

# Construction and characterization of microreactors of Chlorocatechol 1,2-dioxygenase using low complexity domains as molecular adhesives



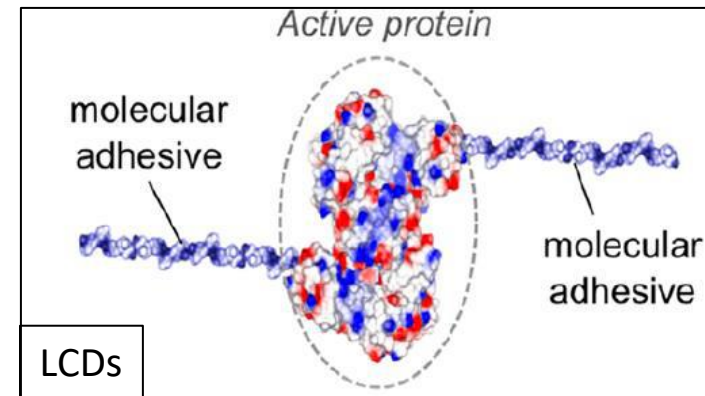
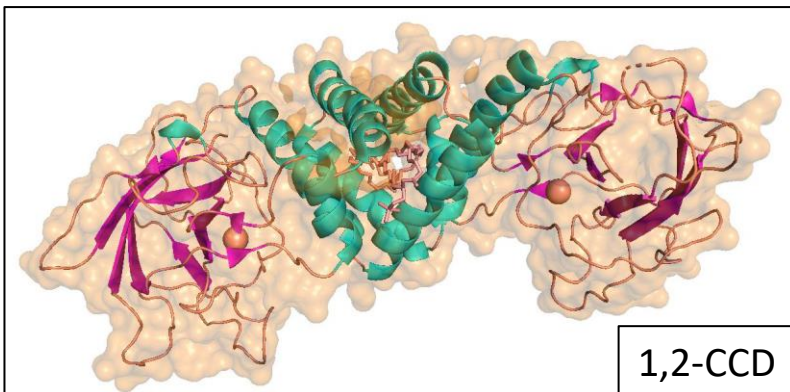
Nathan N. Evangelista<sup>a\*</sup>, Mariana C. Micheletto<sup>a</sup>, Luis Felipe S. Mendes<sup>a</sup> e Antonio José da Costa Filho<sup>a\*</sup>

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## Introduction

- Low Complexity Domains (LCDs)
- Liquid Liquid Phase Separation (LLPS)
- Chlorocatechol 1,2-Dioxygenase (1,2-CCD)
- Microreactors



(Faltova, 2019)

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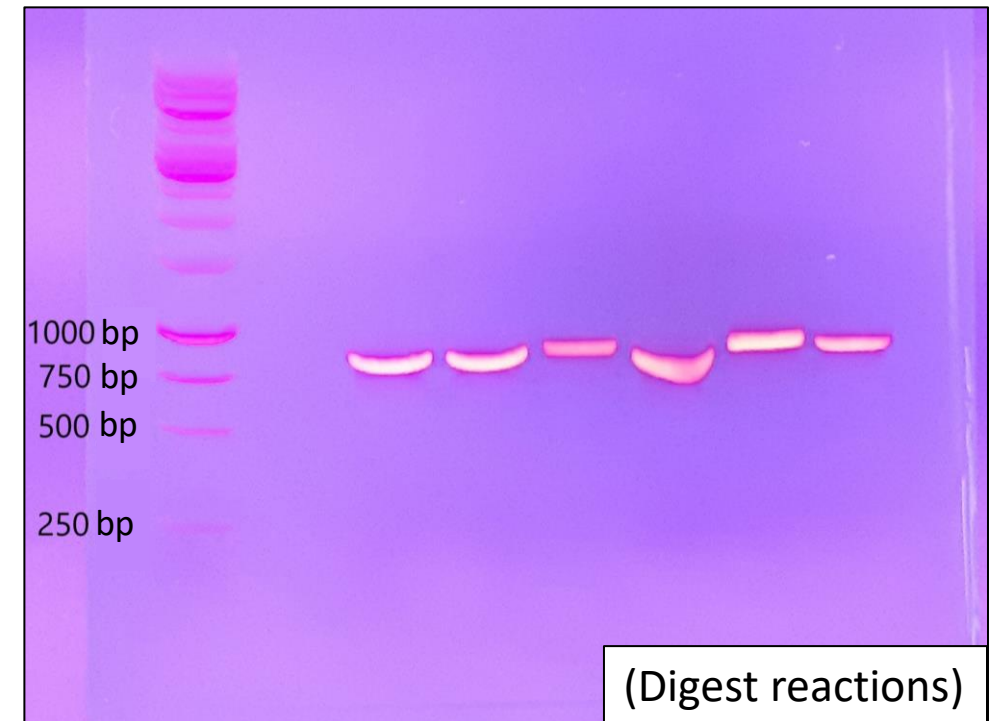
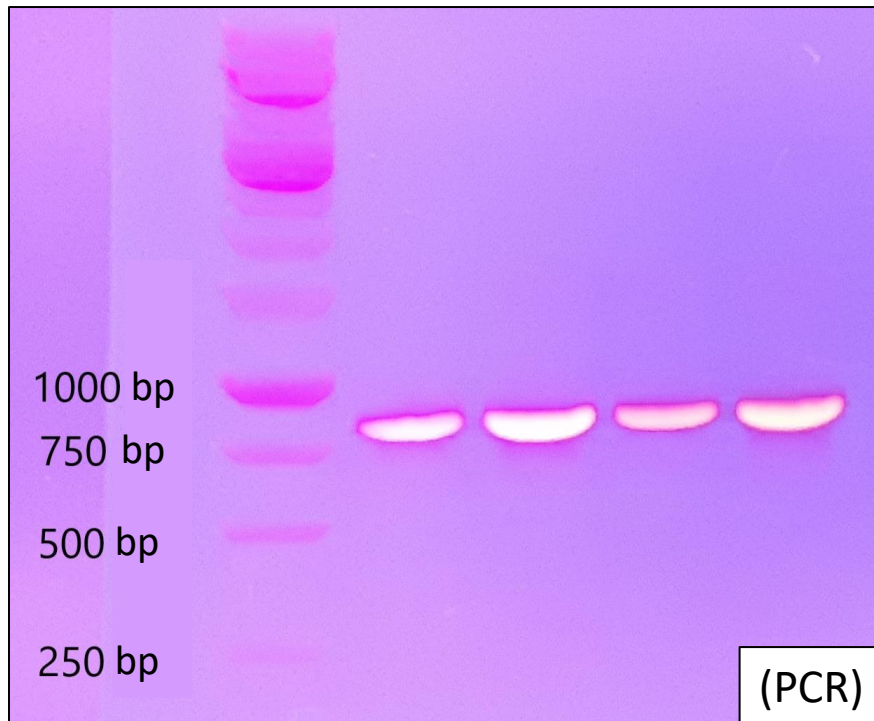


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## 1,2-CCD gene subcloning: initial stages



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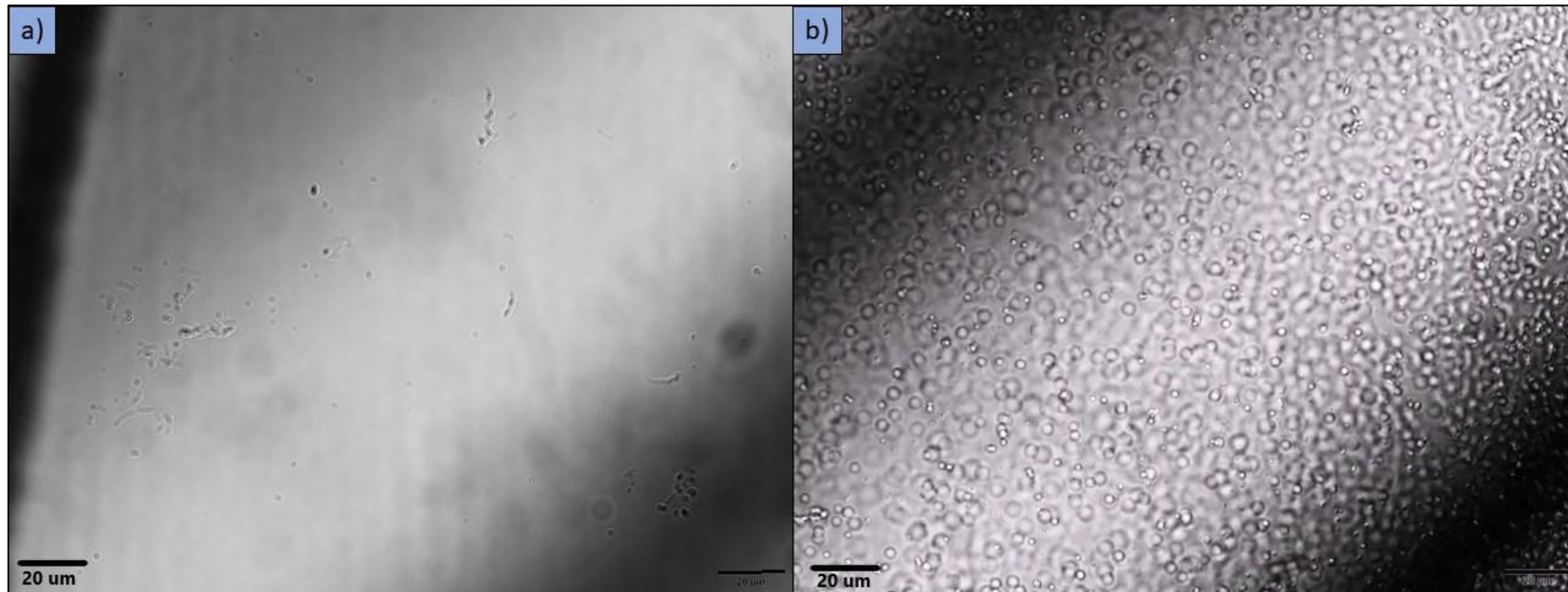


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## Optical characterization: DIC Microscopy



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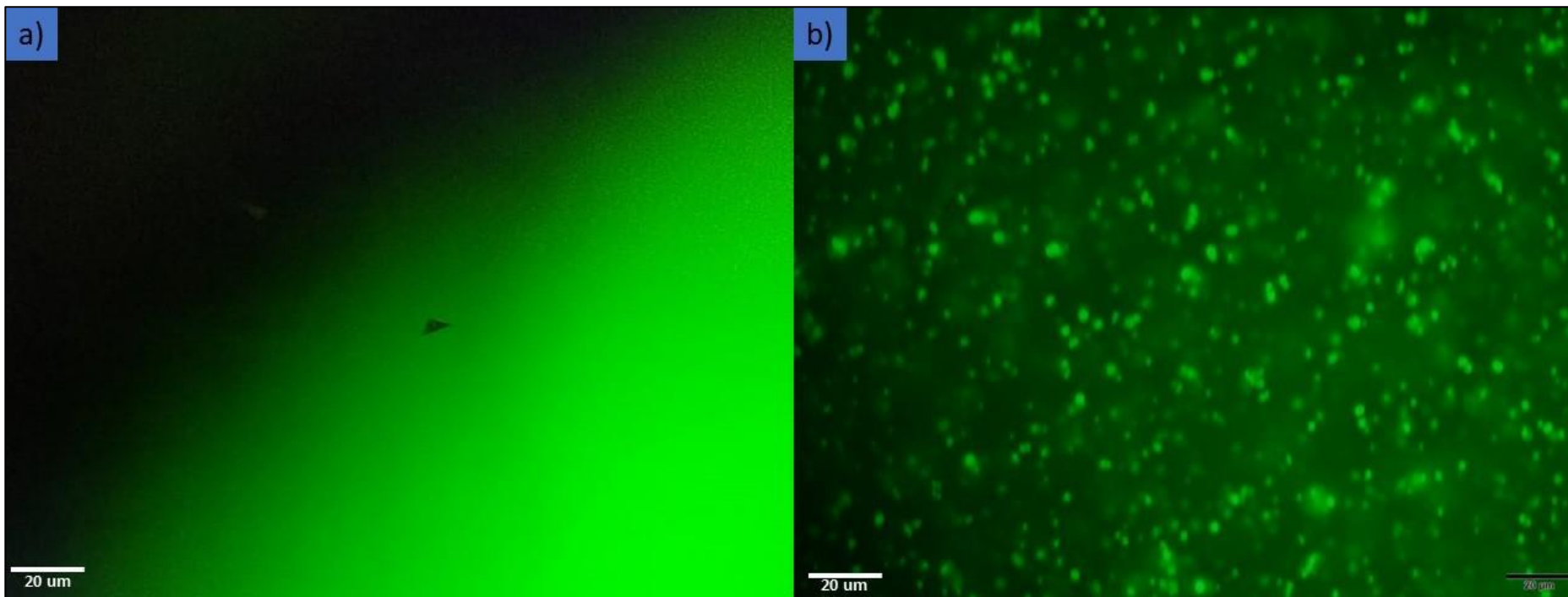


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## Optical characterization: Steady-state Fluorescence Microscopy



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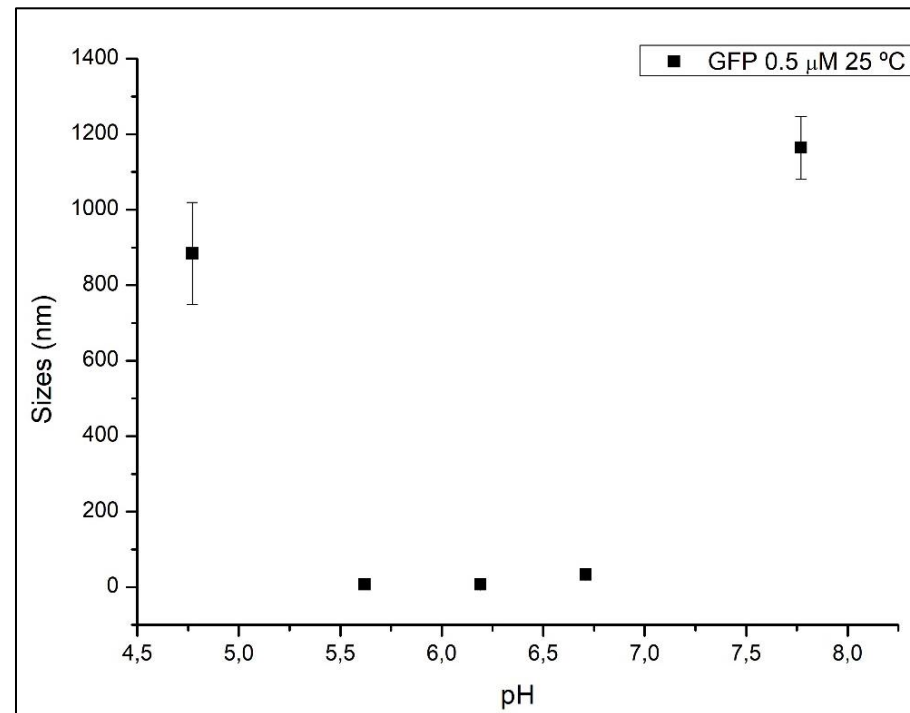
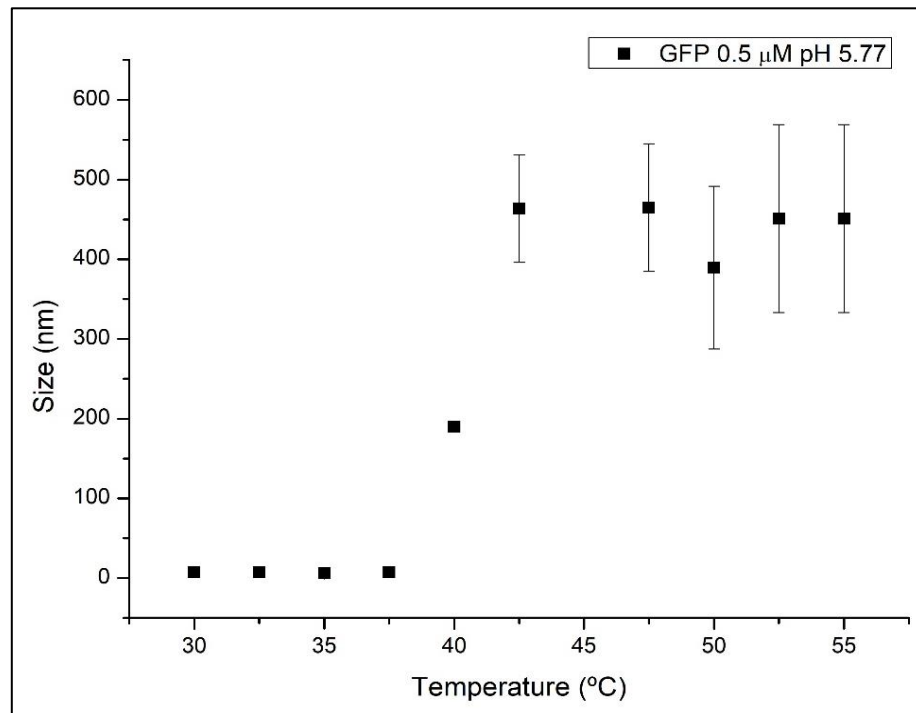


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## pH and thermal stability: DLS



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## Concludes

- Characterizing LCDs
- Optimizing 1,2-CCD subcloning

