# FTIR OF HUMAN BLOOD PLASMA AS A DIAGNOSTIC TOOL FOR MYOMA PATIENTS 

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Various diseases produce their characteristic molecular signatures on body fluids known as molecular markers. In many cases, this molecular markers could be identified as spectral markers ("spectral fingerprints") in such spectroscopic techniques as EPR, Raman, FTIR etc. Here we apply FTIR method on human blood plasma from myoma patients to identify spectral markers for diagnostic proposes. Plasma is a multifaceted body fluid composed of various functional molecules, such as proteins, peptides, lipids and metabolites that reflect physiological status of various body organs.

Blood samples taken from the veins of 23 females (age 50-60 years old) clinically diagnosed to have myoma (mass at uterus) were compared to those of 27 healthy persons (age 25-66 years old). FTIR spectra of averaged healthy plasma samples for regions of $500-1800 \mathrm{~cm}^{-1}$ and 2500-3800 $\mathrm{cm}^{-1}$ are shown below. The shaded area displays a variation of the standard deviations. The spectra in the lower part are representative difference spectra (average healthy- myoma) of each spectral region. It is evi-

 dent that for both regions there are spectral regions were difference spectra lay beyond the values of standard deviation. Data indicate that some of FTIR spectral parts may be used as an early diagnostic marker for myoma patients.

