

PhD. Student BÎRCĂ ALEXANDRA CĂTĂLINA

List of papers that include data from the thesis

PAPER LIST

1. **Bîrcă, A.C.**; Chircov, C.; Niculescu, A.G.; Hildegard, H.; Baltă, C.; Roșu, M.; Mladin, B.; Gherasim, O.; Vasile, B.S.; Grumezescu, A.M.; Andronescu E.; Hermenean A.O.; *H₂O₂-PLA-(Alg)₂Ca Hydrogel Enriched in Matrigel® Promotes Diabetic Wound Healing*. *Pharmaceutics* 2023, 15, 857.

Q1, I.F. = 5.4

2. **Bîrcă, A.C.**; Gherasim, O.; Niculescu, A.G.; Grumezescu, A.M.; Neacșu, I.A.; Chircov, C.; Vasile, B.S.; Oprea, O.C.; Andronescu E.; Stan, M.S.; Curuțiu, C.; Dițu, L.M.; Holban, A.M.; *A Microfluidic Approach for Synthesis of Silver Nanoparticles as a Potential Antimicrobial Agent in Alginate–Hyaluronic Acid-Based Wound Dressings*. *International Journal of Molecular Sciences* 2023, 24, 11466.

Q1, I.F. = 5.6

3. **Bîrcă, A.C.**; Gherasim, O.; Niculescu, A.G.; Grumezescu, A.M.; Vasile, B.S.; Mihaiescu, D.E.; Neacșu, I.A.; Andronescu E.; Trușcă, R.; Holban, A.M.; Hudiță, A.; Croitoru, G.A.; *Infection-Free and Enhanced Wound Healing Potential of Alginate Gels Incorporating Silver and Tannylated Calcium Peroxide Nanoparticles*. *International Journal of Molecular Sciences* 2024, 25, 5196.

Q1, I.F. = 5.6

Co-author publications related to the thesis theme

1. Stoica (Oprea), A.E.; **Bîrcă, A.C.**; Pițigoi (Pandel) M.L.; Grumezescu A.M.; Vasile, B.S.; Iordache, F.; Fikai, A.; Andronescu, E.; *Nanostructured zinc oxide for wound dressings*. *U.P.B. Scientific Buletin – Series B: Chemistry and Materials Sciences* 2024, 86,2.

2. Puiu, R.A., **Birca, A.C.**, Grumezescu, V., Duta, L., Oprea, O.C., Holban, A.M., Hudiță, A., Gălățeanu, B., Balaure, P.C., Grumezescu, A.M., Andronescu, E.; Multifunctional Polymeric Biodegradable and Biocompatible Coatings Based on Silver Nanoparticles: A Comparative In Vitro Study on Their Cytotoxicity towards Cancer and Normal Cell Lines of Cytostatic Drugs versus Essential-Oil-Loaded Nanoparticles and on Their Antimicrobial and Antibiofilm Activities. *Pharmaceutics* 2023, 15, 1882.
3. Stoica, A.E., Albuleț, D., **Bîrcă, A.C.**, Iordache, F., Fikai, A., Grumezescu, A.M., Andronescu, E., Marinescu, F., Holban, A.M.; Electrospun Nanofibrous Mesh Based on PVA, Chitosan, and Usnic Acid for Applications in Wound Healing. *Int. J. Mol. Sci.* 2023, 24, 11037.
4. Chircov, C., **Bîrcă, A.C.**, Vasile, B.S., Oprea, O.C., Huang, K.S., Grumezescu, A.M.; Microfluidic Synthesis of -NH₂- and -COOH-Functionalized Magnetite Nanoparticles. *Nanomaterial* 2022, 12, 3160.
5. Spirescu, VA., Şuhan, R., Niculescu, A.G., Grumezescu, V., Neguț, I., Holban, A.M., Oprea, O.C., **Birca, A.C.**, Vasile, B.S., Grumezescu, A.M., Bejenaru, L.E., Mogoşsanu G.D., Biofilm-resistant nanocoatings based on ZnO nanoparticles and linalool. *Nanomaterials* 2021, 11, 2564.
6. Rayyif, SMI., Mohammed, HB., Curutiu, C., **Birca, A.C.**, Grumezescu, AM., Vasile, BS., Ditu, LM., Lazar, V., Chifiriuc, MC., Mihaescu, G., Holban, AM.; ZnO Nanoparticles-Modified Dressings to Inhibit Wound Pathogens. *Materials* 2021, 14, 3084.
7. Gherasim, O., Popescu, RC., Grumezescu, V., Mogosanu, GD., Mogoanta, L., Iordache, F., Holban, AM., Vasile, BS., **Birca, A.C.**, Oprea, OC., Grumezescu, AM., Andronescu, E.; MAPLE Coatings Embedded with Essential Oil-Conjugated Magnetite for Anti-Biofilm Applications. *Materials* 2021, 14, 1612.
8. Chircov, C., **Bîrcă, A.C.**, Grumezescu, A.M.; Vasile, B.S., Oprea, O.C., Nicoară, A.I., Yang, C.H., Huang, K.S., Andronescu, E.; Synthesis of magnetite nanoparticles through a lab-on-chip device. *Materials* 2021, 14, 5906.
9. Niculescu, AG., Chircov, C., **Birca, AC.**, Grumezescu, AM.; Nanomaterials Synthesis through Microfluidic Methods: An Updated Overview. *Nanomaterials* 2021, 11, 864.

10. Niculescu, AG., Chircov, C., **Birca, AC.**, Grumezescu, AM.; Fabrication and Applications of Microfluidic Devices: A Review. *International Journal of Molecular Sciences* 2021, 22, 2011.
11. Gherasim, O., Puiu, RA., **Birca, AC.**, Burdusel, AC., Grumezescu, AM.; An Updated Review on Silver Nanoparticles in Biomedicine. *Nanomaterials* 2020, 10, 2318.
12. Chircov, C., **Birca, AC.**, Grumezescu, AM., Andronescu, E.; Biosensors-on-Chip: An Up-to-Date Review. *Molecules* 2020, 25, 6013.
13. Vasile, BS., **Birca, AC.**, Musat, MC., Holban, AM.; Wound Dressings Coated with Silver Nanoparticles and Essential Oils for The Management of Wound Infections. *Materials* 2020, 13, 1682.

SCIENTIFIC MEETINGS ATTENDED

1. Cross-shape Microfluidic Platform for Silver Nanoparticles: Synthesis Focused on Alginate Wound Dressings; **Alexandra Cătălina Bîrcă**, Adelina Gabriela Niculescu, Alexandru Mihai Grumezescu, Bogdan Ștefan Vasile, Ecaterina Andronescu; The 5th Conference of the Romanian Electron Microscopy Society – C.R.E.M.S (2023)
2. Solid Lipid Nanoparticles for acne treatment; **Alexandra Cătălina Bîrcă**, Luca Huștiuc, Alexandru Mihai Grumezescu, Cristina Chircov, Bogdan Ștefan Vasile, Alina Maria Holban, Ecaterina Andronescu; 22nd Romanian International Conference on Chemistry and Chemical Engineering – RICCE 22. (2022)
3. Collagen Wound Dressings Loaded with CuO- and ZnO-based Microspheres; **Alexandra Cătălina Bîrcă**, Mihai Adrian Minculescu, Alexandru Mihai Grumezescu, Cristina Chircov, Ecaterina Andronescu; Applications of Chemistry in Nanosciences and Biomaterials Engineering – NanoBioMat 2022 – Summer Edition. (2022)
4. Synthesis of Nanoparticles through Lab-on-Chip Devices; **Alexandra Cătălina Bîrcă**, Alexandru Mihai Grumezescu, Ecaterina Andronescu; Applications of Chemistry in Nanosciences and Biomaterials Engineering – NanoBioMat 2021 – Winter Edition. (2021)
5. Regenerative medicine testing models; **Alexandra Cătălina Bîrcă**, Ecaterina Andronescu, Alexandru Mihai Grumezescu; Applications of Chemistry in Nanosciences and Biomaterials Engineering – NanoBioMat 2020 (2020)