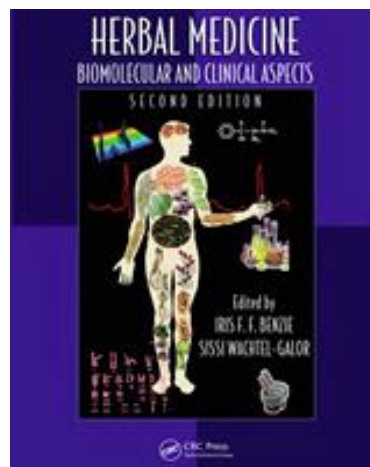


# Plants as Alternative Therapeutics (Biol-490G) Online Course

## HERBAL MEDICINE



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### Recommended books/literature:

- (1) **Herbal Medicine: Biomolecular and Clinical Aspects (2<sup>nd</sup>. ed)**, Edited by Iris F. F. Benzie and Sissi Wachtel-Galor, CRC Press: Boca Raton (FL), 2011.  
**Available free on NIH site:** <http://www.ncbi.nlm.nih.gov/books/NBK92771/>
- (2) **Medical Botany: Plants Affecting Human Health (2<sup>nd</sup> ed)**, Edited by Lewis, Walter H. and Memory R. F. Elvin-Lewis, John Wiley & Sons, Inc.: Hoboken, NJ, 2003. (No book is mandatory)  
Additional peer reviewed literature/reviews will be recommended via Blackboard Discussion time-to-time.

### Learning Outcomes

Successful completion of this course will enable students to

- Identify the nutritive and therapeutic roles of plants/phytochemicals
- Understand the mechanism of phytochemical action and intervention in a medical condition
- Apply the mechanistic knowledge of common health conditions to understand human biology
- Critically evaluate the scope and limitation of herbals

**Course Objectives:** Plants therapeutics is an emerging area gaining wide acceptance in medical circle, academicians, researchers and public. Rapidly increasing resistance in microbial pathogens and cases of chronic conditions have fuelled interests in all the concerned parties. In light of this, this course is an attempt to provide a bird's-eye view of the science involved in herbal remedies.

The following classwork will facilitate students achieve the above learning goals

- Analysis of the traditional systems of medicine and their relevance in modern health management
- The nature and general properties of phytochemicals present in various plant parts
- Specific functions of plant-derived bioactive compounds when used as drugs or nutrients
- Notable phytochemicals and their pharmacological applications in light of current clinical research
- What happens in case of common human diseases?

NB: Information from this course is not meant to substitute for medical advice, and guidance should always be sought from a physician if required to address a medical condition.

### **Tentative course topics/ Exam Schedule**

#### Module 1:

Introduction  
Traditional Systems of Medicine I:  
Ayurveda  
Chinese medicine  
Traditional Systems of Medicine II:  
Egyptian medicine  
Native American medicine  
Phytochemicals I, II  
**Midterm Exam I**

#### Module 2: **Application of phytochemicals in**

Gastrointestinal diseases  
Cardiovascular diseases  
Respiratory diseases  
Oral infections and hygiene  
**Midterm Exam II**

#### Module 3: **Application of phytochemicals in**

Cancer  
AIDS & immunological disorders  
Skin diseases; herbal cosmetics  
Reproduction: male & female

### **Class policy**

You must have access to the WKU Blackboard system that allows you to use online course materials. Please familiarize yourself with this system (Contact IT Helpdesk: 270-745-7000 if you need to know how to use the Blackboard). “Course-at-a-glance” posted under Course info will navigate you through the course. Course topics will be offered through the posted Power Point presentations and recommended online literature. Selected video classes will also be available under Tegrity campus. Recommended (not required) books may be helpful in learning and understanding details. Exams will be conducted using the Blackboard. You can use Discussion board of the Blackboard system to address your questions about a specific subject/topic or course mechanics. I generally answer questions every day between 10:00 AM-12:30PM. I also answer E. mails in case of individual concerns. Students are expected to read thoroughly and understand the topics discussed in slides, suggested books or online literature.

### **Exam Policy**

The exams will reflect the material covered from the syllabus and posted (Blackboard) presentations/referred literature. Exams may include true/false, fill-in-the-blank, multiple choice, matching, diagrams, and other types of questions.

*Midterms:* There will be two midterm exams covering the content completed before. Midterms will be posted on the Blackboard and can be taken from your home/personal computer. These are closed-book, time-limited exams. Date and exact timing of the tests will be notified by Blackboard announcement (please watch!)

### ***FINAL (DEPENDING ON COVID-19 PANDEMIC DEVELOPING SITUATIONS, FINAL CAN BE CHANGED TO OTHER FORMATS)***

1. **Final:** Final is a comprehensive exam; NORMALLY conducted by WKU/DELO testing centers on the scheduled date. It includes all the materials covered in the class (approximately, an assortment of 40% questions from previous chapters and 60% from chapters afterwards). It will carry a weight of 150 points for 100 questions. Questions will be multiple choices, True/False similar to midterms.
2. **Registration for final:** You will need to register, in advance, with the Distance Learning Testing Office *for your final exam (IF DELO CONDUCTS THE FINAL).* After start of the course, you will receive a notification from WKU/DLTO office with clear instructions about how to register and reserve your spot. For questions or concerns, as well as detailed guidelines and procedures about testing in a proctored environment, visit the website: [www.wku.edu/testing](http://www.wku.edu/testing) OR call at 270-745-5122 or 270-745-2106, or email at [dltc@wku.edu](mailto:dltc@wku.edu). Make sure to reserve your place early for the final exam.
3. *Makeup:* No makeup for missed tests will be allowed, as they are available on your personal computer for long hours. Make up for final can be considered only under University-approved conditions.

**Research paper:** You will be required to write an article in the manner of a research manuscript/review on the topic suggested or selected (details on Blackboard/Research assignment). The report should be fully organized in pages (about 13-15 pages), reflecting consistency of styles in font (12') and format; and it can be submitted online or in bound hard copy. Figures, tables or images must be supplemented with clear legends at the bottom. The detail can be found on the Blackboard/Course info. You are expected to follow the directions as outlined.

**The date for submission of the paper will be August 5.**

**Grading Pattern:**

The final class grade will be determined on a standard grading scale out of a total of 400 points as follows:

Midterm I	100 pts
Midterm II	100 pts
Research paper	100 pts
Final Exam	150 pts
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TOTAL	450 pts
Grading scale: A= 90%; B=80%; C=70%; D=60% (of a total of 450 points)	