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(54) Title: ENGINEERED ENONE REDUCTASE AND KETOREDUCTASE VARIANT ENZYMES

(57) Abstract: The present disclosure provides engineered enone reductase enzymes (EREDs), polypeptides having ERED activity, and polynucleotides encoding these enzymes, as well as vectors and host cells comprising these polynucleotides and polypeptides. Methods for producing ERED enzymes are also provided. The present disclosure also provides engineered ketoreductase enzymes (KREDs), polypeptides having KRED activity, and polynucleotides encoding these enzymes, as well as vectors and host cells comprising these polynucleotides and polypeptides. Methods for producing KRED enzymes are also provided. The present disclosure further provides compositions comprising the ERED and KRED enzymes and methods of using the engineered ERED and KRED enzymes. The present disclosure finds particular use in the production of pharmaceutical compounds.