

## Marcin Sobczak



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### Contact:

Department of Analytical Chemistry and Biomaterials, Faculty of Pharmacy, Medical University of Warsaw, 02-097 Warsaw, 1 Banacha Street, Poland,  
<https://zchb.wum.edu.pl/>  
e-mail: [marcin.sobczak@wum.edu.pl](mailto:marcin.sobczak@wum.edu.pl)  
Phone: (+48 22) 57 20 784

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### *Current academic position*

Head of Department of Analytical Chemistry and Biomaterials  
Head of Department of Biomaterials Chemistry  
Head of the Pharmaceutical Sciences Discipline Council in Medical University of Warsaw

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### *Academic title, scientific degrees and professional titles*

2020 Professor of Medical and Health Sciences  
2012 Doctor Habilitatus of Pharmaceutical Sciences  
Title of the dissertation: "*Synthesis, characterization and pharmaceutical use of polymers with ester, carbonate and urethane segments*"  
2001 Doctor of Chemical Sciences  
Title of the dissertation: „*Research on the synthesis of oligocarbonatediols and poly(carbonate-urethane)s*”  
1996 Master of Science, Chemical Technology  
2012 Postgraduate studies, Biomaterials - Materials for Medicine  
2010 Postgraduate studies, Physics and Astronomy

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### *Research interests*

- Biomaterials engineering;
  - Nanopharmacy and nanomedicine;
  - Studies on new methods for the synthesis of biodegradable and bioresorbable polymers as components of active ingredient carriers, drug delivery systems (DDSs) and a variety of biomaterials;
  - Synthesis, and structural, physicochemical and biological studies of carriers of anticancer drugs;
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- Synthesis, and structural, physicochemical and biological studies of carriers of antimicrobial substances;
  - Synthesis, and structural, physicochemical and biological studies of polymers as implantable materials;
  - Studies on new methods for obtaining polymer/hydroxyapatite/active substance composites as components of DDSs;
  - Synthesis, and structural, physicochemical and biological studies of carriers of other active substances;
  - Synthesis, and structural, physicochemical and biological studies of various materials for medicine and pharmacy;
  - Application of polymers in tissue engineering, dermatology and cosmetology;
  - Studies on the kinetics of drugs release from carriers;
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### **Summary of scientific activity**

Number of original papers -	71
Number of review papers -	23
Cumulative Impact Factor -	178.996
Total Score - Ministry of Science and Higher Education in Poland -	2770
Hirscha-index -	18
Number of citations (without self-citations) -	581
Other:	
Patents -	9
Chapters in foreign monographs -	1
Chapters in Polish monographs -	5
Books in Polish -	4
International conferences -	38
National conferences -	46

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### **Prizes and awards**

Awards of Rector of the Medical University of Warsaw, Dean of the Faculty of Chemistry of the Warsaw University of Technology and Minister of Health in Poland.

<i>Scientific awards</i> -	16
<i>Didactic awards</i> -	1
<i>Organizational awards</i> -	3

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### **Scientific projects**

Projects financed by National Science Centre of Poland, National Centre for Research and Development in Poland and Ministry of Science and Higher Education in Poland -	10
Other projects -	10

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### **Selected publications**

1. Izabela M. Domańska, Ewa Oledzka, **Marcin Sobczak\***. Sterilization process of polyester based anticancer-drug delivery systems. International Journal of Pharmaceutics. 2020, 587, 119663.  
doi: 10.1016/j.ijpharm.2020.119663

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*IF = 4.845; MNiSzW = 100*

2. Martyna Zagórska-Dziok, **Marcin Sobczak\***. Hydrogel-Based Active Substance Release Systems for Cosmetology and Dermatology Application: A Review. *Pharmaceutics*. 2020, 12, 396.

doi:10.3390/pharmaceutics12050396

*IF = 4.421, MNiSzW = 100*

3. Adam Kasiński, Monika Zielińska-Pisklak, Ewa Oledzka, **Marcin Sobczak\***. Smart hydrogels - synthetic stimuli responsive antitumor drug release systems. *International Journal of Nanomedicine*. 2020, 15, 4541-4572.

Doi: 10.2147/IJN.S248987

*IF = 5.115; MNiSzW = 140*

4. Paula Majewska, Ewa Olędzka, **Marcin Sobczak\***. Overview of the latest developments in the field of drug-eluting stents technology. *Biomaterials Science*. 2020, 8(2), 544-551.

doi: 10.1039/C9BM00468H

*IF = 6.183, MNiSzW = 140*

5. Karolina Mulas, Zdzisława Stefanowicz, Ewa Oledzka, **Marcin Sobczak\***. Current state of the polymeric delivery systems of fluoroquinolones – A review. *Journal of Controlled Release*. 2019, 294, 195-215.

doi: 10.1016/j.jconrel.2018.12.021

*IF = 7.727, MNiSzW = 140*

6. Maria Bialik, Marzena Kuras, **Marcin Sobczak**, Ewa Olędzka\*. Biodegradable synthetic polyesters in the technology of controlled dosage forms of antihypertensive drugs – the overview. *Expert Opinion on Drug Delivery*. 2019, 16(9), 953-967.

doi: 10.1080/17425247.2019.1651716

*IF = 5.400, MNiSzW = 140*

7. Urszula Piotrowska\*, Ewa Olędzka, Wojciech Kamysz, Sławomir Białek, **Marcin Sobczak**. The Effect of Polymer Microstructure on Encapsulation Efficiency and release Kinetics of Ctropin 1.1. from the Poly( $\epsilon$ -caprolactone) Microparticles. *Nanomaterials*. 2018, 8, 482.

doi:10.3390/nano8070482

*IF = 3.504, MNiSzW = 35*

8. Andrzej Plichta\*, Sebastian Kowalczyk, Ewa Olędzka, **Marcin Sobczak**, Marcin Strawski. Effect of structural factors on release profiles of camptothecin from block copolymer conjugates with high load of drug. *International Journal of Pharmaceutics*. 2018, 538(1-2), 231-242.

doi:10.1016/j.ijpharm.2018.01.022

*IF = 3.862, MNiSzW = 40*

9. Andrzej Plichta\*, Sebastian Kowalczyk, Krzysztof Kamiński, Monika Wasylęczko, Stanisław Więckowski, Ewa Oledzka, Grzegorz Nałęcz-Jawecki, Anna Zgadzaj, **Marcin Sobczak**. ATRP of methacrylic derivative of Camptothecin initiated with PLA towards three-arm star block copolymer conjugates with favorable drug release. *Macromolecules*. 2017, 50(17), 6439-6450.

doi: 10.1021/acs.macromol.7b01350

*IF = 5.835, MNiSzW = 40*

10. Karolina Żółtowska, Urszula Piotrowska, Ewa Oledzka, Urszula Luchowska, **Marcin Sobczak\***, Anita Bocho-Janiszewska. Development of biodegradable polyesters with

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various microstructures for highly controlled release of epirubicin and cyclophosphamide. European Journal of Pharmaceutical Sciences. 2017, 96, 440-448.  
doi: 10.1016/j.ejps.2016.10.014  
*IF* = 3.756, *MNiSzW* = 35

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### **Selected patents**

1. PATENT PL 226742. Macromolecular prodrugs of 5-FU and process for the preparation of macromolecular prodrugs of 5-FU. **Marcin Sobczak**, Waław L. Kołodziejski, Piotr Goś, Magdalena Hajdaniak. Medical University of Warsaw.
  2. PATENT PL 226520. Process for the preparation of new polyurethane quinolone prodrugs. **Marcin Sobczak**, Waław L. Kołodziejski, Piotr Goś. Medical University of Warsaw.
  3. PATENT PL 224866. Biodegradable implant and a method for preparing a biodegradable implant. **Marcin Sobczak**, Tomasz Ciach, Marta Andrzejczyk, Ewa Olędzka, Joanna Kolmas, Waław L. Kołodziejski. Medical University of Warsaw.
  4. PATENT PL 211729. Method of obtaining new polyester chinolone pro-drugs. **Marcin Sobczak**, Ewa Olędzka, Ewa Witkowska, Waław L. Kołodziejski. Medical University of Warsaw.
  5. PATENT PL 196403. Method of obtaining polyurethane elastomers incorporating carbonate segments. Zbigniew Florjańczyk, **Marcin Sobczak**, Tomasz Listoś, Cezary Dębek. Warsaw University of Technology.
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