

## Vanderbilt University

### **Altering Departmental Admissions Policies to Diffuse Dependent Relationships Between Graduate Students and Their Advisors**

**This Action Applies to Rubric Item(s):** 21 – Reducing Power Differentials

**Description of Work:**

**The problem: admission to graduate school to work with a specific advisor**

Graduate programs in biological/biomedical sciences may use any of three distinct types of admission processes. The most common is for several programs to band together and offer admission through an umbrella program, where accepted students share a common first-year curriculum, meet several potential advisors from many graduate programs, and then join an advisor's lab within a graduate program. Vanderbilt has two such umbrella programs, the Interdisciplinary Graduate Program and the Quantitative and Chemical Biology program, and all 11 of Vanderbilt's biomedical graduate programs participate. In a second route, a graduate program may accept students into its specific program, where again the students can meet with several potential advisors and choose one. Vanderbilt's Biological Sciences Department and Graduate Program in Neuroscience utilize this model as well as the umbrella programs. The third process is for a student to apply to a graduate program to work with one specific advisor, chosen in advance of applying. This is a "direct-admit" process. Sometimes the student and advisor have worked together previously, and sometimes they are unknown to each other. Direct-admit students may have less information for choosing an advisor, and they have less power to change labs if problems arise. Eight of the biomedical graduate programs at Vanderbilt offer students a direct-admit path to entry, and one of these is the Department of Cell and Developmental Biology ("CDB").

In 2019, CDB appointed a new Director of Graduate Studies ("DGS"), who was also independently appointed by the Provost to serve as a co-delegate to the NASEM Action Collaborative. The new DGS observed that direct-admit students seemed to have a more difficult path in graduate school than other students, with more advisor-student conflict and increased rates of leaving the PhD program before graduation.

**Structural differences in the direct-admit experience in CDB before the policy changes:**

- Admission: Umbrella students are interviewed by four faculty members and reviewed by an admissions committee before being accepted. In contrast, direct-admit students were vetted by the prospective advisor without a standard framework.
- First-year funding: Students who enter through umbrella programs have their first year paid by university funds; they switch to advisor-based funding after they choose a lab. Direct-admit students were funded by their advisor from the first day in the program.
- Rotations: Students who enter through umbrella programs are required to do four rotations, in which they "try out" working in four different labs for a period of about two months in each lab with the goal of identifying a thesis laboratory. These students experience a variety of

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mentoring styles, get a sense of cultural norms, and develop a professional network. In contrast, direct-admit students work with the same advisor's lab from the beginning.

- Social experience: Students who enter through umbrella programs have a class identity and usually form strong bonds with classmates, forged in part in mentoring groups, which are a required part of their programs. In contrast, direct-admit students are more isolated and often know only people in their own lab. They are not required to participate in the mentoring groups because of the attention given in these groups to identifying a thesis laboratory.
- Switching labs: If a student requests, the umbrella program will pay for a student to undertake more rotations to find a new lab if problems arise. Further, students who enter through umbrella programs can enlist the help of the umbrella program faculty advisors and former rotation advisors in identifying a new lab. In contrast, the direct-admit student has few human resources, no access to funded rotations, and does not carry the official stamp of acceptance of the umbrella program.

### **NASEM Sexual Harassment of Women Report analysis and relevant recommendations:**

The report's Recommendation 5 is *to diffuse the hierarchical and dependent relationship between trainees and faculty*. A direct admit student is particularly dependent on their advisor because of the complete dependence on the advisor's funding, their reduced professional network, and their decreased potential to change labs. Specifically, the report recommends mentoring networks and departmental funding.

### **The process of shaping a new policy:**

1. Information was collected on all CDB direct-admit students for the last 11 years (May 2020).
  - a. Direct admit students accounted for approximately 10% of doctoral students during this time.
  - b. 40% of direct-admit students were foreign nationals. Because of visa stipulations that they must leave the United States if they leave graduate school, foreign nationals would be a uniquely vulnerable group. Further, they have fewer social supports in this country.
  - c. 30% of direct-admit students had worked with their advisor before admission to graduate school, as an undergraduate, a summer intern, or an employee. These students were very successful and had few problems.
  - d. Direct-admit students were more likely than umbrella students to leave graduate school without a PhD and/or to have significant academic problems. (We are not reporting these percentages because of the small number of students involved.)
  - e. Anecdotally, it was frequently observed that direct-admit students did not know about the existence of the umbrella programs; or they did not realize that by choosing a direct-admit pathway, their options were limited compared to their peers.
2. The other 10 biomedical graduate programs at Vanderbilt were queried by email about whether they had direct-admit programs and how they managed them: *"Will your program accept a student to work directly with one faculty member, who is entirely responsible for their finances?"* Eight programs used the direct-admit path at varying frequencies and with various admissions requirements. The DGS's discussed their experiences with direct-admit programs. Several

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focused on the success of students who had worked in the lab prior to matriculation. (June 2020)

3. The DGS and the CDB department chair met to discuss the problem and outline potential solutions, including departmental funding.
4. The DGS convened a meeting of the CDB Graduate Education Committee, composed of 6 CDB faculty (at that time 3 assistant professors and 3 full professors) to brainstorm and evaluate solutions.
5. The Grad Ed Committee negotiated and compromised over email for several weeks, arriving at a new set of policies with unanimous support.
6. The Committee recommended these policies to the full faculty, who voted overwhelming in favor (August 2020). The full policy can be found here:  
<https://medschool.vanderbilt.edu/cdb/admission-to-cdb-graduate-program/>

### **Why the direct-admit path was reformed rather than abolished:**

Although the DGS originally suggested eliminating the direct-admit program entirely, the graduate education committee did not support this approach for the following reasons.

1. Many direct-admit students with prior experience in the lab were spectacularly successful and clearly understood the environment they were joining.
2. The high proportion of foreign nationals was viewed as a benefit. Because of issues with funding international students, the IGP and QCB umbrella programs admit a limited number of foreign nationals in each class. Thus, abolishing the direct-admit path in CDB would reduce access for international students to an American education, reduce access of the labs to highly talented students, and reduce CDB's multicultural diversity.
3. Some faculty in CDB rely on direct-admit graduate students to fuel their lab. Abolishing this route of admission would disproportionately affect them and likely interfere with their research programs.

### **Key elements of the new policy:**

Policies were put in place to promote these goals:

1. To preserve the student's choices. Because a student spends 5-6 years in a lab with one advisor, they should know what they are signing up for.
  - a. Students must apply to a Vanderbilt umbrella program in order to be considered for direct-admission to a lab at CDB. Only application, not admission, is required. By applying to the umbrella programs, students will become aware of their benefits and may choose that route of entry if available. Umbrella programs are the preferred route for graduate school, as they offer students the most choices and resources.
  - b. Students expressing interest in the direct-admit program will be advised about the differences between that and the umbrella programs by the DGS.
  - c. Students are expected to work in an advisor's lab before applying to that lab through the direct-admit program. If they have not, they must explain why this is not possible in their application materials.

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- d. The mentor must send their Mentoring Compact (a document outlining the responsibilities of the mentor and student) to the student before an offer of admission can be extended.
  - e. If the student wants to change labs, and if this decision is supported by the pre-candidacy committee (see below), the department will fund the student for 12 weeks, which is sufficient time to do two rotations.
2. To increase the professional and social network of the student.
    - a. A pre-candidacy committee will work with the student from the first week of their first year until a thesis committee is formed. The committee is charged with overseeing the student's intellectual growth, class performance, lab productivity, and social adjustment to graduate school.
    - b. A student-advisory group will be assigned to the student on arrival to campus, composed of three students with various overlapping interests, to provide a social network for the student.
    - c. Direct-admit students will participate in mentoring groups with the umbrella students.
  3. To maintain admissions standards.
    - a. The application will be reviewed by the CDB Graduate Education Committee rather than just by the prospective mentor. Because candidates will have applied to an umbrella program, feedback from that admissions program can be taken into consideration by the committee. The ultimate admissions decision will be made by the committee rather than just by the DGS. This will make it easier for a student to change labs if needed.

### **Future evaluation metrics:**

There are three metrics by which to measure success of the policy.

The first and most important is the experience of the direct-admit graduate students for the next 6 years, which is approximately one graduate-student generation. Because the numbers are expected to be small, this measure will be qualitative, noting their connectedness, levels of conflict with their advisor, academic success and professional productivity, and retention to the PhD.

The second is to measure how many direct-admit graduate students have previously worked with their advisor prior to arriving. An increase in this percentage will be considered a success of the policies.

The third measure is the overall number of direct-admit graduate students. A decrease in their number will be considered a success of the policies.

### **Website for further information (if applicable):**

<https://medschool.vanderbilt.edu/cdb/admission-to-cdb-graduate-program/>

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