Scientific Writing of the Review Paper

OBJECTIVE:

The purpose of this course is to learn how to write a scientific review article for a peer reviewed journal. A literature review paper reviews and synthesizes the current understanding of a specific topic. It is a significant method to become current on the state of knowledge and the research for a particular research field. Writing a review paper is good practice for synthesizing and organizing scores of information into a concise product. Reviewing and summarizing the literature is a critical skill for successful scientists. Instruction will focus on the process of writing and publishing scientific review manuscripts. The goal of this course is to prepare students in understanding the scientific method, reading and critical analysis of scientific literature, and effective oral and written scientific communication. The students will learn what a review article is, the function of a review article, and who the target audience is.

OUTLINE AND EXPECTATIONS:

Each student will choose a topic of current research, choose at original research papers in this scientific field, and develop a review paper.

Individual assignments include:

Identification of original papers that frame the current state (within 5 years) of research on the topic.

Written description of the significance of the topic that justifies the choice of topic.

In-class presentations that summarize individual papers on the chosen topic.

A written review paper on the chosen topic, including drafts with comments and revisions.

Critique of peer student review papers.

CLASS PARTICIPATION:

Students are expected to attend every class meeting, participate in discussion and provide feedback and constructive criticism. This is a significant portion of your grade. Do NOT ignore it. Students are expected to write a scientific review paper on their topic of choice.

WEEK OF		LECTURE TOPICS	NOTES
Week 1	9/26	Introduction, course summary, goal – write a concise review article.	Hughes et al, Nuclear Topology, Epigenetics, and Keratinocyte Differentiation. JID 2013
Week 2	10/3	What is a review article? What is the function? Who is the audience?	Jheng et al, Molecular insight and pharmacological approach targeting mitochondrial dynamics during obesity. Ann. N.Y. Acad. Sci. 2015
Week 3	10/10	No class scheduled.	Taiwan National Day
Week 4	10/17	Types of review articles. Choosing a research topic and justifying the choice.	Methodological, objective and mandated review articles.
Week 5	10/24	How to write a review paper; the outline of a review paper.	Authors, title, abstract, introduction, body & figures, conclusion, acknowledgment, references.
Week 6	10/31	Where to begin the iterative process: prepare, develop structure, write draft, revise.	Student justification of their research topic due.
Week 7	11/7	Prepare; hypothesis, literature search, read, and define with focus.	Identification of current papers (within 5 years) of research on the topic.
Week 8	11/14	Advance literature searches.	Student list of scientific papers related to the topic due.
Week 9	11/21	Develop structure; organization, prepare outline with headings, plan section content, prepare figures.	Student hypotheses due.
Week 10	11/28	Abstract writing; a concise summary.	
Week 11	12/5	Student presentation of research topic; critical review by class.	Student abstracts due.
Week 12	12/12	Student presentation of research topic; critical review by class.	Rough draft due.
Week 13	12/19	In-class presentations that summarize individual papers on the chosen topic; critical review by class.	
Week 14	12/26	In-class presentations that summarize individual papers on the chosen topic; critical review by class.	1st revision due.
Week 15	1/2	Student presentation of their review article; critical review by class.	
Week 16	1/9	Student presentation of their review article; critical review by class.	
Week 17	1/16	No class scheduled. Review articles due.	Final review papers due.

- Plagiarized assignments will receive an automatic zero grade; the student will receive an F in the course and will be reported to the Dean of Student Affairs.