Robert E. Brennan Jr.

Dean, McCoy College of Science, Mathematics and Engineering
Professor, Department of Biology
3410 Taft Blvd, Wichita Falls, TX. 76308
Work (940) 397-4198, Cell (715) 307-2470
robert.brennan@msutexas.edu

EDUCATION

Ph.D. Texas A&M University Health Sciences Center. 2004. Medical Sciences
M.S. Louisiana State University. 1997. Veterinary Medical Sciences
B.S. University of South Dakota. 1993. Biology

PROFESSIONAL EXPERIENCE

2024-Current Dean, McCoy College of Science, Mathematics, and Engineering, Midwestern State University Texas, Wichita Falls, TX. 76308.

2020-2024 Associate Dean, College of Mathematics and Science, University of Central Oklahoma, Edmond, OK 73034.

Examples of Duties and Responsibilities:

- Assist the Dean with budget and strategic planning efforts
- Member of the University COVID-19 Task Force
- Coordinate the annual Tenure and Promotion review process with the Dean
- Coordinate and manage curriculum initiatives and revisions for the college
- Member of the University Strategic Enrollment and Persistence Team
- Coordinate the College of Mathematics and Science assessment efforts
- Review and track online course development requests
- Coordinate and lead the college safety committee
- Coordinate and review transfer agreements between community colleges and UCO CMS
- Coordinate and manage faculty and staff hiring processes (position descriptions, position postings, search and screening committee training, etc.)
- Plan, coordinate, and participate in student recruitment and retention efforts
- Coordinate and participate in efforts to cultivate and strengthen relationships with community partners
    - Leading collaboration with STEAM Engine OKC to develop mobile STEM activities for students in underserved schools in the Oklahoma City metropolitan area.
    - Organize STEM outreach activities being provided for students who attend City Center OKC after school programming
- Serve as the liaison for accreditation efforts in the college

Key accomplishments:

- Led collaborative efforts to relocate program advisors from central advising to their respective departments within the college and improve their compensation
- Established, organized, and moderated annual STEM Industry Careers Panel
- Led efforts to collaborate with Scientists from Cytovance Biologics to better align college curriculum with industry skill competencies

- Chaired the successful search to hire a STEM building manager for the College of Mathematics and Science in the fall of 2022
- Member of the 2022 UCO Advising Success Task Force that submitted a number of recommendations to the administration on how to improve advising conditions at UCO
- Contributed to the development and implementation of the College of Mathematics and Science fall 2020 COVID reopening plan
- Chaired the successful search to hire a Development and Marketing Coordinator for the College of Mathematics and Science
- Contributed to decision making processes to make strategic budget reductions in order to retain all personnel (faculty and staff lines)
- Produced reports based on enrollments, revenue, and costs to demonstrate the positive impacts of the college on the overall budget of the university
- Led efforts to establish college-wide research lab safety plans and protocols
- Contributor to our college's NSF EPIIC grant pre-proposal that resulted in our invitation to participate in the institutional collaboration process.

2015-2020 Chair, Department of Biology, University of Central Oklahoma, Edmond, OK 73034

Examples of Duties and Responsibilities:
- Served as the primary voice for communicating the university's, the college's and the department's vision and mission to the faculty, students and other stakeholders
- Represented the department in communications with other professionals on and off campus
- Guided the long-range development of the department within the context of the university's and the college's vision, mission, and goals
- Developed and oversaw the implementation and evaluation of a strategic plan with clear budget implications congruent with the university and college missions and strategic plans
- Articulated the department's goals and needs within the college and collaborated with the dean to strengthen the department
- Oversaw curriculum, budget, and personnel issues for the department, and addressed the needs of faculty, staff, students, accreditors and other stakeholders
- Oversaw the supervision, evaluation and professional development of all departmental personnel
- Initiated and supervised program development, maintenance, and evaluation
- Collaborated with academic advisors and others to address students' academic needs including transfer articulation, course substitutions and advisement

Key accomplishments:
- Coordinated and guided our successful five-year Self Study for Continuous Improvement (SSCI) report for accreditation purposes
- Established an external advisory board consisting of professionals in the community who represent diverse areas of biological expertise
- Established an endowed chair's fund to help fund student and faculty needs that have no other funding mechanisms
- Developed and put into action a renovation and space reallocation plan for our current building (Howell Hall)
- Worked with the department, college, and facilities management to identify funding for the purchase and installation of a new greenhouse

- As a Co-facilitator of the University Faculty Workload Action Team, developed and submitted faculty workload recommendations to Provost and Academic Affairs
- Established a departmental recruitment and retention committee that works with area schools to inform them of our programs, holds advising days for current students, and surveys our current students to identify ways to help them complete their degrees
- Secured funding from the UCO foundation to provide equipment for the new teaching and research labs in the Don Betz STEM Research and Learning Center
- Developed internship agreements with several community partners to provide experiential learning opportunities for our students.
- Secured a new tenure-track Anatomy and Physiology faculty line for the department, which was the first new tenure-track faculty line in 10 years.

2020-Current Director, Center for Interdisciplinary Biomedical Education and Research, College of Mathematics and Science, University of Central Oklahoma, Edmond, OK 73034.

Duties and Responsibilities:
- Facilitate and promote collaborative teaching and research opportunities among faculty members from several different departments (Mathematics and Statistics, Chemistry, Engineering and Physics, Biology, Computer Sciences, and Human Environmental Sciences)
- Serve as a liaison between faculty and the CMS Dean's Office
- Facilitate communication between faculty members to acquire needed equipment and resources
- Contribute to the organization of the annual symposium
- Participate in grant proposal read-throughs as able

Key accomplishments:
- Co-authored the white paper to create the center
- Established a common core equipment room in the new Don Betz STEM Research and Learning Center
- Identified a CIBER faculty member to serve as editor for our quarterly newsletter
- Identified a CIBER faculty member to serve as our collaborative meetings coordinator
- Implemented a monthly meeting schedule
- Coordinated efforts to acquire more than $200,000 in instrument and equipment needs through INBRE carry-over funds

2018-2024 Professor, Department of Biology, University of Central Oklahoma

2013-2018 Associate Professor, Department of Biology, University of Central Oklahoma

2009-2013 Assistant Professor, Department of Biology, University of Central Oklahoma

Duties and Responsibilities:
- Responsible for teaching, scholarly activities, and service to the department, college, and university.

Key accomplishments:
- Initiated the formalization of departmental policies and procedures manual
- Facilitated and supported the implementation of eight new common core course assessment tools.
- Coordinated the customization of the ACAT test to better reflect our common core courses.

- Led and coordinated the effort to convert the ACAT test to online testing to provide more flexibility and a better testing environment for the students.
- Co-authored and edited the Biology Department's end of the year assessment report.
- Developed, coordinated, and supervised microbiology activities for the Central Regional Science and Engineering Fair for the past six years at UCO.
- Facilitated and participated in the development of a Capstone Experience for the Biology Department.

2007-2009 Adjunct Lecturer, Life Sciences Department, Chippewa Valley Technical College, River Falls, WI 54022.

- Taught General Human Anatomy and Physiology I in the evenings

2005-2009 Microbiology Research Specialist, 3M Corporation, Medical Division, Diagnostics Department, St. Paul, MN. 55144

Duties and Responsibilities:

- Technical team leader for diagnostic assay development projects
- Provided microbiological expertise to product development projects within the Infection Prevention Division
- Independently coordinated, designed, and executed appropriate microbiological testing to support product development and regulatory requirements
- Reviewed, developed, and implemented microbiological test methods as needed
- Presented data in oral and written format to technical and business leadership groups
- Effectively communicated with scientists, clinical research associates, and project managers
- Participated in the technical due diligence for mergers and acquisition efforts
- Served as a microbiology subject matter expert consultant across 3M Health Care Divisions
- Directed and supervised the work of laboratory team members

Key Accomplishments:

- Laboratory notebooks and expert witness testimony helped 3M win a $40,000,000.00 lawsuit that was filed against 3M corporation
- Filed several records of invention that resulted in one published patent and others that were filed

SELECT SERVICE

University of Central Oklahoma

- Chair's Academy Facilitator
- University COVID-19 Task Force
- University Workload Action Team, Co-Facilitator
- University Biosafety Committee Member
- College of Mathematics and Science Center for Interdisciplinary Biomedical Education and Research Task Force Chair
- College of Mathematics and Science Assessment Committee Chair
- Biology Department Policies and Procedures Committee Chair
- Biology Department Assessment Coordinator
- Biology Department Student Scholarship and Awards Committee Member
- Oklahoma Central Regional Science and Engineering Fair's SRC/IRB committee
- Microbiology for Majors Course Development Committee Chair

Profession

- JMBE Reviewer
- MERLOT Biology Editorial Board Member

HONORS/AWARDS

2014	University of Central Oklahoma College of Math and Science Vanderford Distinguished Teacher Award
2013	Teaching Merit Award, UCO
2012&2014	MERLOT House Cup
2009	Genesis Grant, 3M
2008	3M Circle of Technical Excellence and Innovation award

EXAMPLES OF INVITED LECTURES/SEMINARS

2022	Texas A&M Health Sciences Center, Graduate Student Organization Alumni seminar. "Dependable, Coachable, Accountable".
2021	Northwest Technology Center Annual Safety Conference in Alva, OK. "COVID-19: Tools to Reduce the Spread and Save Lives. October.
2020	National Science Teaching Association. "Science Update: COVID-19: What We Know, Where We Are Going: A Look at What the Current Research Tells Us About the Pandemic". June. Webinar
2019	Biology Department Tri-Beta Club: "Value of Industrial Internships"
2018	Inframark. Oklahoma City's wastewater management company. "Microbiology of Waterborne Pathogens".
2017	University of Oklahoma Chemistry Graduate Student Organization. "How to Prepare for a Career in Industry When all You've Done is Academic and Vice Versa".

PUBLICATIONS 2012-2024 (student names in italics)

Eric Ng'eno, Abdelghafar Alkishe, Daniel Romero-Alvarez, Kellee Sundstrom, Marlon Cobos, Hallee Belgum, *Abigail Chitwood*, Amber Grant, *Alex Keck*, *Josiah Kloxin*, Brayden Letterman, Megan Lineberry, Kristin McClung, Sydney Nippoldt, *Sophia Sharum*, Stefan Struble, *Breanne Thomas*, Anuradha Ghosh, **Robert Brennan**, Susan Little, A. Townsend Peterson. Phenology of five tick species in the Central Great Plains. 2024. PLoS ONE 19(5): e0302689. https://doi.org/10.1371/journal.pone.0302689

Cassandra L. Wouters, Neda Heydarian, Jennifer Pusavat, Hannah Panlilio, Anh K. Lam, Erika L. Moen, **Robert E. Brennan***,* and Charles V. Rice. Breaking Membrane Barriers to Neutralize *E. coli* and *K. pneumoniae* Virulence with PEGylated Branched Polyethylenimine. 2023. Biochemical Biophysica Acta – Biomembranes. Volume 1865(6):184172. doi.org/10.1016/j.bbamem.2023.184172.

Russell Smalley IV, *Haris Zafar*, *John Land*, *Asma Samour*, *Dylan Hance*, and **Robert E. Brennan**. Detection of *Borrelia miyamotoi* and Powassan Virus Lineage II (Deer Tick Virus) from *Odocoileus virginianus* harvested *Ixodes scapularis* in Oklahoma. 2022. Vector-Borne and Zoonotic Diseases. Volume 22(4):209-216. doi:10.1089/vbz.2021.0057.

Small, Mariah and **Robert Brennan.** Detection of *Rickettsia amblyommatis* and *Ehrlichia chaffeensis* From *Amblyomma americanum* Inhabiting Two Urban Parks in Oklahoma. 2021. Vector-Borne and Zoonotic Diseases. Volume 21(5):385-387. Doi:10.1089/vbz.2020.2755.

David F. Mullins and **Bob Brennan Jr.** Pathology and Microbiology for Mortuary Science. Second edition. Oklahoma City (OK): Funeral Service Education Resource Center. 2021. ISBN: 978-0-9979261-7-0.

Anh K. Lam, Hannah Panlilio, Jennifer Pusavat, *Cassandra L. Wouters, Erika L. Moen*, **Robert E. Brennan**, and Charles V. Rice. Expanding the spectrum of antibiotics capable of killing multi-drug resistant *Staphylococcus aureus* and *Pseudomonas aeruginosa*. 2020 ChemMedChem. doi: 10.1002/cmdc.202000239.

Mariah M. Small, Sean M. Laverty, Chad B. King, and **Robert E. Brennan**. Tick Species Establishment in Oklahoma County, Oklahoma, USA, Identified by Seasonal Sampling in Residential and Non-Residential Sites. 2019. J. Vector Ecol. 44(1):105-111. doi.org/10.1111/jvec.12334

Baalman, R., *Y. Shang*, *J.R. Johnston*, M. Fakhr, and **R.E. Brennan.** Nasal carriage of *Staphylococcus aureus* and methicillin resistant *Staphylococcus aureus* (MRSA) in students at the University of Central Oklahoma. 2018. Proc. Okla. Acad. Sci. 98:118-126.

Matthew Nichols, Wayne Lord, Michelle Haynie, **Robert Brennan**, Victoria Jackson, and Wendy Monterroso. 2018. First Report of *Trypanosoma cruzi* in a Mexican Free-Tailed Bat (*Tadarida brasiliensis*) in Oklahoma. J Wildl Dis. 55(2):444-448. doi:10.7589/2018-04-095.

Amy G. Briggs, **Robert E. Brennan**, Nancy Boury, John Buchner, Rachel Horak, Lee E. Hughes, Sue Katz-Amburn, Maria J. Massimelli**,** Ann McDonald, Todd P. Primm, Ann C. Smith, Ann M. Stevens, Sunny. B. Yung, and Timothy D. Paustian. Development, Validation and Application of the Microbiology Concept Inventory. 2017. JMBE. 18(3). doi:10.1128/jmbe.v18i3.1320

Amy G. Briggs, Lee E. Hughes, **Robert Brennan**, John Buchner, Rachel Horak, Sue Katz Amburn, Ann McDonald, Todd P Primm, Ann C. Smith, Ann M. Stevens, Sunny Yung, Timothy Paustian. Concept Inventory Development Reveals Common Student Misconceptions about Microbiology. 2017. JMBE. 18(3). doi:10.1128/jmbe.v18i3.1319

Bragg A., M. Braden, K. Ceasar, A. Coleman, P. Drevets, J. Fleming, Q. Gorges, J. Herwig, A. Khabbab, J. Proffer, S. Ramsey, E. Shackelford, V. Smith, C. Smith, B. Yuill, and **R.E. Brennan.** Impact of hand washing instructions on hand washing practices at the University of Central Oklahoma. 2016. Proc. Okla. Acad. Sci. 96:109-114.

Brennan R.E., W. Caire, *N. Pugh*, S. Chapman, A.H. Robbins, and D. Akiyoshi. Examination of Bats in Western Oklahoma for Antibodies against *Pseudogymnoascus destructans*, the Causative Agent of White-Nose Syndrome. 2015. Southwest Naturalist. 60(2-3):145-150.

Brennan R.E., K. Kiss, *R. Baalman*, and J.E. Samuel. Cloning, Expression, and Characterization of a *Coxiella burnetii* Cu/Zn Superoxide Dismutase. 2015. BMC Microbiology. 15(99). doi:10.1186/s12866-015-0430-8.

Tankersley, A., M.B. Frank, M. Bebak, and **R. Brennan**. Early effects of *Staphylococcus aureus* biofilm secreted products on inflammatory responses of human epithelial keratinocytes. 2014. Journal of Inflammation. 11(17).doi:10.1186/1476-9255-11-17.

Brennan, R.E. and *S. Everman*. Antibiotic resistance of *Escherichia coli* isolated from a stream near two wastewater treatment facilities in Edmond, Oklahoma. 2012. Proc. Okla. Acad. Sci. 92:59-64.

PATENTS

Marco G. Bommarito, **Robert E. Brennan, Jr**., Sridhar V. Dasaratha, Chunmei Guo, Joseph P. Hensler, Brinda B. Lakshmi, Triet M. Lu, Patrick A. Mach, Mara S. Reif-Wenner, Joseph J. Stoffel, Heather M. Webb. Method of analyzing a sample for a bacterium using diacetylene-containing polymer sensor. EP 2220500 A1, 3M Innovative Properties Company.

SELECTED RESEARCH SUPPORT

2024-2027 NSF EPIIC Program "Cross-Continental Collaboration Coalition (C4). Multi-institutional collaborative grant (California State University, Chico; University of Central Oklahoma; Central Washington University; State University of New York (SUNY) Oswego; and Weber State University). Purpose is to implement effective strategies for building vibrant regional innovation ecosystems and fostering interdisciplinary research and education. $2,000,000.00 ($400,000.00/institution).

2019-2023 NSF EPSCoR multi-institutional collaborative grant (University of Kansas, Kansas State University, University of Oklahoma, Oklahoma State University, University of Central Oklahoma, and Pittsburg State University). A. Townsend Peterson, University of Kansas is the awardee institution. "Marshalling Diverse Big Data Streams to Understand Risk of Tick-borne Diseases in the Great Plains". $3,921,229.00. ($134,000.00 to UCO). Co-Principal Investigator.

2018 University of Central Oklahoma on campus interdisciplinary grant with Dr. Sean Laverty, Mathematics and Statistics. "Extent and Distribution of Ticks and Tick-borne Pathogens in a Rural and Urban Setting in Oklahoma." $4,000.00. Principal Investigator.

2017 University of Central Oklahoma on campus interdisciplinary grant with Dr. Sean Laverty, Mathematics and Statistics. "Extent and Distribution of Ticks and Tick-borne Pathogens in a Rural and Urban Setting in Oklahoma." $7,300.00. Principal Investigator.

2013 Non-tenured Faculty Grant, 3M Corporation. "Role of *Staphylococcus aureus* biofilm secreted products in chronic wound pathogenesis." $30,000.00. Principal Investigator.

2011 Oklahoma IDeA Network of Biomedical Research Excellence (INBRE) collaborative grant, "*Staphylococcus aureus* biofilms and chronic wound pathogenesis." $63,188.00. Principal Investigator.