



# Yulia Yuts

Chemist and MBA  
PhD Candidate at ETH Zurich

A high-performing scientist with a passion for innovation in pharmaceutical industry. I've spent over 5 years collaborating in diverse teams across small and corporate firms, gaining insights from industrial-scale production to strategic planning for startups. My hands-on experience complements my research background, allowing me to translate theory into tangible real-world solutions.

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## EDUCATION

**PhD in Pharmaceutical Sciences**  
ETH Zurich  
2020-2025. Leroux group

**MSc in Chemistry**  
ETH Zurich  
2018-2020

**MBA**  
Technological University of Costa Rica  
2015-2017

**BSc in Chemistry**  
University of Costa Rica  
2008-2012

## WORK EXPERIENCE

### Strategic Project Manager

Alibion AG, Basel, Switzerland | 05.2020 - 09.2020

- Evaluation of potential technologies in early pharmaceutical development
- Creation of positioning strategy and market research

### Analytics Manager

Aristoteles Data Analytics, Costa Rica | 06.2016 - 07.2017

- Created a data analytics unit from scratch, business model and positioning strategy
- Business analyses for **Ogilvy** and **Grey** customers to improve their marketing strategies
- Implemented **CRM** and created digital **inbound strategies** based on comprehensive customer data analysis, non-generic and targeted content for their customers

### Latin America Rep. for Constant Improvement Network

Dow AgroSciences Central America, Costa Rica | 08.2015 - 05.2016

- Additional role to Regulatory Specialist
- Co-developed significant changes to USA planning process to improve **global regulatory requests**
- Implemented effective solutions for delivering **compliant** documentation to internal stakeholders

### Regulatory Specialist, R&D

Dow AgroSciences Central America, Costa Rica | 05.2012 - 05.2016

- Regulatory affairs for +100 products (pesticides and genetically modified seeds)
- Developed record-keeping system for the plan of work & expenses for each region
- Partnered with global **marketing teams** to develop Regional and Global Registration Plans
- Actively involved in **Product Stewardship** projects for persistent chemicals
- Lead a **Green Belt Lean Six Sigma** cross functional project to avoid errors in customer service processes worth \$100K/year
- Actively participated in **CropLife International** regional projects
- Designed and approved **MSDS**

### Internship, R&D

ChemTica Internacional S.A., Costa Rica | 07.2011-12.2011

- Total synthesis on industrial scale of a **pheromone** of African palm weevil
- Quality control via GC-MS and GC-FID

## RESEARCH EXPERIENCE

### Doctoral thesis (Ongoing)

ETH Zurich, [Drug Formulation & Delivery](#) | 11.2020 - to date

- Development of novel formulations and medical devices for **oral delivery of peptides**
- Synthesis of biodegradable, shape-memory, strong and elastic polymers for precise 3D printing of oral medical devices
- Synthesis and *in vitro* evaluation of **new permeation enhancers**
- *In vivo* studies design and pharmacokinetics analysis

### Master thesis (Grade: 5.75)

ETH Zurich, [Pharmaceutical chemistry group](#) | 10.2019 - 02.2020

- Efficient synthesis of stereopure 2'-MOE phosphorothioate oligonucleotides for antisense therapy

## KEY SKILLS

### PROFESSIONAL

- High performer
- Strong communicator
- Team-builder
- Flexible
- Independent learner
- Continuous improvement mindset

### TECHNICAL

- Organic synthesis and purification of small molecules and polymers
- **Techniques:** NMR, HPLC, UPLC, TLC-MS, LC-MS, Native-MS, Head-space GC, UV-VIS, CAD, IR, Raman, SAXS/WAXS, GPC, TGA/DSC
- Cell culture, cytocompatibility, *in vitro/ex vivo* permeability assays
- *In vivo* experiments planning
- Pharmacokinetics data analysis
- Clean room experience
- Good clinical practices (GCP)
- Toxicology and ecotoxicology
- Regulatory affairs

### IT RELATED

- ChemOffice, MestreNova, Chemira, Mendeley, EndNote
- Adobe Acrobat
- Origin, Prism, Power BI, Tableau, Rapid Miner

## LANGUAGES

<b>Spanish</b>	Native speaker
<b>English</b>	Fluent (C2)
<b>French</b>	Beginner (A2)
<b>German</b>	Beginner (A2)

## REFERENCES

Upon request

### Internship

EMPA, [Laboratory for functional polymers](#) | 02.2019-07.2019

- Researched in Dorina Opris' group on chemical synthesis of polar elastomers for **artificial muscles**.

### Research Projects

ETH Zurich, [Pharmaceutical biology group](#) | 09.2018-01.2019

- Worked on total synthesis of an analog of Amicetin nucleoside **antibiotic**, thanks to its potential treatment against modern tuberculosis strains. This project was part of global initiative MM4TB

UCR, [Atomic, nuclear and molecular sciences research center](#) | 2011-2012

- Researched, collected data, developed, designed and interpreted analytical method for quantitative determination of trihalomethanes (THM) in **drinking water** with Head Space-GC chromatography

UCR, [Natural products research center](#) | 2010-2012

- Researched in Guy Lamoureux's group in the synthesis of **naphthoquinone derivatives** with several biological activities. Hands-on purification, alternative Friedel-Crafts reactions, radical reactions and **green chemistry** approach

## PUBLICATIONS

- **Y. Yuts**, M. Bohley, A. Krivitsky, Y. Bao, Z. Luo, J.-C. Leroux. Photopolymerization inks for three-dimensional printing of elastic, strong, and biodegradable oral delivery devices. *Adv. Funct. Mater.* **2023**, 2310111, 1.
- Y. Sheima, **Y. Yuts**, H. Frauenrath, and D. M. Opris. Polysiloxanes Modified with Different Types and Contents of Polar Groups: Synthesis, Structure, and Thermal and Dielectric Properties. *Macromolecules.* **2021**, 54 (12), 5737-5749.

## AWARDS AND CERTIFICATIONS

2023	Good Clinical Practice (GCP) Certification Module 2, Clinical Trial Center, Zurich
2019	Scholarship from Charles E. Blatter Stiftung, Zurich
2015	Certified Internal Quality Auditor <b>ISO 9001:2008</b> , Costa Rica

## VOLUNTEERING AND ACTIVITIES

2023	Graduate Consulting Club. Team lead for a pro bono consulting for a biotech startup
2021	Member of <b>Polymesse</b> 2021 and <b>Poly-e-fair</b> (company relations)
09-12.2019	Startup Campus Training by Innosuisse. <b>1st Place</b> for the most innovative business idea (5-Dec 2019), in collaboration with ETH students and graduates. <b>Project:</b> <i>Affordable, extremely fast and portable PCR device</i>
8.2019	Mentor and Team Leader of the Swiss Team, International Young Naturalists' Tournament ( <b>IYNT</b> ) 2019. Zurich. Silver medal (Minsk)
3.2019	National Juror, Swiss Young Naturalists' Tournament ( <b>SYNT</b> ) 2019, Zurich
2019	Digital marketing manager at <b>ARIS</b> (Akademische Raumfahrt Initiative Schweiz), ETH Zurich
2015-2017	<b>Toastmasters</b> Club (club officer), San Jose, Costa Rica