

**Student research group on:  
Designing pharmaceutical and cosmetics formulations  
Academic year 2017-2018**

**Acronym:**

**PHARMCOSMART**

**Permanent members:**

CIURBA Adriana-Daniela, Professor, PhD (**Head Coordinator**)

TODORAN Nicoleta, Associated Professor, PhD (**Coordinator**)

RÉDAI Emőke Margit, Lecturer, PhD (**Coordinator**)

ANTONOAEA Paula, Instructor, PhD student

VLAD Robert-Alexandru, PhD student

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**Students currently involved:**

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SZÁSZ Emőke-Szidónia

SZÁSZ Ildikó

ŞTEBLEA Alexandra-Maria

TAFLAN Andreea-Maria

TIRAN Maria

TRIFAN Elena-Beatrice  
TUȘINEAN Anamaria

**Research topics:**

- Development of new pharmaceutical or cosmetic formulations: tablets (classic/modified release), pellets, hydrophilic gels, microemulsions.
- Active pharmaceutical ingredient and excipients interactions (DSC, IR analysis)
- Manufacturing techniques and quality control tests presented in illustration form.
- Mathematical and statistical analysis methods applied in studies of pharmaceutical or cosmetic formulation, using some specific software.
- Cosmetic care techniques and alternative treatment methods.

**Research infrastructure (relevant items):** eccentric and rotary tablet press, automated dissolution tester, rheometer/viscometer; DSC (differential scanning calorimeter), pH/conductometer, UV/VIS spectrophotometer, HPLC-UV, LC-MS/MS, GC-FID; Mini Extruder; Skin Analyzer, Cosmetic Combine.

**Relevant *in extenso* ISI/BDI articles of the research team (\*student):**

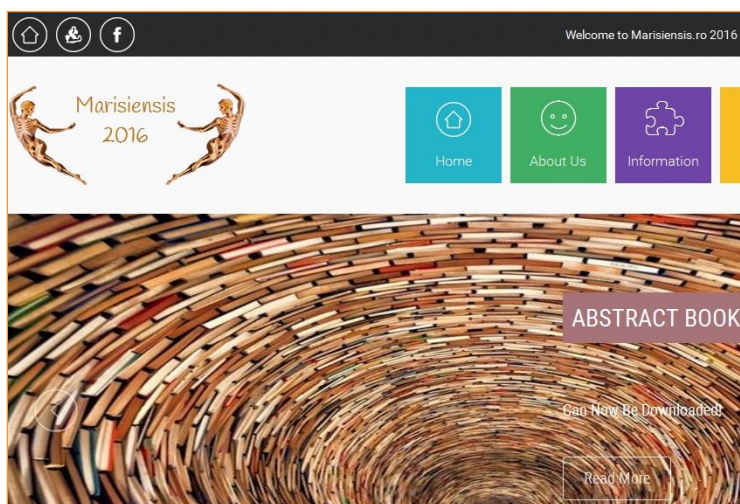
1. Ciurba A, Rédai E, **\*Pop I**, Antonoaea P, Todoran N. *Kinetics and Mechanism of Drug Release from Loratadine Orodispersible Tablets Developed without Lactos*. Acta Medica Marisiensis **2017**, 63(1): 23-26; DOI: 10.1515/amma-2017-0004; pISSN 0014-8237, eISSN 2247-6113; **BDI: EBSCO**.
2. Hancu G, **\*Neacșu AM**, Papp LA, Ciurba A, *Simultaneous determination of amoxicillin and clavulanic acid in pharmaceutical preparations by capillary zone electrophoresis*, Bras J Pharm Sci **2016**, 52(2), 281-286, IF 2016: 0,485
3. Ciurba A, Todoran N, **\*Pop M**, Antonoaea P, Rédai E, Al Hussein S. *Modification of the loratadine release mechanism induced by disintegrants in orodispersible tablets*. 10th World Meeting on Pharmaceutics, Biopharmaceutics and Pharmaceutical Technology, 4-7 April 2016, Glasgow, United Kingdom; Book of Abstracts **2016**, eBook OCLC: 951387404; **BDI: WORLDCAT**
4. Hancu G, **\*Sasebesi A**, Rusu A, Kelemen H, Ciurba A. *Study of the electrophoretic behavior of cephalosporins by capillary zone electrophoresis*. Adv Pharm Bull **2015**, 5(2): 223-229, pISSN 2228-5881, eISSN 2551-7308; IF 2016: 0,875
5. Ciurba A, Hancu G, **\*Cojoclea LM**, Sipos E, Todoran N - *Development of new formulation and its evaluation by capillary electrophoresis of tablets containing tramadol hydrochloride and paracetamol*, Pharm Dev Technol, **2013**, 19(7): 833-838; pISSN 1083-7450, e1097-9867; IF 2013: 1,335.

**Student's participation at scientific meetings and publications:**

- **PBP World Meeting - World Meeting on Pharmaceutics, Biopharmaceutics and Pharmaceutical Technology** ([www.worldmeeting.org/](http://www.worldmeeting.org/)):



1. Ciurba A, Todoran N, **Pop M\***, Antonoaea P, Rédai E, Al Hussein S – *Modifications of the loratadine release mechanism induced by disintegrants in orodispersible tablets*, 10th World Meeting on Pharmaceuticals, Biopharmaceutics and Pharmaceutical Technology, Glasgow, United Kingdom 4 to 7 April **2016**, Abstract Book.
- **Marisiensis - International Scientific Congress for Students, Young Physicians and Pharmacists, Tîrgu Mureş, Romania** (<http://marisiensis.ro/>):



2. **\*Biro A**, Ciurba A - *Transepidermal Water Loss – in vitro and in vivo noninvasive measurement of skin barrier function*, Acta Medica Marisiensis, **2016**, 61(Supl.1): 88 (ISSN-L 2068-3324, ISSN 2068-3324).
3. **\*Muntean RR**, Antonoaea P, Todoran N - *Carboxymethyl cellulose vs. Hidroxyethyl cellulose in developing the formulation of ibuprofen gel for gingival application*, Acta Medica Marisiensis, **2016**, 61(Supl.1): 90 (ISSN-L 2068-3324, ISSN 2068-3324).

4. **\*Asoltanei C, \*Hărășan OR**, Todoran N, Ciurba A – *Using scientific software for mathematical and statistical analysis in developing pharmaceutical or cosmetic formulations*, Acta Medica Marisiensis, **2015**, 61(Supl.1): 91-92 (ISSN-L 2068-3324, ISSN 2068-3324).
5. **\*Borșan AM**, Bogdan AA, Todoran N – *Optimizing pharmaceutical formulation using design of experiment with specialized software*, Acta Medica Marisiensis, **2015**, 61(Supl.1): 90-91 (ISSN-L 2068-3324, ISSN 2068-3324).
6. **\*Pop IV**, Ciurba A, Todoran N – *Pharmaco-technological properties of loratadine fast-disintegrating tablets formulated without lactose*, Acta Medica Marisiensis, **2015**, 61(Supl.1): 92 (ISSN-L 2068-3324, ISSN 2068-3324).
7. **\*Simion EA**, Butucea A\*, Todoran N – Arguments in sustaining the necessity of a guide for community pharmacists in counselling patients about common skin disorders, Acta Medica Marisiensis, **2015**, 61(Supl.1): 84 (ISSN-L 2068-3324, ISSN 2068-3324).
8. **\*Simion EA**, Todoran N- *Acne treatments: A review of the present for indentifying the future research perspectives*, Acta Medica Marisiensis, **2014**, 60(Supl.3): 111 (ISSN-L 2068-3324, ISSN 2068-3324).
9. **\*Niculoiu I, \*Petrovici R**, Todoran N - *Reflexotherapy: A massage which can function as a treatment*, Acta Medica Marisiensis, **2014**, 60(Supl.3): 114 (ISSN-L 2068-3324, ISSN 2068-3324).
10. **\*Cojoclea L**, Ciurba A, Donath G - *Development of tramadol hydrochloride and paracetamol tablets using different excipients*, Acta Medica Marisiensis, **2011**, 57 (Supl.1): 74 (ISSN 2068-3324).

- **Symposium - University Days, Tîrgu Mureș, Romania** (<http://zilele.umftgm.ro/>):



11. Todoran N, **\*Răuță D**, Antonoaea P, Rédai EM, Ciurba A, Sipos E - *Dissolution curve fitting using statistical software*, Acta Medica Marisiensis, **2014**, 60 (Supl.4): 60 (ISSN 2068-3324).
12. Antonoaea P, Todoran N, Ciurba A, Muntean DL, **\*Lirca C**- *The preliminary experimental approach in developing a single-layer drug-in-adhesive transdermal systems*, Acta Medica Marisiensis, **2012**, 58 (Supl3): 66 (ISSN 2068-3324).
13. Todoran N, Ciurba A, Antonoaea P, **\*Răuță D** - *Mathematical modeling of an in-vitro dissolution profile*, Acta Medica Marisiensis, **2012**, 58 (Supl.3): 71 (ISSN 2068-3324).

14. Todoran N, Drașoveanu A, Imre S, Ciurba A, **\*Iștoan RO** - *Two methods for testing the whitening teeth capacity of hydrogen peroxide used in dental gels*, Acta Medica Marisiensis, **2012**, 58 (Supl.3): 70 (ISSN 2068-3324).

- **Romanian National Congress of Pharmacists, Romania** (<http://www.congresfarmacie2014.ro/>):



15. Ciurba A, Todoran N, **\*Vrinceanu A**, Eșianu S, Antonoaea P, Rédai EM - *Rheological and mucoadhesive properties of buccal gels containing hydroalcoholic extract*, CNFR, ediția a XV-a, Iași, 24-27.09.2014; vol rez: 305 (ISBN 978-606-544-252-8).