

## ***Fourier-Transform Infrared Spectrometry : A Pharmaco-Toxicologic Tool for Monitoring in vitro and in vivo Radical Attack.***

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Fourier-transform infrared spectrometry has been widely applied, since several years, for the *in vitro* or *in vivo* study of whole cells,. Thus it allowed to highlight biomolecular alterations on:

- proteins
  - o apparition of Multi Drug Resistance processes on cancer lines
  - o or beta-lactame resistance on pathogenic bacteria
- or nucleic acids.

We showed that, coupled with data analysis, FT-IR spectrometry allowed to determine the toxicity threshold of radicalar agents either on microorganisms or on eucaryotic cells.

Among studied microorganisms we selected sensitive strains and *Deinococcus radiodurans* which is known to be particularly resistant.

We were also able to characterize toxicity induced by radical attack in brain and liver of rats.

Therefore, FT-IR spectrometry proved to be a very promising tool towards toxicological tests or pharmacological studies of novel synthetic protective agents.