1. Record Nr. UNINA9910557289503321

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Titolo	Biomaterial-Related Infections
Pubbl/distr/stampa	Basel, Switzerland, : MDPI - Multidisciplinary Digital Publishing Institute, 2020
Descrizione fisica	1 electronic resource (204 p.)
Soggetti	Medicine
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	The use of medical devices (e.g., catheters, implants, and probes) is a common and essential part of medical care for both diagnostic and therapeutic purposes. However, these devices quite frequently lead to the incidence of infections due to the colonization of their abiotic surfaces by biofilm-growing microorganisms, which are progressively resistant to antimicrobial therapies. Several methods based on anti-infective biomaterials that repel microbes have been developed to combat device-related infections. Among these strategies, surface coating with antibiotics (e.g., beta-lactams), natural compounds (e.g., polyphenols), or inorganic elements (e.g., silver and copper nanoparticles) has been widely recognized as exhibiting broad-spectrum bactericidal or bacteriostatic activity. So, in order to achieve a better therapeutic response, it is crucial to understand how these infections are different from others. This will allow us to find new biomaterials characterized by antifouling coatings with repellent properties or low adhesion towards microorganisms, or antimicrobial coatings that are capable of killing microbes approaching the surface, improving biomaterial functionalization strategies and supporting tissues' bio-integration.