Record Nr. UNINA9910346691103321 Electrospun and electrosprayed formulations for drug delivery / / **Titolo** special issue editors, Ian S. Blagbrough, Gareth R. Williams Pubbl/distr/stampa MDPI - Multidisciplinary Digital Publishing Institute, 2019 **ISBN** 3-03897-913-9 Descrizione fisica 1 electronic resource (190 p.) 615.1/9 Disciplina Soggetti Drug delivery systems Electrospinning Nanoparticles Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico

Sommario/riassunto

This book is comprised of important reviews and cutting-edge original research papers concerning electrospun and electrosprayed formulations in drug delivery. Electrospinning and electrospraying have, in recent years, attracted increasing attention in the pharmaceutical sector, with research in the area advancing rapidly. It is now possible to prepare extremely complex systems using multi-fluid processes, and to increase production rates to an industrial scale. Electrospun formulations can be produced under GMP conditions and are in clinical trials. In this volume, we explore a range of topics around electrospinning and electrospraying in controlled drug delivery. Four reviews cover the exciting potential of cyclodextrin-containing fibers and the many potential biomedical applications of electrospun fibers. The use of electrospinning to prepare amorphous systems and improve the dissolution rate and solubility of poorly soluble active ingredients is addressed, and the possibilities of such materials in tissue engineering are comprehensively covered. The six original research papers cover the effect of molecular properties on API release from Eudragit-based electrospun fibers; ferulic acid solid dispersions; electrospun medicines to treat psoriasis; scale up of electrospinning and its use to produce low-dose tablets; transepithelial permeation of drugs released from

electrospun fibers, and the possibilities for the synergistic chemophotothermal treatment of cancer.