Understand and manipulate biological processes through the controlled formation and/or breaking of chemical bonds

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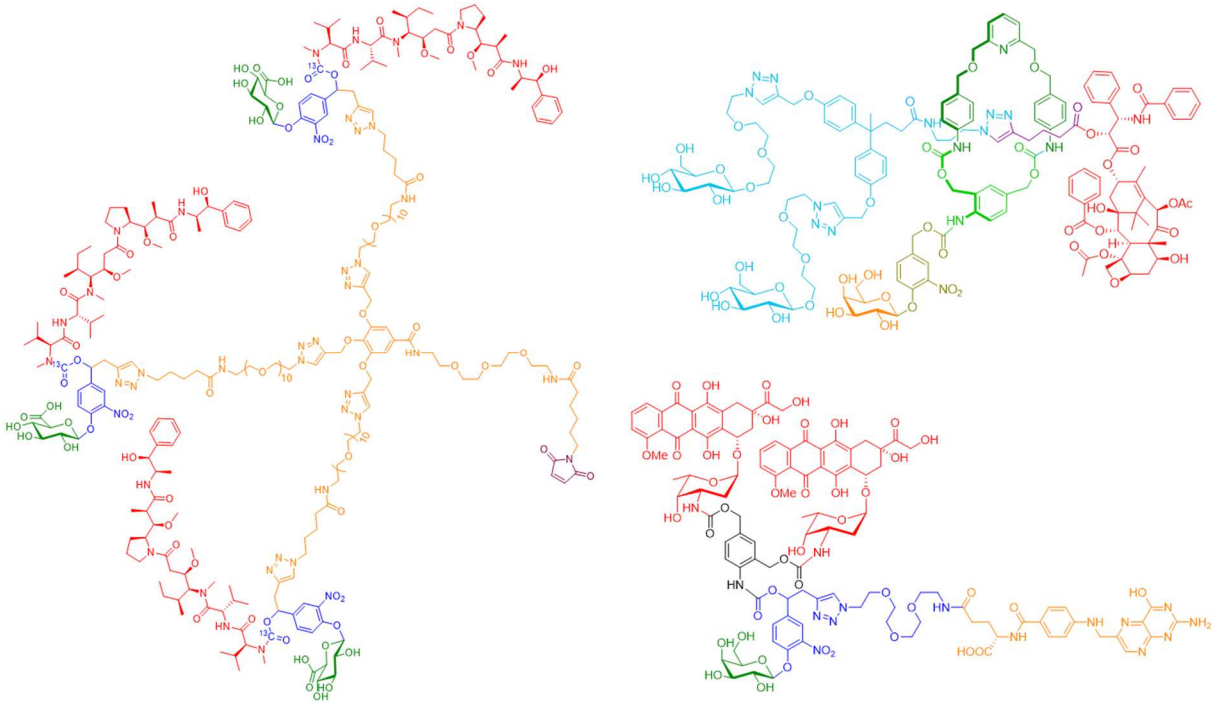
The rise of chemical biology has led to the development of sophisticated molecular devices designed to perform specific tasks within living systems. Most of these molecules have built into their structure a "chemical program" that determines their behaviour during their interaction with biological environments. Thus, such molecular systems can be programmed to explore or manipulate processes of the living through the controlled formation and/or breaking of chemical bonds.
Within this framework, we developed various molecular devices programmed for cancer diagnosis and therapy. Such compounds include programming components like self-immolative linkers, chemical amplifiers, self-opening macrocycles, enzyme-responsive biorthogonal triggers, artificial cell membrane markers etc … allowing them to interact with living systems in a stringently controlled fashion.



References

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