NATALIA CHEVTCHIK

Researcher - Engineer
R&D medical devices / life sciences

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PERSONAL INFORMATION

Telephone: +31 (0)6 26 47 13 47

Email: natalia.chevtchik@gmail.com
Birth: Minsk, Belarus, 16 December 1987

Nationality: French
Driving Licence: French - B



PERSONNALITY AND PROFESSIONAL GOAL

I am a Material Sciences Engineer finalising my PhD in Biomaterials Science and Technology. With 6 years of industrial and academic experience in the development of medical devices, I am looking forward to integrate the R&D department of an international company oriented towards medical, life sciences or diagnostic applications. I master various polymer processing and characterisation techniques, learn and adapt fast. I am well organised, goal oriented and I work in a good team spirit with multidisciplinary partners on complex projects. I speak and write 4 European languages in full working proficiency.

PROFESSIONAL EXPERIENCE

Aug 2013 – **PhD candidate- Marie Curie ITN "BIOART"** at the **University of Twente**, the Nederlands, now Biomaterials Science and Technology group, Promotor Prof. Dr. Stamatialis:

- Development of bioartificial kidney using polymeric membranes and human cells;
- Upscaling of a hybrid device, surface modification of membranes, cell culture;
- Characterization of cell function, detection of proteins and toxins via HPLC, UV-vis, fluorescence and microscopy (optical, confocal, SEM; sample preparation techniques);
- Design of experiments, data analysis, technical writing, dissemination of results;
- Supervision of Master and Bachelor students (in English and in Dutch).

2010-2013 **SOFRADIM Production - COVIDIEN** Surgical Devices, Lyon, France – (**ISO 13485**):

Oct 2012 - • **R&D Engineer**: responsible for X-ray photoelectron spectrometry (XPS):

Jul 2013

- Installation, troubleshooting and validation (IQ, OQ, PQ) of the XPS;
- Development and optimization of the characterization techniques for polymeric implants, antimicrobial coating and degradation of the implants for internal clients.

Sep 2010 - • Engineering Project Leader: Parietex™ Composite Ventral Patch:

Sep 2012 _

- Development of the manufacturing process (including overmolding) and of the characterization methods (mechanical properties, viscosity) of a novel class III implant;
- Risk analysis of the product and of the process (FMECA);
- Transfer to Manufacturing (communication, organization, training of the operators);
- Management of planning, budget, suppliers and team (professional use of English).

Mar 2010 - • **R&D Engineer (stage)**: Microencapsulation using experimental design Taguchi:

Sep 2010 – Microencapsulation of model molecules and in vitro evaluation of cytotoxicity.

EDUCATION

2005-2010 <u>Diploma of Master in Engineering in Materials Sciences at I.N.S.A. Lyon, France.</u>

I.N.S.A National Institute of Applied Sciences is the Leading organisation in France to educate engineers after the baccalaureate (A level). This diploma is the equivalent of an excellent level Bachelor (2 years) and an excellent Master (3 years) of Engineering Science and Technology.

2005 <u>Scientific Baccalaureate (equivalent A level)</u> majors Math, Physics and Biology, France.

INTERNSHIPS AND PROJECTS

2009-2010 Final year research project - BLUESTAR SILICONES, Lyon, France:

Functionalization of silicones using ionizing radiations and characterization (RMN, SEC).

2009 **R&D** internship - University of Southampton, UK:

Computer assisted modelling of micromechanics of failure in orthopaedic cements.

R&D and Quality internship - NORAKER Innovative Biomaterials, Lyon, France:

Conception of a testbed for composite screws, elaboration of bone substitutes.

ADDITIONAL COURSES AND CERTIFICATIONS

2016 NT2 – Dutch as a second language, official Dutch Certification;

- Certificate of Dutch at European C1-C2 level, the University of Twente, the Netherlands;
- "From Market to Research", regulatory affairs en clinical research, Bionethos, Germany;
- "Technical Writing and Editing", Peterborough Technical Communication, UK, course from the University of Twente, the Netherlands;
- Winter school "Nephrology", Dutch Kidney Foundation, Driebergen, the Netherlands.

2015 - Summer school "Membranes for bioartificial organs", Twente, the Netherlands;

Professional Effectiveness, Novitijd, University of Twente, the Netherlands.

2013 Plastic injection and overmolding – Centre de Formation en Plasturgie (CFP), France.

2009-2010 - Master of Science in Research in innovative polymeric materials at University Claude Bernard Lyon 1, France. Double degree, courses in physico-chemistry of polymers.

SKILLS

2008

Technical Polymer processing (microencapsulation, overmolding, spinning);

> Polymer and protein characterization (membrane permeability, mechanical testing, FT-IR, DSC, viscosimetry, UV-Vis, fluorescence, HPLC, SEC, RMN);

Cell culture (including bioreactor), microscopy (optical, confocal, SEM/EDS, XPS);

Project Management: planning, budget and team management, solving problems and conflicts, intercultural communication, giving feedback.

Communication Written – regular project reports, publication as first author:

Chevtchik, N.V., et al., Upscaling of a living membrane for bioartificial kidney device.

Eur J Pharmacol (2016), http://dx.doi.org/10.1016/j.ejphar.2016.07.009;

Oral – teaching practical courses, giving introductions to technical equipment, presentations at meetings, national and international conferences (ESAO, TERMIS).

Languages French: native;

Russian: native, Russian teacher at INSA Lyon 2007-2010;

English: fluent;

Dutch: very good (professional language).

Software Image analysis and processing (ImageJ, CellProfiler); Drawing (autoCAD, SolidWorks);

Specific software (Nikon NIS-Elements, Jasco ChromNAV, Aphelion SDK),

Statistics (IBM SPSS); Office (Microsoft office pack, EndNote, Origin, Illustrator).

Hobbies Dance, badminton, French and Russian classic literature.