

The proposed new Translational Science degree Program at Indiana University has a strong rationale and an outstanding leadership. It is timely and is in line with both the NIH road map initiative and the aims of the funded CTSA program at Indiana University. Below are my comments on specific aspects for the proposal:

Market and Student Demand

The assessment of the market demand as outlined in the application seems to be reasonable. A very strong and convincing case is made for high demand, and it is likely that there will be significant demand for this program by students desiring to enter the field of translational research. This degree program certainly has great future prospects for graduating students and therefore, market demand is deemed to be quite high. There is a great national need for scientists who are at the interface of basic and clinical sciences. There appears to be no overlapping training program within Indiana University that will compete with this new degree program. The existing programs that target students in translational research at IU seem to focus on T2/T3 aspects, while this program fulfills a need for T1 education with initial emphasis on development of translational clinicians with the goal of extending this new program to engineers and other relevant professions in the future.

One potential weakness is the lack of detail on the potential student desiring the new MS degree, making it difficult to understand who would apply for the MS degree. It is indicated that initially the students applying to the MS program would have an MD degree and they would consist of fellows and junior faculty, and that they would have a protected time. The details and assurances of the protected time are lacking. Many of the clinical fellows and junior faculty are burdened with high clinical service demands coupled with financial pressure on junior faculty to produce revenues to cover their salaries. It is not clear what percentage of protected time fellows and faculty candidates will have to pursue such degree. Are the fellows on research fellowship track? And are there assurances from chairs/unit directors for a protected time for qualified junior faculty who wish to pursue the proposed degree?

Curriculum Structure

The curricular structure of the proposed program is considered to be highly meritorious and state-of-the-art with dual mentorship. This kind of environment should highly enrich the learning process. A potential weakness of the curriculum is that it is very classroom heavy. This is to be expected of a cross-disciplinary training program. However, the net effect is that the graduating students will be well trained in didactic coursework, but potentially low on experience in solving laboratory-based problems and original thinking. This argues that the graduating students would be more suitable as collaborative translational researchers rather than being developed to be independent translational researchers.

Viability in the Field

The proposed degree program in translational science is emerging at many institutions and, therefore, the long-term viability in the field is always a bit of a concern. However, given the leadership of Dr. Payne and involvement of many other senior faculty members at IU, and the documented strong market demand, the long term viability of the proposed program in the field is considered to be very high. There is strong national need for developing translational research programs to move new discovery from bench to bedside. Both NIH and the Pharmaceutical industry have called for greater emphasis on accelerating the translation of science to medicine and have noted that the current supply of translational scientists and physicians needed to do this is limited.

Budgetary Considerations:

The financial projections provided are reasonable and it appears that the proposed and current resources will be sufficient to support the program. This reviewer did not find detailed estimates on new curricular development. However, given the time effort of many faculty members already committed to this program, this may not pose any major hurdles. Further, it is not clear if there is tuition forgiveness for the students in this program.

Resources and Collaborations:

The quality of the leadership, faculty, and resources is outstanding and will assure success of the program. The program has taken advantage of the breadth of the university's disciplines and resources. Although the application makes a strong case of the collaborations and benefits to multiple institutions, including Indiana University, Purdue University, and University of Notre Dame, among others, there is lack of details in the application on the nature and benefit of that collaboration and the extent of key involvement beyond SOM at Indiana University.

Overall Quality of the Program

This is an excellent and timely new program proposal in translational research. It is well thought out, although it is quite likely that the first few years of operation will require significant adjustments in curriculum, recruiting, and outcomes evaluation. The lead author of this application, Dr. Payne, has thoroughly researched the market and has assembled an excellent faculty to design and implement an excellent proposal. Indiana University is likely to have a strong future return on investment in this new degree proposal, which has the potential to be large.

In summary, the quality of this program plan is high and the standards by which it will be judged are also high. The strengths far outweigh the potential weaknesses noted above, and the program director is experienced enough to adjust for any unforeseen problems.