

needling of another point is not effective. Thus, these results give credence to the basic premise of acupuncture. However, in our opinion, this series of studies does not evaluate the effectiveness of acupuncture, as in most instances, acupuncturists would not needle a single point, regardless of other accompanying signs and symptoms.

While science claims to be dispassionate, many scientists have become polarized around the issue of AM. For decades, Western academia has excluded research and practice in areas identified with AM, and has shunned those who dared defy the status quo. This opposition has contributed substantially to the paucity of data in this area. For example, in the US, established academics have been discredited and have had difficulties when attempting to do AM research,^{35,36} and at times, explicit threats were made by mainstream medicine to individuals and institutions that would associate with alternative practitioners,³⁷ or who would do research in areas identified as alternative.^{38,39} Consequently, most AM research has been conducted outside of academia by individuals with limited research training and resources, and their investigations are often methodologically inadequate.^{9,10} Conversely, those AM studies deemed methodologically sound may lack comparability and replicability. For example, lack of funding and differences among individual investigators' resources and personal research interests have limited replication of hundreds of studies in acupuncture and homeopathy.²⁶

In summary, we strongly believe that the scientific method *can* and *must* be applied to the study of traditional medicine, but that the blind application of methodologies designed for other purposes and circumstances is poor science.

6. Implications for a Program in Alternative Medicine

Based on the above, to be successful, a program in AM needs to be multifaceted and address at least the major factors that will impact on the integration of AM into conventional healthcare.

I have presented, and I hope clarified, factors that impact in different ways on alternative and traditional medicine as compared to biomedicine. According to this outline, I believe that a program should address the following:

- A commonality exists among various traditional systems of health, all of which describe a spiritual and “energy” basis for biological mechanisms. *The physical and biological effects of non-molecular interactions should be investigated.*
- Alternative and traditional therapies are very heterogeneous, and include a variety of different health systems, some of which may be as complex as biomedicine itself. *The health benefits and economic impact of improved access to indigenous medicine by whole populations should be examined and evaluated.*
- Many traditional medical treatments are holistic and multifaceted. *To evaluate the potential benefits of such holistic systems on patients, outcome studies should be carefully designed in which the practitioners will have no other constraints than to recruit suitable patients and accurately record the treatment.*
- Each health system reflects the beliefs and philosophical systems of the culture from which it evolved. These considerations should be included in teaching curricula from early pre-school age to professional level education to counter-balance the notion that science, in particular medicine, is objective. *Ultimately, it should be understood that each healthcare approach should be evaluated on its demonstrated merit, not on a priori beliefs.*
- Much of the healthcare system is driven by profit. *We must develop models of coverage that are based on factors other than consumption of medical goods.*

We believe that such programs, if clearly and decisively coordinated, could have a profound impact on worldwide healthcare because the various facets of such programs touch upon the essence of the differences between traditional systems of health and biomedicine, not only from a medical, but also from a cultural and value-based standpoint.