ADVANCED TOPICS IN CELL BIOLOGY
MCB6772 Section 5731, Spring – 2024
1 credit

Time: Tuesdays and Thursdays; 8:00 AM to 10:00 AM EST
In-person meetings in MCS room 1044

Instructors: Peter Kima (pkima@ufl.edu) & Zhonglin Mou (zhlmou@ufl.edu)

Course Description: Specific topics about cell structure and function published in recent journal articles with microbiological interest animal and plant systems will be studied. The specific topic for this semester will be vesicle trafficking. We will discuss how cell surface receptors were discovered and how they are involved in transferring extracellular signals. The role of cell surface receptors in host-microbe interactions will be the focus of this semester.

Course Objectives:
- To develop an understanding of current advances and approaches in the study of the cell biology of eukaryotes.
- To gain insight on differences between plants and animals pertaining particularly to their susceptibility or capacity to resist or to be exploited by microbial pathogens.

Student Responsibilities:
You are expected to read the research articles and upload questions and/or comments under Assignments in Canvas (do not send to the instructor) before each virtual class meeting. At least 3 questions or comments on each paper are required. Class attendance is required to achieve the objectives of this course. Each student (working in a team) will present at least twice.

Students will take quizzes in Canvas on the topics that will be discussed. The quizzes will be extracted from the research articles that we will discuss.

A written paper of 1-2 pages (11 point) will be expected from each student no more than 1 week after the end of the course. The paper will be in response to questions that will be made available before the end of the course.

Course Schedule:
The course schedule will be discussed in the first meeting of the course. Each student is expected to present at least twice in this course.

Student Evaluation:
Oral presentations will be worth 25% of grade; quizzes will be worth 25% of grade; class participation will be worth 25% of grade; final paper will be worth 25% of grade.

Final grades will be based on the following performance standard (100 points total):

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<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
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<tbody>
<tr>
<td>92 - 100%</td>
<td>A</td>
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<tr>
<td>85 - 91.9%</td>
<td>B+</td>
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<tr>
<td>80 - 84.9%</td>
<td>B</td>
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<tr>
<td>75 - 79.9%</td>
<td>C+</td>
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<td>70 - 74.9%</td>
<td>C</td>
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<td>60 - 69.9%</td>
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<td>Less than 60%</td>
<td>E</td>
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## Course Schedule:

(Quiz questions will be from the papers **highlighted in bold**)(Papers will be updated soon)

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Presenters</th>
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| 2/6  | *Introduction to the course & Vesicle trafficking in plant immunity and pathogenesis I*  
Topic: *Introduction to the course & Vesicle trafficking in plant immunity and pathogenesis I*  
Presenters:  
Articles:  
| 2/8  | *Vesicle trafficking in plant immunity and pathogenesis II*  
Topic: *Vesicle trafficking in plant immunity and pathogenesis II*  
Presenters:  
Articles:  
https://doi.org/10.3390/ijms22031005 (Review)  
doi:. 10.1002/jev2.12080.  |
| 2/13 | *Vesicle trafficking in plant immunity and pathogenesis III*  
Topic: *Vesicle trafficking in plant immunity and pathogenesis III*  
Presenters:  
Articles:  
| 2/15 | *Vesicle trafficking in plant immunity and pathogenesis IV*  
Topic: *Vesicle trafficking in plant immunity and pathogenesis IV*  
Presenters:  
Articles:  
### 2/20
**Topic:** Vesicle trafficking in animal immunity and pathogenesis I
**Presenters:**
**Articles:**

### 2/22
**Topic:** Vesicle trafficking in animal immunity and pathogenesis II
**Presenters:**
**Articles:**

### 2/27
**Topic:** Vesicle trafficking in animal immunity and pathogenesis III
**Presenters:**
**Articles:**

### 2/29
**Topic:** Vesicle trafficking in animal immunity and pathogenesis IV
**Presenters:**
**Articles:**