

A N E X A 4 . 1Nume Prenume: **Gavan Alexandru Dan**

Gradul didactic:

Instituția unde este titular:

Facultatea: Facultatea de Științe Medicale și ale Sănătății

Departamentul: Științe Medicale și ale Sănătății

L I S T A**lucrărilor științifice în domeniul disciplinelor din postul didactic****A. Teza de doctorat**

Quality by Design approach and Process Analytical Technology implementation for the manufacturing of solid oral dosage forms (Ro: Aplicarea conceptului de Calitate prin Design și implementarea Tehnologiei de Analiză a Procesului în fabricarea formelor farmaceutice solide orale), calificativ Excelent/Summa cum laude, coordonator Prof. Dr. Ioan Tomuță, 2019, Cluj-Napoca

B. Cărți și capitole în cărți publicate în ultimii 10 ani

1. S. Mirel, L. Coobațiu, **A. Gavan**, A. Pusta, Terapia unor afecțiuni cutanate din perspective farmaceutice și medicale – Pansamente moderne utilizate în terapia plăgilor, în Editura Medicală Universitară “Iuliu Hațieganu” Cluj-Napoca, 2022: pp 357-584.
2. Tomuta, A. Porfire, T. Casian, **A. Gavan**, Multivariate Calibration for the Development of Vibrational Spectroscopic Methods, in: M. Stauffer (Ed.), Calibration Valid. Anal. Methods, IntechOpen, 2018: pp. 35–58.

C. Lucrări indexate ISI/BDI publicate în ultimii 10 ani

1. **A. Gavan**, A.M. Toiu, M. Tamaș, I. Tomuță, Dry rose petal extracts and compressed lozenges: Formulation and NIR – Chemometric quantification of active principles, Farmacia. 65 (2017) 577–583.
2. **A. Gavan**, A. Porfire, C. Marina, I. Tomuta, Formulation and pharmaceutical development of quetiapine fumarate sustained release matrix tablets using a QbD approach, Acta Pharm. 67 (2017). doi:10.1515/acph-2017-0009.
3. **A. Gavan**, L. Colobatiu, A. Mocan, A. Toiu, I. Tomuta, Development of a NIR Method for the In-Line Quantification of the Total Polyphenolic Content: A Study Applied on Ajuga genevensis L. Dry Extract Obtained in a Fluid Bed Process, Molecules. 23 (2018) 2152. doi:10.3390/molecules23092152.
4. T. Casian, S. Iurian, **A. Gavan**, C. Revnic, S. Porav, A. Porfire, L. Vlase, I. Tomuță, Near Infra-Red spectroscopy for content uniformity of powder blends – Focus on calibration set development, orthogonality transfer and robustness testing, Talanta. 188 (2018). doi:10.1016/j.talanta.2018.05.101.
5. T. Casian, S. Iurian, **A. Gavan**, C. Revnic, S. Porav, A. Porfire, L. Vlase, I. Tomuță, Near Infra-Red spectroscopy for content uniformity of powder blends – Focus on calibration set development,

- orthogonality transfer and robustness testing, *Talanta*. 188 (2018) 404–416. <https://doi.org/10.1016/J.TALANTA.2018.05.101>.
6. L. Colobatiu, **A. Gavan**, A. Mocan, C. Bogdan, S. Mirel, I. Tomuta, Development of bioactive compounds-loaded chitosan films by using a QbD approach – a novel and potential wound dressing material, *React. Func. Polym.* 138 (2019) 46–54. doi:10.1016/j.reactfunctpolym.2019.02.013.
7. L. Colobatiu, **A. Gavan**, A.-V. Potarniche, V. Rus, Z. Diaconeasa, A. Mocan, I. Tomuta, S. Mirel, M. Mihaie, Evaluation of bioactive compounds-loaded chitosan films as a novel and potential diabetic wound dressing material, *React. Funct. Polym.* 145 (2019). <https://doi.org/10.1016/j.reactfunctpolym.2019.104369>.
8. **A. Gavan**, B. Sylvester, T. Casian, I. Tomuta, In-line fluid bed granulation monitoring by NIR spectroscopy. Method development and validation, *Farmacia*. 67 (2019) 248–257. doi:10.31925/farmacia.2019.2.8.
9. **A. Gavan**, S. Iurian, T. Casian, A. Porfire, S. Porav, I. Voina, A. Oprea, I. Tomuta, Fluidised bed granulation of two APIs: QbD approach and development of a NIR in-line monitoring method, *Asian J. Pharm. Sci.* (2019) 1–12. doi:10.1016/j.ajps.2019.03.003.
10. C. Tanase, A. Mocan, S. Cosarca, **A. Gavan**, A. Nicolescu, A.-M. Gheldiu, D. Vodnar, D.L. Muntean, O. Crisan, Biological and Chemical Insights of Beech (*Fagus sylvatica* L.) Bark : A Source of Bioactive Compounds with Functional Properties, *Antioxidants*. 8 (2019) 1–14. doi:10.3390/antiox8090417.
11. **A. Gavan**, C. Bogdan, L. Rus, P. Rasteiu, I. Toma, M. Achim, S. Iurian, NIR spectroscopy coupled with multivariate data analysis in the prediction of the characteristics of mannitol lyophilized cakes, *Rom. J. Pharm. Pract.* 14 (2021) 130–138. <https://doi.org/10.37897/rjphp.2021.3.4>.
12. T. Casian, **A. Gavan**, S. Iurian, A. Porfire, V. Toma, R. Stiufiuc, I. Tomuta, Testing the limits of a portable NIR spectrometer: Content uniformity of complex powder mixtures followed by calibration transfer for in-line blend monitoring, *Molecules*. 26 (2021). <https://doi.org/10.3390/molecules26041129>.
13. C. Moldovan, O. Frumuzachi, M. Babotă, L. Menghini, S. Cesa, **A. Gavan**, C.R. Sisea, C. Tanase, M.I. Dias, C. Pereira, I.C.F.R. Ferreira, G. Crișan, A. Mocan, L. Barros, Development of an optimized drying process for the recovery of bioactive compounds from the autumn fruits of *berberis vulgaris* L. and *crataegus monogyna* Jacq, *Antioxidants*. 10 (2021). <https://doi.org/10.3390/antiox10101579>.
14. D. Muntean, A. Porfire, C. Alecu, S. Iurian, T. Casian, **A. Gavan**, I. Tomuta, A non-destructive NIR spectroscopic method combined with chemometry for simultaneous assay of paracetamol and caffeine in tablets, *Rom. J. Pharm. Pract.* 57 (2021) 68–75. <https://doi.org/10.37897/rjphp.2021.2.2>.
15. C. Moldovan, M. Babota, A. Mocan, L. Menghini, S. Cesa, **A. Gavan**, C. Sisea, D.C. Vodnar, M.I. Dias, C. Pereira, I.C.F.R. Ferreira, G. Crisan, L. Barros, Optimization of the drying process of autumn fruits rich in antioxidants: a study focusing on rosehip (*Rosa canina* L.) and sea buckthorn (*Elaeagnus rhamnoides* (L.) A. Nelson) and their bioactive properties, *Food Funct.* 12 (2021) 3939–3953. <https://doi.org/10.1039/d0fo02783a>.
16. M. Tămaș, O. Vostinaru, L. Soran, I. Lung, O. Opris, A. Toiu, **A. Gavan**, E. Dinte, C. Mogosan, Antihyperuricemic, anti-inflammatory and antihypertensive effect of a dry extract from *solidago virgaurea* L. (asteraceae), *Sci. Pharm.* 89 (2021). <https://doi.org/10.3390/scipharm89020027>.

17. T. Casian, A. Casian, **A. Gavan**, I. Tomuță, Influence of Dissolution Conditions on the Dissolution Rate and Release Mechanism of Ketoprofen From Extended Release Hydrophilic Matrix Systems, *Farmacia*. 70 (2022) 331–343. <https://doi.org/10.31925/farmacia.2022.2.20>.
18. **A. Gavan**, B. Sylvester, A. Porfire, S. Iurian, T. Casian, I. Tomuta, NIR spectroscopy for monitoring of the critical manufacturing steps and quality attributes of paliperidone prolonged release tablets, *J. Mol. Struct.* 1247 (2022) 131326. <https://doi.org/10.1016/j.molstruc.2021.131326>.
19. **A. Gavan**, L. Colobatiu, D. Hanganu, C. Bogdan, N.K. Olah, M. Achim, S. Mirel, Development and Evaluation of Hydrogel Wound Dressings Loaded with Herbal Extracts, *Processes*. 10 (2022). <https://doi.org/10.3390/pr10020242>.
20. D.E. Gavan, **A. Gavan**, C.I. Bondor, B. Florea, F.L. Bowling, G.V. Inceu, L. Colobatiu, SUDOSCAN, an Innovative, Simple and Non-Invasive Medical Device for Assessing Sudomotor Function, *Sensors*. 22 (2022). <https://doi.org/10.3390/s22197571>.
21. T. Casian, S. Iurian, **A. Gavan**, A. Porfire, A.L. Pop, S. Crisan, A.M. Puscas, I. Tomuta, In-Depth Understanding of Granule Compression Behavior under Variable Raw Material and Processing Conditions, *Pharmaceutics*. 14 (2022). <https://doi.org/10.3390/pharmaceutics14010177>.
22. M. Babotă, O. Frumuzachi, **A. Găvan**, C. Iacoviță, J. Pinela, L. Barros, I.C.F.R. Ferreira, L. Zhang, L. Lucini, G. Rocchetti, C. Tanase, G. Crișan, A. Mocan, Optimized ultrasound-assisted extraction of phenolic compounds from *Thymus comosus* Heuff. ex Griseb. et Schenk (wild thyme) and their bioactive potential, *Ultrason. Sonochem.* 84 (2022) 1–10. <https://doi.org/10.1016/j.ultsonch.2022.105954>.
23. H.F. Coman, A. Rusu, N.A. Gavan, C.I. Bondor, **A.D. Gavan**, C.G. Bala, Recent Trends in Diabetic and Nondiabetic Neuropathies: A Retrospective Hospital-based Nationwide Cohort Study, *Endocr. Pract.* 30 (2024) 901–907. <https://doi.org/10.1016/j.eprac.2024.07.011>.
24. H.F. Coman, B. Stancu, O.A. Andercou, R. Ciocan, C.D. Gherman, A. Rusu, N.A. Gavan, C.I. Bondor, **A.D. Gavan**, C.G. Bala, A. Necula, T. Ana, T. Tatiana, P.L. Haldenwang, Five-Year Trends of Vascular Disease-Related Amputations in Romania: A Retrospective Database Study, *J. Clin. Med.* 13 (2024). <https://doi.org/10.3390/jcm13092549>.

D. Lucrări publicate în ultimii 10 anii în reviste și volume de conferințe cu referenți (neindexate)

- Reviste

1.

- Selecție cu maximum 20 lucrări în volume de conferințe

1.

E. Brevete obținute în întreaga activitate

1. M. Tămaș, O. Vostinaru, L. Dobjanschi, E. Dinte, C. Mogosan, **A. Gavan**, A.M. Toiu, H. Popa, Extract uscat de origine vegetală destinat prevenției și tratamentului gutei, OSIM, 2024.

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Semnătura: