

## **Lesson Plan: “Complementary and Alternative Medicine”**

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### **Introduction**

Throughout history, mankind has utilized plants as a primary source of food, medicine, and shelter. This tradition continues today. In 2001, the World Health Organization estimated that 85% of the world’s population was directly dependent on plant-based medicines. In contrast with most other organisms, plants have the ability to undergo a process of secondary metabolism, in which unique compounds are produced for the purposes of defense, pollinator attraction, and coloration, among others. Examples of these important secondary metabolites usually fall within the following natural product classes: alkaloids, non-protein amino acids, cyanogenic glycosides, coumarins, glucosinolates, monoterpenes, sesquiterpene lactones, diterpenoids, saponins, limonoids, carotenoids, phenols, flavonoids, and quinones.

In this lesson, we will focus on the study of complementary and alternative medicine (CAM). To understand CAM, you need to have a good understanding of what conventional medicine is as a comparison:

**Conventional or allopathic medicine:** The mainstream medical care practiced at most hospitals in the United States. Standards of care are set by government and regulatory agencies, and by individual health insurance companies.

**Complementary and alternative medicine:** Forms of treatment that are used in (addition to (complementary) or instead of (alternative) standard treatments. These practices generally are not considered conventional medical approaches. Some examples include: Traditional Chinese Medicine (TCM), Ayurvedic, indigenous medicines, herbal medicine, acupuncture, naturopathy homeopathy, biological based therapies (herbal supplements), manipulative methods (chiropractic and massage therapy), mind-body interventions (meditation, hypnosis, prayer, faith healing, dance, music, animal, art therapies), and energy therapies (body fields and electromagnetic fields).

The US National Institutes of Health has an institute dedicated to the scientific investigation of CAM therapies called the National Center for Complementary and Alternative Medicine (NCCAM). Please take a moment to visit their [website](#) – this may be a good resource for you as you prepare for writing your medicinal plant monograph.

### **Learning Objectives**

Upon completion of this module, you should be able to:

1. Compare/contrast CAM versus allopathic medicine.
2. List the major categories of CAM
3. List some examples of CAM plant remedies highlighted by NIH/NCCAM

### **Assigned Reading**

- Chapter 2 from *Medical Botany* (Lewis and Lewis) on CAM
- NIH Herbs at a Glance - you can browse through this. It is quite long, but contains useful information about specific herbs: [http://nccam.nih.gov/health/NIH\\_Herbs\\_at\\_a\\_Glance.pdf](http://nccam.nih.gov/health/NIH_Herbs_at_a_Glance.pdf)

### **Assessment**

- Take the Quiz.