



UNIVERSITATEA
DE MEDICINĂ ȘI FARMACIE
VICTOR BABEȘ | TIMIȘOARA

Faculty of Pharmacy

Department I

Discipline Toxicology, Drug Industry, Management and Legislation

Pos. 42 Associate Professor with the disciplines: Scientific Research Methodology (F, IV), Scientific Research Methodology (FFR, IV), Scientific Research Methodology (ASF-L, II)

1. Purpose and character of scientific research, definition, and characteristics of pharmaceutical scientific research, main objectives of the research
2. Types of scientific research, scientific theory, and its characteristics, general aspects related to scientific research methods
3. Stages of scientific research from problem selection to confirmation/refutation of hypotheses; cyclical character of scientific research stages
4. Methodology of scientific documentation phase (I): significance and types of scientific documentation, stages of bibliographic documentation, usefulness of keywords in scientific documentation
5. Methodology of the scientific documentation phase (II): the main indexes and journals of abstracts used in pharmacy and their access methods
6. Methodology of the scientific documentation phase (III): online documentation methods; main sources of online documentation for specialized journals
7. Notions of ethics and bioethics in scientific research: definitions. European framework and national structures of professional ethics and bioethics, provisions on working protocols including laboratory animals
8. Intellectual Property and Copyright, Informed Consent, Plagiarism
9. Experimental data processing methods (I): types of variables (data) obtained, general aspects regarding the notion of population and sample, precision and accuracy of data obtained
10. Experimental data processing methods (II): data collection and presentation methods, types of experimental errors
11. Experimental data processing methods (III): concepts of central tendency and dispersion, frequency distributions
12. Experimental data processing methods (IV): aspects of statistical analysis of data, concept of probability
13. Experimental data processing methods (V): proposal of an algorithm for choosing the statistical method for the analysis of continuous quantitative variables – z and t tests
Student
14. Experimental data processing methods (VI): proposal of an algorithm for choosing the statistical method for the analysis of continuous quantitative variables – Anova test
15. Experiment optimization strategies: regression and correlation; explanation of the process of estimating a numerical and functional relationship between two variables
16. Experiment optimization strategies: data correlation study, types of correlations.



17. Scientific writing (I): the purpose of scientific writing, types of scientific publications, the general structure of a publication
18. Scientific writing (II): importance of scientific writing style principles - precision, clarity, brevity; choice of journal for publication of scientific material, importance of impact factor in terms of recognition of a researcher's work
19. Scientific writing (III): general rules for writing a scientific article
20. Scientific drafting (IV): dissemination of results, types of oral presentation, general rules observed at oral presentation
21. Scientific writing (V): specific components regarding the structure of the bachelor's and dissertation thesis
22. Scientific writing (VI): specific components regarding the doctoral thesis, importance of originality of the study, delimitation of personal contributions from those resulting from scientific documentation; importance of clear and pertinent conclusions
23. Key principles of good laboratory practice guidelines: phases of laboratory tests (pre-clinical, analytical, and post-analytical phases)
24. Stages of administration of test compounds on experimental animal model and its role in medical-pharmaceutical research
25. Clinical trial models in medical-pharmaceutical research, types of errors that occurred in experimental medical-pharmaceutical research

References

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2. Lukáš Bielik. Methodology of science - an introduction. Comenius University in Bratislava, 2019, ISBN: 978-80-223-4782-2;
3. Taylor RB. Medical writing a guide for clinicians, educators, and researchers. 3rd ed. 2018. Cham: Springer International Publishing; 2018;
4. C.A. Mack. How to write a good scientific paper, Published by SPIE, Bellingham, Washington USA, 2018, ISBN: 9781510619135;
5. E. Socaciu, C. Vică, E. Mihailov, T. Gîbea, V. Mureșan, M. Constantinescu. Etică și integritate academică, Editura Universității din București, 2018, București, România, ISBN 978-606-16-1021-1.
6. Gastel B. and Day RA. How to Write and Publish a Scientific Paper (8th ed.). 2016. Greenwood.
7. Cristina A. Dehelean, Corina Danciu, Georgeta M. Simu, Codruța M. Soica, Elemente de metodologia cercetării științifice, Ed. Victor Babeș Timisoara, 2013
8. Joubert PH, Rogers SM. Strategic Scientific and Medical Writing - The Road to Success. 1st ed. 2015. Berlin, Heidelberg: Springer Berlin Heidelberg; 2015.
9. D.P. Singh. Academic integrity and research quality. University Grants Commission, 2021;
10. Meredith Zozus. The Data Book Collection and Management of Research Data. CRC Press Taylor & Francis Group, 2017, ISBN: 9781498742245;
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14. A. Sandu, Etică și deontologie profesională. 2012, Editura Lumen, Iași, România;
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16. Research Methodology for Scientific Research, Publisher: Dreamtech Press, 2019, ISBN-10:9389447550
17. Margaret Cargill, Patrick O'Connor. Writing Scientific Research Articles - Strategy and Steps, Third Edition, Wiley-Blackwell Publisher, 2022, ISBN 1119717272
18. Academic Integrity and Research Quality, Published by: University Grants Commission, Bahadur Shah Zafar Marg, New Delhi, 2021

Date,

15.12.2023

Discipline coordinator,
Prof. Univ. Dr. Cristina Adriana DEHELEAN