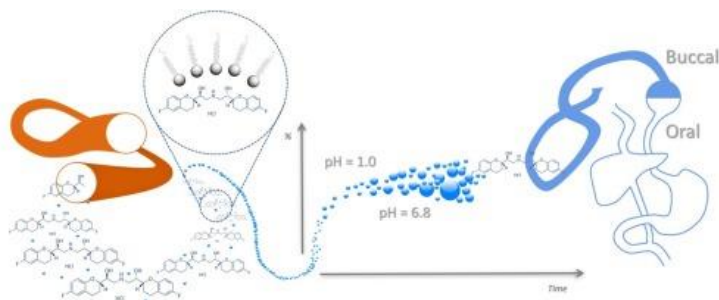


Student research group on early phase drug development



Acronym: EPhD2

Permanent members:

Emese Sipos, PhD, professor (Head of the group)

Emőke Rédei, PhD, lecturer

Zoltán - István Szabó, PhD, lecturer

Contact:

University of Medicine and Pharmacy of Tîrgu Mureș

Faculty of Pharmacy

Gheorghe Marinescu street, 38

Postal code: 540139

Phone: +4 0265 215 551 / 125

Email: emese.sipos@umftgm.ro

Students currently involved:

Koppány Bardócz

Gréta Vincze

István-Sebastian Nagy

Melánia-Mária Beluska

Mátis Márta

Szócs Paula

Fekete Bernadette

Bóbis Ildikó

Csatári Tamás

Ciocan Ágnes

Kacsó Andrea

Hartman Erna

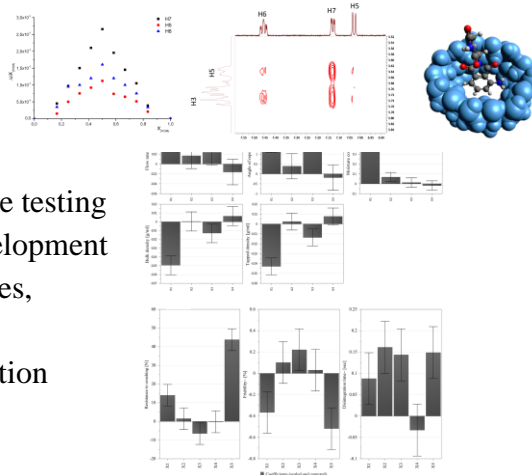
Klós Beáta

Kósa Nóra

Bodosi Noemi.

Research topics

- Improving bioavailability of poorly soluble drugs
- Nanofibers and cyclodextrin complexes
- Characterization of cyclodextrin complexation, including chiral separation method development
- Formulation and compatibility studies, stability and storage testing
- Quality by design in analytical and in pharmaceutical development
- *In vitro* dissolution testing – comparative dissolution studies, discriminative dissolution method development/validation
- Analytical method evaluation/development/transfer/validation



Research infrastructure (relevant items): HPLC-UV, CE-UV, UV/VIS spectrophotometers; Erweka dissolution testers; DSC; FT-IR; viscosimeter

Relevant *in extenso* ISI articles on research items (as main authors: first author, corresponding author and last author; *students):

Zoltán-István Szabó, Réka Gál*, Zsolt Gáll, Szende Vancea, **Emőke Rédei**, Ibolya Fülöp, **Emese Sipos**, Gabriella Donáth-Nagy, Béla Noszál, Gergő Tóth: Cyclodextrin complexation improves aqueous solubility of the antiepileptic drug, rufinamide: solution and solid state characterization of compound-cyclodextrin binary systems. *J Incl Phenom Macrocycl Chem*, 88: 43-52. FI 1.095

Zoltán-István Szabó, Réka Gál*, Levente Szócs, Róbert Ludmerczki, Daniela-Lucia Muntean, Béla Noszál, Gergő Tóth: Validated capillary electrophoretic method for the enantiomeric quality control of R-praziquantel, *Electrophoresis* 2017, 38:1886-1894. FI 2.744

Emese Sipos, Andrea Ramona Oltean*, **Zoltán-István Szabó, Emőke Margit Rédei**, Gabriella Donáth-Nagy: Application of SeDeM expert systems in preformulation studies of pediatric ibuprofen ODT tablets, *Acta Pharmaceutica* 2017, 67:237-246. FI 1.288

Zoltán-István Szabó, Tímea Szabó*, **Rédei Emőke, Emese Sipos**: Validated HPLC method for determination of nebivolol in pharmaceutical dosage form and *in vitro* dissolution studies. *Studia Universitatis Babes-Bolyai, Chemia* 2014, 59 (4) FI 0.148

Emese Sipos, Noémi Szász*, Szende Vancea, Adriana Ciurba: Evaluation and selection of gel base for the formulation of dexpanthenol products. *Trop J Pharm Res* 2014, 13:1987-1992. FI: 0,495 (2013)

Rita Ambrus, **Matild Gergely***, Alenka Zvonar, Piroska Szabó-Révész, **Emese Sipos**: The role of co-spray-drying procedure in the preformulation of intranasal propranolol hydrochloride, *Acta Chim Slov* 2014, 61:601-607. FI: 0,810 (2013)

Participation at scientific meetings:

Tímea Rebeka*, **Zoltán-István Szabó**, **Emőke Rédei**, **Emese Sipos**, Formulation and study of fluoxetine containing mucoadhesive films, 7th BBBB International Conference on Pharmaceutical Sciences New Trends and Achievements in Pharmaceutical Sciences and Pharmacy Practice, 5-7 October 2017 – Hotel Füred Soa & Conference – Balatonfüred, Hungary.

Réka Gál*, Enantiomeric separation of alkylamine antihistamines by liquid chromatography on an ovomucoid stationary phase, Scientific Session of Hungarian Students, 2015 – first prize, *Pharmacy Session*, 25-28.03.2015, Tg. Mureș, *Orvostudományi Értesítő*, 2015, 88(Suppl. 1):135.

Réka Gál*, Characterization of rufinamide-cyclodextrin complexes, Scientific Session of Hungarian Students, 2016 – special prize, *Pharmacy Session*

Réka Gál*, **Zoltán – István Szabó**, Gergő Tóth, **Emőke Rédei**, Zsolt Gáll, Gabriella Donáth-Nagy, **Emese Sipos**, Béla Noszál, Gergő Tóth: Increasing the water solubility of a third generation antiepileptic drug by complexing with cyclodextrins, *Scientific Session of the Transylvanian Museum Society*, 20-23.04.2016, Tg. Mureș, *Orvostudományi Értesítő*, 2016, 89(Suppl. 2):16.

Zoltán-István Szabó, **Réka Gál***, Béla Noszál, Gergő Tóth: Evaluation of enantioselective cyclodextrin complexation of neutral compounds by capillary electrophoresis, *Scientific Session of the Transylvanian Museum Society*, 20-23.04.2016, Tg. Mureș, *Orvostudományi Értesítő*, 2016, 89(Suppl. 2):48.



**16th CEEPUS Symposium
and Summer School on Bioanalysis**
July 6 - 15, 2016, Warsaw, Poland

Zoltán-István Szabó, **Réka Gál***, Béla Noszál, Gergő Tóth: Development and validation of a cyclodextrin-modified capillary electrophoresis method for the enantiomeric quality control of R-praziquantel, 16th CEEPUS Symposium and Summer School on Bioanalysis. 6-15.07.2016, Warsaw, Poland, Abstract Book, p.29



11th Central European Symposium
on Pharmaceutical Technology
SEPTEMBER 22ND - 24TH 2016, BELGRADE

Emese Sipos, Blanka Selyem*, Emőke Rédei, Péter Szabó, Romána Zelkó: Preformulation studies for the prediction of the fiber forming ability of poorly soluble drug containing polymer solutions, 11th Central European Symposium on Pharmaceutical Technology, 22-24 september 2016, Belgrade, Serbia, Archives of of Pharmacy (Arh.Farm.) 2016, 66:268-270

Dorottya Balázs*, Utilization of modern substances and methods to increase NSAIDS' biodisponibility, Scientific Session of Hungarian Students, 2015 – *Richter Special Prize, Pharmacy Session*, 25-28.03.2015, Tg. Mureș, Orvostudományi Értesítő, 2015, 88(Suppl. 1):133.

Tímea Nagy*, Kinga Emese Sepsi*, Preparation of Carbopol-based nanofibers by electrospinning method, Scientific Session of Hungarian Students, 2015 – *second prize, Pharmacy Session*, 25-28.03.2015, Tg. Mureș, Orvostudományi Értesítő, 2015, 88(Suppl. 1):136.