

THE UNIVERSITY OF TEXAS AT SAN ANTONIO

PROSPECTIVE AFFILIATION AGREEMENT

Agency / Facility Information Sheet

This information collected on this sheet will be used to complete a formal agreement with your institution.

Today's Date: September 23, 2019

Agency Name: Laboratory of Exercise and Sports Nutrition (LESN), UTSA

Address: UTSA Main Building 3.422, One UTSA Circle, San Antonio, TX 78249

Phone Number: (210) 458-2985

Email address: tinaou.zhang@utsa.edu

1. **Mission:** The LESN utilizes exercise and nutritional science to establish plant chemical compounds for dietary supplements demonstrating antioxidant and anti-inflammatory properties. These phytochemicals existed in plants (e.g. oat Avenanthramides and Oleocanthal/Oleacein in extra virgin olive oil, etc.) are attractive resources to exercise physiology and nutrition scientist, to balance oxidative stress and inflammation, and they are widely available and natural.

Vision: The LESN aims to accomplish its mission through the following tasks:

(1) Investigate the health benefits of nutrients/phytochemicals supplementation in acute or chronic inflammation and immuno-suppression in sports and exercise (e.g. eccentric contraction induced muscle injury, upper respiratory tract infection, overtraining syndrome, etc.) to improve skeletal muscle health and sports performance.

(2) Explore and screen the potential phytochemicals from natural plants and apply to chronic diseases caused by oxidative stress and inflammation, such as obesity, insulin resistance and cardiovascular diseases (e.g. atherosclerosis, hypertension, etc.).

(3) Seek collaborations to develop nanotechnology and microencapsulation techniques to enhance anti-inflammatory and immunoregulatory properties of phytochemicals and bioactive compounds extracted from plants, which could be potentially applied in nutraceutical and pharmaceutical fields.

Projects and Requirements: The LESN currently has an ongoing project to establish the supportive documentation for mission.

Project title: Relationship between polyphenols intake and plasma inflammatory markers after exercise.

- This will require a systematic review of literature be conducted to collect secondary data and synthesize all findings. Additionally, a meta-analysis of multiple scientific studies will be conducted to complete statistical analysis.

- Students will learn literature review, data analysis, systematic review with meta-analysis, manuscript and abstract preparations.

Applicants: The following may apply to the LESN program:

Undergraduate students pursuing a degree in Kinesiology with an interest in exercise and Sports Nutrition and are willing to support graduate students for their thesis.

Location: Bioscience Building 1.03.38, One UTSA Circle, San Antonio, TX 78249.

2. Point of contact for all inquiries is Dr. Tinaou Zhang, Director, LESN, at (210) 458-2985 or tinaou.zhang@utsa.edu.

3. As part of the LESN program, you will stand to gain substantial experience utilizing laboratory equipment, as well as to further develop research skills in both literature reviews and meta-analysis. In addition, you will gain knowledge in exercise science and nutrition outside of the classroom setting, as provided by real-time experiments and research. Furthermore, as a participant in the LESN program, you will be part of a team fostering a learning environment conducive to your growth and development.

4. This is not a paid position. All applicants must complete an interview with Dr. Zhang. In addition to the interview all applicants will need to complete the following training courses: Hazardous Waste Generator's Training; Hazardous Communication and Laboratory Safety; Biosafety and Bloodborne Pathogens; and Citi Program training. Valid updated immunization records will need to be provided. If the immunizations are not up to date, proper immunizations will need to be obtained.