# Dual-wavelength sequential peptide photoactivation for the control of p53-Mdm2 interaction

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The objective of this research project is to develop novel photosensitive peptide derivatives and evaluate their biological properties in the context of the inhibition of the p53-Mdm2 interaction, recognized as an attractive anticancer strategy. One originality of our approach is that cell-penetration and biological activity of our target peptides will be spatially and temporally controlled in a selective and sequential manner upon visible light irradiation, through a combination of appropriate cell-penetrating peptide (**CPP**) and two photocleavable groups (**PPG1** and **PPG2**) that can be deprotected at wavelengths of 514 and 458 nm. This strategy is believed to overcome the commonly encountered limitations in the use of peptide therapeutics: poor cellular delivery and side-toxicity due to uncontrolled interaction with other cellular targets. The mechanistic insights gained in this study could serve as a solid ground for further development of novel therapeutic compounds acting against a variety of cancers.

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