

CELLULAR AND MOLECULAR PHARMACOLOGY

VETMM 6100/Fall 2008

Tuesday and Thursday mornings from **10:10-11:00 am** in room **C2-539** in the Clinical Programs Center at the College of Veterinary Medicine.

| Date | Topic | Lecturer |
|----------------|--|-----------------|
| Tues. Sept 2 | 1. Drug-receptor interactions I | Oswald |
| Thurs. Sept 4 | 2. Drug-receptor interactions II | Oswald |
| Tues. Sept 9 | 3. Ligand-gated ion channels I | Oswald |
| Thurs. Sept 11 | 4. Ligand-gated ion channels II | Oswald |
| Tues. Sept 16 | 5. Voltage-gated ion channels I | Oswald |
| Thurs. Sept 18 | 6. Voltage-gated ion channels II | Oswald |
| Tues. Sept 23 | 7. G protein-coupled receptors | Cerione |
| Thurs. Sept 25 | 8. G protein signaling | Cerione |
| Tues. Sept 30 | 9. Voltage-gated Ca ²⁺ channels | Horne |
| Thurs. Oct 2 | 10. TRP channels | Chuang |
| Tues. Oct 7 | 11. Tyrosine kinases/growth factor signaling | Cerione |
| Thurs. Oct 9 | 12. Nuclear receptors | Weiland |
| Tues. Oct 14 | FALL BREAK | |
| Thurs. Oct 16 | IN CLASS EXAM (covering Lectures 1-12) | |
| Tues. Oct 21 | 13. Calcium signalling I | Fewtrell |
| Thurs. Oct 23 | 14. Calcium signalling II | Fewtrell |
| Tues. Oct 28 | 15. Mechanisms of exocytosis | Lindau |
| Thurs. Oct 30 | 16. Nutrient signaling & drugs used in diabetes mellitus | Sharp |
| Tues. Nov 4 | 17. Neural excitability and conduction | Oswald |
| Thurs. Nov 6 | 18. Muscle contraction | Kotlikoff |
| Tues. Nov 11 | 19. Electrical pacemakers | Gilmour |
| Thurs. Nov 13 | 20. Nitric oxide pathways | Weiland |
| Tues. Nov 18 | 21. Cancer chemotherapy – approaches and drugs I | Page |
| Thurs. Nov 20 | 22. Cancer chemotherapy – approaches and drugs II | Page |
| Tues. Nov 25 | 23. Antibacterial and antifungal agents | Schwark |
| Thurs. Nov 27 | THANKSGIVING | |
| Tues. Dec 2 | 24. Antiviral agents | Whittaker |
| Thurs. Dec 4 | IN CLASS EXAM (covering Lectures 13-24) | |

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Textbooks

There is no required textbook. In addition to lecture notes, most handouts will include research or review articles. There are a few textbooks that may be useful for more general information:

Rang and Dale's Pharmacology by Rang, Dale, Ritter and Flower; Churchill Livingstone; 6th. Edition (2007).

Goodman and Gilman's The Pharmacological Basis of Therapeutics edited by Brunton, Lazo and Parker; McGraw Hill; 11th. Edition (2006).

Medical Physiology: A Cellular and Molecular Approach by Boron and Boulpaep; Saunders; 1st. Edition (2003).

The Molecular Biology of the Cell by Alberts, Johnson, Lewis, Raff, Roberts and Walter; Garland Science; 5th. Edition (2007).

Examinations and Grading

The final grade for the course will be determined from two equally weighted exams. These will be 50 minute, in-class, short-answer, closed-book examinations on October 16 and December 4.

Faculty

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