

BIOTECHNOLOGY BCMB (BTEC, ENTO) 4200/6200**Course Coordinators:**

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 Michael Pierce hawkeye@uga.edu

Teaching Assistant:

SPRING QUARTER 2005 Life Sciences C127 11:00 to 12:15 Tuesdays and Thursdays

<u>Date</u>			
1/10	1.	Introduction	Adang/Pierce
1/12	2.	Biotech stock watch assignment; Basic Recombinant Techniques	Pierce/dang
1/17	3.	Technologies of DNA Sequencing, Genomics, Proteomics	Adang
1/19	4.	Survey of organisms and expression systems for biotech applications	Adang
1/24	5.	Protein structure/function--enzyme engineering	Pierce
1/26	6.	Comparative Genomic Analyses	Jessica
1/31	7.	Bioforensics and genetic marker screening	Anderson
2/2	8.	Engineering of enzyme systems in bacteria EXAM HANDED OUT	Adang
2/7	9.	Bioremediation; the story of Apgen EXAM DUE	Meagher
2/9	10.	Genetic engineering of plants	Adang
2/14	11.	BT Insecticidal proteins in plants	Adang
2/16	12.	Discovery/development of biologically active compounds	Puett
2/21	13.	Intellectual Property and Biotechnology	Sanders
2/23	14.	Biotechnology Entrepreneurship	Wanner
2/28	15.	Ethical Issues in AgBiotechnology	Parrott/Adang
3/2	16.	Cloning and genetic engineering of animals EXAM HANDED OUT	Stice
3/7	17.	Stem Cell Biotechnology EXAM DUE	Dalton
3/9	18.	Molecular Markers and their applications TEAM ASSIGNMENTS	Pierce
3/14-16		SPRING BREAK	
3/21	19.	New cancer treatments from biotechnology	Pierce
3/23	20.	Which came first, the protein or the egg: the story of Avigenics, Inc	Ivarie
3/28	21.	The story of Neose, Inc. and Immune Control	Roth
3/30	22.	Fighting global diseases using biotechnology	Tarlton
4/4	23.	Starting a medical biotech company Abeome	Meagher
4/6	24.	Biomedical Applications of Biotechnology TEAM TOPICS DUE	Pierce
4/11	25.	Georgia Biotechnology	Guests
4/13	26.	Workshop on Presentations	Pierce-Adang
4/18	27.	Team project presentations	
4/20	28.	Team project presentations	
4/25	29.	Team project presentations	
4/27	30.	Team project presentations	
5/9		Final EXAM, Due 5:00 PM C127 Life Sciences	

Grades will be determined by the following percentages:

5%	In-class participation
10%	Homework assignments/Quizzes
25%	Exam I
25%	Exam II
25%	Exam III
10%	Team project presentation

100%

In class participation: The classes in this course will be organized around the premise that students will use web-based tools to understand topics of biotechnology discussed in the class. The 5 % grade will be comprised of: the asking of thoughtful questions during and after the presentation and attendance. Three absences from class are allowed.

Team Project: Teams and members assigned by course coordinators. Briefly, each team can claim as proprietary intellectual property any published intellectual property or patent that appeared in the literature since 2000. Each team will present a document consisting of Executive Summary, very basic Business Plan, and Research and Development Plan. The team will also give a 20 minute class presentation with visual aids to resemble an actual presentation to potential investors including scientists or partner scientific company, and all members of the team must present to the class. Students hearing the presentation will critique, discuss, and score each presentation, along with the faculty organizers. Faculty will provide assistance in choosing a topic and directing students to appropriate resources, including other University faculty. Topic will be chosen and approved by 4/12.

Plagiarism. For all of your assignments, it is **NOT** permissible to copy or cut and paste words or figures with no references. It is permissible to quote authors and provide full reference to the quote. If we find a case of plagiarism on any of your assignments, you will receive an F on that assignment. When in doubt, reference. When you are answering a question, do not simply paste quotations together. An occasional quotation is acceptable, but you need to synthesize what others have written and give the answer in your own words (along with your own thoughts and creativity).

Presenters

Michael Adang, Professor, Depts. of Entomology, and Biochemistry and Molecular Biology, UGA. Biological Sciences Rm 427. Phone 542-2436

Wyatt Anderson, Professor, Dept. of Genetics and Dean, Franklin College, UGA

Guy Cardineau, Arizona State University.

Jeff Dean, Professor, Dept. of Forestry, UGA

Bob Ivarie, Professor, Dept. of Genetics, UGA

Ian Lyons, Project Leader, Bresegen

Richard Meagher, Professor, Dept. of Genetics, UGA

Kevin McBride, Verdia, Inc. Redwood City, CA

Wayne Parrot, Professor, Dept. of Soil Sciences, UGA

Michael Pierce, Professor, Dept. of Biochemistry and Molecular Biology, UGA

David Puett, Professor and Chair, Dept. of Biochemistry and Molecular Biology, UGA

Steve Roth, CEO, Immune Control Inc. Conshohocken, PA

Steve Stice, Professor, Animal and Dairy Sciences, UGA

Rick Tarleton, Professor, Dept. of Cellular Biology, UGA

Eric Veitenheimer, Morgan, Lewis and Bockius, LLP. Washington, DC

Jan Westpheling, Associate Professor, Dept. of Genetics, UGA