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CONFIRMATION NO. 4721

FILING RECEIPT

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Permission to Access Application via Priority Document Exchange: Yes

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If Required, Foreign Filing License Granted: 07/19/2019

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 62/875,231**

Projected Publication Date: None, application is not eligible for pre-grant publication

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

ENZYMATIC PRODUCTION OF HEXOSES WITH MULTIPLE IMMOBILIZED ENZYMES

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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ENZYMATIC PRODUCTION OF HEXOSES WITH MULTIPLE IMMOBILIZED ENZYMES

In one aspect, the invention relates to an enzymatic process for producing a hexose comprising multiple enzymes immobilized on one or more enzyme carriers. In some embodiments, enzymatic reactions of the invention use 2, or 3, or more immobilized enzymes in which the enzymatic reactions occur in a single bioreactor or plurality of bioreactors using one or more enzyme carriers. In some embodiments the enzyme carriers are beads. International application publication No. WO 2018/169957 discloses pathways for the enzymatic production of hexoses. In some embodiments, the invention relates to an enzymatic process for producing inositol comprising multiple enzymes immobilized on one or more enzyme carriers

In another aspect, the invention relates to processes for the immobilization of multiple enzymes on a single enzyme carrier for the enzymatic production of a hexose. In one embodiment, the invention relates to immobilizing two or more enzymes on an enzyme carrier. The immobilization process is not limited, and can be for various combinations of enzymes: for example, if 6 enzymes are used in the pathway, all 6 enzymes are on one bead, or the enzymes are split amongst multiple beads, for example, 2 enzymes on one bead and 4 enzymes on another; or 3 enzymes on one bead and 3 enzymes on another, etc. In yet another aspect, the invention relates to immobilization of multiple enzymes on two or more carriers for the enzymatic production of a hexose: i.e. a process in which more than one carriers are used.

In another aspect, the invention relates to a composition comprising multiple enzymes (2, 3, 4, 5, 6, or more) for the enzymatic production of hexose coupled to an enzyme carrier.