

Certificate of Completion Campus Hungary Placement

Details of the student

Name of student (surname, first name): Póta Kristóf

Registration number: B2/1SZ/10884

Address (house number, street name, postcode, city, country): 41., Mikes Kelemen street, 3300, Eger, Hungary

Nationality: Hungarian

Sending Institution: University of Debrecen

Subject area: Coordination Chemistry

Dates of the completed placement period (first and last day of activity)

First day (dd.mm.yyyy): 22.09.2014

Last day (dd.mm.yyyy): 19.12.2014

Number of working hours per week (Minimum 12 hours per week required.): 35 hours per week

Working language: English

Details of the host organisation/company

Name of the organisation/company: Center of Molecular Biophysics

Website: cbm.cnrs-orleans.fr

Address: Rue Charles Sadron, 45071 Orleans Cedex 2,

City: Orléans

Country: France

Name of contact person: Prof. Dr. Éva Jakab Tóth

Title: Research director

E-mail: eva.jakabtoth@cnrs-orleans.fr

Phone number: +33 2 38 25 76 25

Brief description of the completed training program:

During his stay in my laboratory, Kristof Pota studied a series of manganese complexes in the context of MRI contrast agent development. Indeed, paramagnetic Mn(II) chelates have potential to be used as contrast enhancing agents in Magnetic Resonance Imaging. The efficiency of such agents is related to a series of microscopic parameters of the complexes, some of which have been investigated in this project. Another important parameter is the stability of the complexes, which determines their in vivo toxicity and which has been also addressed in details. Kristof Pota carried out potentiometric studies and ¹⁷O NMR and relaxometric measurements. He acquired expertise in these fields and became fully independent in carrying out those measurements and in the analysis and evaluation of the experimental results. During this stay, Kristof Pota was working in a research group which is part of a large laboratory at the interface of chemistry, biology and physics. The interactions he could have with the other members of the laboratory can be also valuable to widen his scientific view.

Description of skills and competences acquired during the placement period

1. Activities/tasks carried out

Complexometric analysis to determine concentration of metal ions in aqueous solution
Potentiometric titration to assess protonation and complex stability constants. Evaluation of the data with Hyperquad.
17O NMR measurements. Relaxometric measurements.

2. Job-related skills and competences acquired

Work in a research team.
Planning experiments.
Evaluation of experimental data.

3. Language skills and competences acquired (if not included under 'Job-related skills and competences')

Kristof was communicating in perfect English with the other members of the laboratory. He progressed in the scientific language.

4. Computer skills and competences acquired (if not included under 'Job-related skills and competences')

Use of specialized programs to evaluate potentiometric data.

5. Organisational skills and competences acquired (if not included under 'Job-related skills and competences')

Independence in the planning of the research work, on the basis of regular meetings with the project responsible (2 times a week).

6. Social skills and competences acquired (if not included under 'Job-related skills and competences')

Integration in a research team.

7. Other skills and competences acquired

8. Number of awarded ECTS credits (if any):

Hereby I certify, that the above mentioned student has successfully completed his/her training period at our organisation/company.

Docteur Eva JAKAB TOTTH

DIRECTOR of organization/company representative

Centre de biophysique moléculaire

Signed on (date) ...17/12/2014... at Orléans

CENTRE DE BIOPHYSIQUE MOLÉCULAIRE

place of organization/company

45071 ORLÉANS cedex 2

(France)

Balassi Institute

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E-mail: info@campushungary.hu

www.balassi-intezet.hu

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signature of student

Signed on (date) ...05/01/2015... at ...DEBRECEN...



HUNGARY'S RENEWAL

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