

## **GMO, czyli innowacyjne biotechnologie w medycynie XXI w.**

Tomasz Twardowski

Instytut Chemii Bioorganicznej, Polska Akademia Nauk, Poznań  
i Politechnika Łódzka, Łódź

### **GMO – innovative biotechnology in 21<sup>st</sup> century medicine**

#### **Summary**

Genetically modified organisms are the key step for innovative medicines. The innovative drugs in the 21<sup>st</sup> century will be in the majority of proteins, nucleic acids and their combinations. The critical issues in case of biopharmaceuticals are quality and reproducibility of production. These aspects are evident in biosimilars (generics) and protection of intellectual property rights.

#### **Key words:**

biopharmaceuticals, biosimilars, red biotechnology, personalised medicine

#### **Adres do korespondencji:**

Tomasz Twardowski, Instytut Chemii Bioorganicznej, Polska Akademia Nauk, ul.  
Noskowskiego 12/14, 61-704 Poznań; e-mail. [twardows@ibch.poznan.pl](mailto:twardows@ibch.poznan.pl)