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Supervisors

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PhD project title

Synthesis and biological evaluation by SCAR laser spectroscopy of cell metabolism modulators

Research summary

The glucose-6-phosphate dehydrogenase (G6PD) is the rate limiting enzyme of the pentose phosphate pathway, which produces ribulose and reduced nicotinamide adenine dinucleotide phosphate (NADPH) starting from glucose. G6PD is often upregulated in tumors since it's used by cancer cells to counteract oxidative stress and support the synthesis of nucleic acids. The aim of the present research project is to synthesize some G6PD modulators and to evaluate their activity by ^{14}C -radiolabeling of G6PD substrate. We intend to accomplish the latter purpose by using Saturated-absorption Cavity Ring-down (SCAR) laser spectroscopy, a new analytical technology for the determination of ^{14}C .

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