Record Nr. UNINA9910350338503321 Autore Chen Jin Titolo Drug Delivery Applications of Starch Biopolymer Derivatives [[electronic resource] /] / by Jin Chen, Ling Chen, Fengwei Xie, Xiaoxi Li Singapore:,: Springer Singapore:,: Imprint: Springer,, 2019 Pubbl/distr/stampa 981-13-3657-1 **ISBN** Edizione [1st ed. 2019.] 1 online resource (147 pages) Descrizione fisica 615.6 Disciplina Soggetti **Polymers** Carbohydrates **Biomaterials** Biomedical engineering Polymer Sciences Carbohydrate Chemistry Biomedical Engineering/Biotechnology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Introduction -- Physiological and pathological bases for designing high-performance drug delivery carriers -- Material nature and physicochemical properties for high-performance of carriers -- Starch -- Starch-based DDSs with stimulus-responsiveness -- Starch-based DDSs with physiological interactions -- Toxicology of starch-based DDSs -- Conclusion and future perspectives. Sommario/riassunto This book summarizes the recent advances in applications of starch in state-of-the-art drug carriers (hydrogel, micro- and nano-particulate carriers) with stimulus-responsive and target-specific properties. It also highlights the role of starch and its derivatives in transmucosal administration to improve the bioavailability of drugs. Further, it outlines the principles of effective, advanced, starch-based drug delivery systems and illustrates how these principles are key to the development of future drug delivery strategies. This interesting reference resource is useful for students, researchers and engineers in the fields of carbohydrate chemistry, polymer sciences and drug

delivery.