

The Use of Plants in Medicine: Organizing Principles & Examples

Based on a Special Lecture by Dr. Kenneth Klemow

Below are seven topics in the sequence that Dr. Klemow presented them. They are phrased in the form of questions here as a guide for your study.

1. Why should plants contain chemicals with medical significance?
 - Many plant medicines are plant secondary metabolites.
 - What are secondary metabolites?
 - What does the plant use them for?
 - What is the medical concept of the “Therapeutic Window”? Why is this important in medicine? Are narrow or broad such Windows more useful?
2. What Percentage of conventional Western medicines are plant derived (i.e. direct extracts, metabolites or analogs of chemicals found in plants)?
3. Many herbal remedies are sold over-the-counter, requiring no prescription and are perceived by many as safe because they are “natural”.
 - What are some of the concerns about herbal remedies?
 - What is coltsfoot, what is it used to treat, is it efficacious in this regard, and what are some of the potential negative side effects?
 - What is Laetrile, what is it used to treat, is it efficacious in this regard, and what are some of the potential negative side effects?
4. How are Modern Medicines from plants different from herbal remedies?
5. What are three different ways to classify useful plants or plant medicines?
6. Case Studies:
 - What is St. John’s Wort, what is it used to treat, is it efficacious in this regard, and what are some of the potential negative side effects or adverse effects?
 - What is foxglove, what is it used to treat, is it efficacious in this regard, and what are some of the potential negative side effects or adverse effects?
7. Future Directions
 - About what percentage of plants are used and what are future researchers needed for in this regard?
 - In what way are future researchers needed to study herbal remedies?
 - What are nutraceuticals?