



Department of Chemistry  
Seminar On  
*Drug Discovery & Biomedical Sciences*



Dr. Kent S. Gates

Schlundt Professor of Chemistry

BS, University of Kansas 1985

PhD, Northwestern University (Silverman), 1990

NIH Postdoctoral Fellow, Caltech (Dervan), 1990-1992

<http://faculty.missouri.edu/~gatesk/index.html>



Mizzou

University of Missouri

## **Chemical events underlying the wrecking and repair of cellular DNA: interstrand cross-links derived from abasic sites in duplex DNA**

Unavoidable endogenous DNA damage in mammalian cells may contribute to aging, neurodegeneration, mitochondrial dysfunction, mutagenesis, and cancer. There are many types of endogenous DNA damage, but not all are equally important. To better understand the roles of endogenous DNA damage in human health and disease, it is critical to identify the most important bioactive lesions that occur spontaneously in cellular DNA. We have identified a novel series of interstrand cross-links arising from abasic sites that are the most common endogenous lesions in genomic DNA. Cross-links are exceptionally deleterious lesions because they prevent strand separation that is required for all functions of duplex DNA in cells. This presentation will describe the formation, properties, occurrence, and cellular repair of abasic site-derived DNA-DNA cross-links.

DATE:	Friday, September 15, 2017
TIME:	4:00 – 5:00 pm <i>Coffee, donuts and gathering at 3:45 pm</i>
LOCATION:	CCSB G.0208 <i>The seminar auditorium below Starbucks</i>
CONTACT:	Yaoqiu Zhu, Ph.D. <i>5360, yzhu2@utep.edu</i>