

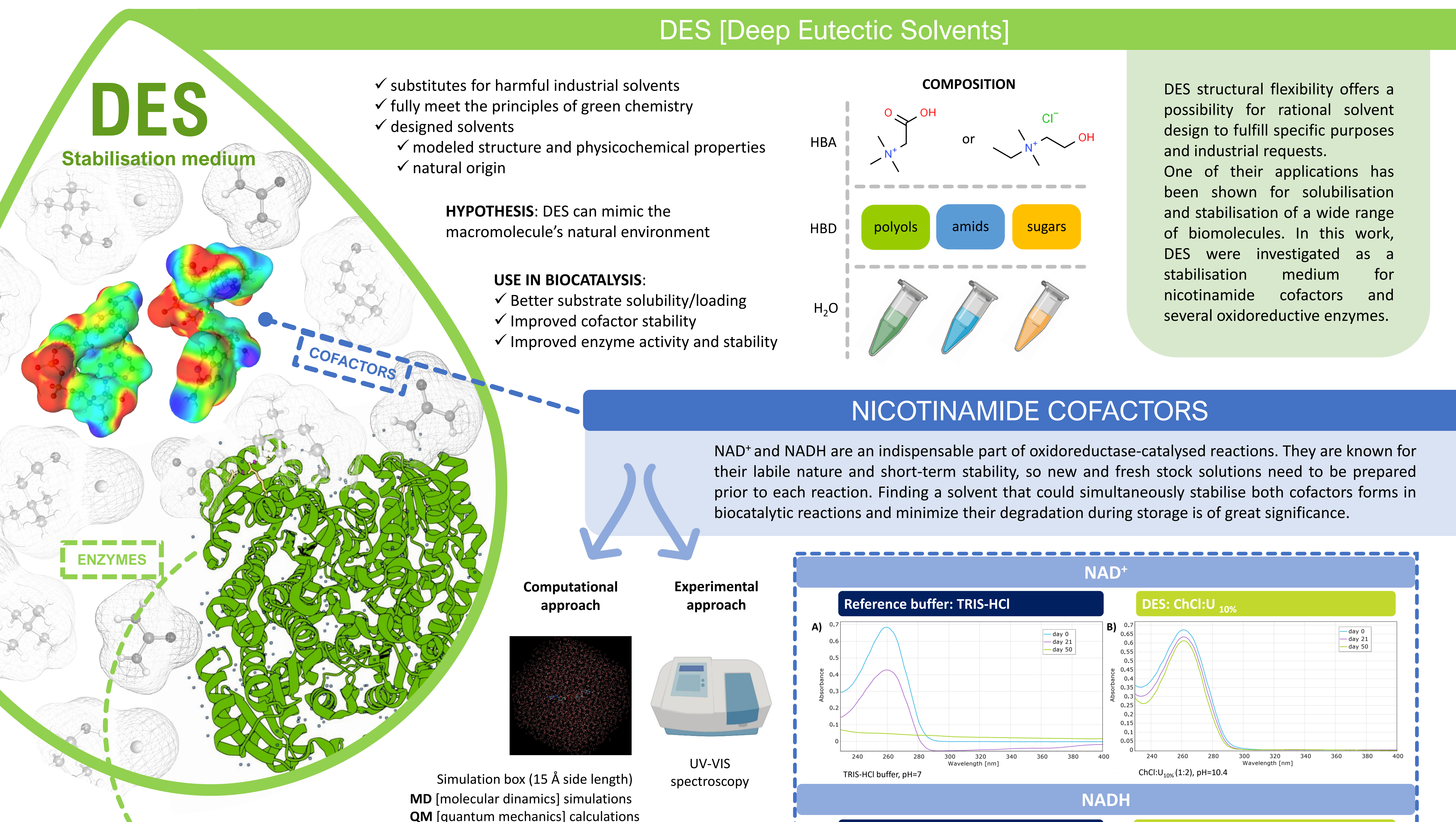
In search of the perfect environment: The quest to maximize macromolecule stability

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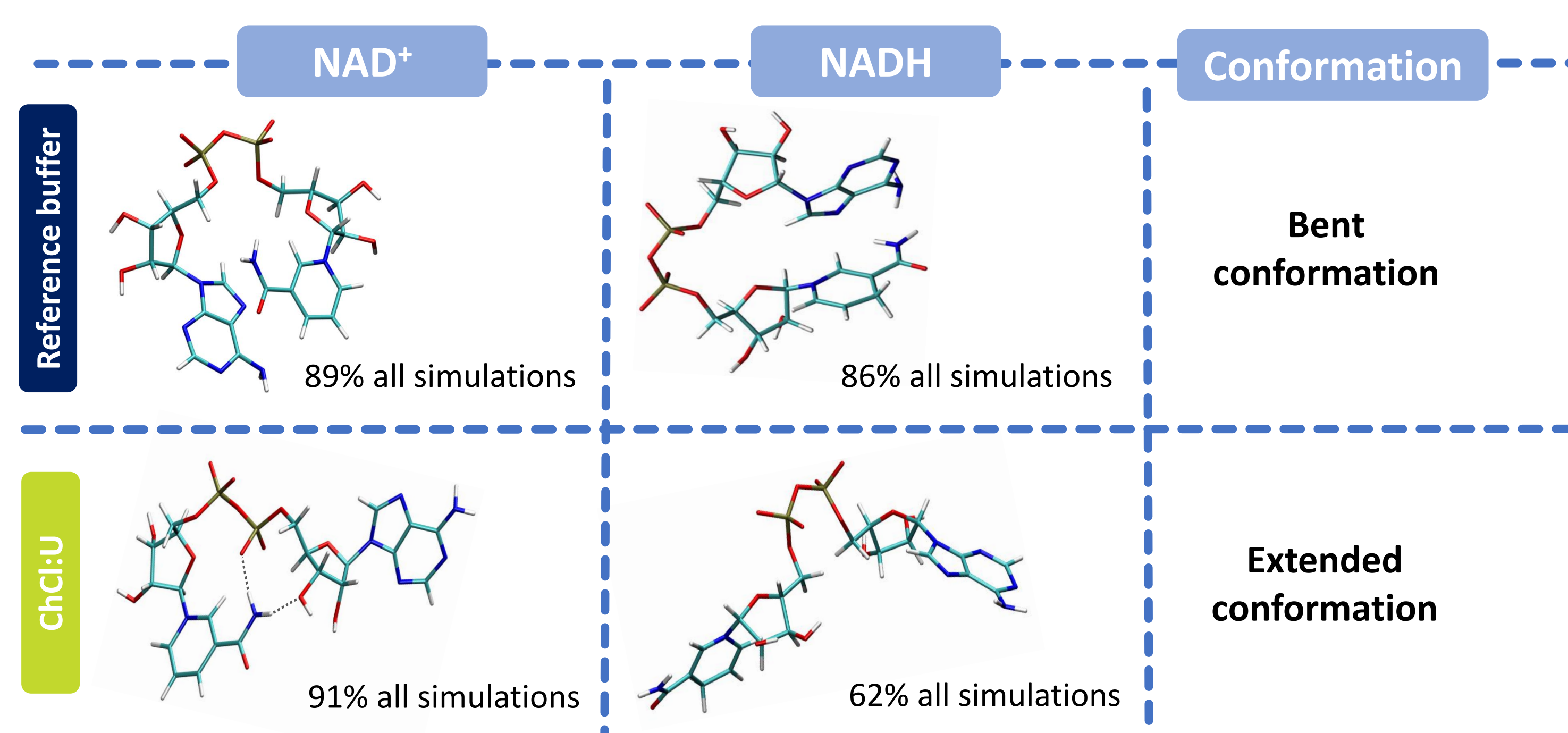
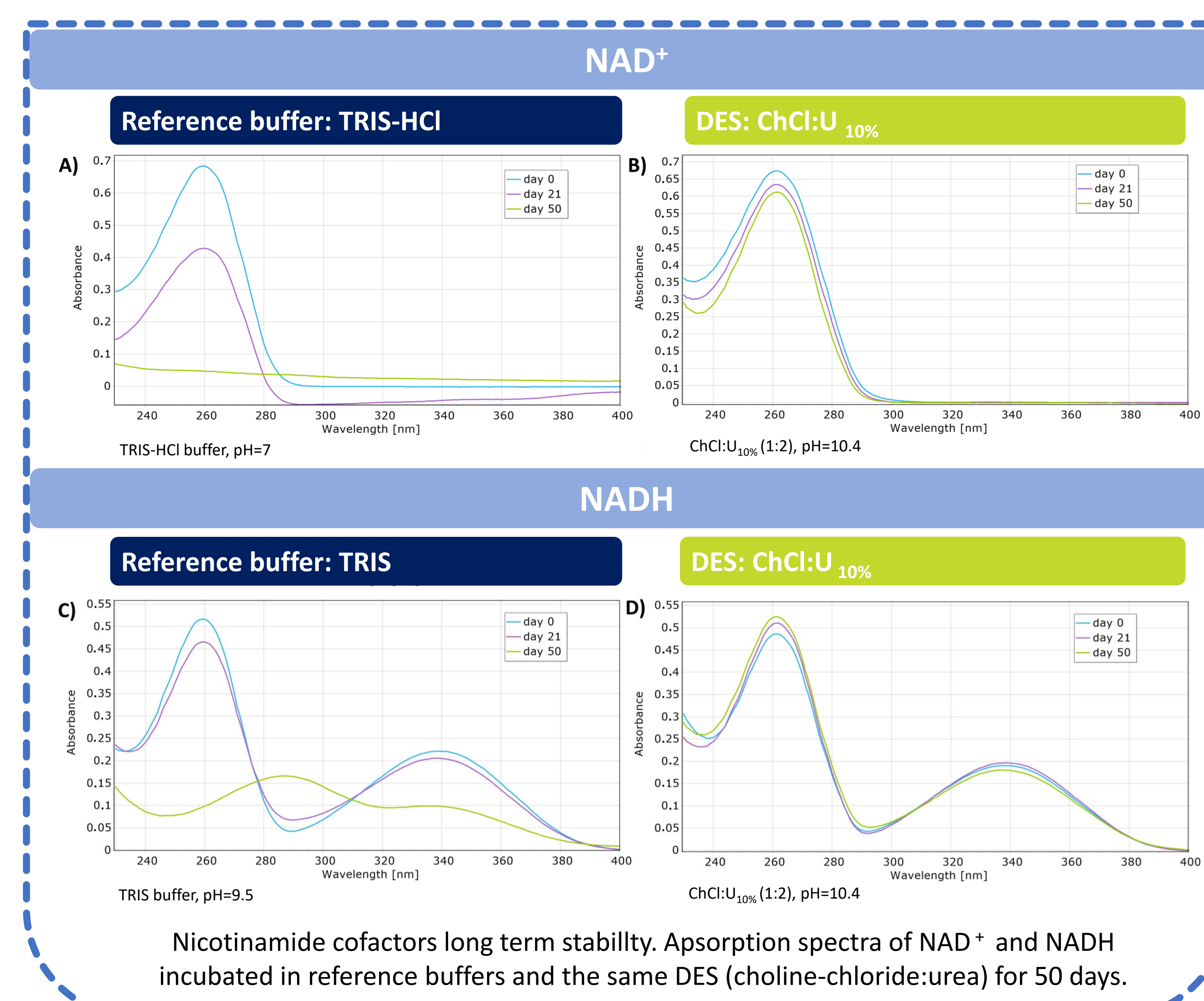
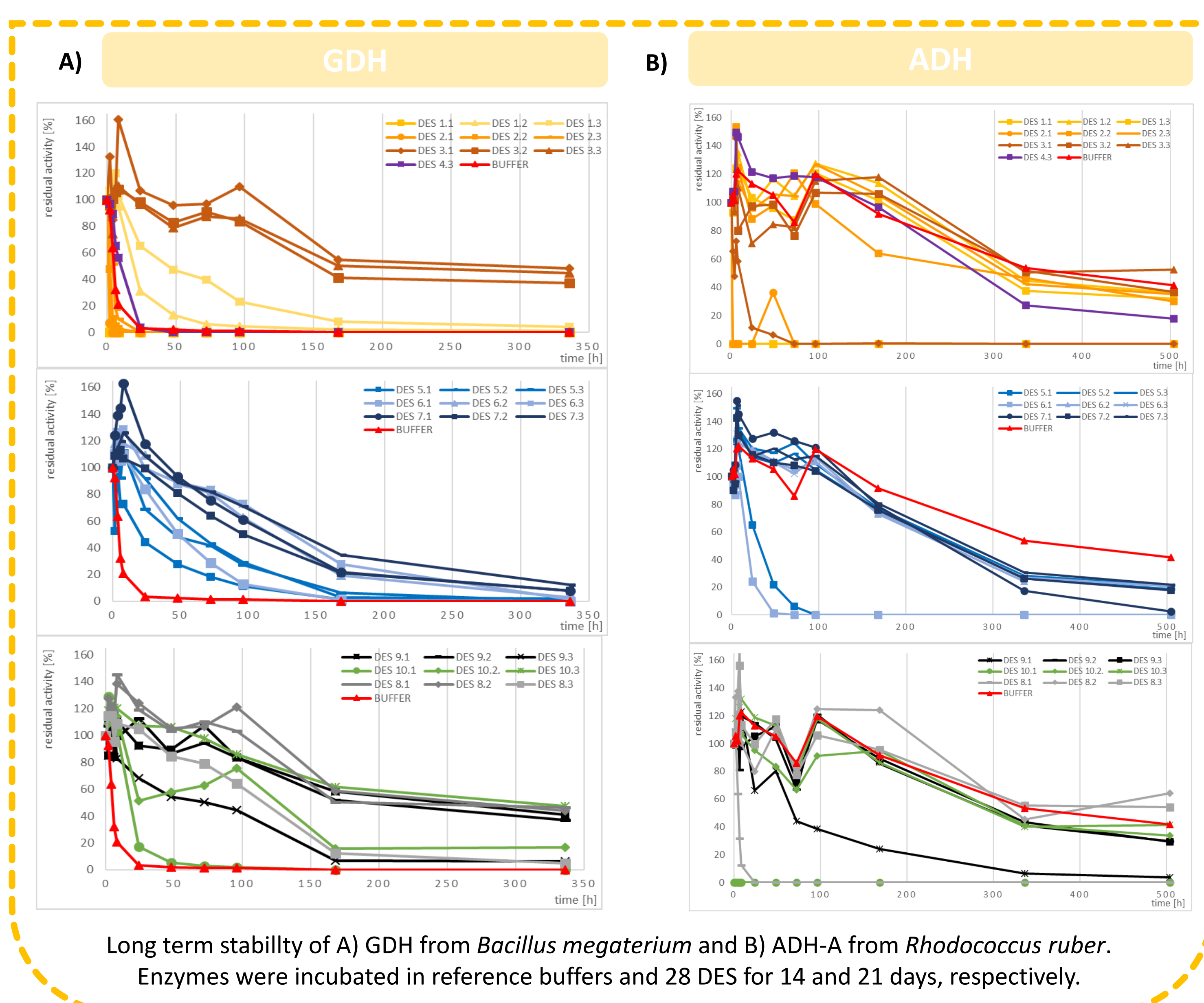
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OXIDOREDUCTIVE ENZYMES

Several oxidoreductases were tested for stability and activity in 28 different choline-chloride and betaine-based DES. By carefully choosing DES constituents, it is possible to mimic their perfect environment, enhance their activity and prolong stability long-term.



Nicotinamide cofactors conformation and interaction with DES plays a role in their long term stability.

CONCLUSION

Due to **deep eutectic solvents (DES)** natural origin, they can mimic the macromolecule's natural environment more effectively. This study presents the use of betaine and choline chloride-based DES as a medium for several alcohol dehydrogenases and nicotinamide cofactors long-term stabilization. Macromolecule stabilization is a promising area of research with potential applications in various fields, including biotechnology and pharmaceuticals.

LITERATURE

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