1. Record Nr. UNINA9910337604103321

| | |
|---|---|
| Titolo | Peripheral Nerve Tissue Engineering and Regeneration / / edited by James Phillips, David Hercher, Thomas Hausner |
| Pubbl/distr/stampa | Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020 |
| ISBN | 3-030-06217-1 |
| Collana | Tissue Engineering and Regeneration |
| Disciplina | 610.28 |
| Soggetti | Biomedical engineering<br>Regenerative medicine<br>Tissue engineering<br>Biomaterials<br>Neurosciences<br>Biomedical Engineering and Bioengineering<br>Regenerative Medicine/Tissue Engineering |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di contenuto | Biomaterials -- Natural materials -- Synthetic materials -- Decellularised nerve grafts -- Cells -- Schwann cells -- Therapeutic cells for seeding in nerve repair guides -- Grafts containing live neurons -- Drugs, Gene Therapy and Extracellular Vesicles -- Drugs for enhancing nerve repair -- Gene therapy -- Extracellular vesicle therapies -- Models -- In vitro models -- Appropriate preclinical animal models for translational research -- Mathematical and computational models -- Clinical Translation -- Regulatory considerations -- Manufacturing considerations -- Clinical trials -- Commercialisation of nerve repair technology -- Surgical techniques. |
| Sommario/riassunto | This updatable book provides an accessible informative overview of the current state of the art in nerve repair research. The introduction includes history of nerve repair research and establishes key concepts and terminology and will be followed by sections that represent the main areas of interest in the field: (1) Biomaterials, (2) Therapeutic Cells, (3) Drug, Gene and Extracellular Vesicle Therapies, (4) Research |

Models and (5) Clinical Translation. Each section will contain 3 - 6 chapters, capturing the full breadth of relevant technology. Bringing together diverse disciplines under one overarching theme echoes the multidisciplinary approach that underpins modern tissue engineering and regenerative medicine. Each chapter will be written in an accessible manner that will facilitate interest and understanding, providing a comprehensive single reference source. The updatable nature of the work will ensure that it can evolve to accommodate future changes and new technologies. The main readership for this work will be researchers and clinicians based in academic, industrial and healthcare settings all over the world.