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F. Várkonyi Egon, Drd.

Pharmaceutical Chemist, Teacher of Chemistry

DATA ON EDUCATIONAL ATTAINMENT

2023-currently University of Szeged, Doctoral School of Chemistry, Szeged

Ph.D. student (Drd.),

Program: Catalysis, surface, colloid and materials science.

Design of complex drug delivery particles containing anticancer (coordination)

compounds.

2024. **Hungarian Atomic Energy Authority**

Extended degree course in radiation protection,

completion of 2 specialisations:

• Health applications, including education and research,

• Non-nuclear industrial applications, including education and research,

Pedigree number: BL B 202406 11

The OTH/OAH licence number authorising the training:SRV-HA19399

Valid for 5 years

2022-2023. University of Szeged, Faculty of Science and Informatics, Szeged

Teaching Chemistry M.Ed. (Master's Degree – Master of Education),

Qualified as a Teacher of Chemistry.

Grade of degree: excellent [P81D001500]

2021-2023. University of Szeged, Faculty of Science and Informatics, Szeged

Chemistry M.Sc. (Master's Degree – Master of Science),

Qualified as a Chemist. Pharmaceutical Chemistry specialisation.

Grade of degree: good [P81D001401]

2018-2021. University of Szeged, Faculty of Science and Informatics, Szeged

Chemistry B.Sc. (Bachelor's Degree – Bachelor of Science),

Oualified as a Chemist.

Grade of degree: good [P81B067138]

2017-2018. University of Szeged, Faculty of Science and Informatics, Szeged

Biology-chemistry teacher student – change.

2009-2017. Our Lady Catholic School, Kalocsa

Primary and Secondary Grammar School studies.

Graduation [P44P058076]; Matriculation at advanced level (biology

and chemistry).

















Dusnok-Fajsz Associated General Education Centre, Dusnok

Primary School studies.

EXPERIENCE IN EDUCATION (as a teacher)

University education

University of Szeged - 2024/25 academic year Semester I

- Chemical calculations for biology (B.Sc.) students (*in progress*)
- Quantitative chemical analysis exercise for pharmacy students, counting exercise and laboratory (in progress)



• Laboratory course in biological analytical chemistry for B.Sc. students in molecular bionics engineering.

Student rating (on a scale of 1 to 5): excellent 4.87

University of Szeged - 2023/24 academic year Semester I

 Teaching general chemistry computational practice and laboratory practice to pharmacy students

<u>Student rating</u> (on a scale of 1 to 5): excellent (4.74)

• General chemistry calculations consultation classes for B.Sc. students in Biology.

High school

2024 spring graduation.

Advanced level chemistry oral examinations - as a member of the subject committee, I was a questioning teacher in two counties.

- Csongrád-Csanád county (Szegedi Tudományegyetem Gyakorló Gimnázium és Általános Iskola)
- Bács-Kiskun county (Kecskeméti Református Gimnázium)

University of Szeged Practical High School and Primary School (former Ságvári), 2022/23 academic year Semester II

Teaching practice (group + individual), 9-10. classes

Exercise rating: excellent

Further training, lectures

2024. march Pázmány Péter Catholic University, Budapest

In-service training for secondary school chemistry teachers

Attended and completed training.

Certificate serial number: T/2024/083775-1

2024. january Bács-Kiskun county local DTV, Dusnok

Making a presentation in the context of a report.

Theme: research, children in public education, covid-information age.

2023. october XV Carpathian Basin Chemistry Camp, Zenta – Serbia

Participation as a lecturer,

Lecture entitled: "From Human to Real, or the recipe for genius?!"















2023. april MCC Szeged Training Centre, Teachers' Conference participation

Presentation by Gergő Fegyverneki (secondary school teacher,

university lecturer, digital pedagogy expert, methodological consultant)

on "How to communicate with the digital generation".

2023. march MCC Szeged Training Centre, lecture participation

Lecture by Dr. Annamária Tari, psychoanalyst, psychotherapist

on "The power of online space and family life... in the 21st century".

2023. march Mentro(h)áló Pedagogy in a different way series, Szeged

Lecture by Dr. Miklós Lehmann, Associate Professor, Department of

Social Sciences, ELTE, entitled "How to raise our children to be

"savvy" media consumers.

2022. november Mentro(h)áló Pedagogical Evenings programme, Szeged

Presentation by Gergő Fegyverneki, digital pedagogy expert, on internet

and gadget addiction (children at the centre).

CHEMISTRY/RESEARCH EXPERIENCE.

2023-currently Hungarian Academy of Sciences – University of Szeged,

"Momentum" Functional Metal Complexes Research Group

Status: assistant research fellow (part-time job next to the Ph.D. studies)

Activity: research experience in coordination chemistry.

2022-2023. Hungarian Academy of Sciences – University of Szeged,

"Momentum" Noble Metal Nanostructures Research Group

Activity: Interaction of noble metal nanoclusters with serum protein in

2D and 3D systems; research, preparative experience.

Thesis leader: Juhászné Dr. Csapó Edit

2022. Under the leadership of the Ministry of Innovation and Technology

summer-autumn National Laboratory of Biotechnology, Biological Research Centre,

Szeged – Centre of Excellence of the Europian Union,

Institute of Biochemistry, Membrane and Stress Biology Unit

Activity: Optimizing the composition of lipid nanoparticles for tissue

specific targeting of mRNA. (Contract of assignment)

2022. summer CLNE Laboratory Kft., Szeged

Activity: Product development for water analysis measurements,

internship.

Products: pH calibration solutions, calibration solutions for conductivity

measurements, reagents for photometers.

2022. june Hungarian Academy of Sciences – University of Szeged,

"Momentum" Noble Metal Nanostructures Research Group

Research activities (Contract of assignment).

Research, preparative experience.





















2022. spring

University of Szeged, Department of Inorganic and Analytical Chemistry and Department of Plant Biology





Activity: Study of trace element and nanoparticle uptake of plants by

LIBS elemental mapping. During a project work.

Thesis leader: Prof. Dr. Galbács Gábor and Ördögné Dr. Kolbert

Zsuzsanna

2019-2021.

University of Szeged, Department of Physical Chemistry and Materials Science – Colloids and Nanostructured Materials Research Group



Activity: Design of liposomal carrier particles containing vitamin B_1 ; research, preparative experience. This work has resulted in a scientific

article.

Thesis leader: Juhászné Dr. Csapó Edit and Janóné Dr. Ungor Ditta

2019. july

Hungarian Academy of Sciences – University of Szeged, "Momentum" Biocolloids Research Group



Activity: Helping in a Ph.D. work on Nanozymes; preparative

experience.

Thesis leader: Prof. Dr. Szilágyi István and Nizar B. Alsharif

Training courses

2023. october "Budapest School on Modern X-ray Science"



Natural Science Research Centre hosted the Budapest School on Modern X-ray Science (3-6 Oct 2023) - with the support of the

European XFEL, the European Synchrotron Radiation Facility (ESRF) and the Natural Sciences Research Centre - organised by the Hungarian

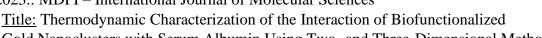
Synchrotron Committee and the Eötvös Loránd Physics Society

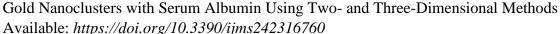
Certificate rating obtained: good (4).

SCIENTIFIC RESULTS

Scientific articles

25.11.2023.: MDPI – International Journal of Molecular Sciences





Author contribution: investigation.

12.09.2021.: MDPI – International Journal of Molecular Sciences

Title: The pH-Dependent Controlled Release of Encapsulated Vitamin B1 from

Liposomal Nanocarrier

<u>Available:</u> https://doi.org/10.3390/ijms22189851 <u>Author contribution:</u> methodology, investigation.





Scientific presentation(s).

2024. (29th of may): Hungarian Chemists' Association, Complex Chemistry Section, 57th Complex Chemistry Colloquium

<u>Presentation title:</u> development of semi-sandwich complexes with multidrug resistance selectivity using phenanthroline derivatives.

2022. autumn -2023. spring: 36. National scientific student conference 2023., University of Szeged, Faculty of Science and Informatics – local and national participation

Section: Chemistry student group - Organic chemistry / Biochemistry

Result: 2nd place

<u>Thesis:</u> Design of colloidal drug delivery systems for vitamin B₁ encapsulation and tissue-specific targeting of mRNA.

<u>Témavezetők:</u> Juhászné Dr. Csapó Edit (MTA-SZTE), Janóné Dr. Ungor Ditta Anita (MTA-SZTE), Dr. Gombos Imre (BNL-SZBK).



OTHER INFORMATION

Computer skills

Knowledge of Microsoft Office at user level (e.g. dokumentation, processing measurement data).

Language examination

English Vantage (B2) complex (state accredited)

Oral: ELTE Origó [NG010-05124] Written: iTOLC [QD320-01445].

Driving licence

Category B.

Szeged, 06.09.2024.

Egon F Varkonyi Drd