Virginia Commonwealth University
Center on Health Disparities

Research Training Programs for Students Underrepresented in the Biomedical Sciences
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VCU MARC and IMSD undergrad - What?

- Research training with a faculty mentor
- Career development activities
- Salary during school year and in summer
- Travel to Annual Biomedical Research Conference for Minority Students (ABRCMS)
- Guidance in applying for graduate school
  - GRE test taking, choosing schools, writing personal statements, interview skills, etc
VCU IMSD & MARC undergrad programs

Successes

• Students into graduate and professional school
• Academic and social support to complete their Bachelors degree
• Undergraduate authorship
• Travel awards

Challenges

• Many students take a gap year and can be difficult to help them apply for graduate programs
• Complex lives, need to earn (beyond program salary)
VCU IMSD/MARC undergrad: What might translate to other institutions?

- “Molecular Lab Skills” Bootcamp (1 week)
- Travel awards to ABRCMS
- Career development series
- Organized summer program for undergraduate researchers
- Build sense of community for students with STEM interests (Research club)
- Seminar series featuring diverse faculty in the sciences (role models)
VCU PREP-What?

- Program for recent college grads aspiring to do PhD in biomedical sciences
- One year of research intensive training with a faculty mentor (75% research)
- Coaching on writing proposals, GRE test taking, choosing grad schools to apply to, writing personal statements, interview skills
- Graduate class or classes to fill undergraduate gaps
VCU PREP program

Successes
• Authorships
• Of 25 former students, 80% went to graduate school
• Several students have stayed at VCU for PhD
• 100% retention in graduate programs

Challenges
• Some students to medical school
• Difficult to transition students who aspire to MD/PhD programs
VCU PREP: What might translate to other institutions?

- Coaching for underrepresented postbacs or Masters students who want to do PhD
- Underrepresented postbacs could be hired as technicians, be volunteers, or be Masters students to get research experience
VCU IMSD PhD-What?

• Salary support provides additional slots for biomedical sciences PhD students from underrepresented groups
• Career development and social activities provide a network for PhD students and near-peer mentoring
• Academic enrichment available – slower pace if necessary
VCU IMSD PhD program

Successes

• Pipeline from VCU PREP to VCU IMSD
• Pipeline from PhD Portal admissions to IMSD
• Several PhD students have now graduated or are in final year

Challenges

• Recruiting underrepresented PhD students
VCU IMSD PhD: What might translate to other institutions?

• Support a faculty member to spearhead career development events for underrepresented PhD students and help create sense of community

• Recruit more advanced PhD students to mentor new PhD students

• Spreading out academics if necessary
VCU IRACDA - What?

- Postdoctoral research training at VCU (~75% effort)
- Training in teaching through Preparing Future Faculty (PFF) course series at VCU, and Summer Teaching Institutes
- Teaching externship at VSU or VUU partner institutions, teach an entire course and assimilate into faculty
- Instill an interest in research in students at the partner schools, take students into their VCU research lab
- Provide avenues for research collaborations between VCU and partner schools
VCU IRACDA postdoctoral program

Successes
- Postdoctoral fellows get tenure-eligible faculty positions
- Improved courses and teaching methods at partner schools
- Students from partner schools into VCU labs and VCU PREP
- Great support from VCU
- 36% URM postdocs in VCU IRACDA

Challenges
- Recruiting postdoctoral fellows in early years
- Evaluation of research goals at partner institutions
- Unbudgeted costs for travel of trainees and applicants
VCU IRACDA: What might translate to other institutions?

• Facilitate opportunities for postdoctoral fellows to get teaching experience at community colleges, local minority-serving institutions

• Provide competitive travel funding for postdoctoral fellows to attend career development activities (such as National Academies Summer Institutes)

• Encourage postdoctoral fellows to obtain Preparing Future Faculty or similar certificates (provide tuition remission)
Virginia Commonwealth University
NIGMS/NIH-Funded Research Training Programs for Students Underrepresented in the Biomedical Sciences

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