

INFORMAȚII PERSONALE

Radu Silaghi-Dumitrescu



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Data nașterii 1974-10-26 | Naționalitate Română

EXPERIENȚĂ PROFESIONALĂ

- 1998–2000 **Preparator universitar**  
 Facultatea de Chimie și Inginerie Chimică, Universitatea Babeș-Bolyai, Cluj-Napoca (România)  
 cercetare, predare laborator chimie organică
- 1999 **Stagiu military obligatoriu, 6 luni (România)**
- 2000–2007 **Asistent universitar**  
 Facultatea de Chimie și Inginerie Chimică, Universitatea Babeș-Bolyai, Cluj-Napoca (România)  
 Cercetare, predare – biochimie, tehnologii enzimactice (laborator/seminar)
- 2000–2004 **Doctorand (Teaching Assistant, Research Assistant)**  
 Department of Chemistry, University of Georgia, Athens, GA (United States)  
 Predare laborator chimie generală și chimie organică, cercetare
- 2004–2006 **Senior Research Officer**  
 Department of Biological Sciences, University of Essex, Colchester (United Kingdom)  
 Cercetare, substitute de sânge
- 2007–2020 **Conferențiar Universitar**  
 Facultatea de Chimie și Inginerie Chimică, Universitatea Babeș-Bolyai, Cluj-Napoca (România)  
 Predare chimie bioanorganică, materiale și procese bioorganice / chimie bioanorganică avansată,  
 biochimie, biochimie avansată, biochimie aplicată, modelare moleculară, chimie computațională,  
 enzimologie clinică și imunologie, metabolismul nutrienților, amprentare genetică; cercetare  
 Abilitare conducere doctorat, din 2013.  
 Cercetător Științific grad I din 2014  
 Președinte al Consiliului Științific al Universității Babeș-Bolyai, din 2012  
 Co-director al Institutului de Tehnologie al Universității Babeș-Bolyai, 2011-2015  
 Co-director al Centrului de Modelare Moleculară și Chimie Cuantică Computațională, din 2010
- 2020-prezent **Profesor Universitar**  
 Facultatea de Chimie și Inginerie Chimică, Universitatea Babeș-Bolyai, Cluj-Napoca (România)  
 Predare chimie bioanorganică, materiale și procese bioorganice / chimie bioanorganică avansată,  
 biochimie avansată, biochimie aplicată, chimie computațională, enzimologie clinică și imunologie,  
 cercetare  
 Director al Centrului pentru Strategie Universitară al UBB, din 2020

EDUCAȚIE

- 1993–1997 **Licenta in Chimie** EQF level 6  
 Universitatea Babeș-Bolyai University, Facultatea de Chimie și Inginerie Chimică, Cluj-Napoca (România)  
 Chimie, inclusiv modul didactic
- 1997–1998 **Masterat in Chimie** EQF level 7  
 Universitatea Babeș-Bolyai University, Facultatea de Chimie și Inginerie Chimică, Cluj-Napoca (România)

1999–2005	Chimie, organică și bioorganică <b>Doctorat in chimie</b>	EQF level 8
	Universitatea Babeș-Bolyai, Facultatea de Chimie și Inginerie Chimică, Cluj-Napoca (România)	
2000–2004	Chimie anorganică <b>Doctorat in chimie</b>	EQF level 8
	Universitatea din Georgia, Athens (GA) Statele Unite ale Americii	
2001–2001	Chimie bioanorganică <b>Summer Course in Crystallography</b>	
	American Crystallography Association, Athens, GA (USA) Cristalografie pentru molecule mici și proteine	

## APTITUDINI PERSONALE

Limba materna Română

Alte limbi

	Inteles		Vorbit		Scris
	Ascultat	Citit	Interactiune vorbita	Productie vorbita	
Engleza	C2	C2	C2	C2	C2
Franceza	B1	B1	B1	B1	B1

Aptitudini de comunicare

~25 ani de experiență didactică și de cercetare  
>80 prezentări orale la conferințe științifice  
>20 interviuri în mass-media, inclusiv în direct la TV și radio

Aptitudini organizationale

Supervizat cercetare (licență, masterat, doctorat) pentru ~120 studenți, câștigat și condus granturi de cercetare

Membru al Comisiei de Biochimie și Biologie Moleculară a CNCS (2011-2013) și respectiv CNATDCU (2011-2012), membru al Comisiei de Chimie a CNATDCU (2016-2020)

Președinte al Consiliului Științific al Universității Babeș-Bolyai (2012-)

Director al Centrului pentru Strategie Universitară al Universității Babeș-Bolyai (2020-)

Membru al Senatului Universității Babeș-Bolyai (2016-)

Membru al Consiliului Facultății de Chimie și Inginerie Chimică a Universității Babeș-Bolyai (2024-)

Coordonator al Grupului de Lucru pentru Știința Deschisă al Universității Babeș-Bolyai (2022-)

Editor, Acta Metallomica <http://chem.ubbcluj.ro/acta-metallomica/> (2014-2017)

Guest editor – Studia Universitatis Babeș Bolyai –Seria Chemia, Chemtracts – Inorganic Chemistry.

Reviewer Editorial Board al Frontiers in Molecular Medicine, 2013-2020

Editor, Molecules (secțiunea Inorganic Chemistry) (2017-)

Membru colectiv editorial, Revue Roumaine de Chimie (2023-)

Delegatul național (reprezentantul) din partea României la Divizia de Chimie Computațională și Teoretică (Division of Computational and Theoretical Chemistry, DCTC) a European Chemical Society, EuChemS (2019-)

Organizat workshopuri/conferințe în modelare moleculară și în chimie bioanorganică, în calitate de copreședinte sau secretar al comitetelor: Molecular Modeling in Chemistry and Biochemistry MOLMOD, Metal Elements in Environment, Medicine and Biology MEEMB

Expert evaluator – proiect de evaluare a integrității academice în universități, organizat în proiect comun de Societatea Academică din România (SAR), alături de Alianța Națională a Organizațiilor Studențești din România (ANOSR) și Federația Studenților din Elveția (VSS-UNES-USU) co-finanțate printr-un grant din partea Elveției prin intermediul Contribuției Elvețiene pentru Uniunea Europeană extinsă (2016-2017)

Tutore cerc studențesc UNIMIND Cluj-Napoca (2021-2024)

Coordonator al Comisiilor de specialitate ale județului Cluj și președinte al organizației Cluj-Napoca în

cadrul ALDE (2018)

**Aptitudini profesionale**

- Exprimare și purificare proteine (solubile, corpi de incluziune)
- Cristalografie de proteine
- Măsuratori de activitate enzimatică, cinetică enzimatică, inclusiv prin tehnici stopped-flow și freeze-quench
- Crio-enzimologie
- Determinarea și izolarea produșilor reacțiilor enzimatic; sinteză chimică și caracterizare structurală cu spectroscopii UV-viz, FTIR, RMN, (GC/LC)-MS, HPLC
- Bio-transformări preparative, folosind celule intacte sau preparate enzimatic purificate; dezvoltare de metodă
- Manipulare ADN – inclusiv clonare și mutageneză direcționată
- Cultură celule bacteriene, inclusiv experimente de stres oxidativ și nitrozativ
- Tehnici anaerobe pentru chimie și biochimie
- Întregstrare și interpretare de spectre UV-viz, de rezonanță electronică paramagnetică (REP/RES), de dicroism circular, vibraționale
- Preparare de probe (proteine) și interpretare (unde este aplicabil) pentru spectroscopii RES, Mössbauer, (VTVH)MCD, ENDOR, rezonanță Raman, RMN, (GC/LC)-MS
- Folosirea unor aparate precum spectrofotometre microplate, UV-viz, IR, senzori pentru măsurarea concentrațiilor dizolvate de gaze precum NO și O<sub>2</sub>, FPLC, aparate de termociclare, electroforeză, camera anaerobe
- Calcule de structură electronică (ab initio, semiempiric, DFT, mecanică moleculară) și modelare de proteine (e.g., Gaussian, Spartan, Titan, Hyperchem, Cache, Sybyl, Insight), inclusiv aplicații UNIX și Linux
- Programe de procesare date – tip Word, spreadsheet, de prezentare științifică, de manipulare de structuri primare de proteine și ADN, reprezentări structuri chimice
- Conceput, scris și supervizat executarea de experimente didactice în biochimie și chimie bioanorganică

**Aptitudini de calculator**

Software uzual în Windows și Linux, software specializat pentru chimie – inclusiv modelare moleculară, spectroscopie sau cristalografie

**INFORMATII SUPLIMENTARE****Scientific publications in journals and conference proceedings ( $h_{WoS}=34$ , Times cited $_{WoS}\sim 3800$ ):**

310. Gal, Melinda; Gaina Luiza; Lovasz, Tamas; Gal, Emese; Craciun, Ana-Maria; Focsan, Monica; Turza, Alexandru; Rugina, Dumitrita; Brânzanic, Adrian M.V.; Pesek, Szilard; **Silaghi-Dumitrescu, Radu**; Cristea, Castelia. **Sonochemical synthesis, optical properties and DFT studies on novel (N-arylamino)phenothiazinium dyes suitable for fluorescence cells imaging.** Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 2024, 322, 124768. <https://doi.org/10.1016/j.saa.2024.124768>

309. Stoean, Bianca; Lehene, Maria; Zagrean-Tuza, Cezara; **Silaghi-Dumitrescu, Radu**; Cristea, Castelia Gaina, Luiza. **Transient radical species and oxygen colorimetric indicators grounded on phenothiazinium dyes.** Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 2024, 320, 124602. <https://doi.org/10.1016/j.saa.2024.124602>

308. Radu, Luana; Lupan, Alexandru; Lehene, Marria; **Silaghi-Dumitrescu, Radu.** **Weak interactions between hydracids / binary acids: some considerations from a DFT analysis.** Studia UBB Chemia, 2024, LXIX(2), 121-134. DOI:10.24193/subbchem.2024.2.09

307. Doukeh, Rami; Craciun, Daniela; Lehene, Maria; Brânzanic Adrian M.V.; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu.** **An iron-free nitrogenase? Computational estimation of the ability to bind/activate N<sub>2</sub> in manganese and cobalt complexes.**

Journal of Coordination Chemistry, 2024, . <https://doi.org/10.1080/00958972.2024.2372812>

306. Zagrean-Tuza, Cezara; Matei, Alina; **Silaghi-Dumitrescu, Radu**. **A biomimetic assay for antioxidant reactivity, based on liposomes and myoglobin**. Journal of Inorganic Biochemistry 2024, 112613. <https://doi.org/10.1016/j.jinorgbio.2024.112613>
305. Zagrean-Tuza, Cezara; Igescu, Ilinca; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu**. **A study of the molecular interactions of hemoglobin with diverse classes of therapeutic agents**. Inorganica Chimica Acta, 2024, 122053. <https://doi.org/10.1016/j.ica.2024.122053>
304. Zagrean-Tuza, Cezara; Pato, Galaba; Damian, Grigore; **Silaghi-Dumitrescu, Radu**; Mot, Augustin C. Redox Reactivity of Nonsymbiotic Phytohemoglobins towards Nitrite. Molecules, 2024, 29(6), 1200. <https://doi.org/10.3390/molecules29061200>
303. Rudenco, Oleg; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu**; King R. Bruce. **Decarbonylation Products of Binuclear Methylphosphinidene Complexes of Cyclopentadienyliron Carbonyls: Triplet and Quintet Structures Are Favored Energetically over Singlet Structures with Iron–Iron Multiple Bonding**. ACS Omega 2024, 9, 10, 12125–12134. <https://doi.org/10.1021/acsomega.3c10460>
302. Stoean, Bianca; Lupan, Iulia; Cristea, Castelia; Silion, Mihaela; Silaghi-Dumitrescu, Luminita; **Silaghi-Dumitrescu, Radu**; Gaina, Luiza Ioana. **Outcomes of folic acid esterification upon the properties of hydrophilic phenothiazinium dyes: New photosensitizers for antimicrobial photodynamic therapy**. Journal of Photochemistry and Photobiology A: Chemistry, 2024, 451, 115500. <https://doi.org/10.1016/j.jphotochem.2024.115500>
301. Pesek, Szilard; **Silaghi-Dumitrescu, Radu**. **The Iodine/Iodide/Starch Supramolecular Complex**. Molecules, 2024, 29(3), 641. <https://doi.org/10.3390/molecules29030641>
300. **Silaghi-Dumitrescu, Radu**. The king, the communists and the roman blood: an automated analysis of the Romanian national anthems. Proglas, 2023, 32(2), 147-157. <https://doi.org/10.54664/GGAE2354>
299. Benedec, Daniela; Oniga, Iliora; Hanganu, Daniela; Tiperciuc, Brîndușa; Nistor, Adriana; Vlase, Ana-Maria; Vlase, Laurian; Pușcaș, Cristina; Duma, Mihaela; Login, Cristian Cezar; Niculae, Mihaela; **Silaghi-Dumitrescu, Radu**. **Stachys species: comparative evaluation of phenolic profile and antimicrobial and antioxidant potential**. Antibiotics, 2013, 12(11), 1644. <https://doi.org/10.3390/antibiotics12111644>
298. Dănescu, Theodor; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu**; King, R. Bruce. **Theoretical study of the effect of phosphorus and nitrogen heteroatoms on pentahapto coordination of diazaphosphoryl ligands in binuclear ruthenium and iron carbonyl derivatives**. Journal of Organometallic Chemistry, 2023, 122949. <https://doi.org/10.1016/j.jorganchem.2023.122949>
297. Coman, Cristina; Hadade, Niculina; Pesek, Szilard, **Silaghi-Dumitrescu, Radu**; Mot, Augustin C. **Removal and degradation of sodium diclofenac via radical-based mechanisms using S. sclerotiorum laccase**. Journal of Inorganic Biochemistry, 2023, 112400. <https://doi.org/10.1016/j.jinorgbio.2023.112400>
296. Fischer-Fodor, Eva; Szabo, Kinga; Scurtu, Florina; Lehene, Maria; **Silaghi-Dumitrescu, Radu**. **Toxicity of hemoglobin derivatized with oxidized adenosine triphosphate against tumoral human cells**. Studia UBB Chemia, 2023, LXVIII(3), 153-160. DOI:10.24193/subbchem.2023.3.10.
295. Lehene, Maria; Zagrean-Tuza, Cezara; Hadade, Niculina; Aghion, Andreea; Septelean, Raluca; Iancu, Stefania; Brânzanic Adrian M.V.; **Silaghi-Dumitrescu, Radu**. **A complex of cobalamin with an organic peroxide**. New Journal of Chemistry, 2023, 47(39), 18178-18185. <https://doi.org/10.1039/D3NJ03307D>.
294. **Silaghi-Dumitrescu, Radu**. **Trends in the texts of national anthems: a comparative study**. Heliyon, 2023 e19105. <https://doi.org/10.1016/j.heliyon.2023.e19105>
293. **Silaghi-Dumitrescu, Radu**; Patrascu, Iulia; Lehene, Maria; Bercea, Iulia. **Comorbidities of COVID-19 patients**. Medicina, 2023, 59(8), 1393. <https://doi.org/10.3390/medicina59081393>
292. Doukeh, Rami; Craciun, Daniela; Lupan, Alexandru; Brânzanic Adrian M.V.; **Silaghi-Dumitrescu, Radu**. **Effect of the coordination environment on the ability of iron to bind/activate N<sub>2</sub>: a theoretical study with relevance to the nitrogenase mechanism**. Polyhedron, 2023, 116571. DOI: 10.1016/J.POLY.2023.116571
291. Lehene, Maria; Brânzanic Adrian M.V.; **Silaghi-Dumitrescu, Radu**. **The adducts of cyano- and aquacobalamin with hypochlorite**. Journal of Biological Inorganic Chemistry, 2023, 28(6),583-589. doi: 10.1007/s00775-023-02015-z
290. Plesa, Diana; Lehene, Maria; **Silaghi-Dumitrescu, Radu**. **On the reaction of Co(II) cobalamin with hydrogen peroxide**. Reaction Kinetics, Mechanisms and Catalysis, 2023, 136,1791–1799. <https://doi.org/10.1007/s11144-023-02441-9>

289. Irsai, Izabella; Pesek, Szilard, **Silaghi-Dumitrescu, Radu. A critical review of computational efforts towards identifying secondary structure elements in polylactic acid (PLA).** *Revue Roumaine de Chimie*, 2023, 68(9), 471–477. DOI: 10.33224/rch.2023.68.9.08
288. Gaina-Gardiuta, Artiom; Lupan, Alexandru; Branzanic, Adrian M. V.; **Silaghi-Dumitrescu, Radu. Study of cobalamin adducts with cysteine and its oxidized sulfenic, sulfinic and sulfonic derivatives.** *Revue Roumaine de Chimie*, 2023, 68(3–4), 143–151. DOI: 10.33224/rch.2023.68.3-4.04
287. Branzanic, Adrian M. V.; **Silaghi-Dumitrescu, Radu. Quale Mechanics as a Metaphysical Weltanschauung of Quantum Mechanics.** *History of science and technology*, 2023, 13(1), 10-33, DOI: 10.32703/2415-7422-2023-13-1-10-33
286. Arkosi, Mariann-Kinga; Mot, Augustin C.; Lupan, Iulia; Ghinia Tegla, Miruna Georgiana; **Silaghi-Dumitrescu, Radu. Selective attachment of polyethylene glycol to hemerythrin for potential use in blood substitutes.** *Protein Journal*, 2023, 42, 374–382. <https://doi.org/10.1007/s10930-023-10118-4>
285. Rudenco, Oleg; Lehene, Maria; Lupan, Alexandru; Zagrean-Tuza, Cezara; Stoean, Bianca; Gaina-Gardiuta, Artiom; Ulici, Adelina Maria; **Silaghi-Dumitrescu, Radu. Versatility of thiourea dioxide as redox agent in globins: case study with myoglobin.** *Inorganica Chimica Acta*, 2023, 121474. <https://doi.org/10.1016/j.ica.2023.121474>
284. Stoica, Anca D.; Toma, Vlad-Al.; Roman, Ioana; Sevastre, Bogdan; Scurtu, Florina; **Silaghi-Dumitrescu, Radu. Glutaraldehyde-polymerized hemerythrin: evaluation of performance as an oxygen carrier in hemorrhage models.** *Bioinorganic Chemistry and Applications*, 2022, 2209101. <https://doi.org/10.1155/2022/2209101>
283. Pesek, Szilard; Lehene, Maria; Branzanic, Adrian M. V.; **Silaghi-Dumitrescu, Radu. On the origin of the blue color in the iodine / iodide / starch supramolecular complex.** *Molecules*, 2022, 27(24), 8974. <https://doi.org/10.3390/molecules27248974>
282. Irsai, Izabella; Pesek, Szilard, **Silaghi-Dumitrescu, Radu. Polylactic acid inter-chain interactions.** *Studia Universitatis Babes-Bolyai Seria Chemia*, 2022, LXVII, 47-71. DOI:10.24193/subbchem.2022.4.04
281. Stoean, Bianca; Gaina, Luiza; Cristea, Castelia; **Silaghi-Dumitrescu, Radu;** Branzanic, Adrian M. V.; Focsan, Monica; Fischer-Fodor, Eva; Tigu, Bogdan; Moldovan, Cristian; Cecan, Andra Diana; Achimas-Cadariu, Patriciu; Astilean, Simion; Silaghi-Dumitrescu Luminita. **New methylene blue analogues with N-piperidiny-carbinol units: Synthesis, optical properties and in vitro internalization in human ovarian cancer cells.** *Dyes and Pigments*, 2022, 205, 110460. <https://doi.org/10.1016/j.dyepig.2022.110460>
280. Osokin, Vladimir S.; Dereven'kov, Iliia A.; Makarov, Sergei V.; Gaina-Gardiuta, Artiom; **Silaghi-Dumitrescu, Radu. Effect of trans-ligand on properties of nitric oxide motif in nitrosylcobinamide.** *Journal of Coordination Chemistry*, 2022, 75(11–14), 1606–1616. <https://doi.org/10.1080/00958972.2022.2079409>
279. Carrascoza, Francisco; Branzanic, Adrian M. V.; **Silaghi-Dumitrescu, Radu. The dynamics of hemerythrin and hemerythrin derivatives.** *Studia Universitatis Babes-Bolyai Seria Chemia*, 2021, 64(4), 397-404.
278. Dănescu, Theodor; **Silaghi-Dumitrescu, Radu;** Lupan, Alexandru; King R Bruce. **Cyclopentadienylmetal group 6 carbonyl derivatives with 2-propanoneoximate and related ligands.** *New Journal of Chemistry*, 2021, 45, 21092-21099. <https://doi.org/10.1039/D1NJ04379J>
277. Suciu, Ioana-Alexandra; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu. Peroxo-transition metal systems: examples of redox Isomerism in palladium structure.** *Revue Roumaine de Chimie* 2021, 66(10-11), 811–820. 10.33224/rch.2021.66.10-11.04
276. Mazilu (Moldovan), Amalia; Popescu, Violeta; Sarosi, Codruta; **Silaghi-Dumitrescu, Radu;** Chisnoiu, Andrea Maria; Moldovan, Marioara; Silaghi Dumitrescu, Laura; Prodan, Doina; Carpa, Rahela; Gheorghe, Georgiana Florentina; Chisnoiu, Radu Marcel. **Preparation and in vitro characterization of gels based on bromelain, whey and quince extract.** *Gels*, 2021, 7, 191. <https://doi.org/10.3390/gels7040191>
275. Lehene, Maria; Plesa, Diana; Ionescu-Zinca, Stefania; Iancu, Stefania D.; Leopold, Nicolae; Makarov, Sergei V.; Branzanic, Adrian M.V.; **Silaghi-Dumitrescu, Radu. Adduct of aquacobalamin with hydrogen peroxide.** *Inorganic Chemistry*, 2021, 60(17), 12681-12684.
274. Irsai, Izabella; Branzanic, Adrian M. V.; **Silaghi-Dumitrescu, Radu. Polylactic acid interactions with bioceramic surfaces.** *Studia Universitatis Babes-Bolyai Seria Chemia*, 2021, 66(3), 107-121.
273. Carrascoza, Francisco; **Silaghi-Dumitrescu, Radu. The dynamics of hemoglobin-haptoglobin complexes. Relevance for oxidative stress.** *Journal of Molecular Structure*, 2022, 1250(1), 131703.

272. Cîrjeu, Victoria; Pușcaș, Cristina; **Silaghi-Dumitrescu, Radu**. **Vincristine affects the redox reactivity of hemoglobin**. *Studia UBB Chemia*, 2021, LXVI(2), 325-332.
271. **Silaghi-Dumitrescu, Radu**. **Measuring pseudoscience in online media: a case study on Romanian websites**. *Journal of Romanian Studies*, 2021, 2, 111-128.
270. Dereven'kov, Ilia A.; Makarov, Sergei V; Branzanic, Adrian; **Silaghi-Dumitrescu, Radu**; Molodtsov, Pavel A.; Pokrovskaya, Elizaveta A.. **Formation of hydroxyl radical in aqueous solutions containing selenite and glutathione**. *Polyhedron*, 2021, 115072.
269. Radu, Luana; Attia, Amr A.; **Silaghi-Dumitrescu, Radu**; Lupan, Alexandru; King, R. Bruce. **Binuclear ethylenedithiolate iron carbonyls: a density functional theory study**. *Inorganica Chimica Acta*, 2021, 120260.
268. **Silaghi-Dumitrescu Radu**. **Topics in National Anthems**. *Journal of Language and Literature*, 2020, 20(2), 288-306, <http://dx.doi.org/10.24071/joll.v20i2.2541>
267. **Silaghi-Dumitrescu Radu**; Gruian, Cristina; Puscas, Cristina; Simon, Alexandra; Fischer-Fodor, Eva; Toma, Vlad Al.; Farcas, Anca D.; Roman, Ioana; Scurtu, Florina; Attia, Amr A.A.; Damian, Grigore. **Spin labelled hemoglobin-based oxygen carriers (HBOC): preparation and evaluation of in vivo/in vitro stability**. *Studia UBB Chemia*, 2020, 65(2), 121-132.
266. Lehene, Maria; Fischer-Fodor, Eva; Scurtu, Florina; Hadade, Niculina; Mot, Augustin C.; Gal, Emese; Matei, Alina; **Silaghi-Dumitrescu Radu**. **Excess ascorbate is a chemical stress agent against proteins and cells**. *Pharmaceuticals*, 2020, 13(6), 107. doi.org/10.3390/ph13060107
265. Farcas, Anca D.; Toma, Vlad Al.; Roman, Ioana; Sevastre, Bogdan; Scurtu, Florina; **Silaghi-Dumitrescu, Radu**. **Glutaraldehyde-polymerized hemoglobin: in search of improved performance as oxygen carrier in hemorrhage models**. *Bioinorganic Chemistry and Applications*, 2020, 1096573. doi.org/10.1155/2020/1096573
264. Matei, Alina; Puscas, Cristina; Patrascu, Iulia; Lehene, Maria; Ziebro, Julia; Scurtu, Florina; Baia, Monica; Porumb, Dan; Totos, Robert; **Silaghi-Dumitrescu Radu**. **On the stability of glutaraldehyde in biocide compositions**. *International Journal of Molecular Sciences*, 2020, 21(9), 3372.
263. Carrascoza, Francisco; Surducun, Mihai; Eriksson, Leif; **Silaghi-Dumitrescu, Radu**. **Interaction of cobalt and iron hydroperoxo bleomycin with deoxyribonucleic acid (DNA): dynamic vs. electronic structure considerations**. *Inorganica Chimica Acta*, 2020, 119682.
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7. Sergei V. Makarov, Anna S. Makarova, **Radu Silaghi-Dumitrescu, Sulfoxylic and Thiosulfurous Acids and their Dialkoxy Derivatives**, in 'The Chemistry of Peroxides' - Patai's Chemistry of Functional Groups, Eds. Alexander Greer and Joel Liebman, John Wiley & Sons Ltd, Chichester, England, 2014, pp 265-306. DOI: 10.1002/9780470682531.pat0829

8. Cristina Bischin, Violeta-Florina Scurtu, Radu Ghinga, Daniela Cioloboc, **Radu Silaghi-Dumitrescu. O scurtă introducere în biochimie**, 2015, Presa Universitara Clujeana, Cluj-Napoca.

9. Sergei V Makarov, Attila K Horvath, **Radu Silaghi-Dumitrescu, Qingyu Gao. Sodium Dithionite, Rongalite and Thiourea Oxides**, World Scientific, London, 2016, 244 pp, ISBN: 978-1-78634-095-5.

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#### Brevete:

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2. Prejmerean Cristina, Moldovan Marioara, Prodan Doina, Silaghi-Dumitrescu Laura, Furtos Gabriel, Iovu Horia, Damian Celina Maria, Popescu Violeta, Pascalau Violeta, Sarosi Liana Codruta, Boboia Stanca, Filip Miuta, Colceriu-Burtea Adela Loredana, **Silaghi-Dumitrescu Radu Lucian**. MATRICE ORGANICA SI COMPOZIT DE RESTAURARE INDIRECTA PENTRU UTILIZAREA IN STOMATOLOGIE, RO 128800 B1, 30.06.2017.

#### Eseuri, interviuri de opinie:

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2. **Silaghi-Dumitrescu, Radu**. Contribuție la interviul “ Ce resetare? Ce schimbări sunt esențiale în politică și în societate – sunt și în economie? Foreign Policy Romania Decembrie 2015/Ianuarie 2016, 26-27.
3. **Radu Silaghi-Dumitrescu**. **Considerations on public perceptions within Romanian public discourse**. Lambert Academic Publishing, 2017, Saarbrücken, 49 pp. ISBN 978-3-330-03040-4.
4. Radu Silaghi-Dumitrescu, **Crima la sugestia unei oi vorbitoare**, 2016, Lulu Press, Inc., 87 pp. ISBN 978-1-329-99360-0 <http://www.lulu.com/shop/radu-silaghi-dumitrescu/crima-la-sugestia-unei-oi-vorbitoare/ebook/product-22618659.html>
5. **Silaghi-Dumitrescu, Radu**. **Fără dovezi materiale pentru diluarea de zece ori a dezinfectanților Hexi Pharma**. Romania Curata, 2017: <http://www.romaniacurata.ro/fara-dovezi-materiale-pentru-diluarea-de-zece-ori-a-dezinfectantilor-hexi-pharma/>
6. **Silaghi-Dumitrescu, Radu**. **Un semafor al adevărului în presa**. Cotidianul, 2016: <http://www.cotidianul.ro/un-semafor-al-adevarului-in-presa-297101/>
7. **Silaghi-Dumitrescu, Radu**. **Curajul de a cerceta și răspunderea de a comunica**. In CERCETĂM, ANALIZĂM, EXPERIMENTĂM, APLICĂM ȘI COMUNICĂM, Editura Viața Arădeană, 2017, Arad, 98 pp. ISBN 978973161213-3
8. **Silaghi-Dumitrescu, Radu**. **Evaluarea academică: între numerologie și substanță**. In EDUCAȚIA ȘI CERCETAREA ROMÂNEASCĂ - Starea prezentă și perspectiva, Editura Casa Cartii de Stiinta 2017, Bucharest, Romania. ISBN: 978-606-17-1284-7
9. **Silaghi-Dumitrescu, Radu**. **Mitul freneziei regicide a valahilor**. Matricea Românească, 2018, <https://matricea.ro/mitul-frezeziei-regicide-printre-valahi-o-replica-la-afirmatia-lui-georg-reicherstorffer-despre-romani-si-asasinate-politice/>
10. Cercetător celebru de la UBB: „Cei care spun că virusul este o exagerare fac propagandă pentru crimă” – Adevărul 2020 [https://adevarul.ro/locale/cluj-napoca/cercetator-celebru-ubb-cei-spun-virusul-exagerare-fac-propaganda-crima-1\\_5ef70cc75163ec42715f690a/index.html](https://adevarul.ro/locale/cluj-napoca/cercetator-celebru-ubb-cei-spun-virusul-exagerare-fac-propaganda-crima-1_5ef70cc75163ec42715f690a/index.html)
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19. **Silaghi-Dumitrescu, Radu**. **Chimia Afganistanului. Când alegerea e între două crime**. contributors.ro 2021,

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20. **Silaghi-Dumitrescu, Radu. Pandemia care n-a fost și vaccinurile care nu trebuiau: 1976. Plus: vaccinurile pentru sterilizare.** contributors.ro 2021, <https://www.contributors.ro/pandemia-care-n-a-fost-si-vaccinurile-care-nu-trebuiau-1976-plus-vaccinurile-pentru-sterilizare/>

21. **Silaghi-Dumitrescu, Radu. Legătura dintre România Educată și sfârșitul „dictaturii medicale”.** contributors.ro 2022, <https://www.contributors.ro/legatura-dintre-romania-educata-si-sfarsitul-dictaturii-medicale/>

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30. **Silaghi-Dumitrescu, Radu. Să punem punctul pe i? Nu prea avem nici punct, nici i.** Vatra, 2024, 1-2, 56. <https://revistavatra.org/2024/04/18/perspectivale-studiilor-umaniste-ii/#more-12822>

#### Prezentări la conferințe, seminarii:

88. Cum recunoaștem cercetarea și la ce folosește asta?

#### Centrul pentru Orientarea în Cariera a Cercetătorilor, Cluj-Napoca, Romania, 2024

87. Small Molecule Activation at Biological Metal-Macrocyclic Complexes: Contrasts between Heme and Vitamin B<sub>12</sub>

#### 3<sup>rd</sup> International Conference on Reaction Kinetics, Mechanisms and Catalysis, Budapest, Hungary, 2024

86. Synergy between computations and experiments on transition metal complexes: challenges with isomerism, spin states and spectroscopy

#### BioMat4CAST Training Workshop, Iasi, Romania, 2024

85. Virusurile și vaccinarea

#### Universitatea vârstei a treia – U3a, UBB în parteneriat cu Primăria Cluj-Napoca, Romania, 2024

84. Seria spectrochimică: ce măsoară ea și pentru cine? Considerente dintr-un unghi bioanorganic – invited conference

#### Joint anniversary symposium of the Romanian Chemical Society and American Chemical Society – Romanian Chapter, Bucharest, Romania, 2023

83. Small Molecule Activation at Biological Metal-Macrocyclic Complexes: Contrasts between Heme and Vitamin B<sub>12</sub>

#### 15<sup>th</sup> Symposium New Trends in Chemistry Research, Timisoara, Romania, 2023

82. The “UV-vis-silent” coordination chemistry of cobalamin with oxidizing agents: contrasts between iron-porphyrin and cobalt-corrin complexes

**The 20th International Conference on Biological Inorganic Chemistry ICBI20, Adelaide, Australia, 2023**

81. Considerente despre clasamentele internaționale ale universităților din Metaranking-RO

**Consiliul Național de Statistică și Prognoză a Învățământului Superior (CNSPIS), Workshop “Rankinguri Internaționale Utilizate în Metarankinguri”, Oradea, Romania, 2023**

80. Case study of interdisciplinary teamwork: a European blood substitutes consortium - invited conference

**EUTOPIA doctoral summer school, Lisbon, Portugal, 2023**

79. Old dogs, old tricks, new glasses: new chemistry with cobalamin and redox agents

**State University of Moldova, Chisinau, Moldova, 2023 - invited conference**

78. Coordination and redox chemistry with metalloproteins and agents of oxidative/nitrosative stress

**State University of Moldova, Chisinau, Moldova, 2023 - invited conference**

77. Transient species in biological metal centers and where to find them - invited conference

**International Conference “Students for Students”, Cluj-Napoca, Romania, 2023**

76. Old dogs, old tricks, new glasses: new chemistry with cobalamin and redox agents

**36th Conference of the Romanian chemical society, Octombrie 2022, Calimanesti-Caciulata, Romania**

75. Virusurile și vaccinarea

**Universitatea vârstei a treia – U3a, UBB în parteneriat cu Primăria Cluj-Napoca, Romania, 2020**

74. Sistemul imunitar și virusurile

**Ziua Porților Deschise – Facultatea de Chimie și Inginerie Chimică, Cluj-Napoca, Romania, 2021**

73. Metalele din noi

**Studium Generale UBB, Cluj-Napoca, Romania, 2021**

72. Structura materiei (vii)

**Studium Generale UBB, Cluj-Napoca, Romania, 2020**

71. Minoritatea cercetătorilor

**Conferința Raționalilor ed. XI a Asociației Secular-Umaniste din Romania, 2022, Alba-iulia, Romania, Septembrie 2022**

70. Old dogs, old tricks, new glasses: hydrogen peroxide, cobalamin and others

**EUROBIC 16 - The European Biological Inorganic Chemistry Conference, Grenoble, Franța, August 2022**

69. Spectral simulations for bioinorganic centers: in the eye of the beholder – invited conference

**18th Central European Symposium on Theoretical Chemistry, Balatonszárszó, Ungaria, Septembrie 2022**

68. Linkage isomerism in bioinorganic chemistry

**12th European Conference on Computational and Theoretical Chemistry, Perugia, Italy, Septembrie 2019**

67. Redox reactivity in globins: modulation by covalent and non-covalent modifications with biomedical relevance

**Annual International Conference of the Romanian Society of Biochemistry and Molecular Biology, Iasi, Romania, Septembrie 2019**

66. Linkage isomerism in bioinorganic chemistry

**Molecular modeling in chemistry and biochemistry MOLMOD 2018, Cluj-Napoca, Octombrie 2018**

65. Antioxidant and prooxidant reactivity in natural compounds: mechanisms, interactions with (metallo)proteins, and practical applications

**35th Conference of the Romanian chemical society, Octombrie 2018, Calimanesti-Caciulata, Romania**

64. Substitute de sânge: cât de artificiali putem fi?

**Atelierul De Filosofie Si Antropologie Medicală, 2016, Cluj-Napoca, Romania**

63. Fără număr: traficul informației și democrația biochimică

**Atelierul De Filosofie Si Antropologie Medicală, 2015, Cluj-Napoca, Romania**

62. Hemoglobin versus hemerythrin - based blood substitutes

**Bio-Nano-Math-Chem 2017, iunie 2017, Cluj-Napoca, Romania**

61. Evaluarea academică: între numerologie și substanță

**Educația și cercetarea românească - Starea prezentă și perspectiva, Martie 2017, Bucharest, Romania**

60. Metal-induced protein and DNA radical chemistry: the cases of bleomycin and haptoglobin

**XXI conference of the Serbian crystallographic society, Iunie 2017, Vrsac, Serbia**

59. Hemoglobin versus hemerythrin - based blood substitutes: data from top-up and hemorrhagic shock models

**Nanomateriale și dispozitive inovative cu aplicații biomedicale – symposium, Noiembrie 2016, Cluj-Napoca, Romania**

58. Sulfite reductase and nitrite reductase chemistry: similarities in linkage and redox isomerism

**34th conference of the Romanian chemical society, octombrie 2016, Calimanesti-Caciulata, Romania**

57. Hemoglobin versus hemerythrin - based blood substitutes: data from top-up and hemorrhagic shock models

**7th International Conference “Biomaterials, Tissue Engineering & Medical Devices” BIOMMEDD’2016, Constanta, Septembrie 2016**

56. Shedding Blood Over Magnets – invited lecture

**9th International Physics Conference of the Balkan Physical Union – BPU9 , 24-27 August 2015 , Istanbul University, Istanbul , Turkey**

55. Hemoglobin/hemerythrin based oxygen carriers – invited lecture

**Molecular Biology – Current Aspects and Prospects, Cluj-Napoca, Noiembrie 2015**

54. Probing supramolecular interactions in oxygen-carrying proteins

**Nanoscience in Chemistry, Physics, Biology and Mathematics, Cluj-Napoca, 2015**

53. Manifestul de la Leiden: un simptom și un îndemn – invited lecture

**Conferința Națională ”Acces la literatură științifică: Rolul structurilor informaționale pentru dezvoltarea cunoașterii, inovare și sisteme de inovare” – Ediția a III-a – 29-31 Octombrie 2015, Timișoara, România**

52. (Per)oxidation cascades induced by globins and related proteins: towards analytical tools of possible use for antiparasitic drugs

**COST Action CM1307 Meeting Belgrade, Serbia, Octombrie 2015**

51. (Per)oxidation cascades induced by metallo proteins: analytical uses, mechanistic insights

**COST Action CM1201 Meeting Lodz, Poland, Septembrie 2015**

50. High-valent reactivity in superoxide reductase, bleomycin and porphyrazines: similarities and differences

**Metal Elements in Environment, Medicine and Biology, 11th edn., Cluj-Napoca, România, 2011**

49. Something old, something new, something borrowed, something blue: some bonding considerations based on DFT results

**Molecular modeling in chemistry and biochemistry MOLMOD 2011, Cluj-Napoca, November 2011**

48. Modeling transition-metal biological centers

**Molecular modeling in chemistry and biochemistry MOLMOD 2011, Cluj-Napoca, November 2011**

47. Substitute de sânge: stadiul actual – invited lecture

**Filiala Timișoara a Academiei Române, ianuarie 2015**

46. Hemoglobin/hemerythrin-based oxygen carriers (HBOC): radical view, conservative solutions

**33rd CONFERENCE OF THE ROMANIAN CHEMICAL SOCIETY, 2014, Calimanesti-Caciulata, România**

45. Exploring unusual ligands at biological metal centers: from molecular nitrogen to peroxochlorate

**Molecular modeling in chemistry and biochemistry MOLMOD 2014, Cluj-Napoca, November 2014**

44. \*\*\*

**Serile Fundatiei Miscarea Populara, Cluj-Napoca 2013**

43. Lead, follow, or get out of the way

**Serile de leadership, Cluj-Napoca, Fundatia Leaders România, 2014**

42. Hemoglobin/hemerythrin-based blood substitutes (HBOC)

**YES (Young European Scientists) Meeting, University of Porto, Septembrie 2014, invited lecture**

41. Shallow potential surfaces in small molecule activation by biological metal centers: from multiple reactivity to supramolecular association

**Summer School on Supramolecular Chemistry, University of Belgrade, August 2014, invited lecture**

40. I remember when oxygen used to be safe – accounts of a tormented oxygen molecule

**Oxygen-binding and Sensing Proteins Conference (O2BiP), 6-10 Iunie 2014, Sheffield, UK, invited lecture**

39. \*\*\*

**Fostering Innovation at Cluj Napoca, USAMV Cluj-Napoca, Martie 2014**

38. Developing the artificial blood

**Healthcare, Education And Research Talks, Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca, 2014**

37. Regele Soare, viile Moldovei și sângele artificial: creatie sau simple consecinte?

**TEDx Iasi, 2014, invited lecture**

36. Aplicații ale tehnicilor stopped-flow și RES asupra unor specii chimice cu durata de viață limitată

**Zilele Academice Clujene, Cluj-Napoca 2014**

35. Activation of oxides and oxyanions of halides and sulfur at biologically-relevant iron centers

**European Colloquium on Inorganic Reaction Mechanisms, Debrecen, Iunie 2014**

34. Weak interactions dictating secondary and tertiary structure in proteins

**1st Symposium on Weak Molecular Interactions, Martie 2013, Pecs, Hungary**

33. Shedding blood over magnets. Since 1456<sup>TM</sup>

**COST Action CM1201 / 1<sup>st</sup> Meeting, Bologna, Italy, Mai 2013**

32. Fast reactions of nitrite with globins: linkage isomerism and redox processes

**European Colloquium on Inorganic Reaction Mechanisms, Debrecen, Iunie 2013**

31. Biological metal centers and supramolecular interactions: some methodology considerations

**Summer School on Supramolecular Chemistry, University of Belgrade, August 2013, invited lecture**

30. Hai sa te ReFaci

**TEDxCluj, Noiembrie 2013, invited lecture**

29. Biocatalysis

**SOE (“Stability Pact for South-Eastern Europe, sponsored by Germany”) Workshop „From Molecules to Functionalised Materials“, Octombrie 2013, Cluj-Napoca, România**

28. O-X (X=O, N, S, halide) bond activation catalysed by transition metal centers: suicidal vs. productive pathways

**COST Action CM1201 / 1<sup>st</sup> WG1 Meeting, Newcastle upon Tyne, UK, Octombrie 2013**

27. Shedding blood over magnets: some applications on unusual valence states in biological metal centers

**EUCMOS 31, August 2012, Cluj-Napoca, România – invited lecture**

26. The silk, the spin, and the tunnel to China

**Advanced Structure-Property Correlation, the Gate for Special Properties at Molecular and Nano Level. Bucharest, România, Septembrie 2012**

25. Biological high-valent metal states: electromerism within them, and en route to their formation

**EUROBIC 11 – European Congress on Biological Inorganic Chemistry, Granada, Spain, 2012**

24. Molecular modeling of supramolecular interactions in protein structure

**32nd CONFERENCE OF THE ROMANIAN CHEMICAL SOCIETY, 2012, Calimanesti-Caciulata, România**

23. Molecular modeling of supramolecular interactions in protein structure

**XIX CONFERENCE OF THE SERBIAN CRYSTALLOGRAPHIC SOCIETY, 2012, Bela Crkva, Serbia**



22. Molecular modeling of supramolecular interactions in protein structure  
**BiomMedD 2012 – 5th Conference on biomaterials, tissue engineering and biomedical devices, 2012, Constanta, România**
21. Superoxide reductase: a debated mechanism, comparison with superoxide dismutases  
**Metal Elements in Environment, Medicine and Biology 2010, Timisoara, România**
20. Walking the plank in small molecule activation by metalloenzymes and related centers  
**Molecular modeling in chemistry and biochemistry MOLMOD 2010, Cluj-Napoca, Mai 2010**
19. Unusual metal oxidation states in metalloproteins and related complexes: from degenerate orbitals to blood substitutes  
**7th International Conference of the Chemical Societies of the South-Eastern European Countries – Bucharest, Septembrie 2010**
18. Walking the plank in small molecule activation by metalloenzymes and related centers  
**Humboldt Conference on non-covalent interactions, Vrsac, Serbia, 2009**
17. Fe(I) and Fe(0) states in biologically-relevant systems  
**Molecular modeling in chemistry and biochemistry MOLMOD 2009, Cluj-Napoca, Mai 2009**
16. Fe(I) states in biologically-relevant systems  
**The 30<sup>th</sup> National Chemistry Conference, Calimanesti-Caciulata, România, Octombrie 2008**
15. Bioinorganic spectroscopy  
**SOE Workshop “From Molecules to Functionalised Materials“ – Cluj-Napoca, Octombrie 2009**
14. The redox reactivity of globins: the chicken and egg paradox  
**Metal Elements in Environment, Medicine and Biology, 8th edn., Timisoara, România, 2008**
13. Unusual metal oxidation states in metalloproteins and related complexes: from degenerate orbitals to apoptosis  
**Metal Elements in Environment, Medicine and Biology, 9th edn., Cluj-Napoca, România, 2009**
12. Sang et orbitales  
**Le Cinquième Colloque Franco – Roumain De Chimie Appliquée (COFrRoCA), Bacau, România, 2008**
11. The Sarajevo train: stress and unusual valence  
**Exploratory workshop in Chemistry with the Scientific Romanian Diaspora, Bucharest, România, 2008**
10. The reactivity of myoglobin towards sulfoxylate  
**The Fifth International Conference on Porphyrins and Phthalocyanines (ICPP5), Moscow, 2008**
9. Drawing blood over computational arguments: the ferryl case  
**From Molecular Informatics to Bioinformatics – an International Symposium, Budapest, Hungary, 2008**
8. Nitrite linkage isomerism in hemoproteins and related complexes: experimental and theoretical evidence  
**37th Inorganic Reaction Mechanisms Group Meeting, 37IRMG, Barcelona, Spain, 2008**
7. Nitrite linkage isomerism in hemoproteins and related complexes: experimental and theoretical evidence  
**Molecular and supramolecular chemistry of multimetallic systems, Bucharest, România, 2007**
6. Artificial blood: how and why do we make it?  
**Workshop in Material Science and Engineering, Cluj-Napoca, România, 2007**
5. Nitrite linkage isomerism in hemoproteins and related complexes – a case for mechanistic promiscuity  
**From Molecular Informatics to Bioinformatics – an International Symposium, Budapest, Hungary, 2007**
4. Nitrite linkage isomerism in hemoproteins and related complexes: experimental and theoretical evidence  
**Molecular Modelling in Chemistry and Biochemistry – MolMod, Arcalia, România, 2007**
3. Ferryl heme protonation gates reactivity in hemoproteins  
**The 29<sup>th</sup> National Chemistry Conference, Calimanesti-Caciulata, România, Octombrie 2006**
2. Transient species involved in catalytic dioxygen/peroxide activation by hemoproteins: possible involvement of protonated Compound I species  
**Dalton Discussions 8, Metals: Centers of Biological Activity, Nottingham, UK, 2005**
1. Ferryl heme protonation gates reactivity in hemoproteins  
**Young Researchers Forum, 8th European Biological Chemistry Conference, EUROBIC 8, Aveiro, Portugal, 2006**

**Experiența acumulată (inclusiv managerială) în programe/proiecte naționale/internaționale de cercetare finanțate de foruri de specialitate:**

1. Izomeria nitro/nitrito in metalocomplecsi cu relevanta biocatalitica, CEEX-ET Director 2006-2008, 120000 RON

2. Bacterial Proteins Containing Novel Iron Sites, NIH, SUA            membru 2000-2004, 1000000 USD
3. Genomics and Blood Substitutes for 21st Century Europe, European Union 6th Framework Programme, Marea Britanie  
membru 2004-2007, 1000000 EUR
4. Metalloprotein-based blood substitutes – PNII Idei            Director 2007-2010, 1000000 RON
5. Superoxid dismutaze si superoxid reductase – Academia Romana            Director 2007-2008, 5000 RON
6. Centru de modelare moleculara si chimie cuantica computationala - PNII Capacitati Partener 2007-2010, 1000000 RON
7. Metalocomplecsi cu relevanta biologica ai azotitului - Rusia + Acad. Romana            Co-director            2008-2009, 5000 RON
8. Reactivi si intermediari organometalici in sinteze stereocontrolate cu derivati de relevanta biologica - CEEX            membru 2006-2008, 500000 RON
9. Aplicatiile bio-medicale ale compusilor metalelor – metallomics – PCCE            Director partener 2010-2013, 700000 RON
10. Nanomanipularea biomoleculelor cu ajutorul microscopiei de forta atomica PCCE            Director partener 2010-2013, 700000 RON
11. Activarea redox a moleculelor mici de catre centri metalici cu relevanta biologica – PCE            Director 2013-2016, 1000000 RON
12. Molecular Modeling in Chemistry and Biochemistry –conferinte internationale            Director 2011, 5000 RON
13. Noi generatii de biomateriale pentru stomatologia cosmetica – PCCA (“Parteneriate”)            membru 2012-2015, 2000000 RON
14. Biomateriale compozite bazate pe noi sisteme de monomeri fluorurati armati cu nano si micro umpluturi bioactive cu proprietati anticariogenice remanente si adeziune superioara la tesuturile dure dentare – PCCA            Director 2008-2011, 2000000 RON
15. Noi biomateriale avansate, inteligente de tip giomer cu diverse aplicatii in stomatology - PCCA            membru 2012-2015, 2000000 RON
16. Biomateriale complexe cu grad avansat de specificitate utilizate in tratamentele endodontice - PCCA            membru 2008-2011, 2000000 RON
17. Elaborarea strategiei nationale in domeniul cercetarii, dezvoltarii tehnologice si inovarii pentru perioada 2014-2020, -membru - 2013-2014
18. CNFIS-FDI-2017- 0539 „Susținerea complexă a internaționalizării la Universitatea Babeș-Bolyai” – 2017 – director proiect, 400000 RON
19. Reprezentant România, COST Action CM1201 - Biomimetic Radical Chemistry, European Cooperation in Science and Technology
20. Reprezentant România, COST Action CM1307 - Targeted chemotherapy towards diseases caused by endoparasites, European Cooperation in Science and Technology
21. Susținerea cercetării de excelență la Universitatea Babes-Bolyai pe direcții aferente programelor de studii – SCPS-UBB 2020, FDI – CNFIS, director
22. PN-III-P1-1.1-PD-2021-0286 2022 - 2024 Preventing the oxidative side effects of nonsteroidal anti-inflammatory drugs by peg-linking them with natural antioxidants – mentor pentru grant postdoctoral
23. PN-III-P1-1.1-PD-2021-0279 2022 - 2024 Heme edge reactivity towards sulfur- and oxygen-based stress agents – mentor pentru grant postdoctoral
24. PN-III-P4-ID-PCCF-2016-0142 2018 - 2022 - New targeted optical imaging nanoprobe for near-infrared (nir) real-time (rt)image-guided surgery of ovarian cancer, membru
25. CNFIS-FDI-2018-0447 2018 - Susținerea cercetării de excelență la Universitatea Babeș-Bolyai
26. Proiect de dezvoltare institutionala nationala - finantarea excelenței in CDI Infrastructura strategica la Universitatea Babes-Bolyai in contextul dezvoltarii de tehnologii noi si emergente 2018-2020, 33PFE/2018, membru
27. Proiect de dezvoltare institutionala nationala - Rețeaua academică de cercetare de excelență STAR-UBB – STAR-UBB-N, 21PFE/30.12.2022, 2022-2024, membru
28. CNFIS-FDI-2019-0351 - Susținerea cercetării de excelență la Universitatea Babes-Bolyai la centenar 1919-2019, membru
29. CNFIS-FDI-2021-0061- Susținerea capacității instituționale pentru cercetare la Universitatea Babeș-Bolyai (UBB) prin proiecte/teme de cercetare multi-și transdisciplinare în cadrul Scolilor Academice de Știință ale UBB, membru
30. CNFIS-FDI-2022-0179 - Promovarea și susținerea practicilor Open Science în cercetarea de excelență la Universitatea Babes-

Bolyai din Cluj-Napoca, membru

31. CNFIS-FDI-2023-F-0214 - Consolidarea practicilor Open Science în cercetarea științifică de excelență la Universitatea Babeș-Bolyai din Cluj-Napoca, membru

## Premii:

### Științifice:

*The Maria Brezeanu Award for Excellence in Inorganic Chemistry, of the Romanian International Chapter of the American Chemical Society, 2023*

*Top 2% scientists cf. Ioannidis JPA, Boyack KW, Baas J (2020) Updated science-wide author databases of standardized citation indicators. PLoS Biol 18(10): e3000918. <https://doi.org/10.1371/journal.pbio.3000918>:*

*2022 all career all fields; all career field: Inorganic & Nuclear Chemistry*

*2021 all career, all fields*

*2021 all career, field: Inorganic & Nuclear Chemistry*

*2021 single-year, field: Inorganic & Nuclear Chemistry*

*2020 all career, all fields*

*2020 all career, field: Inorganic & Nuclear Chemistry*

*2019 all career, all fields*

*2019 all career, field: Inorganic & Nuclear Chemistry*

*Premiul de excelență în cercetarea științifică la Universitatea Babeș-Bolyai, 2021, 2022, 2023*

*Premiul de excelență pentru dezvoltarea instituțională la Universitatea Babeș-Bolyai, 2018*

*Premiul de excelență pentru dezvoltarea instituțională la Universitatea Babeș-Bolyai, 2016*

*Premiul pentru cercetare științifice la Universitatea Babeș-Bolyai, 2014*

*Premiul cercetării științifice la Universitatea Babeș-Bolyai, 2010*

*Nominalizare în top 100 evaluatori la nivel internațional pentru domeniul chimie în clasamentul Sentinels of Science al Publons, 2016 (<https://publons.com/community/sentinels-of-science-recipient-2016/>)*

*Premiul anual Costin D. Nenițescu al Academiei Române, 2013*

*1<sup>st</sup> prize, 2004 Procter & Gamble Poster Competition (University of Georgia, 2004)*

*Honorable mention, 2003 Procter & Gamble Poster Competition (University of Georgia, 2003)*

### Altele:

*Candidatură la alegeri locale (consiliu local Florești – Cluj), parlamentare, europarlamentare (2016-2019)*

*“Senior al cetății”, Cluj-Napoca 2014*

*Trofeu VIP – Oamenii schimbării, București 2014*

*“Onoare pentru Cluj” – premiu anual pentru cercetare al Prefecturii Cluj, 2013*

*Premiu annual pentru cercetare din partea asociației “Pro Familia”, 2013*

*Trofeu “Prețuiește Viața” - TVR1, București, 2013*

*Trofeu “Ce se întâmplă doctore”, București 2013*

*Premii și mențiuni la Olimpiade școlare faza județeană și națională, și alte concursuri, diverse discipline (chimie, istorie, matematică,*

etc) –1988-1992