38th EPS
European Peptide Symposium

6 - 11th of September 2026
Vienna, Austria

SYNTHESIS, RADIOLABELING AND PRELIMINARY CHARACTERIZATION OF AN EGFR-TARGETING DOTA-CONJUGATED PEPTIDE FOR CANCER IMAGING

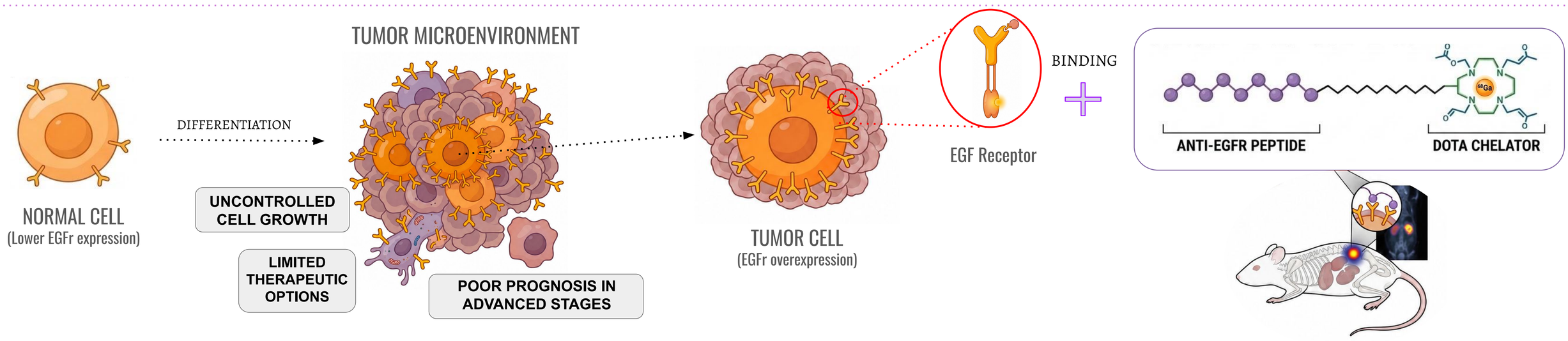
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[a]*https://doi.org/10.17952/38EPS.2026.P014*

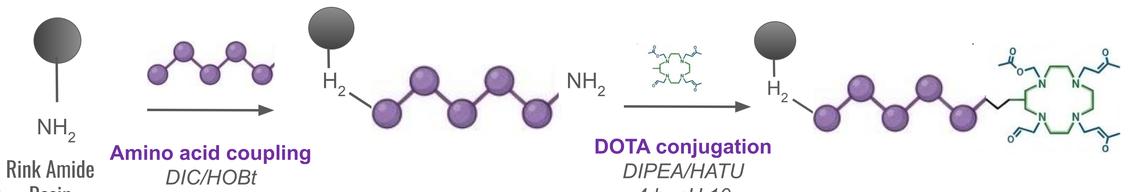
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INTRODUCTION

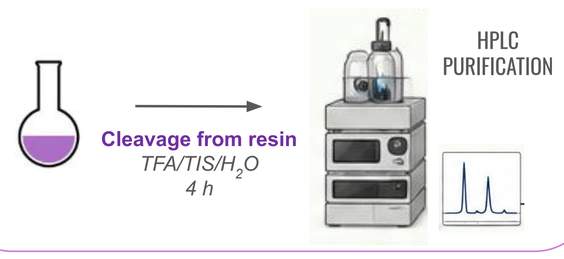


METHODOLOGY

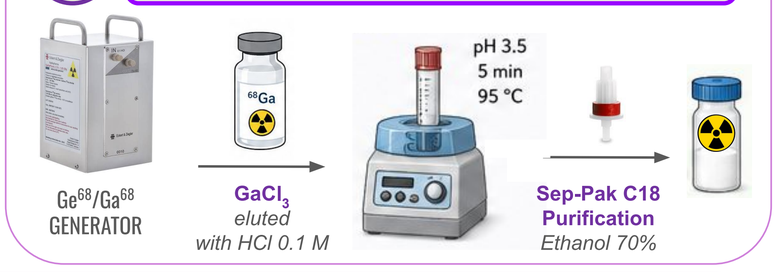
1 PEPTIDE SYNTHESIS (Fmoc SPPS)



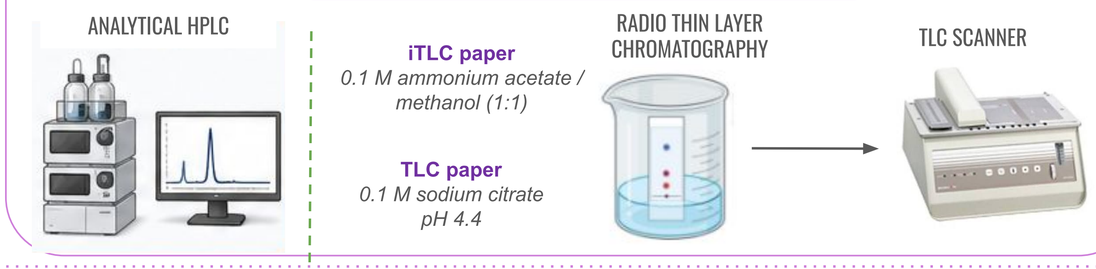
2 CLEAVAGE AND PURIFICATION



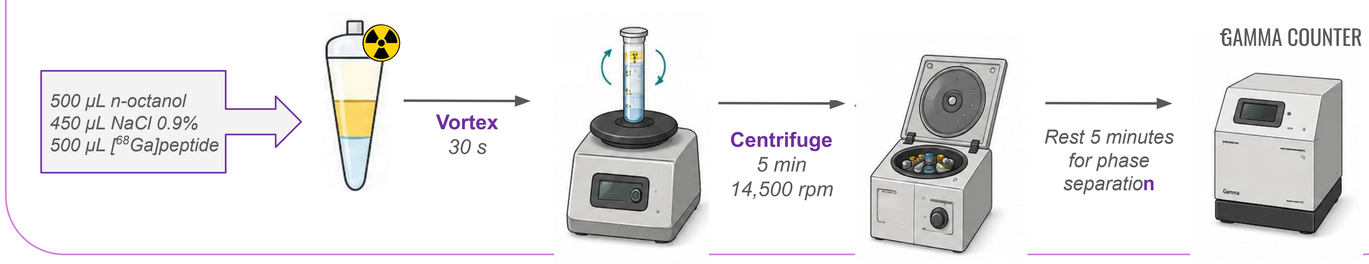
3 RADIOLABELING



4 QUALITY CONTROL



5 PARTITION COEFFICIENT (LogP)



RESULTS

PEPTIDE SYNTHESIS OVERALL YIELD

30%

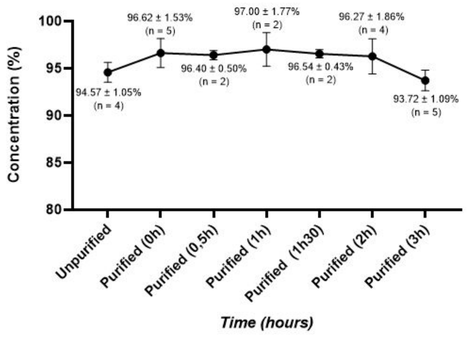
Peptide synthesis resulted in an overall yield of **30%**.

RADIOSYNTHESIS OVERALL YIELD

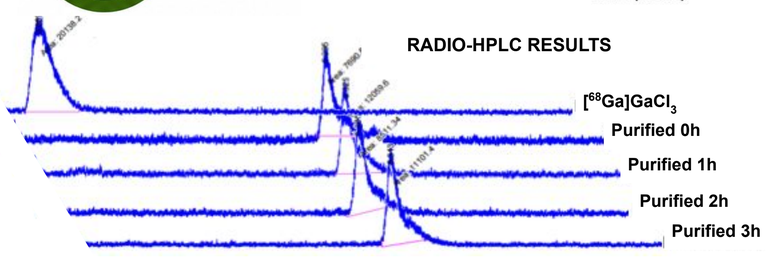
≥77%

Radiolabeling showed yield above **77%**.

RADIOCHEMICAL PURITY AND STABILITY



RADIO-HPLC RESULTS



~95% radiochemical purity (HPLC)

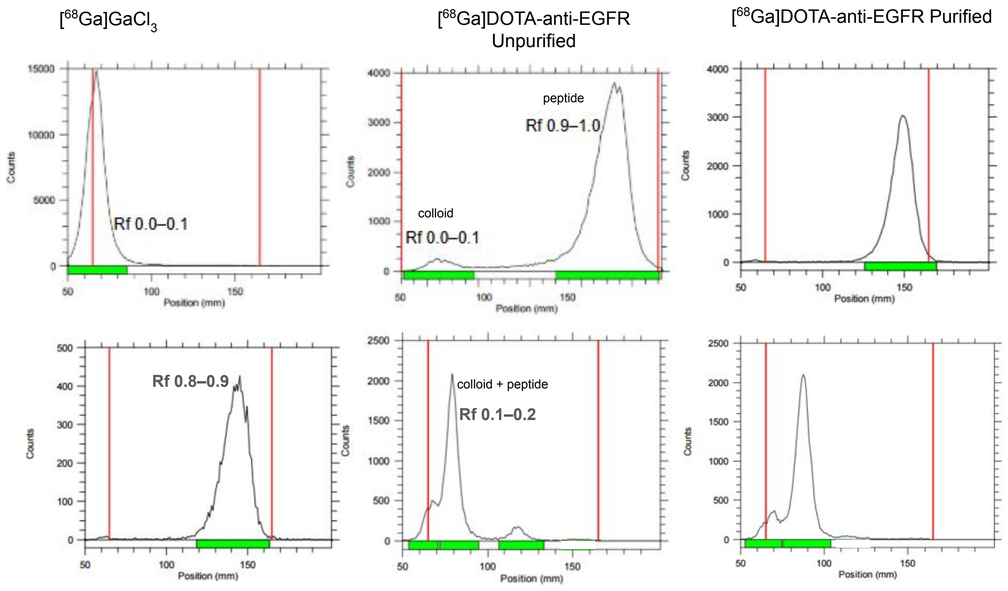
~95% radiochemical purity (iTLC)

0.1 M ammonium acetate / methanol (1:1)

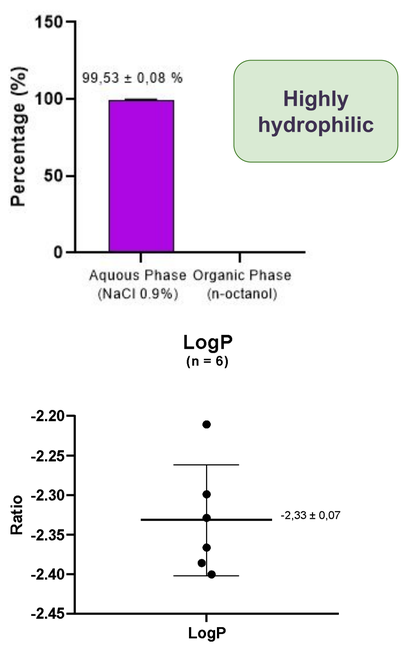
TLC method optimization

0.1 M sodium citrate pH 4.4

iTLC AND TLC RESULTS



PARTITION COEFFICIENT



CONCLUSION

This preliminary study demonstrates the successful synthesis and radiolabeling of a promising EGFR-targeting radiopeptide for cancer imaging, highlighting important parameters for further optimization and biological validation.

Acknowledgements: This work was supported by FAPESP grants #2025/12735-2 and #2021/10265-8, Cancer Theranostics Innovation Center (CancerThera)/CEPID. Chamada CNPq/MCTI/FNDCT nº 22/2024 - Programa Conhecimento Brasil - Apoio a Projetos em Rede com Pesquisadores Brasileiros no Exterior (CNPq): grant number 444492/2024-0.