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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 enzimatice (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 bioanorganice / 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 bioanorganice / 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)

Chimie, organică și bioorganică

1999–2005 **Doctorat in chimie** EQF level 8

Universitatea Babeș-Bolyai, Facultatea de Chimie și Inginerie Chimică, Cluj-Napoca (România)

Chimie anorganică

2000–2004 **Doctorat in chimie** EQF level 8

Universitatea din Georgia, Athens (GA) Statele Unite ale Americii

Chimie bioanorganică

2001–2001 **Summer Course in Crystallography**

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

~24 ani de experiență didactică și de cercetare
>70 prezentări orale la conferințe științifice
>20 interviuri în mass-media, inclusiv în direct la TV și radio

Apitudini 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-)

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 co-președinte 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 Elveției pentru Uniunea Europeană extinsă (2016-2017)

Tutore cerc studențesc UNIMIND Cluj-Napoca (2021-2022)

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 enzimatice; sinteză chimică și caracterizare structurală cu spectroscopii UV-viz, FTIR, RMN, (GC/LC)-MS, HPLC
- Bio-transformări preparative, folosind celule intacte sau preparate enzimatice 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
- Înregistrare 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_2, 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$_{WoS}$~3800):

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 Diazaphospholyl Ligands in Binuclear Ruthenium and Iron Carbonyl Derivatives**. Journal of Organometallic Chemistry, 2023, in press.

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, Hadade, Niculina; Cezara; 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, . 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 N2: 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, 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, 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/rrch.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/rrch.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, 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-piperidinyl-carbinol units: Synthesis, optical properties and in vitro internalization in human ovarian cancer cells**. Dyes and Pigments, 2022, https://doi.org/10.1016/j.dyepig.2022.110460.

280. Osokin, Vladimir S.; Dereven'kov, Ilia 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, DOI: 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-propanoneoximato 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/rrch.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.; Brânzanic, 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; Surducan, 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.

262. Obasi, Titus Chukwuemeka; Benedec, Daniela; Hanganu, Daniela; Gheldiu, Anamaria; Vlase, Laurian; Oniga, Ilioara; Pușcaș, Cristina; **Silaghi-Dumitrescu, Radu**; Oprean, Radu. **Free radical scavenging activity and total polyphenol content of *Securidaca longipedunculata* roots and leaves extracts**. Farmacia, 2020, 68(1), 116-120.

261. Puscas, Cristina; Moldovan, Marioara; Silaghi-Dumitrescu, Laura; Ungureanu, Lavinia; **Silaghi-Dumitrescu Radu**. **On the apparent redox reactivity of "oxygen-enriched water"**. Biological Trace Element Research, 2020, 198, 350–358. doi.org/10.1007/s12011-020-02056-4.

260. **Silaghi-Dumitrescu, Radu. Redox reactivity in globins: modulation by covalent and non-covalent modifications with biomedical relevance**. Journal of Experimental and Molecular Biology, 2019, XX(3), 1-2.

259. Attia, Amr A.; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu**; King, R. Bruce. **Neutral rhenadicarbaboranes with Re(CO)2(NO) vrtices: a theoretical Study of building blocks for rhenacarborane-based drug delivery agents**. Molecules, 2019, 25(1), E110.

258. Branzanic, Adrian; Ryde, Ulf; **Silaghi-Dumitrescu, Radu. Importance of the iron–sulfur component and of the siroheme modification in the resting state of sulfite reductase.** Journal of Inorganic Biochemistry, 2019, 110928.

257. Mot, Augustin C.; Coman, Cristina; Hadade, Niculina; Damian, Grigore; **Silaghi-Dumitrescu, Radu**; Heering, Hendrik A. **"Yellow" laccase from Sclerotinia sclerotiorum is a blue laccase that enhances its substrate affinity by forming a reversible tyrosyl-product adduct**. PLoS One, 2019, 0225530.

256. Branzanic, Adrian; Ryde, Ulf; **Silaghi-Dumitrescu, Radu. Why does sulfite reductase employ siroheme?** Chemical

Communications, 2019, 55, 14047-14049.

255. Hanganu, Daniela; Olah, Neli-Kinga; Pop, Carmen; Vlase, Laurian; Oniga, Ilioara; Ciocarlan, Nina; Matei, Alina; Puscas, Cristina; **Silaghi-Dumitrescu, Radu**; Benedec, Daniela. **Evaluation of polyphenolic profile and antioxidant Activity for some *Salvia* species**. Farmacia, 2019, 67(5), 801-805. https://doi.org/10.31925/farmacia.2019.5.8

254. Hannibal, Luciana; Molodtsov, Pavel; Branzanic, Adrian; **Silaghi-Dumitrescu, Radu**; Makarov, Sergei. **Kinetic, spectroscopic and in silico characterization of the first step of the reaction between glutathione and selenite**. Inorganica Chimica Acta, 2020, 499, 119215.

253. Moldovan, Mirela L.; Iurian, Sonia; Puscas, Cristina; **Silaghi-Dumitrescu, Radu**; Hanganu, Daniela; Bogdan, Catalina; Vlase, Laurian; Oniga, Ilioara; Benedec, Daniela. **A design of experiments strategy to enhance the recovery of polyphenolic compounds from *Vitis vinifera* by-products through heat reflux extraction**. Biomolecules, 2019, 9(10), 529; https://doi.org/10.3390/biom9100529.

252. Farcas, Anca Daniela; Mot, Augustin C.; Zagrean-Tuza, Cezara; Ticolea, Madalina; Sevastre, Bogdan; Kulak, Muhittin; **Silaghi-Dumitrescu Radu,** Parvu, Alina. **Remarkable rutin-rich *Hypericum capitatum* extract exhibits anti-inflammatory effects on turpentine oil-induced inflammation in rats**. BMC Complementary and Alternative Medicine, 2019, 19, 289.

251. Sacalis, Carmen; Morar, Cristina; Lameiras, Pedro; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu;** Bende, Attila; Katona, Gabriel; Porumb, Dan; Harakat, Dominique; Gál, Emese; Darabantu, Mircea. **Design, synthesis and structure of novel dendritic G-2 melamines comprising piperidine motifs as key linkers and 4-(n-octyloxy)aniline as a peripheral unit**. Tetrahedron, 2019, 75, 130468, https://doi.org/10.1016/j.tet.2019.130468.

250. Radu, Luana; Attia, Amr A.; **Silaghi-Dumitrescu, Radu**; Lupan, Alexandru; King, R. Bruce. **The group 9 cyclopentadienylmetal cis ethylenedithiolates as metallodithiolene ligands in metal carbonyl chemistry: analogies to benzene metal carbonyl complexes.** New Journal of Chemistry, 2019, 43(32), 12711-12718.

249. Puscas, Cristina; Mircea, Alina; Raiu, Madalina; Mic, Mihaela; Attia, Amr A. A.; **Silaghi-Dumitrescu Radu**. **Affinity and effect of anticancer drugs on the redox reactivity of hemoglobin**. Chemical Research in Toxicology, 2019, 32(7), 1402-1411.

248. Mot, Augustin C.; Puscas, Cristina; Dorneanu, Sorin; **Silaghi-Dumitrescu Radu**. **Isolation, purification and characterization of ascorbate oxidase and peroxidase from *Cucurbita pepo medullosa***. Studia Universitatis Babes-Bolyai Seria Chemia, 2019, 64(2), 49-60.

247. Scurtu, Florina; Tebrean, Bogdan; Árkosi, Mariann Kinga; Ionele, Adrian; **Silaghi-Dumitrescu, Radu. Hemoglobin-albumin co-polymers for blood substitutes: increasing the reproducibility of the polymerization reaction**. Studia Universitatis Babes-Bolyai Seria Chemia, 2019, 64(2), 421-434.

246. Mot, Augustin C; Puscas, Cristina; Dorneanu, Sorin; **Silaghi-Dumitrescu Radu**. **EPR detection of sulfanyl radical during sulfhemoglobin formation–Influence of catalase**. Free Radical Biology and Medicine, 2019, 137, 110-115.

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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/

22. **Silaghi-Dumitrescu, Radu**. **Războiul din Ucraina e în primul rând unul împotriva decenței. Cu un ecou în mediul academic.** contributors.ro 2022, https://www.contributors.ro/razboiul-din-ucraina-e-in-primul-rand-unul-impotriva-decentei-cu-un-ecou-in-mediul-academic/

23. **Silaghi-Dumitrescu, Radu**. **Ar trebui interzise reclamele exagerate la „suplimente alimentare" și „produse naturiste"?** contributors.ro 2022, https://www.contributors.ro/ar-trebui-interzise-reclamele-exagerate-la-suplimente-alimentare-si-produse-naturiste/

24. **Silaghi-Dumitrescu, Radu**. **Mușamalizarea plagiatelor la nivel înalt nu întărește România în contextul agresiunii Rusiei, ci transformă România în Rusia**. contributors.ro 2022, https://www.contributors.ro/musamalizarea-plagiatelor-la-nivel-inalt-nu-intareste-romania-in-contextul-agresiunii-rusiei-ci-transforma-romania-in-rusia/

25. **Silaghi-Dumitrescu, Radu**. **Discriminarea din instinctele noastre** contributors.ro 2023, https://www.contributors.ro/discriminarea-din-instinctele-noastre/

26. **Silaghi-Dumitrescu, Radu**. **Universitățile amenințate de Inteligența Artificială.** contributors.ro 2023, https://www.contributors.ro/universitatile-amenintate-de-inteligenta-artificiala/

Prezentări la conferințe, seminarii:

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 ICBIC20, Adelaide, Australia, 2023

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

Consiliul Național de Statistică și Prognoză a Învațământului 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: traficarea 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 şi substanţă

Educaţia şi cercetarea românească - Starea prezentă şi 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

Conferinţa Naţională "Acces la literatură ştiinţifică: Rolul structurilor informaţionale pentru dezvoltarea cunoaşterii, inovare și sisteme de inovare" – Ediţia a III-a – 29-31 Octombrie 2015, Timişoara, 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 Supramollecular 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™
COST Action CM1201 / 1st 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 Supramollecular 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 / 1st 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 30th 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 Poprhyrins 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, 37IRMGM, 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 Engineeering, 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 29th 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

Experienţa acumulată (inclusiv managerială) în programe/proiecte naţionale/internaţionale de cercetare finanţate 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 „Susţinerea complexă a internaţionalizării la Universitatea Babeş-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. Susţinerea cercetării de excelenţă la Universitatea Babes-Bolyai pe direcţii 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 for postodctoral grant

23. PN-III-P1-1.1-PD-2021-0279 2022 - 2024 Heme edge reactivity towards sulfur- and oxygen-based stress agents – mentor for postodctoral grant

24. PN-III-P4-ID-PCCF-2016-0142 2018 - 2022 - New targeted optical imaging nanoprobes for near-infrared (nir) real-time (rt)image-guided surgery of ovarian cancer, team member

25. CNFIS-FDI-2018-0447 2018 - Susținerea cercetării de excelență la Universitatea Babeș-Bolyai

Premii:

Științifice:

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*:*

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 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-recipients-2016/*)*

Premiul anual Costin D. Nenițescu al Academiei Române, 2013

1st 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 Floresti – 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 asociatiei "Pro Familia" , 2013

Trofeu "Prețuiește Viața" - TVR1, București, 2013

Trofeu “Ce se intampla doctore”, București 2013

Premii și mențiuni la Olimpiade scolare faza județeană și națională, și alte concursuri, diverse discipline (chimie, istorie, matematică, etc) –1988-1992