

Ready to start planning your care? Call us at [646-926-0945](tel:646-926-0945) to make an appointment.

×



Memorial Sloan Kettering  
Cancer Center

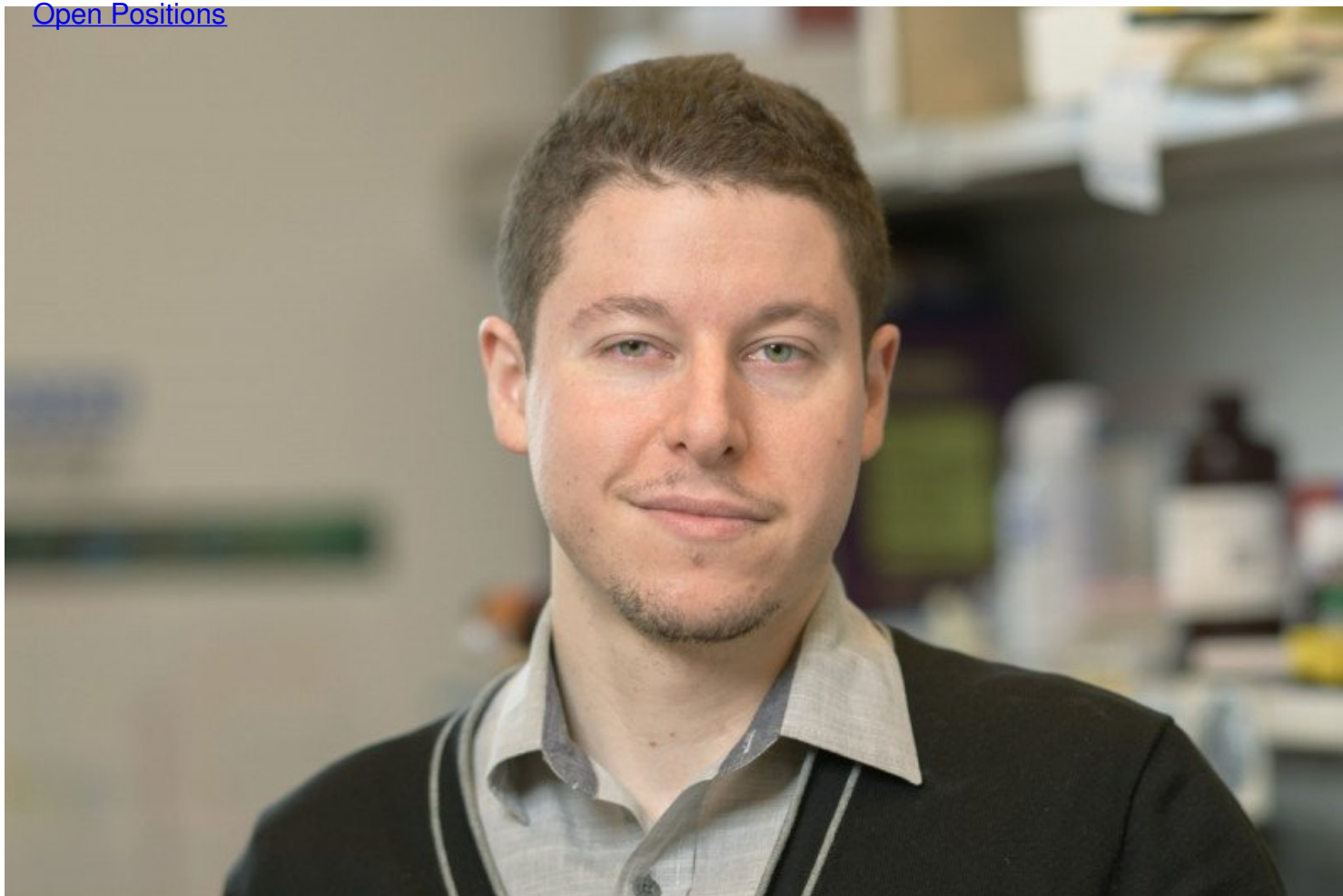
[About Us](#)  
[Sloan Kettering Institute](#)

[The Daniel Heller Lab](#)  
[Research](#)

## [Education & Training](#) Christopher Horoszko, PhD

[News & Events](#) Application Scientist, On-Line Instrument Systems, Inc. (OLIS)

[Open Positions](#)



## Project(s)

I am a cross-disciplinary pharmacologist broadly interested in redox phenomena and oxidation-related biological stresses. Most unsaturated lipids are key targets of oxidative damage and can mediate stress signaling and cell death through direct reaction (radical attack, enzyme activity) or indirect surface-acting (surfactant) and ligand effects. I study a highly conserved oxidized-phospholipid 'disposal' enzyme we found expressed across many malignant cell lines; this enzyme sub-family was initially characterized using a MEF model of oncogene-induced oxidative stress. The only small molecule antagonist/inhibitor drugs developed for this enzyme failed efficacy in Phase III studies of cardiovascular and neurodegenerative disease patients. We are re-positioning this drug for oncology using mechanism of action-based cytotoxic synergism. Downstream events that control enzyme expression are of interest given atypical tissue- and nutrient-associated expression. Lipids play an active role in carcinogenesis; I investigate the relationship between lipid oxidation and oncogenic proliferation based on the recent emergence of non-genotoxic drug candidate classes that act on lipid metabolism. I collaborate with colleagues in biophysics and engineering to take advantage of novel optics methods, infrared imaging modalities, and nano-sensors. More recently, in collaboration with a lipid nanoparticle (LNP) formulation scientist, I am dissecting the impact of particle lipids on target cells and tissues; in particular, a payload (RNA) potency effect.

## Links

[LinkedIn](#)

[Google Scholar](#)

## (CV)

Prior to this position, Dr. Horoszko worked in labs studying the metabolomics of proliferation, nutrient uptake, and neurodegenerative proteins; nanomaterial characterization and in vitro biosensor design; and hormone neuropharmacology/endocrinology using molecular histology techniques on animal brain tissue.

© 2026 Memorial Sloan Kettering Cancer Center