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| 1. Record Nr.           | UNINA9910502971003321   |
| Titolo                  | Drug Delivery in Dermatology : Fundamental and Practical Applications // edited by Célia Luiza Petersen Vitello Kalil, Valéria Campos   |
| Pubbl/distr/stampa      | Cham : , : Springer International Publishing : , : Imprint : Springer, , 2021   |
| ISBN                    | 3-030-81807-1   |
| Edizione                | [1st ed. 2021.]   |
| Descrizione fisica      | 1 online resource (212 pages)   |
| Disciplina              | 615.778   |
| Soggetti                | Dermatology<br>Surgery  |
| Lingua di pubblicazione | Inglese   |
| Formato                 | Materiale a stampa  |
| Livello bibliografico   | Monografia  |
| Nota di bibliografia    | Includes bibliographical references and index.  |
| Nota di contenuto       | Chapter 1. Understanding Skin and Drug Delivery -- Chapter 2. How to Optimize Drug Delivery in Dermatology? -- Chapter 3. Dermatological Applications of Drug Delivery Systems -- Chapter 4. Drug Delivery-Associated Dermatological Technologies and Techniques -- Chapter 5. Microneedling and Drug Delivery -- Chapter 6. Intense Pulsed Light and Drug Delivery -- Chapter 7. Fractional Non-Ablative Laser and Drug Delivery -- Chapter 8. Ablative Fractional Lasers & Drug Delivery -- Chapter 9. Switched and Drug Delivery -- Chapter 10. Radiofrequency, Infra-red and Others Technologies for Drug Delivery -- Chapter 11. Drug Delivery in the Treatment of Alopecia -- Chapter 12. Digital Microneedling and Drug Delivery -- Chapter 13. Active Agents in Injectable Drug Delivery -- Chapter 14. Microinfusion of Drugs into the Skin (MMP®) & Drug Delivery -- Chapter 15. Protocols for Drug Delivery. |
| Sommario/riassunto      | Skin accounts for approximately 15% of an adult's total body weight, with a surface of about 2m <sup>2</sup> . It provides an entry and exit barrier to various substances, offers effective protection against harmful substances, microorganisms and ultraviolet radiation, and is also paramount in immunology and body homeostasis, preventing dehydration and loss of essential minerals. The topical route has a number of advantages over oral and parenteral routes: no first-pass metabolism, greater convenience resulting in better treatment  |

compliance, lower side-effect frequency, and prompt dosing cessation if required. However, the stratum corneum allows penetration of only 1 to 5% of substances applied topically, making this application route much less efficient. Lipophilic and small molecules (up to 500 Da) can cross the stratum corneum, since keratinocytes are covered by a lipid matrix, while it is virtually impossible for hydrophilic and large drugs to cross intact, normal skin, which means that passive topical delivery is restricted. To address this, techniques have been developed aimed at optimizing drug skin penetration by means of chemical, mechanical and physical methods, such as adding permeating active agents and using occlusion, iontophoresis, microneedling, lasers and intense pulsed light, and it is now possible to deliver medication to different skin layers or transdermally to the systemic circulation. Drug delivery is a hot topic in dermatology, with a Pubmed search generating 203431 articles. Offering a detailed review of this emerging therapeutic option, including the various methods available, this unique book guides physicians and doctors in selecting the correct technologies, technique and products for each patient. .

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