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(71) Applicant: **ELI LILLY AND COMPANY** [US/US]; Lilly
Corporate Center, Indianapolis, Indiana 46285 (US).

(72) Inventors: **JOHNSON, Martin D.**; c/o ELI LILLY
AND COMPANY, P.O. Box 6288, Indianapolis, Indiana
46206-6288 (US). **KOPACH, Michael E.**; c/o ELI LILLY
AND COMPANY, P.O. Box 6288, Indianapolis, Indiana
46206-6288 (US). **WEBSTER, Luke P.**; c/o ELI LILLY
AND COMPANY, P.O. Box 6288, Indianapolis, Indiana
46206-6288 (US).

(74) Agent: **GRIMSHAW, Kyle W.** et al.; ELI LILLY
AND COMPANY, P.O. Box 6288, Indianapolis, Indiana
46206-6288 (US).

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(54) Title: THREE RESIN REACTORS IN SERIES PEPTIDE SYNTHESIZER

(57) Abstract: ABSTRACT OF THE DISCLOSURE A Solid Phase Peptide Synthesis (SPPS) device and method of using the same for manufacturing peptides is taught herein. The system comprises at least two reactors, each reactor including a quantity of SPPS resin. The reactors are positioned in series. A de-protecting agent is added to the first reactor and then transferred to the second and third reactors, in series, thereby operating to de-protect the protected N-group. Wash solvent is added to the first reactor and then transferred to the second and this operation repeated several times. Likewise, an amino acid activated ester solution is added, in series, to the first, second and third reactors, thereby operating to couple the amino acid to the de-protected N-group. Wash solvent is added to the first reactor and then transferred to the second and this operation repeated several times prior to the next cycle. The use of the reactors in series reduces the overall solvent required. Online LCMS is also used to monitor progress and identity of reactions happening within the solid phase resin particles. X22082 1



WO 2021/158444 A2