

INFORMATIONS PERSONNELLES

TATU CALIN ADRIAN

- **Nationalité :** Roumaine
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EXPÉRIENCE PROFESSIONNELLE

2007 – Présent Maître de conférences (Associate Professor)

Université de Médecine et de Pharmacie Victor Babeş, Timisoara, Roumanie

Département d'Immunologie, Sciences de l'Environnement, Sciences Fonctionnelles (III)

- **Missions :** Activités d'enseignement et de recherche

01/2005 – Présent Chercheur associé, Santé Environnementale

US Geological Survey (USGS), Reston, VA, États-Unis

03/2001 – 12/2006 Laboratoire Clinique

Hôpital Clinique d'Urgence du Comté de Timisoara, Roumanie

03/2001 – 12/2006 Chargé de cours (Lecturer)

Université de Médecine et de Pharmacie Victor Babeş, Département d'Immunologie

02/1999 – 03/2001 Assistant de recherche

Institut de Santé Publique de Timisoara, Roumanie

01/1997 – 01/1999 Chercheur postdoctoral

Université de Caroline du Nord à Chapel Hill, Département de Microbiologie et d'Immunologie, NC, États-Unis

ÉDUCATION ET FORMATION

2005 Doctorat (PhD) en Sciences Médicales : Médecine Interne

Université de Médecine et de Pharmacie Victor Babeş, Timisoara, Roumanie

- **Sujet :** Étiologie de la néphropathie endémique des Balkans

2005 Médecin Spécialiste – Biologie Clinique (Laboratoire Clinique)

Hôpital Clinique d'Urgence du Comté de Timisoara, Roumanie

2000 – 2004 Diplôme d'État de Docteur en Médecine (MD)

Université de Médecine et de Pharmacie Victor Babeș, Timisoara, Roumanie

1990 – 1996 Médecine Générale

Université de Médecine et de Pharmacie Victor Babeș, Timisoara, Roumanie

COMPÉTENCES PERSONNELLES

- **Langue maternelle :** Roumain
- **Autre langue :** Anglais (Niveau C1 - Utilisateur expérimenté, Toefl/Cambridge)
- **Compétences en communication :** Bonnes aptitudes acquises par l'enseignement auprès des étudiants et la direction de cours.
- **Compétences organisationnelles / managériales :** Chef de projet ou membre clé de 11 projets de recherche ; actuellement responsable d'une équipe de 5 personnes.
- **Compétences techniques :** Expertise en microscopie confocale, cytométrie en flux (incluant le tri cellulaire FACS) et spectrométrie de masse.
- **Compétences numériques :** Maîtrise de la suite Office et des logiciels de retouche photo (photographe amateur).
- **Autres compétences :** Ingénierie.
- **Permis de conduire :** Catégorie B.

LISTE DES PUBLICATIONS REPRÉSENTATIVES

(Note : Les titres de publications scientifiques restent généralement dans leur langue de publication originale, l'anglais, pour permettre aux recruteurs de les retrouver facilement dans les bases de données comme PubMed.)

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- 1. E Pahonțu, CED Pîrvu, LI Socea, TV Apostol, C Oprean, CA Tatu et al. (2025) Biomolecular Interaction, Molecular Docking, Antimicrobial, Antioxidant, Antitumor, Cell Cycle Analysis, and Annexin V/PI Assay Efficiency of Some Co (II), Cu (II), Mn (II), Ni (II), Pd (II), and Pt (II) Complexes With a Halogenated Bidentate Schiff Base. *Applied Organometallic Chemistry* 39 (12), e70462.
- 2. MA Pricop, A Negrea, M Ciopec, IB Pascu, C Oprean, AT Lukinich-Gruia, MI Cristea, A Ivan, V Paunescu, CA Tatu (2025) Aristolochic Acid I Adsorption onto Activated Carbon: Kinetics, Equilibrium, and Thermodynamic Studies. *Processes* 13 (11), 3397.
- 3. Ivan A, Pricop MA, Lukinich-Gruia AT, Cristea IM, Negrea A, Pascu IB, Calma CL, Paunescu A, Paunescu V, Tatu CA. (2025) Cellular Metabolic Responses to Copper Nanoparticles: Comparison Between Normal and Breast Cancer Cells. *Int J Mol Sci* Nov 4;26(21):10716. doi: 10.3390/ijms262110716.
- 4. Watz CG, Mihali CV, Oprean C, Krauss Maldea L, Tatu CA, Nicolov M, Sîrbu IO, Dehelean CA, Socoliuc V, Moacă EA. (2025) Fe3O4@β-cyclodextrin Nanosystem: A Promising Adjuvant Approach in Cancer Treatment. *Nanomaterials (Basel)* Aug 4;15(15):1192. doi: 10.3390/nano15151192.
- 5. Ivan A, Lukinich-Gruia AT, Cristea IM, Pricop MA, Calma CL, Simina AG, Tatu CA, Galuscan A, Păunescu V. (2024) Quercetin and Mesenchymal Stem Cell Metabolism: A Comparative Analysis of Young and Senescent States. *Molecules* Dec 5;29(23):5755. doi: 10.3390/molecules29235755.
- 6. Pricop MA, Lukinich-Gruia AT, Cristea IM, Păunescu V, Tatu CA. (2024) *Aristolochia clematitis* L. Ethanolic Extracts: In Vitro Evaluation of Antioxidant Activity and Cytotoxicity on Caco-2 Cell Line. *Plants (Basel)* Oct 25;13(21):2987. doi: 10.3390/plants13212987.
- 7. Ivan A, Cristea MI, Telea A, Oprean C, Galuscan A, Tatu CA, Paunescu V. (2023) Stem Cells Derived from Human Exfoliated Deciduous Teeth Functional Assessment: Exploring the Changes of Free Fatty Acids Composition during Cultivation. *Int J Mol Sci.* 2023 Dec 8;24(24):17249. doi: 10.3390/ijms242417249
- 8. Ordodi VL, Hădărugă NG, Hădărugă DI, Lukinich-Gruia AT, Mărgineanu M, Tatu CA, Păunescu V. (2023) Urine Metabolomic Signature of People Diagnosed with Balkan Endemic Nephropathy and Other Types of Chronic Kidney Disease Compared with Healthy Subjects in Romania. *Metabolites.* 2023 Apr 28;13(5):609. doi: 10.3390/metabo13050609
- 9. Lukinich-Gruia AT, Nortier J, Pavlović NM, Milovanović D, Popović M, Drăghia LP, Păunescu V, Tatu CA. (2022) Aristolochic acid I as an emerging biogenic contaminant involved in chronic kidney diseases: A comprehensive review on exposure pathways, environmental health issues and future challenges. *Chemosphere.* Feb 26;297:134111. DOI: [10.1016/j.chemosphere.2022.134111](https://doi.org/10.1016/j.chemosphere.2022.134111)

10. Wanlin Guo, Jiayin Zhang, Zhihan Sun, William H Orem, Calin A Tatu, Niko S Radulović, Dragan Milovanović, Nikola M Pavlović, Wan Chan (2021) Analysis of Polycyclic Aromatic Hydrocarbons and Phthalate Esters in Soil and Food Grains from the Balkan Peninsula: Implication on DNA Adduct Formation by Aristolochic Acid I and Balkan Endemic Nephropathy. *Environmental Science & Technology*. <https://doi.org/10.1021/acs.est.1c00648>
11. Lavinia Paula Drăghia, Alexandra Teodora Lukinich-Gruia, Camelia Oprean, Nikola M Pavlović, Virgil Păunescu, Călin Adrian Tatu (2021) Aristolochic acid I: an investigation into the role of food crops contamination, as a potential natural exposure pathway. *Environmental Geochemistry and Health*. <https://doi.org/10.1007/s10653-021-00903-4>
12. Alexandra Ivan, Dilys Lam, Mirabela Iustina Cristea, Ada Telea, Alexandra Teodora Gruia, Camelia Oprean, Florin Margineanu, Florina Maria Bojin, Richard Saffery, Virgil Paunescu, Calin Adrian Tatu (2020) Differential methylation pattern of xenobiotic metabolizing genes and susceptibility to Balkan endemic nephropathy, in a cohort of Romanian patients. *Journal of Nephrology*. <https://doi.org/10.1007/s40620-019-00621-2>
13. AT Lukinich-Gruia, C Jianu, CA Tatu (2019) Chemical Composition of the Essential Oil Obtained from Aristolochia clematitis Leaves from the Western Part of Romania. *Chemistry of Natural Compounds*. <https://doi.org/10.1007/s10600-019-02862-w>
14. Weiwei Li, Chi-Kong Chan, Yushuo Liu, Jing Yao, Branka Mitić, Emina N Kostić, Biljana Milosavljević, Ivana Davinić, William H Orem, Calin A Tatu, Peter C Dedon, Nikola M Pavlović, Wan Chan (2019) Aristolochic acids as persistent soil pollutants: determination of risk for human exposure and nephropathy from plant uptake. *Journal of agricultural and food chemistry*. <https://doi.org/10.1021/acs.jafc.8b04770>
15. Alexandra T Gruia, Camelia Oprean, Alexandra Ivan, Ada Cean, Mirabela Cristea, Lavinia Draghia, Roxana Damiescu, Nikola M Pavlovic, Virgil Paunescu, Calin A Tatu (2018) Balkan endemic nephropathy and aristolochic acid I: an investigation into the role of soil and soil organic matter contamination, as a potential natural exposure pathway. *Environmental geochemistry and health*. <https://doi.org/10.1007/s10653-017-0065-9>
16. William Orem, Matthew Varonka, Lynn Crosby, Karl Haase, Keith Loftin, Michelle Hladik, Denise M Akob, Calin Tatu, Adam Mumford, Jeanne Jaeschke, Anne Bates, Tiffani Schell, Isabelle Cozzarelli (2017) Organic geochemistry and toxicology of a stream impacted by unconventional oil and gas wastewater disposal operations. *Applied Geochemistry*. <https://doi.org/10.1016/j.apgeochem.2017.02.016>
17. Peter George Mantle, Diana Herman, Calin Tatu (2016) Is Aristolochic acid really the cause of the Balkan endemic nephropathy? *Journal of Controversies in Biomedical Research*. <https://doi.org/10.15586/jcbmr.2016.14>
18. Pavlovic NM, Orem WH, Tatu CA, Lerch HE, Bunnell JE, Feder GL, Kostic EN, Ordodi VL. (2008) The role of lecithin cholesterol acyltransferase and organic substances from coal in the etiology of Balkan endemic nephropathy: a new hypothesis. *Food Chem Toxicol*. 46(3):949-54.
19. Ordodi VL, Paunescu V, Ionac M, Sandesc D, Mic AA, Tatu CA, Mic FA. (2008) Artificial Device for Extracorporeal Blood Oxygenation in Rats, *Artif Organs*, 32(1):66-70 (5) (factor impact: 1,903).
20. Paunescu V, Deak E, Herman D, Siska IR, Tanasie G, Bunu C, Anghel S, Tatu CA, Oprea TI, Henschler R, Ruster B, Bistriar R, Seifried E. (2007) In vitro Differentiation of Human Mesenchymal Stem Cells to Epithelial Lineage. *J Cell Mol Med*. 11(3):502-508 (factor impact: 6,555).
21. Orem WH, Tatu CA, Lerch HE, Rice CA, Bartos TT, Bates AL, Tewart S, Corum MD. (2007) Organic compounds in produced waters from coalbed natural gas wells in the Powder River Basin, Wyoming, USA. *Applied Geochem.*, 22(10):2240-2256.
22. Hadaruga NG, Hadaruga DI, Paunescu V, Tatu CA, Ordodi VL, Bandur G and Lupea AX. (2006) Thermal stability of the linoleic acid/ α - and β -cyclodextrin complexes. *Food Chemistry* 99(3): 500-508 (factor impact: 2,433)
23. Orem WH, Tatu CA, Lerch III HE, Maharaj SVM, Pavlovic N, Paunescu V, Dumitrascu V. (2004) Identification and Environmental Significance of the Organic Compounds in Water Supplies associated with a Balkan Endemic Nephropathy Region in Romania. *J. Environ. Health Res*. 3(2): 53-61 (factor impact: 0,403)
24. Paunescu V, Suci E, Tatu C, Plesa A, Herman D, Siska IR, Suci C, Crisnic D, Nistor D, Tanasie G, Bunu C, Raica M. (2003) Endothelial cells from hematopoietic stem cells are functionally different from those of human umbilical vein. *J Cell Mol Med*, 7(4):455-60 (factor impact: 1,694)
25. Orem WH, Tatu CA, Feder GL, Finkelman RB, Lerch HE, Maharaj S, Szilagyi D, Dumitrascu V, Paunescu V, Margineanu F. (2002) Environment, geochemistry, and the etiology of Balkan Endemic Nephropathy: lessons from Romania, *Facta Universitatis, Medicine and Biology* 9, 39-46
26. Finkelman RB, Orem WH, Castranova V, Tatu CA, Belkin HE, Zheng B, Lerch HE, Maharaj SV, Bates AL. (2002) Health impacts of coal and coal use: possible solutions. *International Journal of Coal Geology*, 50(1-4): 425-443.
27. Feder GL, Tatu CA, Orem WH, Paunescu V, Dumitrascu V, Szilagyi D, Finkelman RB, Margineanu F and Schneider F. (2002) Weathered coal deposits and Balkan Endemic Nephropathy. *Facta Universitatis, Medicine and Biology*, 9:34-38.
28. Tatu CA, Clarke SH. (2000) Selective maturation of VH12 B cells in the spleen enriches for anti-phosphatidyl choline B cells: evidence for receptor editing. *Curr Top Microbiol Immunol*, 252:77-86.
29. Arnold LW, McCray SK, Tatu CA, Clarke SH. (2000) Identification of a precursor to phosphatidyl choline-specific B-1 cells suggesting that B-1 cells differentiate from splenic conventional B cells in vivo: cyclosporin A blocks differentiation to B-1. *J. Immunol.*, 164: 2924-2930.
30. Tatu CA, Orem WH, Feder GL, Finkelman RB, Szilagyi DN, Dumitrascu V, Margineanu F, and Paunescu V. (2000) Additional support for the role of the Pliocene lignite derived organic compounds in the etiology of Balkan endemic nephropathy. *J. Med. Biochem*. 4:95-101 (factor impact: 4,134)
31. Tatu CA, Orem WH, Feder GL, Paunescu V, Dumitrascu V, Szilagyi DN, Finkelman RB, Margineanu F, Schneider F. (2000) Balkan endemic nephropathy etiology: a link to the geological environment. *Central European Journal of Occupational and Environmental Medicine* 6:138-150 – 3 citari
32. Tatu CA, Ye J, Arnold LW, Clarke SH. (1999) Selection at multiple checkpoints focuses V(H)12 B cell differentiation toward a single B-1 cell specificity. *J Exp Med.*, 190: 903-914.
33. Tatu CA, Orem WH, Finkelman RB, Feder GL. (1998) The etiology of Balkan endemic nephropathy: still more questions than answers. *Environ. Health Perspect*. 106:689-700.
34. Tatu CA, Drugarin D, Paunescu V, Stanescu DI, Schneider F. (1998) Balkan endemic nephropathy, the haematopoietic system and the environmental connection, *Food Chem Toxicol*. 36(3):245-7 (factor impact: 1,416)
35. Tatu CA, Paunescu V, Stanescu DI, Schneider F. (1997) P-glycoprotein mediated multidrug resistance assessment by flow-cytometry in malignant hemopathies, *Anticancer Res*. 17(4A):2583-6 (7 citari)
36. Drugarin D, Tatu C, Noveanu L, Paunescu V. (1996) Identification of a novel subset of T lymphocytes in patients with Balkanic Nephropathy. *Autoimmunity* 23:119-126 (3 citari)
37. Tatu CA, Drugarin D, Stanescu DI, Paunescu V. (1993) DNA topology and V(D)J recombination: a tentative connection, *Roum Arch Microbiol Immunol*. 52(4):255-60

Books and book chapters

1. WH Orem, JE Bunnell, CA Tatu, NM Pavlovic (2019) *Encyclopedia of Environmental Health, Second Edition*. Elsevier, <https://doi.org/10.1016/B978-0-12-409548-9.11723-3>
2. Tatu CA, Paunescu V. et al. (2003) Organic compounds derived from Pliocene lignite and the etiology of Balkan endemic nephropathy. In Skinner C and Berger A, eds. *Geology and Health: Closing the Gap*, Oxford University Press, New York, NY, USA.
3. Paunescu V, Tatu CA, Stanescu DI, Medrea D, *Imunologie: concepte fundamentale si aplicative*, Helicon, Timisoara, Romania, 1996 ISBN: 973-574-182-2.

4. Paunescu V, Holmberg JC, Tatu CA et al., *Immunology: course for students*, Orizonturi Universitare, Timisoara, Romania, 1999, ISBN: 973-9400-25-6.
5. Tatu CA (1998) Apoptosis: a molecular approach. In *Actual Aspects of Molecular Biology and Physiology* (Simon Z. and Schneider F, eds.), Romanian Medical Life Publishing House, Bucharest, Romania.

Research grants

Project	Title	Timeframe
Grant NATO CLG #975818/1999, The role of the geochemical environment in Balkan endemic nephropathy (BEN) etiology	Associate PI	1999
Grant NATO CLG #977806/2000, The geochemical background and the etiology of Balkan endemic nephropathy (BEN).	Associate PI	2000
Grant NATO EST-CLG #980104/2003, The geochemical background and the etiology of Balkan endemic nephropathy (BEN).	Associate PI	2003
Dezvoltarea de tehnici de bioinginerie tisulara pentru reconstructia osteoarticulara si miocardica. Proiect MATNANTECH Nr. 162/2003	Researcher	2003 - 2005
Dezvoltarea de tehnici de bioinginerie tisulara pentru reconstructia osteoarticulara si miocardica. VIASAN Nr. 311/2004	Researcher	2004-2006
Strategii inovatoare de modulare a raspunsului imun la persoanele de varsta a treia: impactul telomerazei si al apoptozei asupra procesului de imunosenescenta a limfocitului T. (SENTAP) P-CD CEEEX Nr. 80/2006	Researcher	2006-2008
Mecanisme moleculare implicate in preconditionarea cardiaca prin anestezice volatile: de la identificarea tintelor moleculare in miocardul de sobolan la precizarea mecanismelor ce mediaza efectul protectiv la nivelul miocardului uman. (PRISME) P-CD CEEEX Nr. 134/2006	Researcher	2006-2008
Cercetari privind izolarea, cultivarea si inducerea diferentierii in vitro a celulelor stem pluripotente din urechea interna. CEEEX Nr 1431/2006	PI	2006-2008
Environmental factors and epigenetic mechanisms – a common link in the etiology of chronic kidney diseases” Proiect TE UEFISCDI PN-II-RU-TE-2014-4-0151	PI	2015-2017
CAR-NK	Senior researcher	2016-2022
DECODE	Senior researcher	2020-2022