



"Tell me and I forget, teach me and I may remember, involve me and I learn."

Origin of quote: <https://quoteinvestigator.com/2019/02/27/tell/>

Health Sciences e-Training Foundation

Annual report 2022

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<https://hset.org>



1. Executive summary

1.1. Preamble

The Health Sciences e-Training Foundation (HSeT) is a Swiss non-profit organization created in 2006. Its mission is to work with a broad network of leading experts from all over the world to develop online training programs in the field of health and life sciences.

Training programs developed by HSeT are provided via institution-specific websites and are designed to enrich existing curricula or develop new ones. These websites can be accessed by trainees in a self-directed manner to permit self-learning activities that can be combined or not with traditional face-to-face teaching.

HSeT develops e-learning programs that are tailored to the needs of specific groups of trainees as defined by the institutions themselves. This customized online training (COLT) approach integrates novel pedagogical strategies and tools to map and assess each individual student's progress at every step.

1.2. Foreword from the executive committee

Over the years, HSeT has developed a broad portfolio of e-training programs in collaboration with local, Swiss, European, and international partner institutions. During 2022, HSeT has sustained, updated, and ameliorated existing programs, of which several are highly visible “flagship” programs. Furthermore, in 2022 HSeT has substantially enriched its portfolio by investing in the creation of several challenging new programs. The latter have either been initiated in 2022 or are anticipated to be launched in the coming two years.

The past year has also witnessed the addition of several new members to the HSeT team. This fresh blood has broadened the range of scientific expertise represented within the foundation, has strengthened its national and international standing and visibility, and has further boosted its already highly motivated and dynamic environment.

Thanks to the maintenance of existing revenues, the acquisition of new sources of income, and the careful management of resources, remunerated staff members and running costs, as well as the outsourcing of our needs for information technology (IT) and infographics support to external partners, HSeT has managed to maintain a stable and well-balanced budget and can face the coming years with optimism.

Lastly, the executive committee is extremely grateful to all those without whom sustaining HSeT's mission would be impossible. We are particularly keen to express our sincere thanks to all members of the HSeT team for their enthusiastic participation in its activities, to HSeT's partner institutions for their confidence in our foundation, and to HSeT's sponsors for their generous support.

2. HSeT's Flagship programs

2.1. e-Training Program of the International Association of Gerontology and Geriatrics (IAGG)

Program description: e-TRaining In Gerontology and GERiatrics (e-TRIGGER) is an online training program aimed at forming the future generation of worldwide leaders in Gerontology and Geriatrics (iagg-fge.org)

The 1st 3-hour session on healthy ageing took place on the 11th of December 2021, and was followed in 2022 by 11 subsequent sessions of 3 hours each. These online sessions comprised presentations by experts, case studies and discussions.

The online sessions covered topics related to the science of muscle ageing, physical frailty, dementia, cognitive impairment, falls and fractures, geriatric pharmacotherapy, Gerontechnology, life course vaccination, and advance care planning.



Following this initial success, the decision was made by AAG World to support, in addition to the ASIO program (training for Asia and Oceania), an AFMEE program (training for Africa, the Middle East and Europe) and a LATAM program (training for Latin America).

Number and origin of students: The e-TRIGGER program was followed by approximately 100 participants in 2021-2022 from Japan, China, Taiwan, Thailand, Singapore among others.

Project partners: The e-TRIGGER program was developed in the context of a close collaboration, established in July 2021, between the International Association of Gerontology and Geriatrics (IAGG) and HSeT.

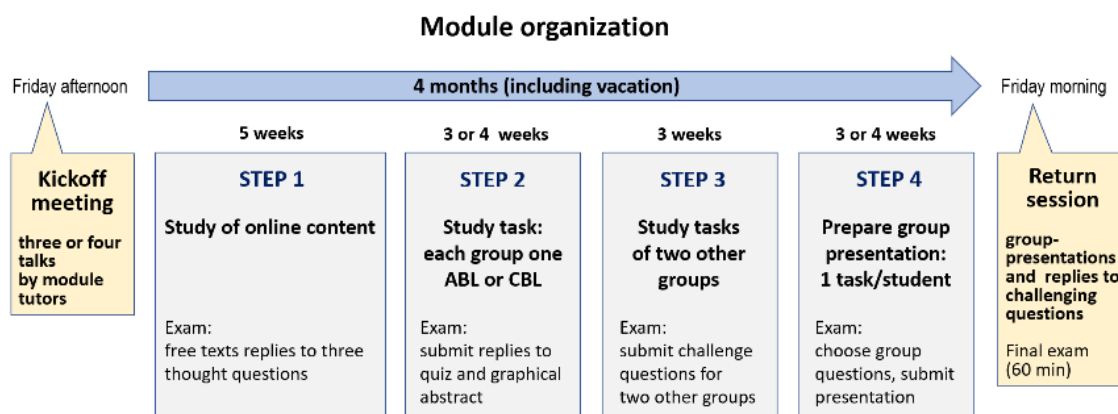
Credits: 3 EACCME (European Accreditation Council for Continuing Medical Education) credits (valid in Europe, Canada, and the USA) were granted for each 3h-session after validation of the quality assessment. Discussions have now been initiated with the Centre for Continuing and Distance Education of the University of Geneva to develop a certified "Executive short course" including 60 hours of training, corresponding to 2 ECTS credits.

2.2. CAS/DAS in Translational Nephrology

Program description: This blended e-learning course in Translational Nephrology (TN), offered by the University of Zurich (UZH, leading house) and the University of Bern

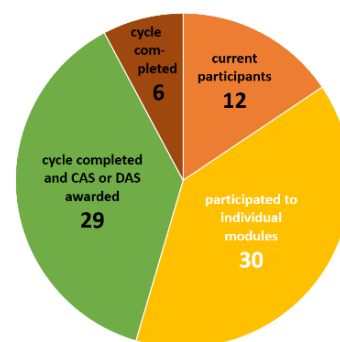
(UNIBE), leads to a joint Certificate (CAS) or Diploma (DAS) of Advanced Studies ([DAS/CAS Translational Nephrology UNIZH](#)). The course offers a 2-year cycle of 6 modules covering the main topics in Nephrology

Starting in 2012, the TN course was developed and run by HSeT together with principal investigators from the Swiss National Science Foundation (SNSF)-financed research network National Centre of Competence in Research (NCCR) Kidney.CH. Its original aim was the education of PhD students and postdocs of the NCCR in Kidney Physiology and Pathophysiology. From 2019 on, the program was progressively adapted and opened for nephrologists. Given that the NCCR ended in 2022, the academic lead of this course at the University of Zurich is now held by the newly created Zurich Kidney Centre.



Participants in the TN course acquire and strengthen their basic knowledge in the pathophysiology of kidney diseases. The topics treated in the six modules of the program are 1) Salt, Water and Hypertension, 2) Acid-Base Homeostasis, 3) Calcium and Phosphate, 4) Oxygen Signalling and Cancer, 5) Metabolism and Kidney Function and 6) Inflammation and Immunology.

Number and origin of students: The number of participants was 12 at the end of 2022, most of which were young nephrologists from Switzerland. Additionally, 4 participants were from other countries and took part online to the kick-off and return sessions held in hybrid mode at the University of Bern.



Project partners: The CAS/DAS in TN is led by a steering committee (Leitender Ausschuss) that is chaired by Professor J. Loffing (UZH) and is composed of two Professors from UZH, two professors from UNIBE, one professor from the University of Lausanne and one professor from the University of Geneva. The HSeT Foundation is mandated to organize the course and Professor F. Verrey (HSeT and UZH) functions as the program chair (Studiengangleitung). Former members of the NCCR Kidney.CH and other selected ad hoc specialists function as tutors for the different modules.

Credits: The structure of the program is modular. Depending on the students' interests and commitment, he/she can complete 5 e-learning modules to obtain a CAS (15 ECTS credits), or by completing additional modules and a thesis to obtain a DAS (30 ECTS credits).

2.3. CAFE-S

Program description: Prospective students are often unaware of the required levels of knowledge when they decide to study sciences at university. This is particularly true for secondary but eliminatory subjects, such as mathematics for a bachelor's degree in biology or pharmaceutical sciences. This situation may result in failure, or redirection to other studies, and may also lead to a drop in the overall level of a class of students.



To remedy this situation, the Faculty of Science of the University of Geneva (UNIGE), in close collaboration with HSeT, has launched the CAFE-S program (Conseils, Accompagnement, auto-Formation et auto-Évaluation à la Faculté des Sciences). The mission of CAFÉ-S is to provide future students with the tools and framework necessary to assess and improve their level of knowledge in basic science ([cafe-s program](#)).

The first edition of CAFE-S focused on mathematics, a core discipline for the various curricula in the Faculty of Science. The program first ran from June to September 2022, and was structured around three major axes: self-assessment, self-learning, and a refresher course. Self-assessment and self-learning were both implemented through cooperation with an international academic website, OMB+, hosted by the University of Aachen. In September, before the beginning of the fall semester, a week-long refresher course, including question-and-answer sessions, was organized with advanced mathematics students hired as tutors.

In 2023, CAFE-S wishes to expand its offer of support to future students by developing a digital skills component. Already available and currently being tested, this component integrates the reflections and work of the institutional project Make-IT-easy, which aims to evaluate and improve the digital skills of the university community.

After including mathematics and digital skills, CAFE-S plans to develop additional programs dedicated to physics and chemistry.

Number of students and their origins: The CAFE-S program was a great success in 2022. The refresher course in September attracted 119 participants from a total of 440 (25%) of the future students starting in first year in the Faculty of Science of the University of Geneva. Twenty percent of the participants were from Geneva, 35% from Switzerland, 45% from France and 19% from other countries (note that French is mandatory to be registered as a student in Geneva). The participants were enrolled in the following bachelor programs: pharmaceutical sciences, biology, biochemistry, chemistry, mathematics, informatics, physics, and earth and environmental sciences.

Rating of the course by students: The average overall rating given by students was 4.0/5. More than two-thirds of the students said that it met their expectations; the same proportion found it "useful", "very useful" or "extremely useful", while slightly more than a third found it "somewhat useful".

Project partners: CAFE-S was the fruit of a close collaboration between HSeT and the Faculty of Science of the University of Geneva.

2.4. International Master of Advanced Studies in Vaccinology (IMVACC)

Program description: IMVACC (<https://imvacc.org>) is a Master of Advanced Studies (MAS) proposed by the University of Lausanne (UNIL). It consists of four web-based e-learning modules during the 1st year followed by a master thesis during the 2nd year (Figure 1). The master thesis can be carried out in an academic or industrial environment under the supervision of a local thesis director.

Customized on-line training (COLT) is the main educational approach used for IMVACC. COLT offers flexibility, accommodates the trainees' time constraints, and avoids long-distance travel and housing expenses. It combines case studies with problem-solving exercises. Students are supervised biweekly by tutors who guide them, answer questions, and maintain momentum.

Assessments conform to a formative paradigm designed to evaluate both learning and skill acquisition. Each module ends with an online exam. At the end of the 1st year the students take a final exam in the form of the design of a novel vaccine. Self-assessments linked to the learning activities provide opportunities to fill knowledge gaps by offering links to relevant teaching material and to acquire skills and competences required to solve problems related to designing vaccines.

Number and origin of students: Since its beginning in 2016, 39 students have been enrolled in IMVACC. Most students came from low/middle income countries (Figure 2). 27 have successfully defended their master thesis and received the UNIL diploma. Three of the Master theses have been published in peer-reviewed journals. Evaluations of the IMVACC program by students are presented on the IMVACC website. Certain students have been promoted to responsibility positions.

Project partners: IMVACC was developed as a joint initiative by the Swiss Vaccine Research Institute (SVRI) and HSeT.

Credits: Completion of the entire IMVACC program is rewarded with a MAS diploma and 60 ECTS credits.

| First year | | |
|--------------------------------|-----------|-------------|
| Modules | ECTS | Study hours |
| 1. Vaccines & vaccine sciences | 15 | 450 |
| 2. Vaccine development | 15 | 450 |
| 3. Vaccines & public health | 7 | 210 |
| 4. Project & time management | 2 | 90 |
| Total | 40 | 1200 |

| Second year | | |
|---------------|-----------|-------------|
| Master thesis | 20 | 600 |
| Total | 60 | 1800 |

Figure 1. IMVACC comprises theoretical studies consisting of 4 modules during the 1st year, followed by a master thesis project performed under the supervision of a director in the 2nd year.

| | | | | | |
|----------|---|---|--------------|-----------|---|
| Austria | 1 |  | Morocco | 1 |  |
| Cameroon | 1 |  | Mexico | 1 |  |
| Germany | 1 |  | South Africa | 18 |  |
| India | 2 |  | Switzerland | 4 |  |
| Kenya | 2 |  | Tanzania | 2 |  |
| RDC | 1 |  | Uganda | 4 |  |
| Czechia | 1 |  | Total | 39 | 13 |

Figure 2. Geographic distribution of past students.

Costs and revenues: Total revenues of IMVACC are based on a tuition fee of 20'000.- CHF per participant. As this high tuition fee is prohibitive for students from low-middle income countries, fellowships have been requested and obtained for 27 students: 17 South African students received fellowships from the South African Medical research Council (MRC); seven Kenyan, Ugandan and Tanzanian students were supported by the East African Consortium for Clinical Research (EACCR); one student from Cameroon received a fellowship from the Fondation de Recherche eb Biochimie in Lausanne; one South African student was supported by a Geneva-based Foundation.

Future of IMVACC: At the end of 2023, all registered students will have completed their Master. The subsequent future of the program will depend on the recruitment by the direction of IMVACC of a person that could take over the role of Jean-Pierre Kraehenbuhl, who will stop his activities for IMVACC at the end of 2023.



3. Other ongoing programs

3.1. Sitem-Insel School

Project description: HSeT has continued its collaboration with the [sitem-insel School](#) by providing e-learning material for teaching. The focus of the project was to provide the necessary services for running the Master/Diploma/Certificate of advanced studies (MAS/DAS/CAS) in Translational Medicine and Biomedical Entrepreneurship (TMBE), and for the CAS in Artificial Intelligence in Medical Imaging.

Number of students and their origins: National and international students are enrolled in both study programs. International students are mostly from Europe. In 2022, a new class of 12 students started with the 1st module of the TMBE program.

Project partners: sitem-insel AG and the University of Bern (UNIBE) are the responsible partners for both study programs.

Credits: Completion of a CAS results is awarded 15 ECTS, completion of a DAS is awarded 30 ECTS and completion of a MAS is awarded 60 ECTS.

3.2. Master of Advanced Studies (MAS) in Toxicology

Project description: The Advanced Master of Advanced Studies in Toxicology is a continuous education course offered by the University of Geneva (UNIGE). HSeT has continued its collaboration with UNIGE in September of 2022, starting with Module 1 of the 2022-2024 session, Basic concepts in Toxicology. Module is coordinated by HSeT (M.-C. Broillet, B. Rossier & M. Rossier) and is entirely based on HSeT proprietary e-learning material, whereas four other modules of the program use material developed by HSeT as part of their teaching.

Number of students and their origins: Twenty fours national and international students were enrolled in the study program in 2022.

Project partners: The University of Geneva (UNIGE) is the responsible partner for the study program.

Credits: Completion of the MAS programme is awarded 90 ECTS credits including 14 modules (60 ECTS credits) and a Master Thesis (30 ECTS credits). Module 1 is awarded 6 credits.

3.3. Preanalytical Phase course

Project description: A course on the Preanalytical Phase was taught at the University Cheikh Anta Diop in Dakar, Senegal. This six-week course has been organized since 2013 by HSeT (M. Rossier) in collaboration with Professor Niama Diop Sall within the superior study diploma (DES) of Clinical Biology for MDs and pharmacists. The course is

given in hybrid format, i.e., self-study and self-assessment of e-learning material entirely developed by HSeT and small group presentations of practical cases by videoconference.

Number of students and their origins: The course was followed by 49 participants mainly from Senegal but also from some other African countries.

Project partners: The University Cheikh Anta Diop in Dakar, Senegal, the RAFT (Réseau en Afrique Francophone pour la Télémédecine) and HSeT.

3.4. Master of Science (MSc) in Medical Biology

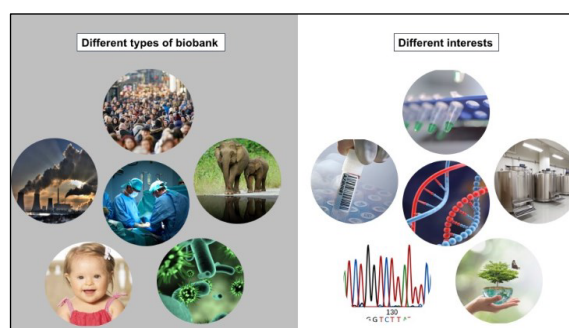
The MSc in medical Biology taught at the University of Lausanne (UNIL) comprises courses in immunology, oncology (S. Luther), toxicology (M.-C. Broillet) and biostatistics (F. Schütz). Course contents are provided by HSeT. It is followed by 26 participants.

3.5. Bachelor in medicine

HSeT provides online teaching material for several Problem Based Learning units taught during the 2nd and 3rd years of the medical curriculum at the University of Geneva (UNIGE), and for all units of the medical bachelor curriculum at the University of Mauritius (UoM). Maintenance, updating and adaptation of HSeT's online learning content were continued in 2022 for both institutions.

3.6. Course in Biobanking

The Institut Pasteur (IP) in Paris, the Network of Biological Resources of the Institut Pasteur (BIPnet), the European Virus Archive goes Global (EVAg), and the HSeT Foundation have developed an online training course that is based on their experience in the surveillance of infectious diseases and is adapted to the training and transfer of knowledge to students and staff of biobank structures, especially in developing countries



The 1st course in 2021 was conducted entirely online due to the Covid-19 pandemic, and was followed by 16 participants from Africa, Asia, South America, and Europe. The students received 5 ECTS from the University of Lausanne (UNIL) after passing the final exam.

The 2nd course in the spring of 2022 was held using a blended format, with a three-month period of online training followed by a 4-day face-to-face practical session in Paris. 28 students participated in the 2nd course and 17 completed the practical session. The students that completed both activities and passed a final exam received a certificate with 5 ECTS credits from the University of Lausanne (UNIL).

The Pasteur Institute has now joined partners from the University of Geneva (UNIGE), the Swiss Biobanking Platform (SBP) and the HSeT Foundation to create a Certificate of Advanced Studies (CAS) in Biobanking (see section below on new projects under development). The CAS is anticipated to start in the fall of 2023 or the spring of 2024. It could eventually replace the Pasteur Institute course.

3.7. Course in Vaccinology

Twenty participants from all over the world followed the 15th vaccinology course of the Institut Pasteur. The course consisted of face-to-face lectures at the Institut Pasteur, a workshop on Vaccine Design (blended, partly online and partly face-to-face) and online self-directed learning in the form of annotated articles and content. Access to online aspects of the course was offered by HSeT via a Moodle platform as Learning Management System linked to HSeT's Content Management System. A certificate from the Institut Pasteur was offered to the students that successfully passed the final exam.

4. New programs under development

4.1. Continuous education program in translational Oncology (ONCOMAS)

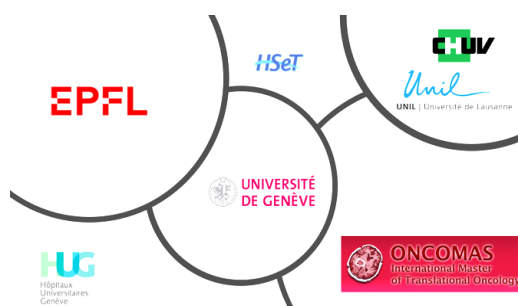
Program description: Cancer remains one of the leading causes of death in the world, and represents a tremendous burden on patients, families, and societies, especially in low/middle income countries. The development of novel therapies and diagnostic tools depends heavily on the integration of basic and clinical science. There is a lack of international postgraduate training programs in Switzerland and Europe. Most offers in oncology are Master of Science (MSc) programs aimed at furthering academic training rather than continuous education programs aimed at healthcare professionals.

We have therefore initiated the development of a new online continuous education program in translational oncology (ONCOMAS) using innovative e-learning approaches to effectively promote integration in the rapidly changing field of oncology.

The planned Certificate/Diploma/Master of advanced studies (CAS/DAS/MAS) program will be open to i) physicians, graduates in biology, human medicine, or engineering in the life sciences who wish to improve their knowledge in research and/or work towards the development and implementation of therapeutics in the field of oncology, ii) medically oriented scientists who pursue clinical research in oncology, iii) healthcare professionals employed in the oncology-oriented industrial sector, and iv) collaborators of non-governmental organizations working for health authorities wishing to expand their knowledge in the field of oncology.

Number of students and their origins: The program will target national and international students. The course will rely heavily on diverse e-learning formats to favour the participation of students from low/middle income countries. We anticipate the participation of up to 12 to 18 students per class.

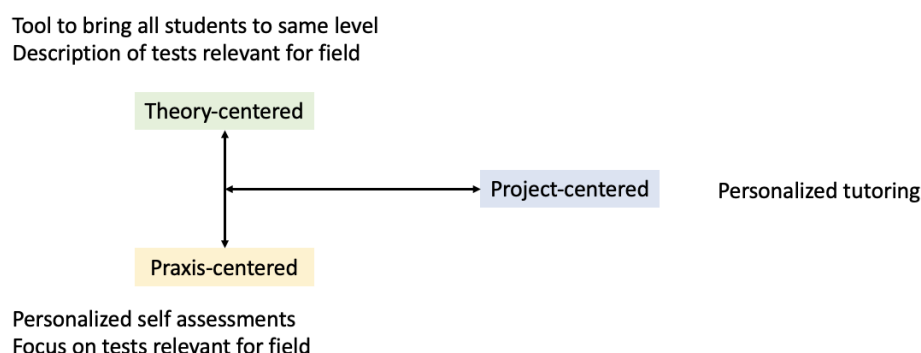
Project partners: The program is an initiative by members of the Swiss Cancer Center Léman (SCCL), the Universities of Geneva (UNIGE) and Lausanne (UNIL), the two University Hospitals of Geneva and Lausanne (CHUV and HUG) and the Swiss Federal Technology Institute of Lausanne (EPFL). HSeT will provide its expertise in distance learning. The leading house will be UNIGE.



Credits: The structure of the designed program is modular. Depending on the students' interests and commitment he/she can select single modules to obtain a CAS (10 ECTS credits), 3 modules to obtain a DAS (30 ECTS credits) or 5 modules to obtain a MAS (60 ECTS credits).

4.2. Course in applied statistics

Project description: With the rise of digitalization in science and medicine, and the resulting generation of massive data sets, the importance of appropriate education of students working in these fields has become an essential factor to be considered. A solid knowledge of data science, i.e., in depth understanding of applied statistics and its application, should nowadays be a prerequisite for any student. While statistics courses are present in most curricula, there continues to be a consistent gap between the educational material that is offered and the knowledge and skills that are acquired. The main goal of our project is to motivate and empower young as well as more experienced science students to take a leading role in the decision process of data analysis. More specifically, we have developed an e-learning tool that facilitates the understanding of statistical concepts and their application to real-life problems, more specifically to custom data. The e-learning tool is designed in such a way that it can be easily adapted to any topic of interest. It can be used as a standalone e-learning tool or complement face-to-face courses.



Number of students and their origins: The e-tool targets mostly national students and is being offered in a blended learning format. We will be using the tool in 2023 in the framework of a new MS program in ultraprecision engineering at the University of Bern (UNIBE) and are planning to use it in the department of biochemistry at the University of Lausanne (UNIL). The expected number of students will be in the range of 80 per session.

Project partners: The e-learning tool has been developed in collaboration with members of the UNIL and the UNIBE.

Credits: The e-tool will be part of a course corresponding to 5 ECTS.

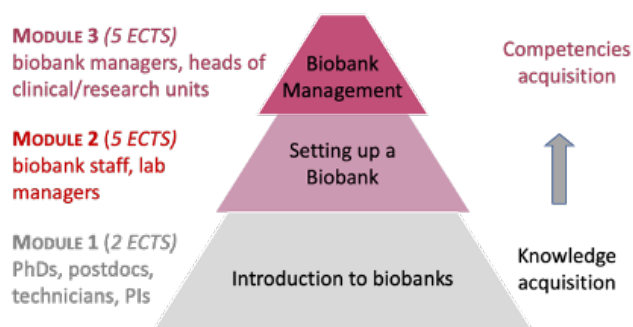
4.3. Certificate of Advanced Studies (CAS) in biobanking

Project description: International demand for the creation and maintenance of biobanks is growing continuously because of the expanding number of available biospecimens, the development of sophisticated high-throughput technologies for analysing large collections of biobanked samples, an increasingly widespread reliance on state-of-the-art scientific and medical applications, and a growing focus on personalized health. There is consequently a dire need for well-trained experts in the field of biobanking, in academic and medical institutions in Switzerland, Europe and the rest of the world. Addressing this need requires well-structured continuing education and training programs in biobanking. Yet only a limited number of national and international courses are currently available.

The creation of a certificate of advanced studies (CAS) in biobanking is thus highly timely and responds to an increasing unmet need.

The planned CAS will be open to healthcare professionals, researchers, clinicians, biobank managers and database managers from Switzerland and abroad. A particular effort will be made to favour the participation of students from low- and middle-income areas of the world, such as Africa.

The CAS will provide theoretical and applied training relevant to the principles, skills and operations required to create and implement new biobanks, or to further develop and professionally manage existing ones. It will consist of online content and learning activities dispatched in 3 progressively more complex modules,



proceeding from basic knowledge acquisition to the development of practical and usable competencies. This organization will permit targeting the needs of a broad audience, ranging from basic and clinical researchers for module 1 to biobank staff or laboratory managers for modules 1-2, and biobank managers or heads of clinical and research units dealing with biological samples for the entire CAS (modules 1-3). The following non-exhaustive list of themes will be addressed in the three modules: basics and importance of biobanking; governance and planning; quality management systems; biosafety & biosecurity; regulations; ethics, privacy, security, and informed consent; biospecimen collection, processing, storage, and distribution; data systems and records management; specificities of different types of biobanks (e.g. microbiological samples, healthy and pathological tissues, body fluids).

The Customized on-line training (COLT) paradigm developed by HSeT will be used, as it offers flexibility, accommodates the time constraints of trainees, reduces long-distance travel and on-site lodging/living expenses, and will therefore favour the participation of trainees from low- and middle-income countries. The bulk of the program will consist of online case studies, problem-solving exercises, and other self-learning activities performed online under the supervision of expert tutors, who will remain in regular online contact with the trainees to guide them, answer questions, follow their progress and maintain momentum. The acquisition of knowledge will be ascertained regularly based on their answers to quizzes associated with the online training activities and learning supports. The online training period will be followed by a limited number of face-to-face sessions comprising practical exercises and a final exam.

Number and origin of students: The expected numbers of trainees are 30 for Module 1, 15 for modules 1+2, and 10 for the entire CAS. We will aim for a Swiss and international public. Fellowships will be sought for participants from low- and middle-income countries.

Project partners: The CAS will be an extension of an online biobanking course that is offered by the Institut Pasteur (IP) Paris and is focused on infectious disease. This course was created through a collaboration between the IP, the Network of Biological Resources

of the IP (BIPnet), the European Virus Archive goes Global (EVAg), and the HSeT Foundation.

The CAS proposed here will be created and managed in a partnership between the Faculty of Medicine of the University of Geneva (FACMED-UNIGE) the Swiss Biobanking Platform (SBP), the Institut Pasteur Paris (IP), and the HSeT foundation.



Credits: The full CAS is valued at 12 ECTS corresponding to approximately 375-450 hours. The distribution of ECTS per module will be as follows: Module 1 – 2 ECTS, Module 2 – 5 ECTS, modules 3 – 5 ECTS. Participants will be able to enrol in only Module 1, only Modules 1+2, or all three modules according to their background and needs. Certificates will be provided for each individual module but only completion of the CAS will be awarded a CAS diploma and the full 12 ECTS.



5. Perspectives, opportunities, and challenges

As it stands our current projections are that HSeT's budget will be sufficient to sustain its ongoing activities until the end of 2025. This projection does not consider additional income derived from new projects (such as ONCOMAS, the CAS in Biobanking, and courses in statistics), or extensions of existing programs (such as IAGG and CAFÉ-S). However, ensuring financial perennity of HSeT will remain a major challenge that is receiving attention by the executive committee with a high level of priority. New opportunities for funding are notably being actively explored, such as the creation of proprietary HSeT courses.

Changes in the composition of the Foundation board and broadening of the scientific expertise represented in the executive committee, the scientific advisory board and the HSeT team has expanded our network and set the stage for the development of new national and international programs, which will strengthen HSeT's visibility and standing in the field of online teaching in biomedical science. We anticipate that this broader national and international visibility and recognition will open new opportunities for enriching our portfolio.

A major mission of HSeT has always been to create and participate in programs that are accessible to students from low-middle income regions of the world, such as Africa, a fact that is exemplified by the IMVACC and IAGG programs, as well as by our close ties with the Pasteur Institute. The new programs under development - notably the CAS in Biobanking and the MAS in translational oncology - extend this outreach mission as they are designed for a wide international public. As the registration fees for such programs are prohibitive for participants from low-middle income countries, we will solicit fellowships for such participants from diverse foundations.

A major challenge will be to stay up to date with respect to information technology, infographic technologies and pedagogic approaches. For information technology, we have chosen to rely on outsourcing, on a case-by-case basis, to a professional company. This ensures expert help and reduces costs. Similarly, to reduce costs for infographics, we are outsourcing on a case-by-case basis to a past collaborator of HSeT, who will be encouraged to develop and master new technologies. For support in pedagogic approaches, we are fortunate to have a specialist in our team.

Thanks to the considerations outlined above and the recent internal development of HSeT and its online teaching portfolio, we believe that HSeT can look forward to the future with confidence.

6. Organization of HSeT

Foundation Board (current composition)

- Walter Reith, president (University of Geneva)
- François Verrey, secretary (University of Zurich)
- Jean Gruenberg, treasurer (University of Geneva)
- Uyen Huynh-Do (University of Bern)
- Jean-Pierre Kraehenbuhl (University of Lausanne)
- Sanjiv Luther (University of Lausanne)
- Meera Manraj (University of Mauritius)
- Mathieu Nendaz (Vice Dean, FacMed, UNIGE)
- Armelle Phalipon (Institut Pasteur Paris)
- William Pralong (EPF Lausanne)
- Frédéric Rochat (Etude Kellerhals-Carrard)
- Michelle Rossier (HSeT, Lausanne)

Executive committee (current composition)

permanent members:

- Jean Gruenberg (University of Geneva)
- Jean-Pierre Kraehenbuhl (University of Lausanne)
- Walter Reith (University of Geneva)
- François Verrey (University of Zurich)

invited members:

- Michelle Rossier (HSeT, Lausanne)
- Bernard Rossier (University of Lausanne)
- Pascale Anderle (HSeT, Berne)
- Victor Jongeneel (University of Lausanne)

Scientific Advisory Board (current composition)

- Amos Bairoch (University of Geneva)
- Alia Benkahla (Institut Pasteur Tunis)
- Victor Jongeneel (University of Lausanne)
- Marie-Christine Broillet (University of Lausanne)
- Li Long (HSeT)
- Ivana Knezevic (WHO, Geneva)
- Bernard Rossier (University of Lausanne)
- Jozsef Zoltan Kiss (University of Geneva)
- Jean-Pierre Michel (IAGG, Geneva)

Entire HSeT team and expertise

- Pascale Anderle (translational medicine)
- Amos Bairoch (bioinformatics)
- Alia Benkahla (bioinformatics)
- Marie Christine Broillet (toxicology)
- Jean Gruenberg (cell biology)
- Victor Jongeneel (bioinformatics)
- Jozsef Kiss (neurosciences)
- Ivana Knezevic (immunology, vaccinology)
- J.-P. Kraehenbuhl (immunology, vaccinology)
- Fabienne Lanau (biology)
- Li Long (computer science)
- Jean-Pierre Michel (gerontology, geriatrics)
- Walter Reith (immunology, molecular biology)
- Bernard Rossier (nephrology, toxicology)
- Michelle Rossier (laboratory medicine, haematology, pharmaco-toxicology)
- Aviva Sugar Chmiel (medical pedagogy)
- François Verrey (nephrology)

Freelance collaborators

- Alain Meystre (infographics)
- Jose Torralbo (computer science)

