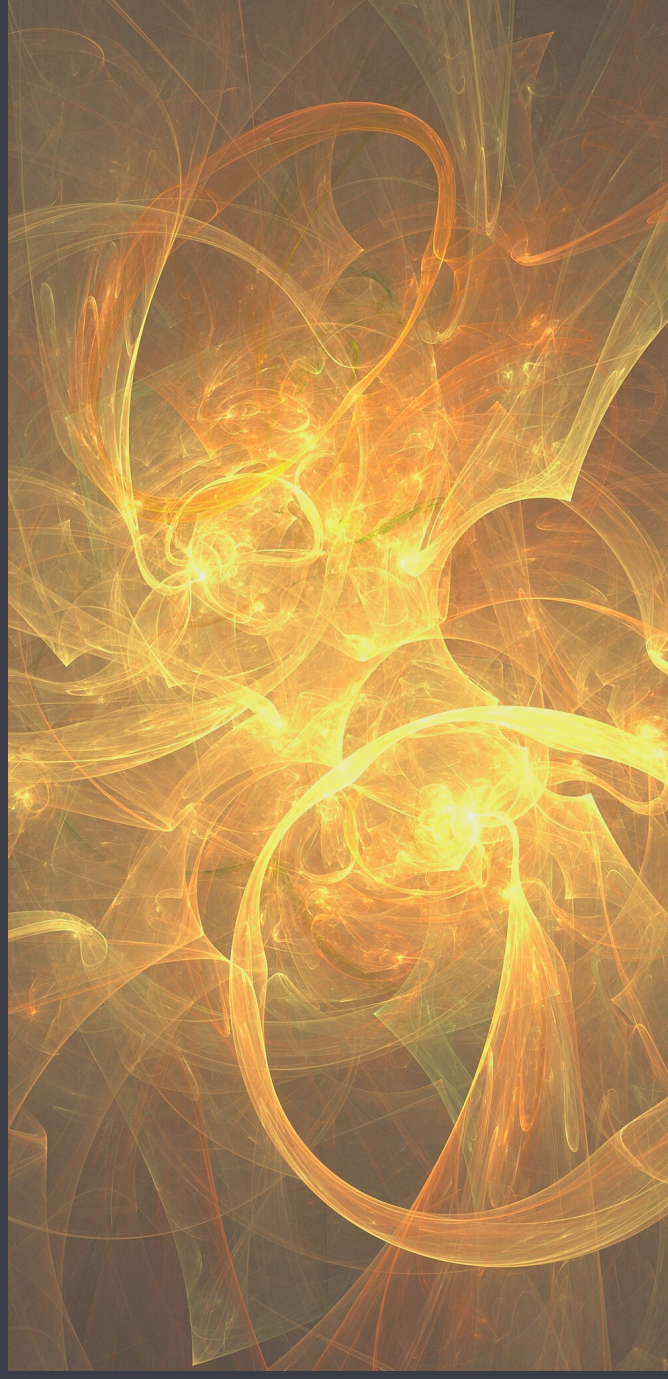
Center for Research and Training in the Sciences (UTSA) ,
Institute for Integration of Medicine & Science (UTHSA) ,
Translational Science Graduate Program , &
UTSA UTHSA Joint Graduate Program in Biomedical Engineering
invite you to attend

STRECH

Seminars in Translational Research

Presents

"Structural basis of RNA cap modification by SARS-CoV-2"



SARS-CoV-2, the causative agent of COVID-19 illness is responsible for nearly four million deaths worldwide. The nsp 16/nsp10 enzyme complex pf SARS-CoV-2 modifies the 2'-OH of the first transcribed nucleotide of the viral mRNA thereby converting the status of RNA cap from Cap-0 (m7GpppA) to Cap-1 (m7GpppA). The 2'-O methylated RNA cap helps the virus evade immune surveillance in the host cell. By using X-ray crystallography and classical biochemistry methods we captured the nsp16/10 complex in the act of attaching a methyl group to the RNA cap. I will present several high-resolution crystal structures of nsp16/nsp10 heterodimer representing different states of RNA cap modification and discuss the important roles of divalent metal ions in this process. I will also present strategies for structure-based development of antiviral drug candidates.

YOGESH GUPTA, PH.D.

Assistant Prof *tructural Biology*
University of T *er at San Antonio*
Greehey Children's Cancer Research Institute

Friday, September 17, 2021
9:00AM - 10:00AM

For information on participating in this virutal seminar, please head to
https://www.utsa.edu/crts/strech/
or scan the QR code below.

UT Health San Antonio
Institute for Integration of Medicine & Science

UTSA Center for Research & Training in the Sciences

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