PLANTS AND HUMAN HEALTH
An Undergraduate Colloquium
(Course: 11:015:408 - Index: 68169)

SYLLABUS, Spring, 2013

INSTRUCTORS: Professors: Dr. Qing-Li Wu and Dr. Jim Simon
Guest Professor: Dr. Rodolfo Juliani

MEETING DAY: Thursdays, 3rd period

Periodic Meeting Day: Tuesdays as needed and schedule

MEETING TIME: 12:35 - 01:55 pm

MEETING LOCATION: Foran Hall, Room 191B, unless noted.

OFFICE HOURS: Upon request (Easiest prior to or after scheduled class)
Qing-Li Wu: Foran Hall – Rm. #396B
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Rodolfo Juliani: Foran Hall-Rm. #396D
Phone: 848-932-6240

BOOKS OR READINGS: Readings to be assigned; no text required, but
The following references will be quite useful for background information:
(i) The ABC Clinical Guide to Herbs, M. Blumenthal
(Thieme, Publishers);
(ii) Herbs of Choice, Robbers and Tyler (Haworth Press);
(iii) Foye’s Principles of Medicinal Chemistry, Williams
and Lemke (Lippincott Williams and Wilkins)
(iv) Dietary Supplements: A Guide to Health Care Professionals, Talbot and Hughes (Lippincott)
(v) We also suggest you find a good introductory text
on human physiology, human medicine, health, nutrition for back-up basic information.
HOMEWORK: At the beginning of the semester, you will be asked to read and critique both popular articles and movies/films and share your critical analyses both in class and via a written report(s). Selected movies will be assigned for you to watch, review, and critique. You are required to prepare and hand-in two written critiques including one popular article and one film relevant to this class.

DISCUSSIONS AND PRESENTATIONS: This is an undergraduate colloquium for the serious student. The classes in general, will be led by you-the students. You will lead the discussion and class presentations. Coupled with the written assignments and research reports, these experiences form the basis of your learning experience and grade. We will provide short overviews, assist in guiding the presentations and discussions, listen and comments but primarily serve to mentor and assist. The responsibility of preparing for class, learning and presenting the materials purposefully resides with you. You are expected to come prepared and willing and able to participate in class discussion as well as lead many short presentations. The use of PowerPoint and computer graphics is key and the ability to write a scientific paper using original scientific articles from journals is expected. Your decision to stay enrolled in this colloquium after reviewing the expectations and requirements of the class means that you fully understand your responsibility, conditions and expectations that we have of all students taking this course.

THE RESEARCH REPORTS: Each week students will be assigned to read, review and critique scientific and/or popular articles relating to plants and human health. One to two page summaries will be required for each assignment in addition to your presentation. For the short weekly written 1-2 page assignments you will be graded on your review and critical analysis. We expect that for each paper you will have read and present scientific findings based upon original scientific studies and scientific literature on the topic; succinctly present either your support of or disagreement with the use of the plant(s) and/or plant product(s) for a particular application and your underlying reasons for your position. For those reading popular articles on herbs and plant-derived medicines we expect that you will critically read original literature, and provide in each paper your conclusions that relate directly to the stated objectives for each paper. More details and guidelines will be presented in class.

THE RESEARCH PROJECT: We will assign two topical research areas. The class will be divided in two and each class member will be required to participate in a larger group project, in which each person has a specific role and responsibilities. This is to enable you to participate in a project larger than yourself that builds to a final class presentation at the end of the semester. The instructors will provide the two topics. More details to be discussed in class.

Where to source information: You can use the internet/online database (e.g. Medline, Scifinder) to conduct the literature search and use as sources of information from the Internet, but your paper must be based upon scientific articles (original research and/or reviews) and not encyclopedias and Internet sources per se. You must cite all sources appropriately whether books, review articles, original scientific articles and/or Internet sources. Your reference list must not rely solely on commercial or popular
sources, but you can use such a source and even a commercial product to then question whether it has been scientifically shown to be safe and efficacious (anyway double checks using the scientific database, e.g. Medline, Scifinder, even check the original papers). Each paper must include traditional scientific journals and technical reference articles. A complete data-base search (in electronic form) must accompany the submission of the paper, and follow after your list of references which are cited You are expected to properly cite and/or graphics and data that come from another source (under or adjacent to where you place it in the paper; and you must cite the references within the body of your paper at the appropriate places in the ext not solely list all your references at the end. Any deviation and/or lack of completeness in following these guides can result in a decreased grade. A few recommended web sites are listed below:

A Short Selected Suggested Web-Sites that will be useful for this class:
FDA: http://www.fda.org/
Health Canada for Safety and Adverse Event Reporting on Natural Products:
National Institutes of Health:
   National Center for Complimentary and Alternative Medicine: http://nccam.nih.gov/
US FDA Safety and Adverse Event Reporting: http://www.fda.gov/medwatch/

During the semester, information will be posted on Ecompanion.

GRADING: Grading is based upon the accumulated grades of each homework assignment, research report and presentation, class presentations, attendance and participation. Grades will then be calculated using:
A = 90-100%; B+ = 85-89%; B = 80-84%; C+ = 75-79%; C = 70-74%; D = 60-69%; F = <60%. Weekly assignments and presentations are worth 70% of grade; Final research paper and presentation 30% of your grade. Attendance is required. Attendance is expected; lack of attendance will result in a lowering of your grade. Active class participation and contribution to class discussion may, in special circumstances, increase your grade. Laptops are welcome for note taking, but no Internet surfing is permitted during class.
Tuesday, January 22: Class Introduction, Objectives and Expectations
How to prepare for class presentations and discussions;
How to Conduct Your Literature searches;
How to Write Your Reports; Critical thinking skills;
How to Present Your Findings;
Class Participation and class projects;
Short Critiques of Movies, Articles and Assignments; and

Thursday, January 24: (i) Therapeutic Use of PhytoMedicines and their distinction between pharmaceuticals drugs; and
(ii) The Regulatory Environment, the FDA, Classification of Dietary Supplements and Role of Patents on development of herbal drugs;
(iii) Office of Dietary Supplements and the National Center for Alternative and Complimentary Medicine; and
(iv) The National Botanical Centers and Their Research
(v) Students sign-up for their class presentations

Thursday, January 31: Natural Plant Products Chemistry: A primer into bioactive compounds in plants, issues of standardization and quality control considerations and
Linking Health and Nutrition to Chemistry of Foods

Thursday, February 07: First class discussion led by you. You’re required to:
(i) read and review two of the popular press articles to review; and
(ii) watch and write a critique on one movie relating to plants and human health
(Articles and films will be on Ecompanion. Your summaries and critical reviews due at end of each class)

Thursday, February 14: Student Presentations and Class Discussions on:
(i) Plants used to address Respiratory Tract Problems

Thursday: February 21: Student Presentations and Class Discussions on:
(i) Plants used to aid Digestive System Problems and
(ii) Plants used for Kidney, Urinary Tract, and Prostate Problems

Thursday, February 28: Student Presentations and Class Discussions on:
(i) Plants used for Weight Loss Plants used for endocrine, metabolic syndrome, diabetes, blood sugar control, obesity
Thursday, March 07: Student Presentations and Class Discussions on:
(i) Plants used for Cardiovascular System Problems
(ii) Research Project discussion

Thursday, March 14: Student Presentations and Class Discussions on:
(i) Plants used for Nervous System Problems
(ii) Plants used for depression and mood elevation

Week of March 18-22: Rutgers Spring Break!

Thursday, March 28: Student Presentations and Class Discussions on:
(i) Plants used for Age Related diseases (eye health, bone retention, aging process; and should we be using plants as natural estrogenic sources?)

Thursday, April 04: Student Presentations and Class Discussions on:
(i) Plants used to Improve Immune Deficiencies

Thursday, April 11: Student Presentations and Class Discussions on:
(i) Herbs used to enhance sexual performance and fertility
(ii) Plants used to enhance energy and stamina

Tuesday, April 16: Each group meeting about their assigned research project

Thursday, April 18: Student Presentations and Class Discussions on:
(i) Plants used for arthritic and musculoskeletal problems
(ii) Plants used to support bone and joints & in sports supplements

Tuesday, April 13: Each group meeting about their assigned research project

Thursday, April 25: Group 1: Student Presentations and Class Discussions on:
Plants products used in support of Cognitive Memory and Alzheimer’s

Tuesday, April 30: Group meeting about their assigned research project

Thursday, May 02: Group 2: Student Research Presentations and Class discussion on Plant products for neurodegenerative diseases

Monday, May 06: Rutgers last day of classes
Research Paper Due in class (hard copy plus copy on CD due in Prof Wu’s mailbox if it has not already been turned in on Thursday, May 02)