

**Research Development Fund – FALL 2023 Request for Applications****1. Cover Page (1 page)**

- Title: **A Spatial Multi-omics Research Core in Nutrition and Metabolic Diseases**
- Contact information (name, department, e-mail address and phone number) for the lead submitter of the application.

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- Participating units

College of Agriculture and Life Sciences (Chaodong Wu, Linglin Xie)  
College of Arts & Sciences (Shogo Sato)  
College of Engineering (Kenneth Hoyt)  
Irma Lerma Rangel College of Pharmacy (Mahua Choudhury, Zhenyu Li, Yinan Wei)  
School of Education and Human Development (John Lawler)  
School of Medicine (Jiang Chang, Shannon Glaser, Kurt Zhang)  
Veterinary Medicine & Biomedical Sciences (James Cai)

- Total \$ amount requested: **\$1,200,000**
- Executive summary of request suitable for publication at [rdf.tamu.edu](http://rdf.tamu.edu).

Improving our health is among the highest priorities in research areas at Texas A&M University. To date, the high prevalence of chronic diseases is attributable largely to obesity. Enormous challenges must be overcome before scientists and clinicians are able to win traction in the fight against obesity and obesity-related diseases. In line with this, a group of PIs from multiple units of TAMU are united to request institutional support to form a Spatial Multi-omics Research Core (SMRC) in nutrition and metabolic diseases aiming to enhance the research effectiveness of TAMU. This application requests funding to support the purchase of three pieces of core required equipment emphasizing spatial bio-physiology such as GeoMx® Digital Spatial Profiler, MACS Imaging and Spatial Biology portfolio, CELLCYTE X™, and PyroMark Q48 Autoprep System. This application also requests funding to cover maintenance costs during the funding period and to allow the team comprising multi- and inter-disciplinary PIs with expertise in nutrition and metabolism with an exceptional track record in funding to integrate the Core into their competitive research in order that they can continually obtain significant grants from federal agencies to perform high impact research in nutrition and metabolism.