

Use of immobilized trypsin in proteomic workflows enables full automation and reduces undesirable by-products

Patrick A. Kates¹, B. Todd Mullis², Michael Walla², Bill Cotham², Qian Wang², and L. Andrew Lee¹

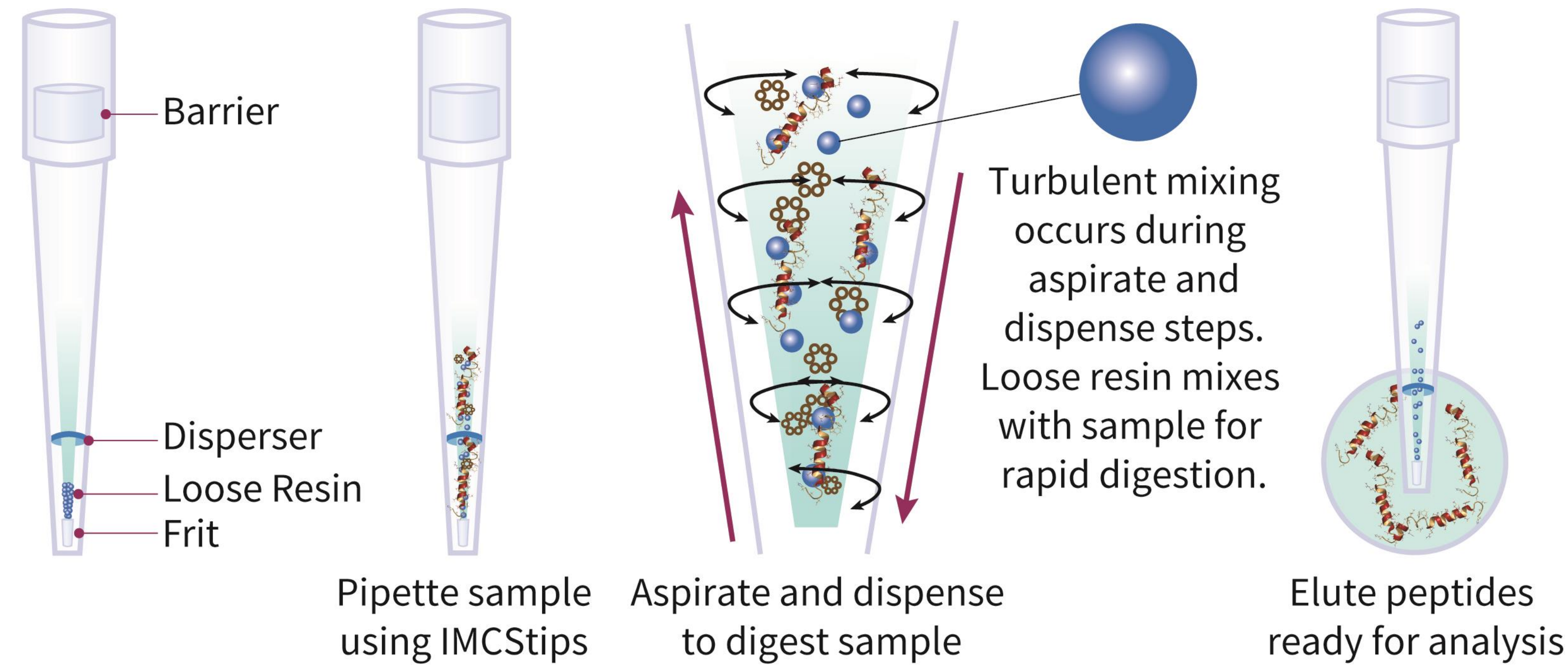
¹Integrated Micro-Chromatography Systems, Inc., Irmo, SC

²University of South Carolina, Department of Chemistry and Biochemistry, Columbia, SC

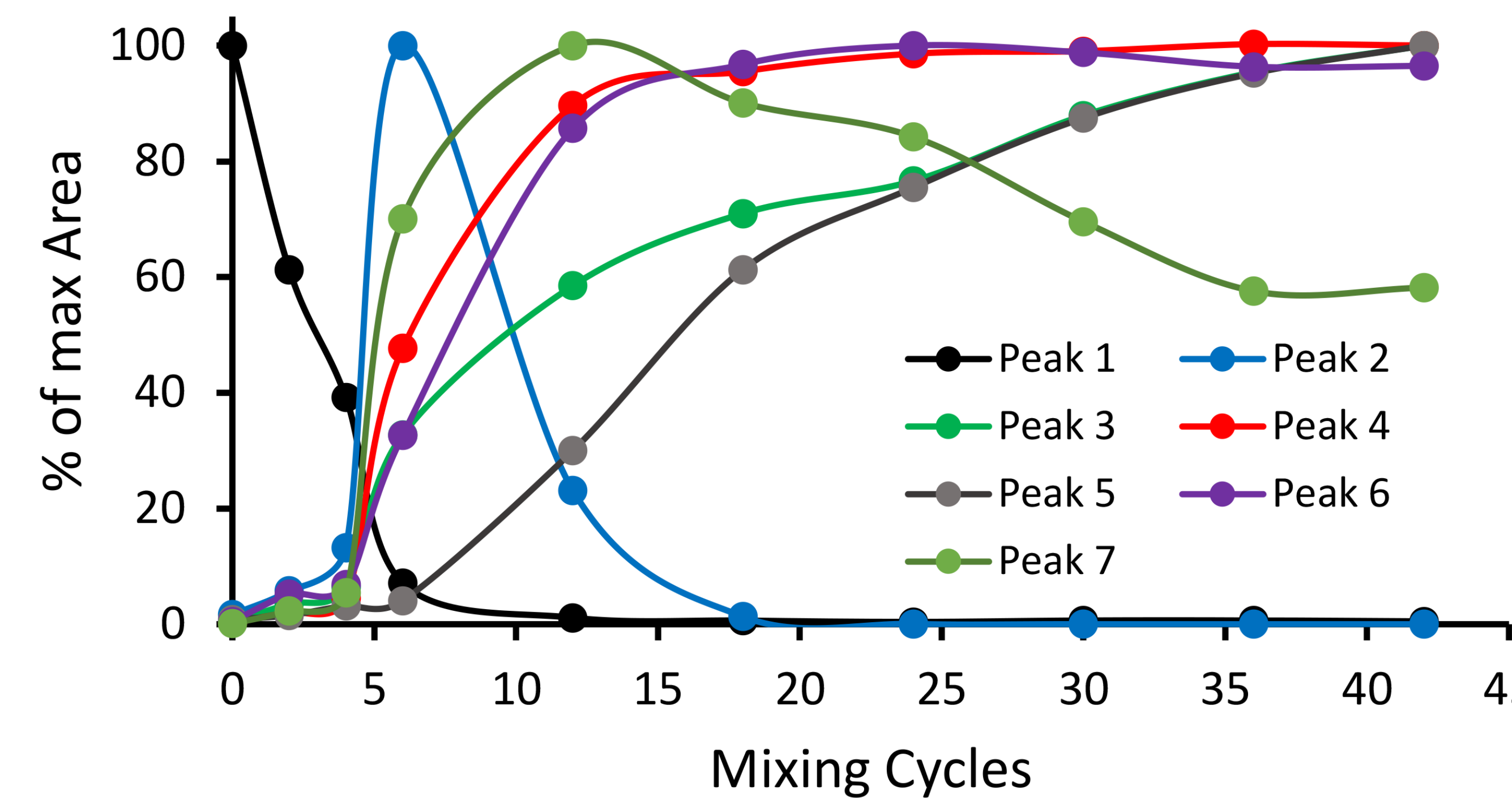
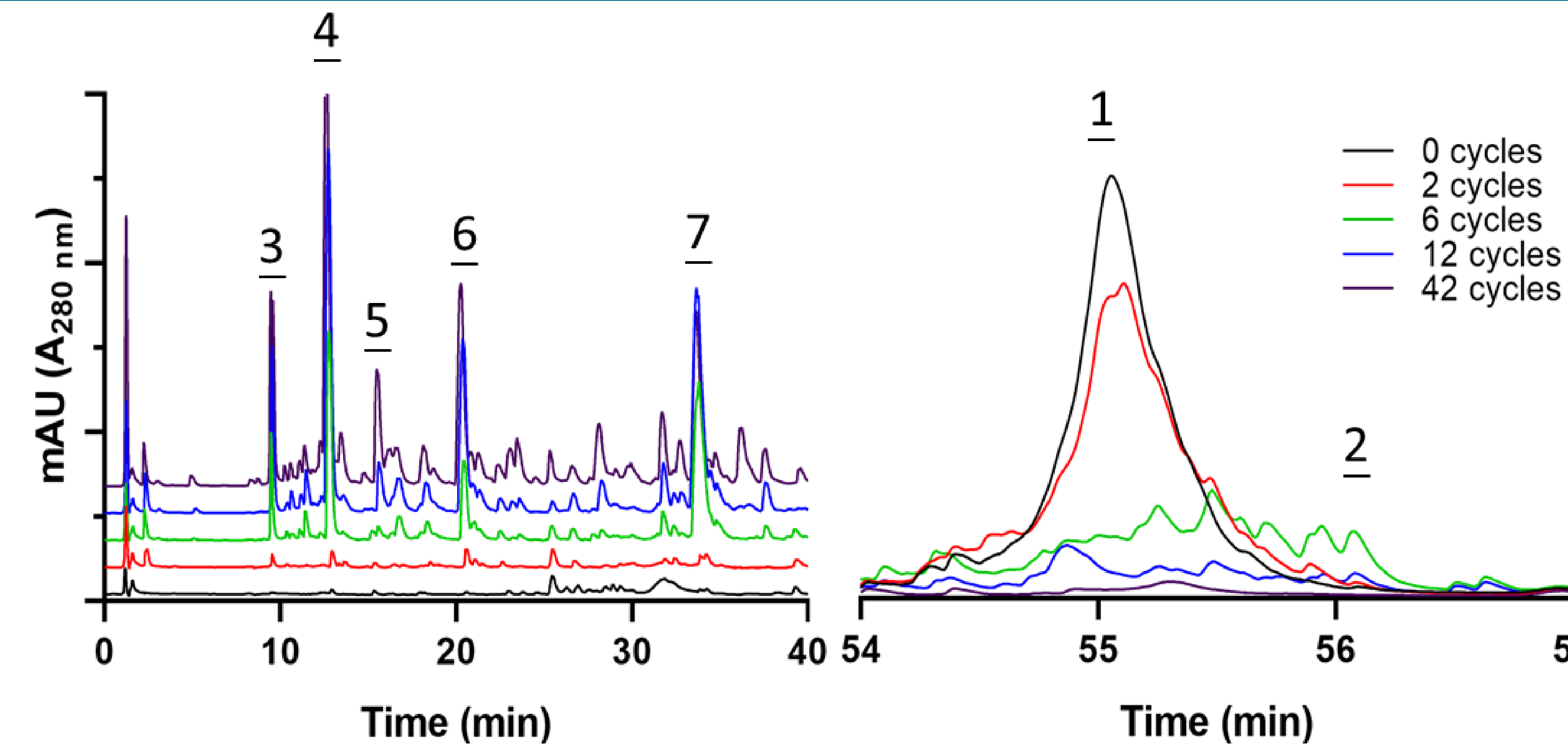


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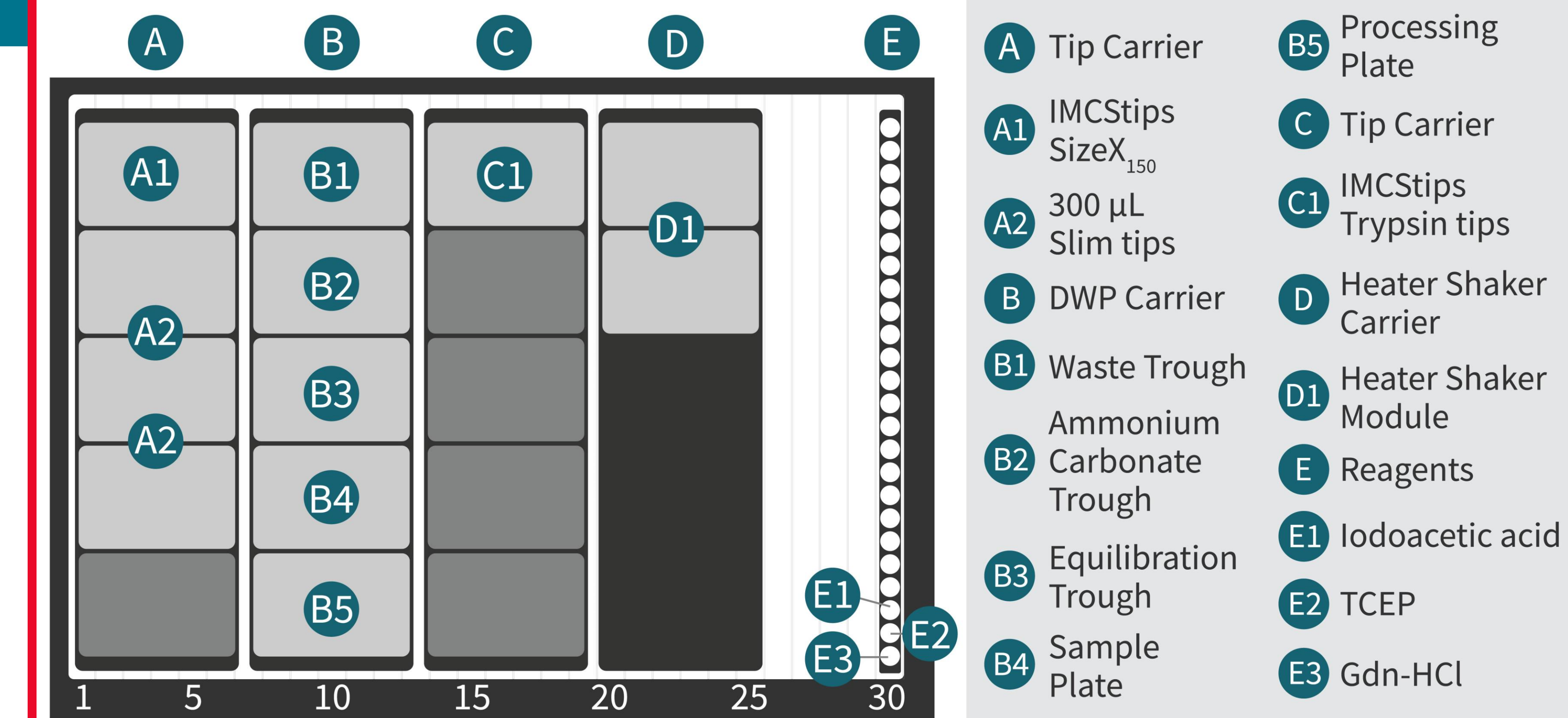
Introduction



Immobilized trypsin tips rapidly digest test substrates and are stable over time



Discussion and Conclusions

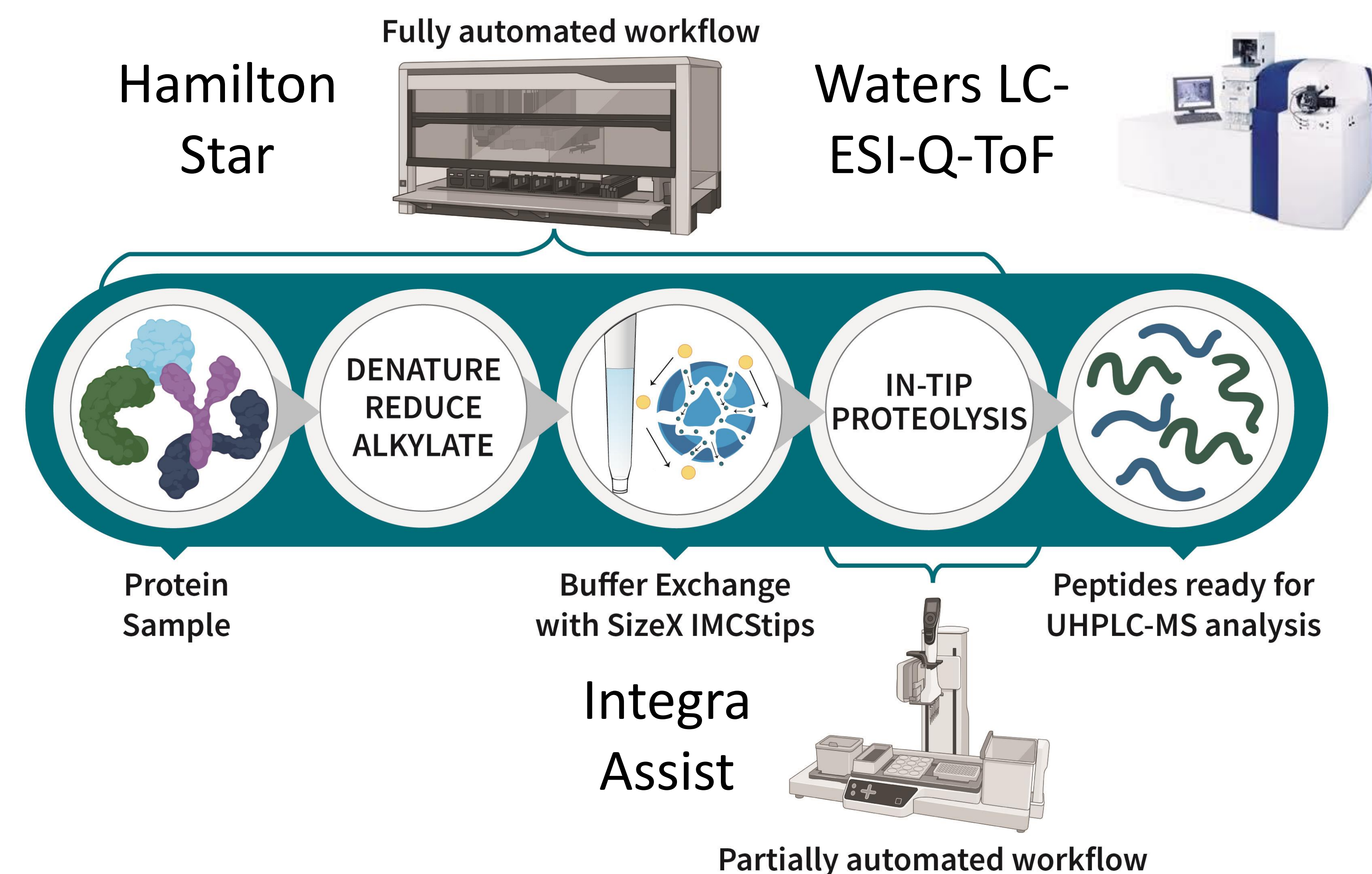


- Fully automated digestion of proteins
- Removed the need for TFA quenching
- Better digestion profiles with increasing resin load
- Efficiencies were comparable to 1:20 mass ratio trypsin solution digests at room temperature

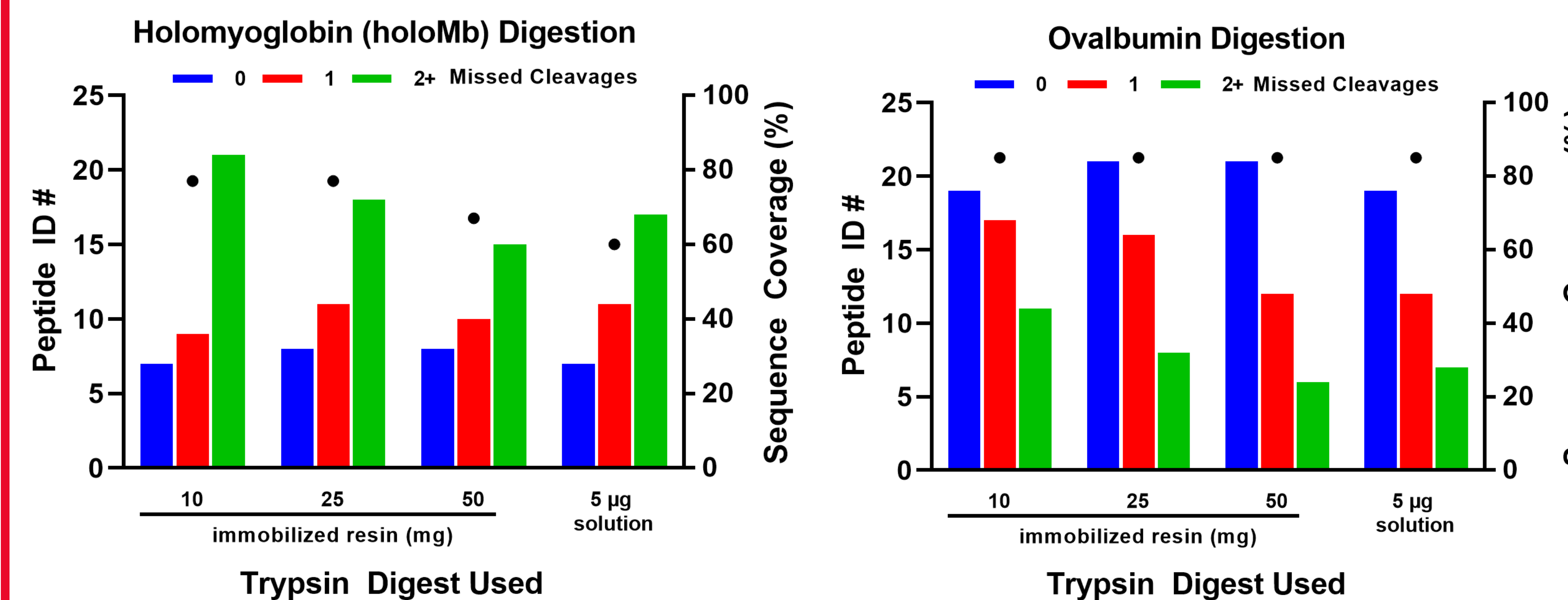
Goals

- Reduce digestion time
- Reduce deamidation and oxidation products
- Fully automate trypsin digestion method and integrate into other proteomic workflows

Instrumentation and Methodology



Immobilized trypsin tips display similar or better digestion efficiency compared to solution digest



Future Directions

- Exploration of kinetics across temperature range
- Integration of organic solvents into digestion buffer
- Integration into phospho- and glycoproteomic workflows
- Side-by-side tip and solution digests of mammalian and yeast cultures for multiple -omics workflows

Acknowledgements

- The authors would like to acknowledge Amanda McGee and P. Nikki Sitasuwan for their assistance in HPLC method development