

There are many reasons to explore options other than “magic bullet” drugs, one of which is the escalating, critical problem with drug interactions.³¹⁻³³ In the West in particular, more people take more “magic bullets” than ever before, in part because many older people have chronic illnesses requiring many medications. We must understand other routes to maintaining and restoring health with diminished reliance on polypharmacy.

5.4 *Scientific and Medical Factors*

Science is not a field of study but a *method of observation* that must be tailored to the object (or phenomenon) being studied. Thus, scientists must tailor the means of observation (the scientific method) to the subject, *not* have a standard method of observation and try to fit the object of study within the method that may deform (sometimes beyond recognition) the subject being studied. In this context, any phenomenon, if felt to be of importance, may be studied scientifically. Many factors can determine whether an area is worthy of study – for example, scientific significance of potential findings for scientists and the public, or strength of evidence to date. However, in many countries the scope of studies is limited by the fact that scientific investigations are guided by available support, which does not necessarily correspond to the intrinsic worth of the topics, but rather to other factors such as economic interest or technological limitations.

In general, there are many methodological approaches to the study of alternative or traditional medicine, and there is no restriction as to which one can be used. However, one must be very careful about the interpretation and extrapolation of results. For example, a number of double-blind studies have been conducted on acupuncture for nausea, using a single point, “Pericardium 6” (P6).³⁴ This series of generally well-designed studies has indicated that the stimulation by a needle of a traditional acupoint (P6) can decrease a centrally controlled symptom (nausea), and that this effect is specific since

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.