Abstract Submitted
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Tracking the effect of a chemotherapeutic drug on pancreatic cancer cells using ^{13}C NMR spectroscopy[1] WIRYA FEIZI, LLOYD LUMATA, University of Texas at Dallas — Pancreatic Ductal Adenocarcinoma (PDAC) is a deadly type of cancer that has a dismal 5-year survival rate of just 6% for patients. One of these metabolic features of PDAC is the abundance of the NAD(P)H Quinone Dehydrogenase 1 (NQO1) enzyme. The abundance of NQ01 is in some way beneficial to chemotherapeutic intervention as catalyzes the conversion of β-lapachone into semiquinone which is detrimental to cancer cells. In this study, we have investigated the utility of ethyl acetoacetate and other ^{13}C-tracers as NMR probes in monitoring the peripheral metabolic effects of β-lapachone as it disrupts the cancel cell proliferation. Protein expression and cellular proliferation assay studies will also be presented here. This study is supported by the Welch Foundation grant AT-1877, DOD grants W81XWH-21-1-0176 and W81XWH-19-1-0741, CPRIT grant RP180716, and the UTD CoBRA and SPIRE grants.

[1]Tracking the effect of a chemotherapeutic drug on PDAC

Wirya Feizi
University of Texas at Dallas

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