



DR. ELENA C. GROSS

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EDUCATION

FEB. 2015- SEPT. 2019

PhD in Clinical Research, University of Basel, Switzerland

PhD in clinical research at **University of Basel**, Department of Neurology and Neuropediatrics, University Hospital and Children's Hospital Basel, Basel, Switzerland
Clinical and basic research projects on: **The metabolic face of migraine** – Metabolism, mitochondrial (dysfunction) and the potential therapeutic benefit of exogenous ketone bodies in migraine and their potential mechanisms of action

JULY-AUG 2016

Research Fellowship at the University of Harvard Medical School, USA

Research Fellowship at the **University of Harvard Medical School, Boston, USA**, with Prof Rami Burstein; focus on the role of inflammation in migraine, assessed with genetic and epigenetic analysis amongst others and shadowing at the headache clinic

SEPT. 2013 – SEPT. 2014

Master of Science in Neuroscience at the University of Oxford, UK

Master of Science in Neuroscience at the **University of Oxford**, Lincoln College, Oxford, UK
Final grade: Distinction, among top 3 students in year group and Clarendon Scholarship

SEPTEMBER 2009 – JULY 2012

Bachelor of Science in Psychology at the University of York, UK

Bachelor of Science in Psychology at the **University of York, York, UK**
Final grade: **79 (First with Distinction)**; rank 1 out of 142 students (= best 0.7%),
Best average grade since existence of university (50 years)

FEBRUARY 2005 – JUNE 2008

Gymnasium Oberursel, Oberursel, Germany

Gymnasium Oberursel, Oberursel, Germany, **Abitur (German A-levels)**
Final grade: **1.0 (A-level equivalent of A*)**, rank 1 out of 145 students (= best 0.7%; Majors: Chemistry and English)

BUSINESS EXPERIENCE

AUG 2017– ONGOING

KetoSwiss AG, Basel, Switzerland

A BioTech startup that has identified a unique migraine subgroup (metabolic migraine), which can be prevented using the lead product MigraKet that is 3x as efficacious than gold standard and no side-effects.

CEO/CSO & founder

- Fundraising / pitching (CHF 2.5m raised), finding potential partners in the industry, networking
- Managing operations and resources, creating and implementing the strategic direction of KetoSwiss
- Managing existing and finding new investors, board members and advisors and collaborators
- Building / expanding the KetoSwiss team (operative and advisory)
- Product development, clinical trial design and execution (including pharmacokinetic trials)
- Patent, grant and scientific paper writing
- Attending conferences, shows and startup events

FEB 2015 – SEPT 2019

University of Basel & University Hospital Basel, Basel, Switzerland

Among Switzerland's top and biggest universities and hospitals.

PhD student in clinical research (Dr. sc. Med)

- Writing grants / getting funding for clinical phase 2 efficacy and safety trial (first ever controlled exogenous ketone body trial in humans) and PhD salary
- Initiating, planning, designing and execution of trial, including writing of all ethics and regulatory agency and patient documents, finding the investigational medicinal product for the trial, biomarker and safety marker choices, recruitment and patient visits
- Management of all involved teams, including study nurses, laboratories, data management, clinical trial unit, patients, study doctors, study drug manufacturers, monitors etc.
- Analysis and writing up of results and writing patents

AWARDS AND PRIZES

SEPT 2021

Sie Venture Female Startup Program

Part of 10 startups in the Sie venture female startup program 2021 (out of 200 applicants)

JUNE 2021

ENRICH Funding Summit Bio Digital

KetoSwiss earns first price at ENRICH Funding Summit Bio Digital (June 2021)

SEPT 2020

Top 100 Swiss Startup Challenge

1st place in BioTech in the public voting of the Top 100 Swiss Startup Challenge in 2020

AWARDS AND PRIZES (CONTINUED)

MARCH 2020

Venture Leader Life Sciences startups in 2020

Amongst the top 10 Venture Leader Life Sciences startups in 2020

JANUARY 2020

Swissnex Venture Leader

Accepted in the Swissnex venture leader 2020 program

DEC 2019

Impact Hub in Basel

1st place at Impact Hub in Basel

NOV 2019

Swiss Innovation Challenge

5th place in the Swiss Innovation Challenge 2019

AUG 2019

Swiss Innovation Challenge in 2019

3rd in life sciences in the Swiss Innovation Challenge in 2019

AUG 2019

Swiss Innovation Challenge

3rd in life sciences in the Swiss Innovation Challenge

AUG 2018

Innosuisse

Innosuisse Coaching Core Coaching acceptance

SEPT 2017

International Headache Conference, Vancouver, Canada

Best Poster Prize at International Headache Conference, Vancouver, Canada

AUG 2017

Stipend: International Headache Society (IHS), Canada

Stipend to attend the iHEAD / IHA academy in Vancouver, Canada, by the International Headache Society (IHS)

MARCH 2017

Swiss National Science Foundation (SNSF) project grant

Swiss National Science Foundation (SNSF) project grant for PhD project: **“Safety, tolerability and efficacy of exogenous ketone bodies for preventive treatment of migraine: A randomised, placebo-controlled, double-blind study” (525'000 CHF)**

AWARDS AND PRIZES (CONTINUED)

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|----------------|--|
| DEC 2016 | <i>PhD project stipend</i> |
| | PhD project stipend for excellent young scientists from the Free Academic Society (FAG) Basel (12'000 CHF) |
| NOV 2016 | <i>Swissnex Venture Leader</i> |
| | Project award by the Clinical Trial Unit, Department of Medicine, Basel University Hospital (150 hours data - and on-site management) |
| OCT 2016 | <i>BioBusiness 2016</i> |
| | BioBusiness 2016 start-up pitch |
| OCT 2018 | <i>iHEAD 2016</i> |
| | iHEAD 2016 winner of the young headache researcher debate |
| AUG 2016 | <i>Stipend to attend the iHEAD academy 2016 by International Headache Society</i> |
| | Stipend to attend the iHEAD academy 2016 in London, UK, by the International Headache Society (IHS) |
| JUNE 2016 | <i>UKBB Research Fellowship (Brian Fowler Fund)</i> |
| | UKBB Research Fellowship (Brian Fowler Fund) to stay at the laboratory of Prof. Rami Burstein, Professor of Anesthesia and Neuroscience at Harvard Medical School (3'000 CHF) |
| APRIL 2016 | <i>Scholarship to attend BioBusiness</i> |
| | Scholarship to attend BioBusiness, a 5 day program on BioEntrepreneurship at the USI, an exclusive learning platform and network where academia, industry and venture capitalists interact fruitfully |
| 2016 - ONGOING | <i>Junior committee member of the International Headache Society</i> |
| | Junior committee member of the International Headache Society (IHS; Trainees and Residents SIG) |
| JAN 2016 | <i>antelope@university stipend</i> |
| | antelope@university stipend aimed at highly qualified female doctoral students to systematically plan and promote their careers and prepare them for future leadership and management assignments in academia |

AWARDS AND PRIZES (CONTINUED)

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|------------|--|
| OCT 2015 | <i>Hans Ruedi Isler Prize</i> |
| | Hans Ruedi Isler Prize of the Schweizer Kopfschmerzgesellschaft (SKG) for the best migraine research project (5'000 CHF) |
| SEP 2015 | <i>PPHS PhD Top-Up stipend</i> |
| | PPHS PhD Top-Up stipend for highly qualified graduates to fund PhD student-initiated research projects (19'250 CHF) |
| AUG 2015 | <i>Novartis Biotechnology Leadership Camp 2015 group winner</i> |
| AUG 2015 | <i>Novartis Biotechnology Leadership Camp 2015 individual winner</i> |
| OCT 2014 | <i>Lincoln College Oxford</i> |
| | Lincoln College Oxford prize for the best students of the year |
| FEB 2014 | <i>Full Scholarship: University of Oxford</i> |
| | Full scholarship from the Nuffield Department of Clinical Neuroscience for a DPhil in neuroimaging of migraine at the University of Oxford (among the 3 best applicants) |
| APRIL 2013 | <i>Full Scholarship: Graduate School of Neuroscience (GSN) in Munich</i> |
| | Full scholarship for the fast-track neuroscience program (1 year MSc +3 PhD) at the Graduate School of Neuroscience (GSN) in Munich |
| MARCH 2013 | <i>Clarendon scholarship , Santander Graduate Award</i> |
| | Clarendon scholarship (including tuition fees, college fees and living costs) and Santander Graduate Award for the MSc in Neuroscience at the University of Oxford (among best 3 applicants) |
| JULY 2012 | <i>Fee waiver : University of York</i> |
| | Fee waiver for the Master of Cognitive Neuroscience at the University of York |
| JULY 2012 | <i>British Psychology Society Undergraduate Award</i> |

AWARDS AND PRIZES (CONTINUED)

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|-----------|--|
| JULY 2012 | <i>Departmental Prize for the best student of the year, University of York</i> |
| JULY 2012 | <i>Departmental Research Prize (best research project), University of York</i> |
| JUNE 2012 | <i>Best Mini-Project-Presentation of year 1 in BSc, University of York</i> |
| JUNE 2008 | <i>Best Abitur (German A-level equivalent) in cohort, Gymnasium Oberursel</i> |

PATENTS / INVENTIONS

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|-----------|---|
| JULY 2021 | <i>AE2075 EP BS patent application (inventors: Elena C. Gross); filed</i> |
| NOV 2020 | <i>AD3498 EP BS patent application (inventors: Elena C. Gross & Timm Trenktrog); filed</i> |
| MAY 2019 | <i>Ketogenic substances in protein based encapsulation for slow release EP-19 17 3881.4 patent (inventors: Elena C. Gross & Sinead Bleiel); PCT stage, pending</i> |
| DEC 2016 | <i>Migraine prevention and treatment WO 2018/115158 Al patent (inventors: Elena C. Gross & Dirk Fischer); GRANTED</i> |

RECENT PUBLICATIONS

- Gross, E. C. et al. **Mitochondrial function and oxidative stress markers in higher-frequency episodic migraine**. *Sci Rep* 11, 4543 (2021). (Impact factor= 5.1)
- Gross, E. C., Klement, R. J., Schoenen, J., D'Agostino, D. P. & Fischer, D. **Potential Protective Mechanisms of Ketone Bodies in Migraine Prevention**. *Nutrients* 11, (2019). (Impact factor= 5.7)

RECENT PUBLICATIONS (CONTINUED)

- Gross, E. C., Lisicki, M., Fischer, D., Sándor, P. S. & Schoenen, J. **The metabolic face of migraine — from pathophysiology to treatment.** Nature Reviews Neurology.15, 627–643 (2019). (Impact factor= 20.3)
- Gross, E.C., Putananickal, N. Orsini, A.L.; et al. (2019). **Safety, tolerability and efficacy of exogenous ketone bodies for preventive treatment of migraine: A single-centre, randomised, placebo controlled, double-blind crossover trial.** Trials. (Impact factor= 2.1)

INTEREST

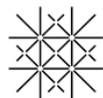
Nature, hiking, different cultures & people (travelling) food and cooking, learning & understanding, Psychology, Medicine, Neuroscience, health & diseases optimisation & innovation, skiing



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