

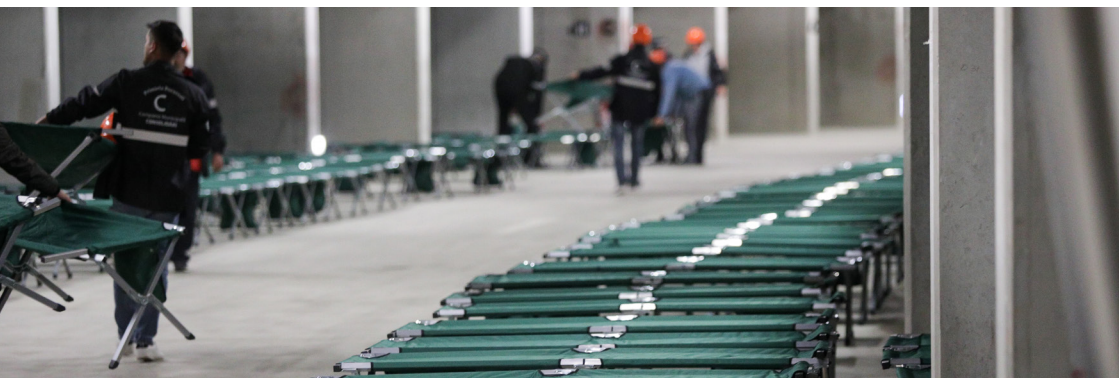
CAS

Certificate of Advanced Studies  
Certificat de formation continue

# Medicines and Medical Devices in Emergency and Disaster

February 2024 > June 2025

on-the-job modular training



FACULTY OF SCIENCE

Specialised Centre for Emergency and Disaster Pharmacy  
Institute of Pharmaceutical Sciences of Western Switzerland



UNIVERSITÉ  
DE GENÈVE



## Steering Committee

### Executive Board

- **Prof. Pascal Bonnabry**, (Director), Director of the Specialised Centre for Emergency and Disaster Pharmacy, University of Geneva; Chief Pharmacist, Geneva University Hospitals
- **Prof. Stefan Mühlebach**, (Co-Director), Department of Pharmaceutical Sciences, Division of Clinical Pharmacy & Epidemiology/Hospital Pharmacy, University of Basel

### University of Geneva Members

- **Dr Olivier Hagon**, Deputy Head, Division of Tropical and Humanitarian Medicine, Geneva University Hospitals; Medical Director at the Swiss Humanitarian Aid Unit; lecturer at the University of Geneva
- **PD Dr Nicolas Widmer**, Operational Director of the Specialised Centre for Emergency and Disaster Pharmacy, University of Geneva; Chief Pharmacist, Pharmacy of the Eastern Vaud Hospitals, Rennaz

### External Expert

- **Mr Michael Flück, MPH**, Cantonal pharmacist, Bern

## Scientific Council

- **Ms Marie-José Barbalat**, Community pharmacist, Unisanté, Lausanne; President of Pharmacists without Borders Switzerland
- **Lt Col Stéphane Galy**, Chief Pharmacist, French National Fire Officers Academy, Aix-en-Provence (France)
- **Dr Birgit Andrea Gartner**, Associate Medical Officer, Pre-hospital Emergencies and Resuscitation Unit, Geneva University Hospitals
- **Dr Sébastien Marti**, Community pharmacist, Neuchâtel, pharmaSuisse committee
- **Dr Beat Möckli**, Head of Clinic; Operational Director of the Specialised Centre for War and Disaster Surgery, Geneva University Hospitals
- **Dr Erik Paus**, Pharmacist and Paramedic, Lecturer at the University of Geneva
- **Dr Kathrin Summermatter**, Head, Biosafety Center, Institute for Infectious Diseases, University of Bern
- **Prof. Mathias Zürcher**, Associate Professor for Rescue and Disaster Medicine, University Hospital Basel; Head of the Swiss Center for Rescue, Emergency and Disaster Medicine, Basel



## Acquire professional knowledge on the selection and use of therapeutic products in crisis situations

Our modern societies are especially vulnerable to natural or man-made disasters because of their high dependence on technology and their concentration in urban areas (requiring extensive infrastructure). In addition, globalisation and economic pressure renders stockpiling and availability of essential/necessary goods sometimes difficult.

In this context, as well as in everyday emergencies in pre-hospital and hospital settings and in the humanitarian context, the role of drugs and medical devices in treating victims and ensuring the survival of most individuals is obvious. In this respect, specific pharmaceutical, pharmacological, and technical knowledge but also a sense of priorities and triage are essential for any health professional involved in emergency and disaster situations. This knowledge is often not sufficiently present and disseminated.

Thus, the overall objective of this CAS is to provide a recognised interprofessional postgraduate university education in emergency and disaster pharmacy. It provides qualified pharmacists, physicians, paramedics, and other health professionals with the necessary skills and/or updated knowledge to strengthen their expertise in this specific field.

### Public

Pharmacists working in the field of emergency and disaster management, including humanitarian and military pharmacists, as well as hospital, community, industrial and administrative pharmacists, physicians and nurses working in a hospital and/or pre-hospital emergency department and qualified paramedics wishing all to improve their specific pharmaceutical, pharmacological, and disaster management knowledge.



## Objectives

- Integrate the fundamentals of pharmaceutical crisis leadership and management
- Acquire comprehensive knowledge of the logistics, use, and handling of medicines and medical devices in emergency and disaster situations
- Apply this knowledge in a professional environment for the benefit of patients
- Practice interprofessional collaboration and preparedness in emergency and disaster contexts
- Share experiences with colleagues working in different fields, and understand their respective issues and responsibilities related to therapeutic products (ambulatory, hospital, industrial, administrative, humanitarian and military)

## Learning Outcomes

- Acquire specialised and multidisciplinary knowledge on drugs and medical devices used in emergency and disaster
- Being able to analyse, judge, decide, provide reasoned justification, and document for complex pharmaceutical issues in new and not experienced health crisis contexts
- Develop, negotiate and justify alternative ways for the procurement of medicines and medical devices during a health crisis (including appropriate Good Manufacturing Practice-compliant local pharmaceutical production)
- Being able to independently process, evaluate and integrate relevant knowledge about drugs and medical devices



## Coordination

**Dr Laurence Schumacher**, Clinical Pharmacist and Trained Specialist, Specialised Centre for Emergency and Disaster Pharmacy, Institute of Pharmaceutical Sciences of Western Switzerland, University of Geneva; Geneva University Hospitals, Geneva

## Programme

- Six complementary modules of three days each correlating to 120 hours of training over two university semesters (January-November)
- Interactive classroom courses (including small group workshops) in presence; online only in specifically agreed exceptions or for some remotely (e-learning)
- During the CAS about 200 hours of self-learning has to be fulfilled, checked by delivered documents and by successful tests
- An end-of-study thesis has to be delivered on a specific CAS-related topic corresponding to about 100 hours of personal work
- The CAS is recognized with a total of 15 ECTS credits
- The course is given in English

## Learning Methods

- Interprofessional interactive teaching promoting reflection among participants including lecturers based on concrete cases
- Interdisciplinary work is suggested to enrich and complement knowledge and skills of the attendees
- Social and interpersonal exchanges among the participants and also during the modules are encouraged



## Detailed Programme

### Module 1 |

### **Context, Conduct and Health Organisation in Crisis**

University Medical Centre (CMU), Geneva |

January 31, February 1, 2, 2024

**Prof. Pascal Bonnabry** (Programme Director) and **PD Dr Nicolas Widmer**, Heads of the Specialised Centre for Emergency and Disaster Pharmacy, Institute of Pharmaceutical Sciences of Western Switzerland, University of Geneva

- Establish a link between risks, threats and appropriate responses to crisis situations
- Define and understand emergency and disaster medicine and pharmacy
- Explain the principles of health crisis management
- Describe the need for therapeutic products in a health crisis situation calculated in quantities in defined daily doses per patient
- Differentiate the roles of health professionals and their complementarity in the context of emergency and disaster medicine





## Module 2 |

### Use of Drugs and Medical devices in Emergency Situations, Part I: Theoretical Background

Online | March 2024

**Dr Laurence Schumacher**, Specialised Centre for Emergency and Disaster Pharmacy, Institute of Pharmaceutical Sciences of Western Switzerland, University of Geneva

- Describe clinical situations and therapeutic needs in crisis situations
- Illustrate the specificities of therapeutic products used during crisis and of their logistical handling
- Develop standard operating procedures and product lists for emergencies and disasters (protocols, kits, etc.)
- Define interdisciplinary collaboration and working procedures based on the strengths and expertise of each professional in crisis situations

## Module 3 |

### Use of Medicines and Medical Devices in Emergency Situations, Part II: Practical Applications

Lausanne University Hospital, Lausanne |  
April 24, 25, 26, 2024

**Cap Jean-Gabriel Clouet**, Head of the Advanced Medical Post Detachment, Service Protection et Sauvetage Lausanne and **Dr Erik Paus**, Lecturer, University of Geneva

- Identify therapeutic needs in practice according to different clinical situations
- Experience the specificities of therapeutic products used during crisis situations
- Apply the minimum standards to be respected in crisis situations (protocols, kits, etc.)
- Practice multidisciplinary collaboration in crisis situations



## Module 4 |

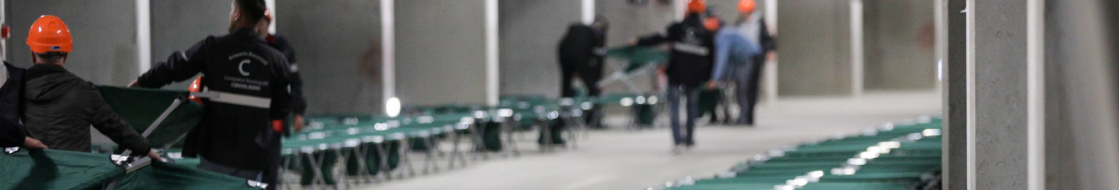
### **CBRN Danger: Toxicology, Medical Management and Use of Antidotes**

Federal Training Centre Schwarzenburg (Bern region) |  
June 13, 14, 2024 (AHLIS-Provider course, certificate is internationally approved)

**Prof. Mathias Zürcher**, Associate Professor for Rescue and Disaster Medicine, University Hospital Basel; Head of the Swiss Center for Rescue, Emergency and Disaster Medicine, Basel; Advanced Hazmat Life Support (AHLIS) Provider course director

- Identify Chemical, Biological, Radiological and Nuclear (CBRN) risks
- Know the principles of self-protection and patient protection as well as the basics of personal and material decontamination
- Learn the systematic approach to people exposed to hazardous materials
- Recognise the specific "toxidromes" (poisoning syndromes) and learn the respective characteristics
- Learn to systematically apply the "poisoning treatment paradigm", including the knowledge and use of specific antidotes





## Module 5 |

### Biological Risk Management in Health Care

University of Bern | September 4, 5, 6, 2024

**Dr Kathrin Summermatter**, Head, Biosafety Center, Institute for Infectious Diseases, University of Bern

- Assess natural and man-made biological risks
- Elaborate the necessary preventive, protective and hygienic measures during an outbreak
- Assess the role of vaccination in crisis and post-crisis situations (interdisciplinary role)
- Identify essential antibiotics for emergency or crisis situations and their specificities

## Module 6 |

### Logistics and Pharmaceutical Production in Disaster and Extraordinary Situation

University of Bern | November 13, 14, 15, 2024

**PD Dr Nicolas Widmer**, Operational Director of the Specialised Centre for Emergency and Disaster Pharmacy, Institute of Pharmaceutical Sciences of Western Switzerland, University of Geneva, and **Prof. Stefan Mühlebach**, Department of Pharmaceutical Sciences, Division of Clinical Pharmacy & Epidemiology/Hospital Pharmacy, University of Basel

- Become familiar with the principle of emergency production and stockpiling of drugs
- Understand the risks in the supply chain field and manage shortages, including the regulatory issues
- Describe the principles of continuity planning of distributors and international mission support
- Recognise substandard and falsified drugs
- Know the possibilities of emergency production within the Swiss Armed Forces Pharmacy and the essential elements of a drug production facility



## Assessments

Active participation in classroom teaching activities is required (at least 80% of classroom courses), as well as participation in collaborative activities. Each module has to be accomplished by a Multiple Choice Questions (MCQ) test.

## Portfolio Thesis

A final written thesis according to scientific requirements on a topic related to the training and/or the professional activity of the participants in the topic is required to obtain the certificate. This work is done individually or in a group of two. Conference abstract submission or publication of the thesis is encouraged.

## Diploma Awarded

The *Certificate of Advanced Studies in Medicines and Medical Devices in Emergency and Disaster / Certificat de formation continue en médicaments et dispositifs médicaux en situation d'urgence et de catastrophe* is issued by the Faculty of Sciences of the University of Geneva in partnership with the University of Basel to participants who have met the conditions for testing the knowledge of the modules and the final thesis work.



## Practical Information

### Admission Criteria

Persons admitted as candidates for the Certificate:

- Hold a bachelor's degree, a master's degree or a university degree in pharmacy or medicine from a Swiss or foreign university, a master's degree or a bachelor's degree from a university of applied sciences (UAS) in nursing care or a diploma from an ambulance school or a title deemed equivalent and
- Have a minimum of 2 years of professional experience with functions or tasks related to the Certificate programme.

The Steering Committee reserves the right to accept applications from persons who do not meet the requirements upon examination of their application file and/or to propose an individual interview for a decision.

**Online Registration before 24 November 2023** (or 1 month before the start of the module chosen for a modular registration)

[www.unige.ch/formcont/en/courses/medicines-emergency-disaster](http://www.unige.ch/formcont/en/courses/medicines-emergency-disaster)

The number of participants will be limited in order to preserve the interactivity of the teaching (max. 16).

### Fees

- CHF 4,500.- for the complete programme
- CHF 900.- per module

Lunch, travel and accommodation expenses to and at the various course locations are the cost of the participant.

### Location and Schedule

- Geneva, Lausanne and Bern region
- 8:30 am - 5:00 pm (with a one-hour lunch-break)

### Contact

**Dr Laurence Schumacher**

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In partnership with



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Centre of Competence for Military and Disaster Medicine CC MDM  
Swiss Humanitarian Aid Unit SHA  
Armed Forces Pharmacy  
Federal Office for National Economic Supply FONES

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Swiss Center for Rescue, Emergency and  
Disaster Medicine (SCRED)  
Schweizerisches Zentrum für Rettungs-,  
Notfall- und Katastrophenmedizin (SZRNK)



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Pharmacie des Hôpitaux  
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