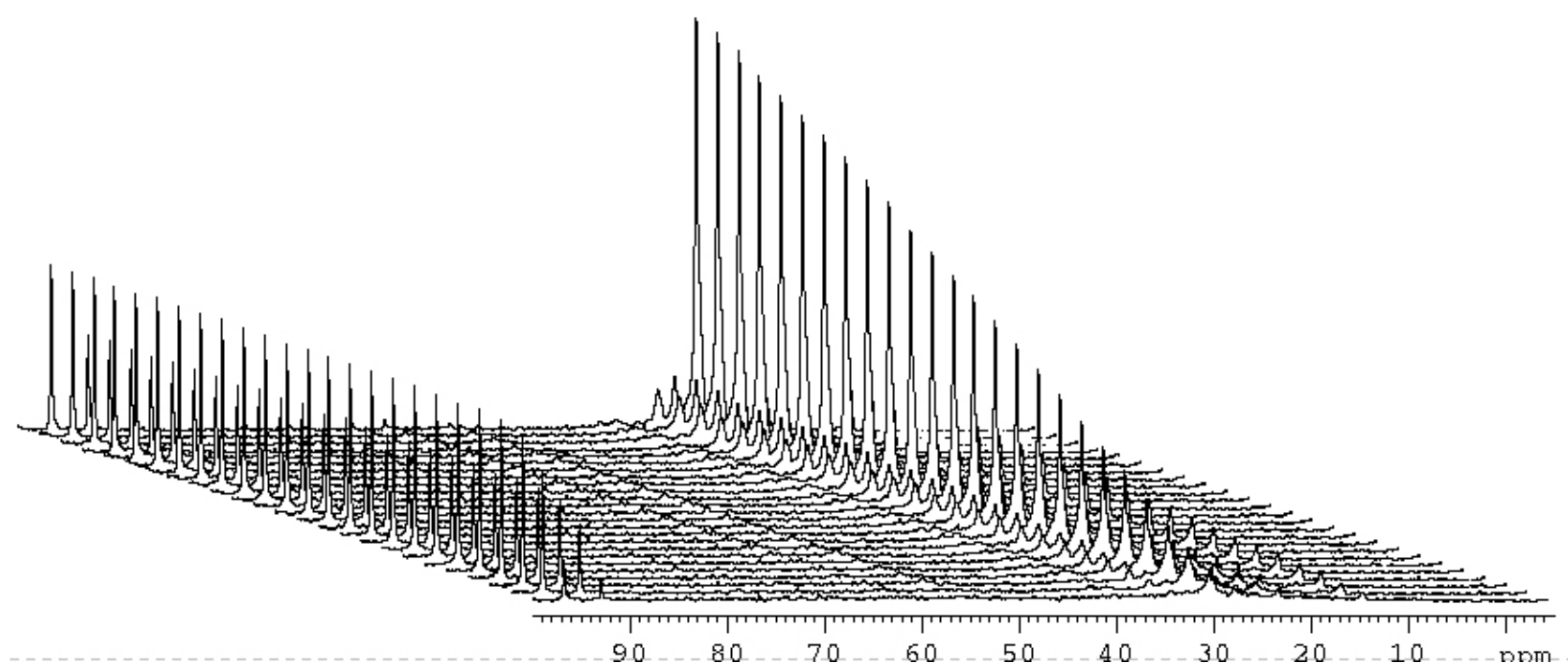




Dynamic ^{13}C triglyceride incorporation in isolated beating mouse heart

Stephen Kolwicz, 2012

Health and Exercise Physiology Department | Ursinus College

Field strength: 14 T

Why is this your favorite spectrum?

This experiment combines classic cardiac physiology experiments with ^{13}C NMR spectroscopy. It requires removing a heart from a mouse, cannulating the aorta to a custom-built perfusion system, securing the heart inside a 10 mm NMR tube, and inserting the tube into the NMR, all the while keeping the heart oxygenated, supplied with nutrients, and temperature controlled. The spectra were acquired by supplementing ^{13}C uniformly labeled long-chain fatty acids in the perfusate. This stacked plot represents a two-hour experiment, suggesting a constant incorporation of fatty acids into the cardiac triglyceride storage pool!