduate students to maintain the Pharmacokinetic Modeling Research Core and consider renaming the core to “Pharmaceutics/ Pharmacokinetics/ Pharmacodynamics/ Drug Delivery Research Core”.
- Increase the level of administrative support allocated to the Graduate Program for administrative tasks (tracking student progress, assignment for GTAs, tracking alumni, publish online newsletter quarterly to promote the achievement of current faculty and students.
- Increase the “sense of community” for graduate students and faculty between Corvallis and the OHSU campuses through informal and formal settings.

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## Summary of Findings:

The preparation, content and organization of the Self-Study Report for the Pharmaceutical Sciences Graduate Program at Oregon State University was excellent (A+), well-written and first-rate. The quality of the report is a definite reflection of the outstanding faculty, the organizational support team, the leadership and support by Dean, Dr. Zabriskie of the College of Pharmacy, Theresa Filtz, Chair of Pharmaceutical Sciences, Drs. Arup Indri and Kerry McPhail, Directors of the Graduate Program in Pharmaceutical Sciences. It certainly made the Review Team's job easier to focus on key challenges identified by the Self-Study report. Collectively, they were 1) additional financial support from the University, 2) update of infrastructure including maintenance of major equipment and 3) responses from Student Survey.

The Review Team found that the Self-Study report assessment accurately reflected the opportunities, areas for improvement and the self-recommendations for enhancing graduate program quality. The Student Survey, was a concern at first. However when the Review Team interacted with the graduate students they came to understand the graduate students scored negative perceptions of academic and social climate. The Student Survey findings were not founded as detailed later in the report.

The Oregon State University, College of Pharmacy Graduate Student and Faculty website was found to be difficult to navigate and it is identified as a priority to be updated with improved branding and a user-friendly interface for the external visitors. The lack of sufficient information to showcase the exciting and rewarding research going on by the faculty and students within the College of Pharmacy is a critical issue that needs to be addressed by the University\*. Honors and awards won by faculty and students must be updated throughout the year to show the alumni, current students and the general public the accomplishments and achievements of the College. In speaking to one graduate student who won a recent award, after he shared the summary of his research he stated with much excitement, *"Bringing home another award for OSU – Go Beavs"*.

There are definitely quality critical masses of faculty and graduate students in the Targeted Drug Delivery Research Core (5 faculty), Gene Regulation & Disease Research Core (6 faculty) and Drug Discovery Research Core (10 faculty). This quality critical mass creates an air of great enthusiasm and passion as evident by their achievements. From an Industry perspective, one notable on-site observation was that a quality critical mass of faculty (2 faculty) and graduate students (appears to be 1 graduate student out of 39 in the program) within the Pharmacokinetic Modeling Research Core needs further recruitment. A name change is recommended and the justification to make sure this core research group remains a sustainable core is discussed later in this document.

A summary of the Review Team's specific findings and recommendations follow in two group headings, Tier I (observations from Self-study report) and Tier II (On-site observations).

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## ***Summary of Specific Recommendations***

### **Tier I Observations:**

1. Exclusively for first-year graduate students, an increase in financial support from the University for these Graduate Students is essential. Subsequent years can then be partially supported from faculty research grants and continuing through to their completion. Therefore support provisions need to be made by the University in forms of (GRA/GTA) to assure the continued success of this graduate program. Currently, the support per graduate student is approximately \$45,000 per year. It is suggested that the Pharmaceutical Sciences Graduate Program seek support from the University to commit to around \$900,000 per year for approximately 20 graduate students, which includes the first year students to provide a competitive advantage to other peer universities with similar graduate program. To share the burden of support for graduate students, the University and the College are encouraged to explore possible industry-sponsored fellowships, endowed-fellowships from alumni, and NIH training grants.
2. Continue to stress to the University the importance for improvements to building and laboratory infrastructure. Reproducibility of data is absolutely vital to the reputation of the graduate program. It was mentioned by the faculty when potential faculty and graduate students visit the Corvallis campus there is a perceived impression of “Lack of emphasis of making the graduate program a priority leading to the erosion of graduate programs.”
3. Implement a plan to contact OSU Pharmaceutical Sciences Alumni: **Level 1:** career successful, financially secure and 21 plus years post-graduation, **Level 2:** career established, saving for retirement and 11-20 years post-graduation, and **Level 3:** career-building and 1-10 years post-graduation. The goal will be to groom these alumni for supporting graduate students, internship programs, networking, professional skills and work acumen. While the “Levels” are general and arbitrary, it is suggested that Level 1 be first approached to help support graduate students. It would set a standard for those in Levels 2 and Tier 3 to give back to the University that has provided and prepared them with opportunities for success. When Level 1 is acknowledged for their generosity, highlighted for their career successes and thanked for the contributions publically through the website and social media sources this gives Levels 2 and 3 challenges to achieve. Ongoing efforts must be maintained and publicized through media/mailings/website/personal contacts to Levels 2 and 3 to reinforce expectations.
4. Increase national profile and ranking through improved focused branding efforts for the Pharmaceutical Services Graduate Program through website, social media, and visibility at national and international conferences. It is suggested that the College of Pharmacy Pharmaceutical Sciences Graduate Program should find resources to support changes to the website and increased visibility via social media. Such as, seeking support from the University\* to provide a full time support position for the College of Pharmacy for the maintenance and continuous updating of the website. This person would be responsible in posting the accomplishments from faculty and students within the College, making sure the information in the “brochure” is current and correct, searching for opportunities for fellowships, internships and grants, and incorporate key words so the Pharmaceutical Sciences Graduate Program is one of the top ones when one searches for potential graduate programs in pharmaceutical/biological sciences.

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5. Increase the level of administrative support for the Graduate Program for administrative tasks (tracking student progress, assignment for GTAs, tracking alumni, publish online newsletter quarterly to promote the achievement of current faculty and students).

### **Tier II Observations:**

1. Incorporate current regulatory understanding and issues as part of the graduate education and show how these topics underpin Drug Development (e.g., database resources; Inactive Ingredient Database)
2. Improve branding and increase visibility for the Pharmacokinetic Modeling Research Core, which is a key interdisciplinary link in Pharmaceutical Sciences product development. One possible name change is suggested to “Pharmaceutics/Pharmacokinetics/Pharmacodynamics/Drug Delivery Research Core”.
3. Increase the “sense of community” for graduate students and faculty between Corvallis and the OHSU campuses through informal and formal settings. Consider providing a motor pool vehicle for use by students and faculty when travel between sites is necessary or helpful and alternating meeting sites between Corvallis and Portland.

### ***Review Team, Graduate School Representatives and On-site Agenda***

#### **Site visit review team**

Dr. Ruth Stevens, Camargo Pharmaceuticals Services, Cincinnati, Ohio  
Dr. Suzie Chen, Department of Chemical Biology, School of Pharmacy, Rutgers University  
Dr. Lisa M. Ganio, College of Forestry, Oregon State University  
Dr. Marie Harvey, College of Public Health, Oregon State University

#### **Graduate School Representatives**

Dr. Jennifer Brown, Dean, Graduate School, Oregon State University  
Dr. Stephanie Bernell, Associate Dean, Graduate School, Oregon State University

#### ***Order of Events***

##### **Monday May 22, 2017: Pharmacy Building Room 213, OSU Campus**

8:00 – 9:00 a.m. Review Team meets with Kerry McPhail and Arup Indra, Graduate Program Directors, and Theresa Filtz, Dept. Chair  
9:00- 9:45 a.m. Review Team meets with Mark Zabriskie, Dean of Pharmacy and Mark Leid, Associate Dean for Research  
10:00 – 11:00 a.m. Review Team meets with Graduate Program Faculty (including Portland via web)  
11:00 – 12:00 p.m. Review team meets with Graduate Studies Committee  
12:00 – 12:45 p.m. Work lunch with Review Team  
12:45 – 2:00 p.m. Review Team meets with Graduate students  
2:00 – 2:45 p.m. Review Team meets with Program Staff

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Debra Peters, Graduate Program Assistant; Angie Mettie, Assistant to the Chair, Portland; Angela Austin Haney, Head Advisor and Director of Student Services; and Gary Miller, IT support

- 2:45 – 3:45 p.m. Facilities Tour – Pharmacy, Weniger and LPSC  
3:45 – 4:30 p.m. Executive Session  
4:30 – 5:00 p.m. Program Director Exit Report with Kerry McPhail and Arup Indra

**Tuesday, May 23, 2017 CLSB 5S085, Portland Oregon**

- 8:00 – 9:45 a.m. Travel to the Collaborative Life Sciences Building, Portland Oregon  
9:45 – 10:15 a.m. CLSB Site Tour  
10:15 – 10:45 a.m. Review team meets with faculty and graduate students housed in the CLSB.  
11:00 – 11:30 a.m. Wrap up session for review team, if needed

***Detailed Findings***

Listed below were the findings discussed among the Review Team members.

**Positives:**

1. Faculty is very engaged and active in graduate mentoring, teaching and research.
2. Excellent and supportive Dean who understands the value of graduate education and as such, continues to seek financial support from the University. However, despite the significant increase in graduate support within the last few years, for the sustainability of the Graduate Program, a more substantial increase in funding is necessary.
3. Crucial major equipment is top-tier and state-of-the-art.
4. Cutting edge and relevant research is going on in each of the College's Research Core groups.
5. There is a strong Graduate Student Union to provide great health care/health insurance benefits to the graduate students and this should be emphasized during potential students' visit to the school.
6. High caliber graduate students that are proud to be part of Oregon State University, College of Pharmacy Graduate Program.

**Key Challenges:**

- I. Funding:
  - i. Flexibility with University\* policy on tuition charges from Professors' grants for more senior 3<sup>rd</sup> and 4<sup>th</sup> year graduate students when class work is completed and they are conducting research full-time.
  - ii. Support (tuition and stipend) for entering first year graduate students without teaching obligation.
- II. Infrastructure: College wide major equipment and Corvallis building maintenance is an on-going issue such as functioning air conditioning units.

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III. Building back up and sustaining the Core Pharmacokinetic Modeling Research group.

## **I. Inputs on Content of Self-Study Report**

### ***The mission of the program, and its relationship and alignment with the missions of the academic college(s), Graduate School and University mission***

In agreement with the Self-Study Report, the mission of the Department of Pharmaceutical Sciences and its relationship and alignment with the missions of the academic college(s), Graduate School and University mission are congruent with the College of Pharmacy vision.

### ***Recruitment and enrollment trends of students***

From the Self-Study assessment report, the recruitment and enrollment trends appear to be in alignment with funding sources provided by the University, departmental support and Fellowships & Scholarships.

We suggest that the donor base be expanded to include Industry and Oregon State University Alumni through the OSU Foundation. A suggestion was made to request the University to double its current support. Concern from a faculty member, "It is "unfair" to start a 1st year graduate on a teaching assistant when the student has just started to juggle the new challenge of graduate classes, let alone having the worry about teaching." Request support from industries in the form of fellowships. The College of Pharmacy has increased the funding into the Graduate Program (\$440,000) but additional support is critical to sustain the success of the Program. See also section in this document called, "Level of financial support of students, and as compared to peers" for additional detail.

### ***Admissions selectivity and other indications of selecting high quality and diverse students***

In agreement with the Self-Study Report assessment, the faculty members have successfully recruited quality and diverse graduate students given their affiliations with the Molecular and Cellular Biology Program, Biochemistry and Biophysics, Chemistry, Environmental and Molecular Toxicology and occasionally other programs or departments on campus. From the Review Team's perspective, it was a pleasure to meet the graduate students. They wanted to be interactive with us and they were very proud to show us their research and labs. From an Industry perspective, the research being conducted in the Department of Pharmaceutical Science is first-class with direct implications for therapeutic benefit.

### ***Level of financial support of students, and as compared to peers***

Faculty and students were appreciative of the increase in graduate student support funding (an increase of \$220,000) since 2011 to a total of \$440,000. This funding supports approximately half of all graduate students in the Program. Given the decline in federal grant

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dollars, it is recommended that the Graduate Program prepare to submit a training grant application. It is absolutely essential to further increase the funding through the University, industry, and alumni.

We suggest expanding the donor base for the Graduate Program through its alumni with the help from the OSU Foundation. We also suggest working with industry to find support through internships, fellowships or direct donation. We suggest that the Foundation makes the College of Pharmacy graduate education be a direct focus of fundraising efforts specifically enlist OSU Alumni.

### ***Curriculum strength***

From the Self-Study assessment and comments from the graduate students concerning their programs, it is obvious that the College of Pharmacy Graduate Program has a very strong learning and research-based core curriculum.

We suggest that there should be some mechanism during their curriculum in which the graduate students are exposed to regulatory laws, regulations, guidances, websites and database resources. This is real world practical working knowledge. The regulatory environment underpins product development from Research & Development to commercialization. Improved branding, faculty hiring, suggested name change and increased visibility for the Pharmacokinetic Modeling Research Core, a key interdisciplinary link in Pharmaceutical Science drug development is suggested. Although cumbersome, a potential name change suggestion for this core discipline is “Pharmaceutics/Pharmacokinetics/Pharmacodynamics/Drug Delivery Research Core”. This title would be more in alignment with and convey the scope of work that Dr. Christensen and Dr. Munar teach and research. The current name is too restrictive in nature and reaches a limited audience that would be only interested in modeling. From an Industry perspective, this group is more than modeling, it is the foundation for selecting the right formulation, selecting the right dosage & administration regimen and in many cases, supports the underlining observed efficacy and safety outcomes from clinical research trials. A name change to something as “Pharmaceutics/Pharmacokinetics/Pharmacodynamics/Drug Delivery Research Core” reaches a broader audience and interest. This discipline is interdisciplinary and a strategic part of product development. It is one of the reasons so many of the Oregon State University Alumni have been extremely successful in their careers. Dr. James Ayres and Dr. Mark Christensen built a high quality critical mass of faculty and graduate students that are now leaders in industry and academia. It is suggested that a faculty in this discipline be hired and trained under Dr. Christensen to build up this research core prior to Dr. Christensen’s retirement. However, it also may be worth investigating if the demand for this particular discipline within Industry is so high that it thwarts academia’s ability to be competitive.

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### ***Quality of faculty and staff and adequacy to achieve mission and goals***

The Oregon State University, College of Pharmacy faculty and staff are outstanding individually and collectively as a team, they are enthusiastic about their mentoring and research, collegial and very supportive of the mission and goals set forth by the Department of Pharmaceutical Sciences. The research strength of the faculty in the Targeted Drug Delivery Research Core, Gene Regulation & Disease Research Core and Drug Discovery Research Core was evident. Pride, excitement and enthusiasm for each other and among the graduate students were visible and especially evident during the OHSU on-site visit.

We suggest, as mentioned under the section, “Curriculum strength” that a critical mass of quality faculty and graduate students be maintained for the Pharmacokinetic Modeling Research Core (suggested renaming to “Pharmaceutics/ Pharmacokinetics/ Pharmacodynamics/ Drug Delivery Research Core”), a fundamental discipline for product development.

### ***Level and quality of infrastructure***

Currently, offices and laboratory space for the program exist in 3 non-adjacent buildings on the OSU campus (Pharmacy Building, Weniger Hall and the Linus Pauling Science Center (LPSC). An additional of-site Collaborative Life Sciences Building (CLSB) is on the OHSU South Waterfront campus. Despite being in non-adjacent buildings, the faculty and student are physically closer to each other and these facilities represent an improvement in the amount and quality relative to the past. However, students and faculty report issues around heating and cooling of laboratory spaces that is disruptive to their research and studies. The lack of emergency power also affects research when power outages hit the campus.

We suggest continuing to request for more funding from the University for improvements to the laboratory infrastructure. The College of Pharmacy graduate study research programs are conducting state-of-the-art research and the reproducibility of data is vital to the credibility of the research. Power outages and the lack of heating and cooling in the laboratory spaces challenge the quality and/or reproducibility of that data. In industry, product development follows good laboratory practices (GLPs). Maybe the below Code of Federal Regulations can be shared with the University to help bolster support for laboratory equipment maintenance year round. The bolded and underlined text are for emphasis.

Good laboratory Practices, Conduct of a nonclinical laboratory study, specifically, 21 CFR § 58.130(a), we require demonstration that all analytical methods are accurate, sufficiently precise, and sensitive enough to result in accurate and reproducible data. We expect this requirement **will help ensure data quality and integrity as its intent is to produce accurate and reproducible data.**

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### ***Quality of organizational support***

Currently one staff with 0.25 FTE is allotted to support the graduate program but in reality this person spends upwards of 50% of the time on graduate program activities. These activities include administrative tasks including GRA/GRA appointment letters, tracking student milestones and progress as well as counseling and advising students who are facing health or personal challenges. It was suggested that the Head Advisor for the PharmD program also formally engage with graduate students in the Pharmaceutical Sciences Graduate Program. However there is no formal plan currently for assigning the Head Advisor for these specific duties.

We suggest reviewing the actual allocation of duties and revising position descriptions to more accurately reflect the workload and adjusting FTE if necessary.

## II. Productivity

### ***4- and 8-year graduation rates for master's and doctoral students***

The Self-Study Report assessment describes the productivity of the 4- and 8-year graduation rates for masters and doctoral students in great detail. No concerns or issues were raised by the Review Team's assessment of this subject matter.

### ***Publications or evidence of other scholarly work by students and faculty***

The Self-Study Report assessment describes the publications and awards for faculty and graduate students. No concerns or issues were raised by the Review Team's assessment of this subject matter.

We suggest to foster greater visibility of the outstanding research, awards and publications for both graduate students and faculty by updating the College of Pharmacy, Department of Pharmaceutical Science website and improved branding efforts. A user-friendly interface and search engine would help to improve that visibility. Social media avenues and scientific annual meetings need to be explored to showcase Oregon State University graduate students and faculty. Flexibility at the University\* level is needed, as it is understood that the University wants to maintain consistency of its branding.

**Website:** Prior to the on-site visit, Dr. Stevens (External Reviewer) asked an independent/colleague to look at the Oregon State University, College of Pharmacy, Pharmaceutical Sciences Graduate Student website and provide feedback. Listed below is the feedback from their experience and search efforts. This independent feedback was requested to be a part of the Self-Study Review Team's report by Dean, Dr. Mark Zabriskie and Associate Dean, Dr. Mark Leid.

1. Needs updating – no pizzazz
2. Needs some research papers and meeting posters

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3. They should host a conference and announce it
4. Why no dissertation area?
5. Why is there no publication area?
6. No bragging about their top professors.
7. What success stories were due to the research done there?
8. No regulatory focus at all was evident.
9. No obvious e-course option or distance programming option was evident. Most campuses need revenue from distance programming now a days.
10. Who are the key alumni contributors?
11. What are their success stories?
12. How did they help you succeed?
13. Who are the best and brightest students?
14. How did they entice them to OSU instead of Ivy League?

Although it is important to update the website, it is equally important that a position is created to keep the website current and to monitor other search tool engines to see what potential students, faculty and/or industry are searching. When there is a College of Pharmacy Graduate/Faculty award, poster presentation, publication or exciting news about research, this needs to be promoted so it can be bumped-up in that search engine listing. Search engines are powerful for visibility and it needs to be easy to navigate through the College of Pharmacy website. Likewise, once they reach the site, they need to easily find the information for which they are searching. This visibility and view into the quality faculty and research is invaluable and improves national rankings. The College of Pharmacy, Department of Pharmaceutical Science needs to seek from the University\* the need to be proactive and to support on an on-going basis the College of Pharmacy's Graduate Program website updating and monitoring of search engines. This will have a direct impact on its national profile and ranking.

### ***Student satisfaction with their education and mentoring experiences***

Students expressed satisfaction with the faculty, the mentoring and interactions they encounter daily and through their coursework. They appreciated the collaborative environment within the Program.

However, students were unaware of the existence and role of their Graduate Representative on various Graduate Committees. The process was unclear to the students how to communicate with the Representative if there are concerns they have within the College. We suggest that this role be clearly described and defined in the Graduate Student Handbook and that the position and contact information to be provided at new student orientation each year.

As Oregon State University has a Graduate Student Union to negotiate for health insurance benefits, and there are very few universities in the US that have Graduate Student Union, this important information should be leveraged as part of graduate student recruiting material.

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Sense of Community: There appears to be a disconnect in the collegiality that exists between OSU and OHSU graduate students. This sentiment was expressed more frequently from the graduate students at OHSU campus rather than the Corvallis campus. One OHSU graduated student stated that “at times, it feels like OHSU is on an Island”. The Review Team asked if transportation such as a van could be provided on a regular basis to join the two sites. The answer from the OHSU students was “possible.”

We suggest, if viable, that a dedicated car for the Department of Pharmaceutical Science be evaluated such that student events are made possible to increase the sense of community among the two sites. Another suggestion is to alternate the meeting place between Portland and Corvallis.

See also section, “Satisfaction of students and graduates with their education and their post-graduation employment success,” for the suggestion of informal video conferencing between the sites.

#### ***Viability of scholarly community within which students can interact***

There is definitely a viable scholarly community for which the graduate students can interact with each other and with the faculty. As stated in the Self-Study assessment faculty members have successfully integrated with other affiliations such as the Molecular and Cellular Biology Program, Biochemistry and Biophysics, Chemistry, Environmental and Molecular Toxicology and occasionally other programs or departments on campus for interdisciplinary teaching and research. A LinkedIn site has recently been set up to connect Oregon State University Alumni out to 10 years post-graduation and graduate students are now able to join the site too. This will certainly open up another source of a scholarly community for the graduate students.

We suggest that a plan be developed with respect to how to locate and reach out to those OSU Alumni greater than 10 years post-graduate work as well.

### III. Outcomes and Impacts

#### ***Equity, inclusion and diversity activities***

The Review Team is in agreement with the findings stated in the Self-Study Report assessment that there is equity, inclusion and diversity of activities within the Department of Pharmaceutical Sciences. Given the culturally diverse faculty and the mirrored graduate student body, the Department of Pharmaceutical Sciences rates as very effective in this outcome.

#### ***Placement and success of graduates***

In agreement with the Self-Study Report findings, placement and success of the graduates rate the intellectual and social climate of their graduate programs favorably.

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We suggest that enough time (FTE) be allotted so that a master document of graduate student placement and Oregon State University Alumni be kept current, continued and maintained by the Organizational Support Team, such as the Graduate Program Assistant, Debra Peters (currently 0.25 FTE for graduate students), and the Director of Alumni Relations, Paige Clark (currently 0% FTE for Alumni).

### ***Satisfaction of students and graduates with their education and their post-graduation employment success***

Surveys were conducted and taken from current students and Alumni (10 years post-graduation). The student survey identified two areas of concern that the Review Team explored further during the on-site visits with the graduate students. Those two concerns noted by the student survey were:

- a. Sense of Community with students who enter the program with you (Poor, n=5, 26.32%)
- b. Facilitating interdisciplinary interactions (Not at all response, 26%)

After discussions with the students, these findings did not accurately reflect the true situation. The Review Team understood that Dean Zabriskie and the faculty took these results very seriously and immediately acted upon them, discussing them with the graduate students. This indicated a sign of true commitment by the Dean and Faculty to ensure that graduate students have a positive and encouraging academic and social climate. There is a great sense of community at each campus; the graduate students wished that a greater sense of community existed between the Corvallis and OHSU campuses. In reality, the answers on the survey questions were more due to distance rather than negative perceptions of the academic and social atmospheres. The graduate students are very appreciated of the support they receive from the Dean, Faculty and Supporting Staff.

We suggest that regular scheduled informal interactions via video teleconferences be set up so that graduate students and/or faculty can share how their week went. For instance, “This A, B, C, research result made my week”, “Working on poster for an X, Y, Z conference”, “Getting married!, etc. These more casual joint gatherings would, hopefully, increase the comradery and bridge a sense of community between the campuses.

See also section, “Student satisfaction with their education and mentoring experiences”, for the suggestion of a dedicated vehicle.

### ***Professional or national rankings/ratings***

In agreement with the Self-Study Report assessment, the Review Team finds the reporting of the professional or national rankings/ratings to be a fair assessment.

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We suggest, as mentioned in “Publications or evidence of other scholarly work by students and faculty” section of this report that updating the College of Pharmacy, Department of Pharmaceutical Science website be undertaken and to increase and improve branding efforts. The exceptional faculty and graduate students with their innovative research is a well-kept secret. We suggest that the University\* support such task so that the College of Pharmacy, Pharmaceutical Sciences Graduate Program could translate their high quality research into grant dollars, scholarships and a strong Alumni donor base.

See also section, “Publications or evidence of other scholarly work by students and faculty”, where the website and other search engines are discussed.

### ***Community engagement activities***

In agreement with the Self-Study Report assessment, the Review Team finds the reporting of community engagement activities to be sufficient.

## **IV. Conclusions and Recommendations**

The College of Pharmacy is building a Pharmaceutical Sciences Graduate program that is in alignment with their mission and departmental goals and objectives and consistent with the departmental strategic plan. The Self-Study Report for the Pharmaceutical Sciences Graduate Program at Oregon State University was so well prepared that it allowed the Review Team to focus on key issues and to consider possible solutions/considerations for the College of Pharmacy to pursue. The College of Pharmacy faculty, graduate students, and operation staff, showed tremendous gratitude and appreciation for Dean Zabriskie and his support of the Graduate Program. The Pharmaceutical Sciences Graduate Program at Oregon State University is definitely building a culture for sustainability and success. Critical to its underlying success is the sustainability and maintenance is the Pharmacokinetic Modeling and Research Core (although a name change is suggested for this Research Core group). A critical mass of quality faculty and graduate students needs to ensure in this Research Core. Further, continuation to pursue for increase in allocation of funds at the University level to support the infrastructure (i.e. maintenance of equipment) within the College. Expanding the donor base for the graduate program by tapping into the Oregon State University, College of Pharmacy Alumni, and from the OSU Foundation, will improve and broaden the funding. A complete “no string attached” support for the first year graduate students is essential to assure the success of the first year of that student. Updating and improved branding of the website is a must to be ranked among the top Graduate Programs in the nation. Equally important to updating the website is the routine monitoring of search engine tools so that College of Pharmacy Graduate Program announcements can be boosted for those searching for relevant topics. Among other benefits, this will enhance the profile and visibility of the graduate program into the national and international communities leading to recruitment of first-rate graduate students.

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