

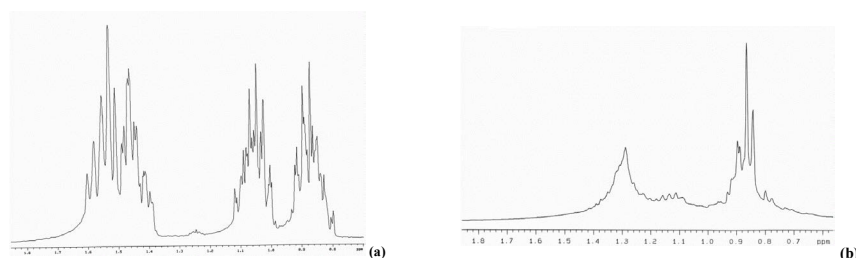
# A novel approach to correlation spectroscopy (COSY), exclusive correlation spectroscopy (ECOSY), total correlation spectroscopy (TOCSY), incredible natural-abundance double-quantum transfer experiment (INADEQUATE), heteronuclear single-quantum correlation spectroscopy (HSQC), heteronuclear multiple-bond correlation spectroscopy (HMBC), nuclear overhauser effect spectroscopy (NOESY) and rotating frame nuclear overhauser effect spectroscopy (ROESY) comparative study on malignant and benign human cancer cells and tissues under synchrotron radiation

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## Image Article

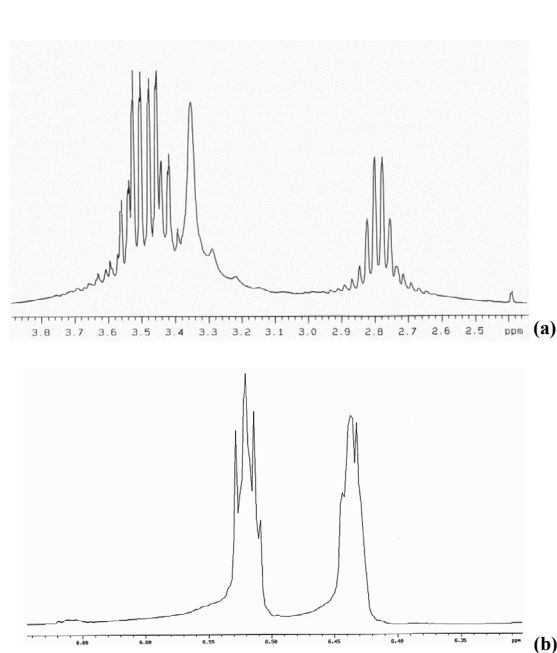
In the current study, we have experimentally and comparatively investigated and compared malignant human cancer cells and tissues before and after irradiating of synchrotron radiation using Correlation Spectroscopy (COSY), Exclusive Correlation Spectroscopy (ECOSY), Total Correlation Spectroscopy (TOCSY), Incredible Natural-Abundance Double-Quantum Transfer Experiment (INADEQUATE), Heteronuclear Single-Quantum Correlation Spectroscopy (HSQC), Heteronuclear Multiple-Bond Correlation Spectroscopy (HMBC), Nuclear Overhauser Effect Spectroscopy (NOESY) and Rotating Frame Nuclear Overhauser Effect Spectroscopy (ROESY). Moreover, in all of the figures y-axis shows intensity and also x-axis shows energy (keV) (Figures 1-8) [1-182].



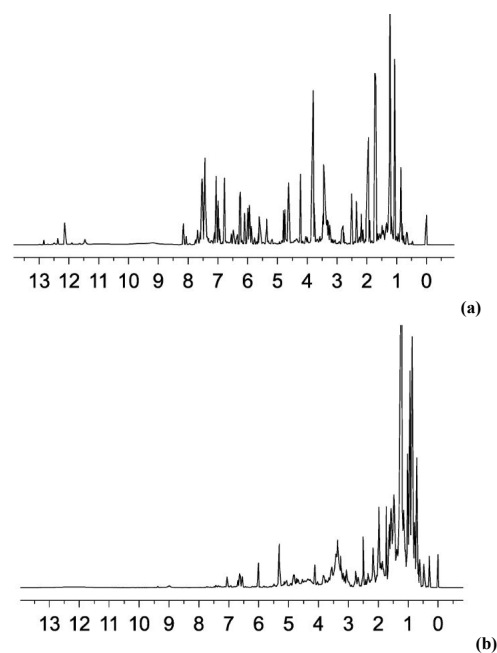
**Figure 1.** Correlation Spectroscopy (COSY) analysis of malignant human cancer cells and tissues (a) before and (b) after irradiating of synchrotron radiation in transformation process to benign human cancer cells and tissues with the passage of time [1-182]

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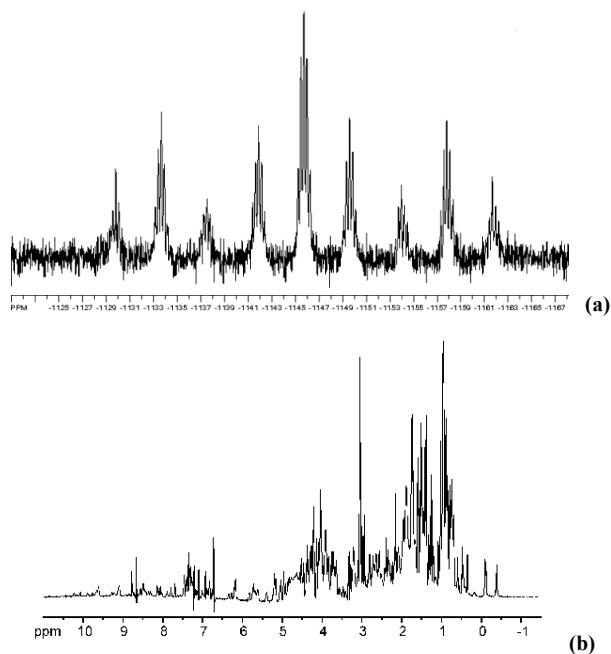
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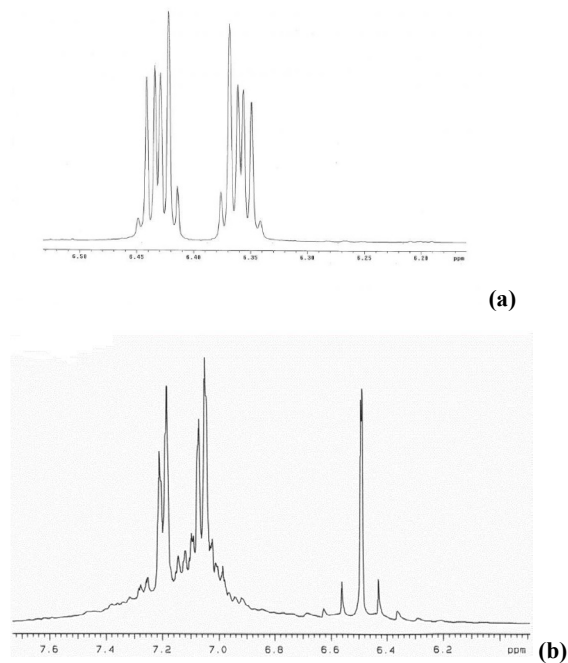
**Figure 2.** Exclusive Correlation Spectroscopy (ECOSY) analysis of malignant human cancer cells and tissues (a) before and (b) after irradiating of synchrotron radiation in transformation process to benign human cancer cells and tissues with the passage of time [1-182]



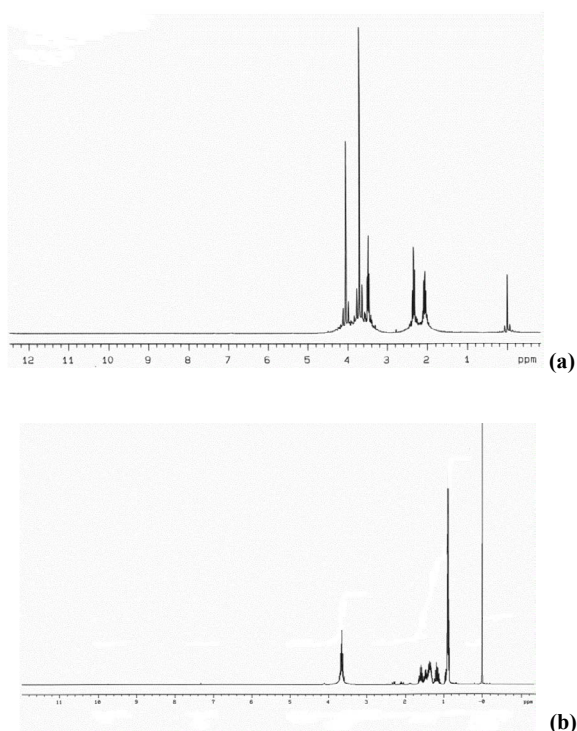
**Figure 4.** Incredible Natural-Abundance Double-Quantum Transfer Experiment (INADEQUATE) analysis of malignant human cancer cells and tissues (a) before and (b) after irradiating of synchrotron radiation in transformation process to benign human cancer cells and tissues with the passage of time [1-182]



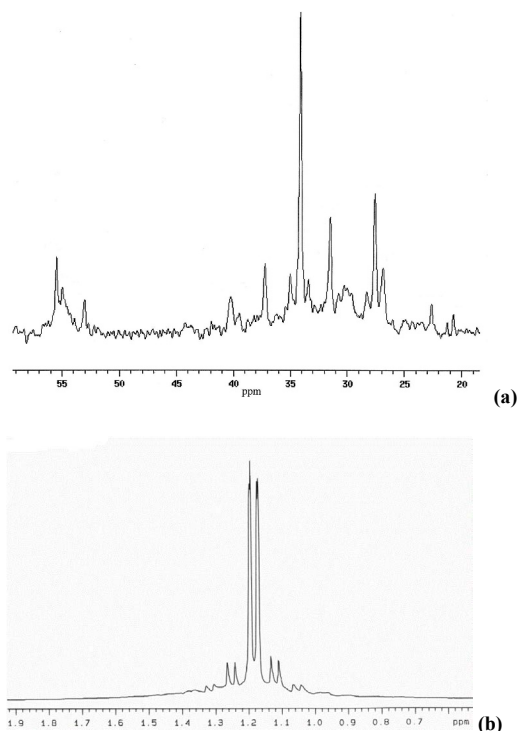
**Figure 3.** Total Correlation Spectroscopy (TOCSY) analysis of malignant human cancer cells and tissues (a) before and (b) after irradiating of synchrotron radiation in transformation process to benign human cancer cells and tissues with the passage of time [1-182]



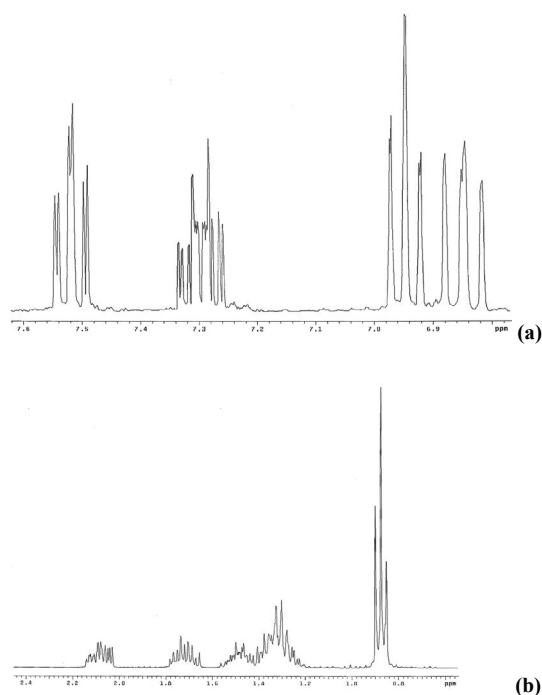
**Figure 5.** Heteronuclear Single-Quantum Correlation Spectroscopy (HSQC) analysis of malignant human cancer cells and tissues (a) before and (b) after irradiating of synchrotron radiation in transformation process to benign human cancer cells and tissues with the passage of time [1-182]



**Figure 6.** Heteronuclear Multiple-Bond Correlation Spectroscopy (HMBC) analysis of malignant human cancer cells and tissues (a) before and (b) after irradiating of synchrotron radiation in transformation process to benign human cancer cells and tissues with the passage of time [1-182]



**Figure 7.** Nuclear Overhauser Effect Spectroscopy (NOESY) analysis of malignant human cancer cells and tissues (a) before and (b) after irradiating of synchrotron radiation in transformation process to benign human cancer cells and tissues with the passage of time [1-182]



**Figure 8.** Rotating Frame Nuclear Overhauser Effect Spectroscopy (ROESY) analysis of malignant human cancer cells and tissues (a) before and (b) after irradiating of synchrotron radiation in transformation process to benign human cancer cells and tissues with the passage of time [1-182]

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