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Transforming the Research Environment and Culture for the Betterment of Health in Wisconsin

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A fundamental transformation of the research culture and environment is taking place in Wisconsin, and it will eventually elevate the health of the people of the Badger State in a dramatic way. The transformation—which ensures that research moves rapidly from the university to doctors' offices, clinics, hospitals and county health departments—originated in the Institute for Clinical and Translational Research (ICTR) at the University of Wisconsin-Madison. ICTR was created 5 years ago, when UW-Madison's health sciences schools, in partnership with Marshfield Clinic, won a highly competitive \$41.5 million Clinical and Translational Science Award (CTSA) from the National Institutes of Health (NIH). The grant is one of the largest ever awarded to the UW School of Medicine and Public Health.

The CTSA program grew out of the vision of Elias Zerhouni, MD, Director of the NIH from 2002 to 2008. He envisioned a consortium of universities that would speed the translation of laboratory discoveries into treatments for patients, engage communities in clinical

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research efforts, and train a new generation of clinical and translational researchers.

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Through an excellent Research Education and Career Development program, ICTR-supported young faculty members are developing their abilities to conduct type 1 translational research, which involves the

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impact of those diseases that are most prevalent in Wisconsin populations. We are experiencing remarkable success in building the foundation for this important goal by focusing on communities and investigators. We are nurturing biomedical and behavioral scientists who want to engage in community research, and we are providing them with training and resources to pursue their community research passions. At the same time, we are creating strong, lasting partnerships with a network of statewide communities and community organizations that are eager to identify research priorities that they believe will lead to better health outcomes in their neighborhoods.

movement of basic laboratory science into controlled clinical trials, and type 2 translational research, which involves community- and population-based studies. The number of UW faculty members now pursuing type 2 translational research, in which researchers collaborate closely with communities and/or community organizations, has nearly tripled in the past 5 years. And the number of these highly trained and productive interdisciplinary researchers continues to grow.

In addition to promoting the development of translational investigators, ICTR funds promising pilot research projects. In its first 5 years, it allocated \$4,837,000 to more than 100 such projects. The ICTR-funded studies

resulted in the publication of 40 articles in peer-reviewed journals. These pilot studies in turn led to more than \$21.5 million in federal grants, a remarkable “return on investment.” The impact of these research projects will extend far beyond the communities that participated in the studies, as the findings can be applied throughout the state. A few examples of ICTR-sponsored pilot projects include development of a tool for diabetes risk assessment in children, testing a psycho-education intervention for families of adolescents with autism spectrum disorder, improving work ability among breast cancer survivors, treating tobacco dependence through community agencies, and expanding primary care treatment of chronic kidney disease.

ICTR also is dedicated to addressing health disparities across Wisconsin. We successfully competed for an additional NIH award that has allowed us to create the Collaborative Center for Health Equity (CCHE), which is now an ICTR core activity. CCHE concentrates on engaging with under-represented communities, funding research, and fostering the development of scholars—all aimed at eliminating health inequities.

One example is a healthy lifestyles program based at the Great Lakes Intertribal Council and other Wisconsin native American communities. The goal is to reduce the high rates of childhood obesity that can lead to related diseases during adulthood. Another planned project is a new partnership with the Lindsay Heights Community, a 110-square-block neighborhood in central-city Milwaukee. Lindsay Heights is planning for the construction of an Innovation and Wellness Commons structure that will serve as a gathering place for community groups and academic partners to offer educational programs, health activities, and related community-based research.

Establishing and maintaining long-term, mutually respectful, and trusting partnerships is essential to the success of these projects and all ICTR programs. Community engagement is crucial for all of what we do. ICTR staff based throughout the state sup-

port an array of community networks, including the Community Health Connections, the Wisconsin Network for Health Research (WinHR), the Wisconsin Research and Education Network (WREN), Wisconsin Public Health Practice-Based Research Network and Marshfield Center for Community Outreach. Our 5 research ambassadors also work with local communities to establish bidirectional communication, which sets the stage for a collaborative approach in the development of research ideas and priority setting.

Community engagement also embraces health services research—which improves the processes by which health care is delivered. Several ICTR-funded projects with explicit dissemination or implementation activities have directly changed clinical practice, community health programs, and/or health policy. For example, an ICTR project that investigated barriers to colorectal screening led a local insurance provider to expand client benefits to include a more patient-friendly preparation for colonoscopy screening. Some 90,000 individuals were affected.

In addition to establishing relationships between community and academic partners, ICTR has offered educational and training activities to develop community partners’ skills and has collaborated with community organizations to obtain grants totaling \$27 million for the support of new type 2 translational research linked directly to community engagement.

ICTR provides centralized infrastructure support to our community partners. For example, we offer electronic data warehousing capabilities, biomedical informatics expertise, and an institutional review board dedicated primarily to type 2 translational research proposals. We also have an extensive video library, periodical e-newsletters, and an active website. It all is designed to be “user friendly” for all investigators pursuing community-based translational research in Wisconsin.

We hope to expand the scope of our influence even further with the creation of an Upper Midwest Consortium that would

unite ICTR with the CTSA at the University of Minnesota, the Medical College of Wisconsin, Northwestern University, and perhaps others. Pooling and sharing our resources and expertise can yield great synergies.

Although an enormous amount of effort has been dedicated to this transformation of the Wisconsin research culture and environment, much remains on our “to do” list. Fortunately, our federal grant has been renewed for another 5-year round of funding, a testimonial to the fact that we have accomplished a great deal in the past 5 years. With a clear set of strategic goals and outstanding institutional support, ICTR is well positioned for more success in the future. We hope to expand our collaborations with central-city minority and rural populations; build new statewide research networks that will focus on aging, obesity and public health; expand training opportunities for investigators and communities; and increase our work in disseminating and implementing the results of our research. If you have not yet observed the impact of these efforts, we hope that you will in the near future.

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