

Statement Submitted for Consideration by the NIH Scientific Management Review Board at its Meeting on December 7, 2010 Regarding Potential Impact on NCRB Programs of TMAP Recommendations

We understand that, during your meeting on Tuesday, December 7, 2010, the SMRB will consider a proposal for a new NIH Center for Translational Medicine and Therapeutics that would likely involve transferring the CTSA portfolio currently within NCRB into the new Center, with implementation as early as the beginning of FY2012. Because planning for the new Center has proceeded so quickly, the stakeholders in other NCRB programs have not had an opportunity to provide adequate input on the consequences that could ensue for the remaining highly regarded elements of the NCRB portfolio. Because many other NCRB programs are strategically very important for future biomedical research and innovation and are uniquely found in the NCRB portfolio, we urge that much more detailed consideration be given to the potential deleterious impacts of the reorganization on these programs. Specifically, we would like to comment on programs in the NCRB Division of Biomedical Technology (DBT; http://www.ncrr.nih.gov/biomedical_technology/) with which we are most familiar.

The NCRB DBT coordinates, balances and stewards the Biomedical Technology Research Centers (BTRCs), a program which has been very successfully and professionally managed through the P41 grant mechanism over more than four decades. These high technology research centers have unquestionably been the broadest and most effective engines of invention supported by NIH, providing nationwide open access to cutting edge expertise and instrumentation. At the BTRCs, discoveries in the physical and computational sciences are translated into tools for biomedical research and the new technologies are disseminated through collaborative research and training activities with investigators supported by many of the other NIH institutes and centers. The BTRCs have a long history of productivity and of broad impact, especially with regard to new technologies that drive the national health agenda, with significant translational, clinical, and social impact and that expand the US economy through technology transfer. The BTRC Program has generated numerous advances and technological breakthroughs, including the first lab-based computers for real-time data processing (the forerunner of the personal computer), magnetic resonance imaging of organs including the human brain, synchrotron x-rays for structural biology and drug discovery, electron imaging of cells and nanomachines, peptide sequencing by mass spectrometry spawning the whole new field proteomics essential to deciphering genomics, multi-photon microscopy of cells and tissues dynamics, and optical and laser-based technologies for *in vivo* diagnosis and treatment. The current 48 BTRCs broadly support the national biomedical research and translational programs of more than 7,000 investigators whose research project support comes through peer-reviewed grant awards from 22 of NIH's institutes and centers. The BTRCs are highly regarded and well-established as the NIH's incubators for the invention, optimization and tailoring of new technologies so important to future medicine and to attracting and training the next generation of biomedical inventors and innovators.

Also among the unique NCRB DBT programs are the Shared Instrumentation Grant (SIG) and High End Instrumentation (HEI) programs, which provide support for the acquisition of state-of-the-art instrumentation for biomedical research that is not available through any other funding

source. Investigators supported by all the other NIH institutes and centers located in almost every state rely on these instrumentation programs for shared access to essential cutting edge technologies for their own biomedical research.

The BTRCs, and the NCRR Division of Biomedical Technology program staff that cultivate and manage these programs, have contributed to preeminence of the US in biomedical technology and have provided a model for national biomedical technology resource program development in Europe and Asia, where shared use of advanced facilities has begun to develop. Given the increasing role of new technologies in biomedical science and health care, we believe that any changes that would weaken these programs that foster technology development would be a significant step backwards for biomedical research in the US. It is our view that the BTRCs, together with the SIG/HEI program (and other smaller but complementary NCRR DBT programs), should be maintained under the umbrella of a cohesive, integrated and coordinated set of programs, housed in an NIH center or institute with the track record, expertise, and focus needed to effectively steward them. This is especially the case given the strategic value that they provide as the NIH engine of cross-disciplinary technology discovery and innovation.

If the SMRB recommends the formation of a new Translational Medicine and Therapeutics Center, it should also recommend that a process be expediently established to assure that sufficient time and attention are given to determine the impact of reorganization on the important and unique elements of the NCRR portfolio. This might be used as an opportunity to strengthen and expand these very successful technology development programs at a time when the innovation they represent is so crucial to the National agenda and shared resources optimize economic investment during times of constrained economic resources. Thank you for your consideration.

Respectfully yours,

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