

***Responses limited to 500 words per topic**

Section A.

Trainees:

- 1. Impact of the time at which trainees apply to and enroll in MD/PhD programs (before, during or after the first year of medical school) on identifying the trainees most committed to and promising for a physician scientist career.**
- 2. Best practices for selecting candidates, including strategies to identify promising candidates who may not have had prior research exposure.**
- 3. Strategies of recruitment that could potentially enhance the diversity of trainees enrolled in MD/PhD programs.**
 - a. Exposure of prospective trainees to mentors of diverse socioeconomic backgrounds
 - b. Continued (or increased) financial support during training
 - c. Increase number of MSTP-funded spots in more rigorous schools
 - d. Improvement of the funding climate for young investigators

Section B.

Finance/Funding:

- 4. Possible impact of changes to the current economic incentives during MD-PhD training (e.g., the requirement for trainees to bear some of the training costs) on MSTP applicant pool and the range of institutions that apply for MSTP support.**
 - a. Requiring trainees to bear some of the training costs will likely deter promising candidates
 - b. 83% of survey responders who answered 'Yes' to the question 'Are you enrolled or have you previously been enrolled in an MSTP program' also responded 'Yes' to the question 'If MD/PhD training required trainees to bear some of the training costs, would this influence your decision to apply for an MD/PhD program?'
 - i. Responders primarily cited lack of feasibility of paying back loans as the primary deterrent if MD/PhD training required trainees to bear some of the training costs
 - ii. Others discussed how this would be incompatible with their desire to begin families during or after their training years
- 5. Impact of financial assistance on the trainees' commitment to research careers.**
 - a. Financial assistance is heavily tied in the trainees' decision to pursue MD-PhD training versus single-degree graduate programs towards research careers (MD or PhD only)
 - b. Financial assistance is viewed as a means to 'offset' the longer training time in an MD-PhD program
- 6. Influence of different possible MD-PhD funding models (eg, direct tuition and stipend payment, loan repayment programs, post-graduation service requirements) on the MSTP trainee pool.**
 - a. Different funding models (such as those suggested) have the potential to deter potential applicants due to the burden of previous loans, length of the training program, and the desire to have financial support to begin families during or after the MD-PhD training years

Section C.

Dual-degree training:

- 7. Potential approaches to further integrate basic medical education, research experiences, and clinical training, as well as to enhance the MD-PhD training curriculum.**
 - a. Increase the availability of research opportunities for medical residents (ie, PSTPs), as trainees find the possibility of spending years away from research to be deterring
 - b. Provide mentors and initiate dialogue among trainees that discuss strategies of integrating both training skill sets in physician-scientist careers
- 8. The essential knowledge and skills required of physician scientists to be successful researchers and leaders of the biomedical research enterprise in academia, industry, and government.**
- 9. The alignment of currently available MSTP graduate research training areas with the future needs of the biomedical enterprise.**
- 10. Strategies for improving mentoring and career advising for MD-PhD trainees.**
 - a. Mentoring strategies should include discussions on how to integrate both MD and PhD training into career
 - b. Provide mentors with the ability to advise on strategies for achieving work/life balance
- 11. Potential approaches to decrease the time-to-degree for MD-PhD training.**
 - a. Decrease emphasis on post-undergraduate research prior to beginning MD-PhD training
- 12. Approaches to encourage MSTP participants to pursue research careers in academia, industry, and government.**
 - a. Improving the funding climate for young investigators
 - b. Increasing research opportunities during residency
 - c. Provide mentors in these fields with the background to discuss how to achieve work/life balance in these careers

Section D.

NIGMS management of MSTP grants:

- 13. Important factors to consider in peer review of MSTP grants.**
- 14. Approaches to evaluate outcomes and to measure the success of MSTP-funded MD-PhD training programs.**
 - a. Number of graduates with successful physician-scientist careers (rigorous, high-impact research projects and well-funded) after residency
- 15. Geographic distribution of MSTP-supported MD-PhD training programs across the nation.**
 - a. Students prioritize the rigor of the training program over the geographic distribution of the program when choosing a program
- 16. The optimal number of MSTP-supported MD-PhD training programs and the optimal number of students each MSTP supports.**
 - a. One of the most deterring factors for promising undergraduates to pursue MD-PhD training is the competition for training spots in the most rigorous training programs
 - b. Increasing the number of students supported by MSTP at the more rigorous schools may motivate promising undergraduates to pursue MD-PhD training

Other:

- 17. Anything else specific to MSTP training you feel is important for NIH to consider with respect to enhancing the persistence of MD-PhD trainees in research careers.**