

Biomedical Research

Medicinal Properties of Honey — A Literature Review Seminar

BIO 4305 001

Dr. Ferhat Ozturk

Sul Ross State University — Eagle Pass Campus

Fall 2026 | Enrollment: 5 students | Format: Small-group research seminar

Individual research consultations by arrangement — two required in-person, whole-class meetings (see Meeting Times)

Course Information

ST: Biomedical Research is a small-group, mentored research seminar. This semester's shared research theme is the Medicinal Properties of Honey — its antimicrobial, antioxidant, and anti-inflammatory properties, and related biomedical applications. Students will conduct a guided primary-literature review on a specific question within this theme, culminating in a written literature review and an in-person research presentation. This course is designed to build the same literature-search, critical-reading, scientific-writing, and presentation skills used in graduate school, medical/dental school applications, and professional research settings.

Prerequisite: Instructor permission / junior or senior standing in Biomedical Sciences or Biology (consent of instructor).

Credit Hours: 3 (Special Topics — confirm with the department if this differs from your degree plan).

Course Modality: Mentored independent/paired research with required in-person presentation days.

This is a small seminar (5 students, Fall 2026). You will work individually or in a group of two on a single shared research question within the honey theme; see Working in Groups below.

Meeting Times

Duration: 08/24/2026 – 12/02/2026 (Fall 2026, 16-week term).

Campus: Eagle Pass Campus.

Regular Meetings: By arrangement. Individual/group research consultations are held during Dr. Ozturk's Student Hours (Wednesdays, 10:00 AM – 1:00 PM) or by appointment — email to schedule a time that works for your group.

Required In-Person Meeting 1 — Initial Presentations: Week of October 13, 2026 (exact day/time to be confirmed with the group).

Required In-Person Meeting 2 — Final Presentations: Monday, December 7th. Attendance is mandatory.

Note: this syllabus assumes a flexible, consultation-based meeting format typical of a small research seminar.

Learning Goals

At the end of the course, you will be able to:

- Formulate a focused research question within the medicinal properties of honey (antimicrobial, antioxidant, anti-inflammatory, or wound-healing applications).
- Search, evaluate, and synthesize primary scientific literature using library databases (PubMed, Web of Science, Google Scholar).
- Distinguish primary research articles from reviews, and evaluate the strength of evidence in a scientific paper.
- Write a structured, properly cited scientific literature review at a level appropriate for an undergraduate research symposium or independent-study report.
- Give and receive constructive, criteria-based peer review on scientific writing.
- Deliver a clear, well-organized oral research presentation to a scientific audience.

Communicate with Me

Instructor Name: Dr. Ferhat Ozturk

Department: Natural and Behavioral Sciences

Office Location: Eagle Pass Campus, Building B – B121

Student Hours: Wednesdays, 10:00 AM – 1:00 PM (or by appointment)

Email Address: Ferhat.Ozturk@SulRoss.edu

Phone: (830) 703-4832

Preferred Method of Communication: Email — please include “BIO 4305” in the subject line.

About Me & My Teaching Philosophy

I am Dr. Ozturk, Associate Professor in the Department of Natural and Behavioral Sciences and Founding Program Director of Biomedical Sciences at the Eagle Pass Campus. My academic background includes a Ph.D. in Cellular and Molecular Biology from the University of Nevada, Reno, and postdoctoral research at the University of Nebraska Medical Center. Before joining Sul Ross, I served as department chair and director of the Honey Research Center in Samsun, Turkey, and — from Spring 2022 through Summer 2025 — I directed the USDA-funded HONEY Pathway program at UTSA, mentoring more than 70 student researchers through my Medicinal Properties of Honey course and independent research. Many of those students went on to medical school, dental school, graduate programs, and research careers. My own research centers on the antimicrobial, antioxidant, and anti-inflammatory properties of local honeys, and on developing a collagen-honey wound gel. I am excited to mentor this group through a genuine, publishable-quality literature review on this same subject.

Working in Groups

You may complete this course's research project individually or in a group of two (partners). Groups of more than two are not permitted, given the depth expected in the literature review. Both partners in a group receive the same grade on the written submissions unless an unresolved, documented contribution problem is brought to my attention well before a deadline. Each individual — including both members of a group — must speak during both the Initial and Final Presentations; you may not have only one partner present on behalf of the group.

Declare your specific research question, and your partner (if any), by Friday, September 4, 2026, by email.

Course Materials

Required: SRSU Library database access — PubMed/MEDLINE, Web of Science, and/or Google Scholar for primary-literature searches. Off-campus access requires your LoboID login at library.sulross.edu.

Required: Blackboard access — for submitting your literature reviews, peer reviews, and this syllabus.

Recommended: A citation manager (Zotero, Mendeley, or EndNote) to organize sources and format citations consistently. SRSU Library offers free support for these tools.

No textbook purchase is required. Foundational readings on honey's medicinal properties will be shared by the instructor to help you get started; the majority of your sources should be primary research articles that you locate yourself.

Literature Review Guidelines

Primary (Initial) Literature Review: A focused review of at least 8–10 primary research articles addressing your specific question within the honey theme. Should include a clear introduction/rationale, an organized synthesis of findings (not just a list of summaries), and a properly formatted reference list (a single citation style, used consistently).

Final Literature Review: An expanded and revised version of your initial review (typically 15–20+ primary sources), incorporating instructor and peer feedback, with a stronger synthesis, a discussion of gaps or contradictions in the literature, and a conclusion identifying directions for future research. This is the version suitable to share at an undergraduate research symposium.

Peer Review

After each submission, you will be assigned one or two classmates' reviews to read and evaluate using a rubric provided on Blackboard (clarity, use of primary sources, organization, and citation quality). Peer review is graded on the quality and specificity of the feedback you give, not on how you rate your peer. Peer feedback is meant to be constructive — treat classmates' work with the same professionalism you'd want applied to yours.

Presentations

Initial Presentation (week of October 13): A short (5–7 minute) presentation of your research question, why it matters, and what the literature has shown so far. This is a checkpoint, not a final product — it's fine to present open questions.

Final Presentation (Monday, November 30 — in person, required): A polished 10–12 minute presentation of your completed literature review: question, synthesis of the evidence, and conclusions/future directions, followed by questions from the class and instructor.

Course Guidelines for the Use of Generative Artificial Intelligence

Generative AI tools may be used to help you brainstorm search terms, outline your review, or polish grammar in your own draft. AI tools may not be used to generate the substantive scientific content, analysis, or synthesis of your literature review, and may never be used to generate or verify citations — AI tools regularly fabricate references, and you are responsible for verifying that every source you cite is real and that you have actually read it. If you use AI for any part of your process, briefly note how in your submission. Undisclosed or substantive AI-generated content will be treated as an academic integrity violation.

Activities and Grading

Activity	Quantity	% of Final Grade
Primary (Initial) Literature Review — written submission	1	25%
Peer Review of Colleagues' Initial Submission	1–2 reviews	10%
Initial Presentation to the Class	1	10%
Final Literature Review — written submission	1	35%
Peer Review of Colleagues' Final Submission	1–2 reviews	10%
Final Presentation to the Class (in-person)	1	10%
TOTAL		100%

Both the initial and final literature reviews are graded on the strength of your use of primary literature, the clarity of your synthesis and writing, and correct/consistent citation — not merely on source count.

Grade Distribution and Letter Grade

Letter Grade	Percentage
A+	97.5 – 100%
A	95 – 97.5%
A-	90 – 95%
B+	87.5 – 90%
B	85 – 87.5%
B-	80 – 85%
C+	77.5 – 80%
C	75 – 77.5%
C-	70 – 75%
D+	67.5 – 70%

Letter Grade	Percentage
D	65 – 67.5%
D-	60 – 65%
F	< 60%

Please note: There are no extra-credit opportunities. Late submissions lose 10% of the assignment's point value per day late, and both the Initial and Final Presentations must be given in person on their scheduled date — there is no makeup presentation except for a documented, university-excused absence arranged in advance.

Course Expectations & Policies

Attendance & Engagement

Because this course is largely independent/paired research, there is no daily attendance grade. However, both presentation days are mandatory and in person, and you are expected to respond to scheduling requests for consultations promptly and to meet each interim deadline. Repeated unresponsiveness or missed deadlines will affect your grade beyond the point penalties listed above and may be reported as unsatisfactory academic engagement.

Academic Integrity for Literature Reviews

Every idea, finding, or figure drawn from another source must be cited. Copying or closely paraphrasing text from an article, a review, or an AI tool without citation is plagiarism, whether it is one sentence or a whole section. Do not fabricate or misrepresent a source, and never cite a paper you have not actually read. Plagiarism-detection software is used through Blackboard. See Academic Integrity under Essential Student Information for the full university standard.

Syllabus Changes

This syllabus is subject to change at the discretion of the instructor. Any changes or corrections to course materials, deadlines, or other updates will be communicated to students ahead of time. You are responsible for checking Blackboard/email for corrections or updates to the syllabus.

Communication Plan

There are several ways you can communicate with me:

- Email: You may email me at Ferhat.Ozturk@sulross.edu. Please begin your message with a professional greeting such as Good morning, Hello, or Dear Dr. Ozturk, and include “BIO 4305” in the subject line.
- Course Messages in Blackboard: Use this option if you need to send me a private message regarding grades or other sensitive information.
- Response Time: I will respond to all messages within 24–48 business hours.

Don't hesitate to reach out and to join me during Student Hours — for a small research seminar like this one, regular check-ins are the best way to stay on track.

Essential Student Information

SRSU Disability Services: Sul Ross State University is committed to equal access in compliance with the Americans with Disabilities Act. Students seeking accessibility/accommodations services must contact Mrs. Mary Schwartz Grisham, LPC, SRSU's Accessibility Services Director, or Ronnie Harris, LPC, Counselor, at 432-837-8203 or by email at mschwartz@sulross.edu or ronnie.harris@sulross.edu. Eagle Pass students can also contact Alejandra Valdez at 830-758-5006 or alejandra.valdez@sulross.edu. See also Counseling and Accessibility Services.

Academic Integrity: Students are expected to demonstrate scholarly behavior and honesty in all work. Submit only your own work, cite sources properly, and do not reuse assignments from other courses or copy from online materials. Unauthorized collaboration is prohibited, and — as noted above — generative AI may not be used to produce substantive

content or citations. Violations may result in failing grades on assignments or the course, as well as further university consequences.

Classroom Climate of Respect: This course is built on free expression, critical inquiry, and open discussion of ideas. We share the responsibility of creating and sustaining an atmosphere of tolerance, civility, and respect for one another's viewpoints — including during peer review and presentations. Intimidation, harassment, or personal attacks of any kind will not be tolerated.

Student Support Services: Sul Ross offers a range of student support, including Counseling and Accessibility Services and Student Support Services. If you encounter difficulties inside or outside of class that impact your performance, please reach out to me — together we can find strategies and resources to help you succeed.

SRSU Library Services: The Bryan Wildenthal Memorial Library and Archives of the Big Bend in Alpine offer free resources and services to the entire SRSU community, at library.sulross.edu. Mike Fernandez, SRSU Librarian, is based in Eagle Pass (Building D-129) and can help you develop a database search strategy for your literature review — reach out early in the semester.

Academic Calendar: See the Sul Ross Academic Calendar for official university-wide dates. For Fall 2026: classes begin August 24; Thanksgiving break is November 25–27; the last day to withdraw with a 'W' is November 6; the last class day is December 2; and final exam week is December 4 and 7–9.

Research Milestone Schedule — BIO 4305, Fall 2026

This schedule lists every graded milestone plus the key ungraded checkpoints that keep a research-and-writing project like this one on track. Dates are subject to change; updates will be posted on Blackboard and sent by email.

Date	Milestone	Notes
Wk 1 – Aug 24–28	Course begins. Introduction to the honey literature; review of primary-literature search strategy and citation management.	No deliverable
By Fri, Sep 4	Topic & Group Declaration — confirm your specific research question within “Medicinal Properties of Honey” and whether you are working individually or with one partner.	Required, ungraded
Ongoing, Sep	Independent/paired research and writing. Individual consultations during Student Hours or by appointment.	—
Fri, Oct 2	PRIMARY (INITIAL) LITERATURE REVIEW DUE — submit via Blackboard by 11:59 PM.	25%
Week of Oct 5	Initial submissions distributed for peer review.	—
Fri, Oct 9	Peer Review of Initial Submission due — written feedback to assigned classmate(s) using the provided rubric.	10%
Week of Oct 13	INITIAL PRESENTATIONS — each student/group presents their initial literature review and research direction to the class.	10%
Oct – Nov	Revise and expand your review using instructor and peer feedback; broaden your source base.	—
Fri, Nov 13	FINAL LITERATURE REVIEW DUE — submit via Blackboard by 11:59 PM.	35%
Week of Nov 16	Final submissions distributed for peer review.	—
Fri, Nov 20	Peer Review of Final Submission due — written feedback to assigned classmate(s) using the provided rubric.	10%
Nov 25–27	THANKSGIVING BREAK — no class activity.	—
Mon, Dec 7	FINAL PRESENTATIONS — in-person, required.	10%