

Interconnectedness of Culture and Science

Featured Information from Guest Lecture by Donald Warne, M.D., M.P.H. (Oglala Lakota)
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As part of the 2021 National Native American Heritage Month at the National Institutes of Health (NIH), Dr. Donald Warne, of the University of North Dakota, provided an overview of Indigenous Knowledge. Dr. Warne, a member of the Oglala Lakota Tribe from Pine Ridge, South Dakota, shared his thoughts on ways that Indigenous Knowledge and modern scientific biomedical research can be used together to provide a deeper understanding of human health and our relationship with ourselves, one another, our communities, and the universe.



Photo credit: University of North Dakota, Grand Forks, ND

In his overview, Dr. Warne made several key observations:

- Scientific investigators should develop respect for Indigenous Ways of Knowing. Indigenous peoples have cultivated knowledge over millennia, some examples of which have only recently been discovered. Examples from multiple disciplines include the amazing feats of engineering and architecture accomplished by the Maya; the health benefits and ecological sustainability of Indigenous foods; the use of natural medicines, such as willow bark tea (containing salicin) to treat pain; and the use of Traditional Medicine and ceremony to heal people struggling with mental health and addictions. Indigenous Knowledge should not be viewed as a romanticized version of Native spirituality but rather as a set of validated observations that add practical value to human existence. Likewise, keepers of Indigenous Knowledge should develop respect for scientific research and its potential to help operationalize and quantify findings and to replicate them in other populations, environments, and fields of inquiry.
- Dr. Warne used the Medicine Wheel as an example of viewing health through an Indigenous lens. The Medicine Wheel is most commonly used to describe the interrelationship of physical, mental, emotional, and spiritual health, but it also can be used to understand family relationships, biospecimen research and its significance in historical and intergenerational trauma, and connectedness to both past and future generations.
- The benefits of research rest on a balance between the negative history and issues that created mistrust of researchers among Indigenous communities and the need to advance science and solutions for those communities. Developing a diversified workforce with Indigenous investigators who possess lived experience in Indigenous communities is the best way to promote Indigenous health as its own paradigm. Dr. Warne described the development of a Ph.D. program in Indigenous Health at UND and the importance of recruiting Indigenous faculty to, in turn, recruit Indigenous students; tailoring the delivery of academic instruction to the students' needs; and developing curriculum aimed at de-colonizing subject areas, as well as the overwhelming response from students interested in enrolling in this program as a result of its design. The program focuses simultaneously on Indigenous and modern scientific methods and approaches to gaining a better understanding of the subject matter.

“Decisions should be made with attention to the impact they will have on the next seven generations.”



