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(54) Title: THERAPEUTIC ENGINEERED MICROBIAL CELL SYSTEMS AND METHODS FOR TREATING CONDITIONS IN WHICH OXALATE IS DETRIMENTAL

(57) Abstract: The present disclosure relates to engineered microbial cells that have been engineered to comprise one or more oxalate catabolism genes that are expressed under the control of non-native, non-inducible promoters. Thus, the genetically engineered microbial cells and pharmaceutical compositions comprising the microbial cells are useful in degrading oxalate inside or outside the engineered microbial cell, resulting in a reduction of the concentration of oxalate outside the cell. The engineered microbial cells of the present disclosure are useful in methods of treating or preventing diseases associated with disorders in which oxalate is detrimental, such as hyperoxalurias. The engineered microbial cells of the present disclosure are also useful in methods of treating calcium oxalate nephrocalcinosis, calcium oxalate nephrolithiasis and calcium oxalate urolithiasis.