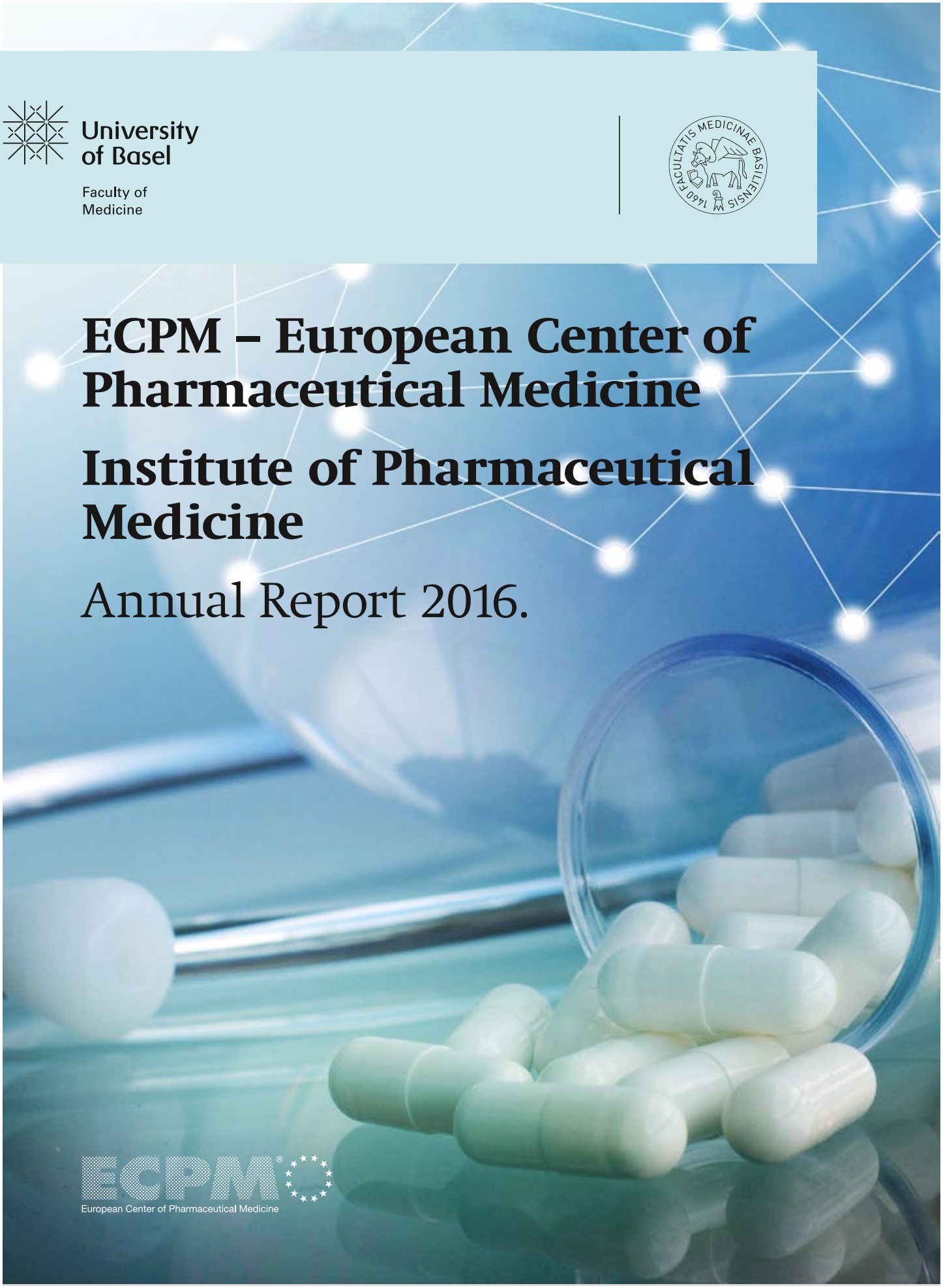
University of Basel

Faculty of Medicine

ECPM – European Center of Pharmaceutical Medicine

Institute of Pharmaceutical Medicine

Annual Report 2016.



ECPM®

European Center of Pharmaceutical Medicine

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ECPM at a glance

In 2016 ECPM

- Continued the 13th ECPM course cycle with 120 participants (overall 1720)
- Collaborated with 150 faculty members from different affiliations
- Developed and offered special modules and lecture series
- Conducted a summer institute at the George Washington University and a study trip to Singapore
- Was involved in undergraduate and postgraduate teaching of 10 different programmes
- Acquired about 600,000 Swiss Francs in third-party research funding
- Was working on 16 research projects
- Completed 5 research projects
- Authored and co-authored 24 published peer-reviewed articles and 5 conference abstracts
- Gave multiple scientific presentations to external audiences
- Supervised 4 PhD theses, 3 MPH and 2 MMD master theses and 1 master defence
- Employed 13 people

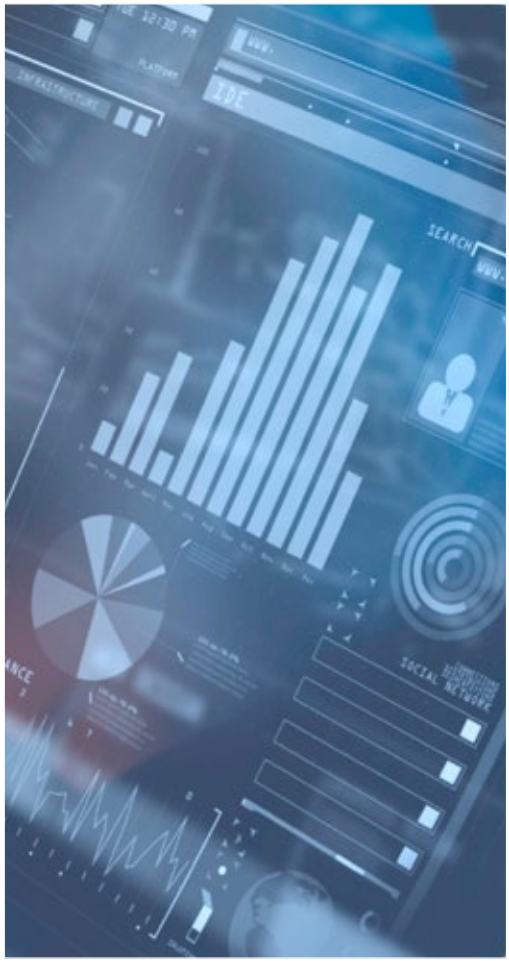
Activities in a nutshell

Research

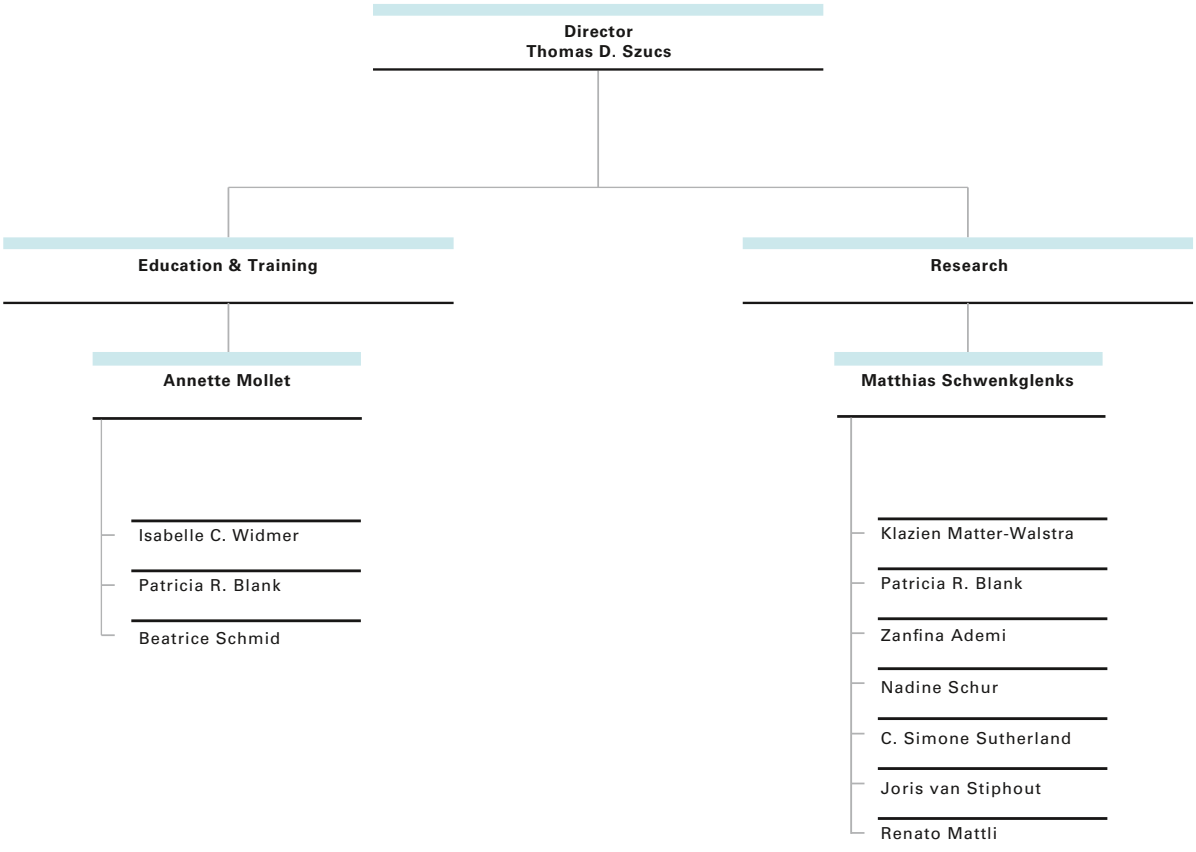
- Health Technology Assessment
- Health economics and pharmaco-economics
- Decision-analytic modelling
- Health Services Research
- Epidemiology; observational study and clinical trial design
- Biostatistics

Education and Training

- Undergraduate medical and pharmacy students
- Supervision of PhD, Master and Master of Advanced Study theses
- Postgraduate Programmes
  - CAS, DAS, MAS in Pharmaceutical
  - Medicine / Drug Development
  - Online e-learning courses
  - Summer institute and study trip
  - public health and nursing students
- Specialist examination for board certification FMH in Pharmaceutical Medicine
- Federal Training Center for MDs in Pharmaceutical Medicine and Public Health



Organisational chart



Director

Prof. Dr. Thomas D. Szucs, MD MBA MPH LLM, heads the unit and is Professor in Pharmaceutical Medicine and Director of ECPM at the University of Basel.

Previously he was Chief Medical Officer of Hirslanden Holding, the largest group of private hospitals in Switzerland. From 1998 to 2001 he was head of the Department of Medical Economics, a joint venture of the University Hospital in Zurich and the Institute of Social and Preventive Medicine of the University of Zurich. Professor Szucs' former appointments include head of research and founder of the Center of Pharmacoeconomics of the University of Milan, head of the working group for clinical economics at the University of Munich, senior consultant at Arthur D. Little Inc. and head of the Department of Health Economics at F. Hoffmann-La Roche Ltd. in Basel. Professor Szucs was appointed professor of pharmacology/ pharmacoeconomics at the School of Pharmacy of the University of Milan in 1996 and associate professor for medical economics at the University of Zurich in 2002. He holds a medical degree from the University of Basel, a Master in Business Administration from the University of St. Gallen, Switzerland, a Master of Public Health degree from Harvard University, and is board certifi ed in Pharmaceutical Medicine as well as in Prevention and Public Health. He has also received a LL.M in International Business Law with a specialisation in Information- and Technology Law from the University of Zurich. He serves as a member of the editorial board of several scientific journals and has published more than 300 scientific articles, book chapters and monographs. In 2010 he was appointed Honorary Professor at Peking University. In June 2012, Prof. Szucs was elected to direct the Faculty Assembly of the Medical Faculty of the University of Basel. He was elected to represent the Swiss Society of Pharmaceutical Medicine in the Senate of the Swiss Academy of Medical Sciences. Currently, Prof. Szucs is Chair of the Master of Public Health Programme of the Universities of Basel, Berne and Zurich; additionally he chairs the examination committee of the Swiss Association of Pharmaceutical Medicine.

In the fall academic semester of 2013/2014 Prof. Szucs went on a sabbatical in order to practice clinical medicine at the Hirslanden Clinic in Zurich. Apart from clinical duties and rotations, he conducted research on drug safety by analyzing in-house prescriptions and initiated a personalized medicine clinic focussing on pharmacogenetics.

In October 2014, Prof. Szucs received the Annual Prize of the Swiss Society of Health Economics, in recognition of his service as a president to this society as well as his endeavors to broaden and strengthen the field of health economics in the Switzerland"

In November 2014, Prof. Szucs received a lifetime honorary professorship at the Peking University's Health Science Center in recognition for his past and ongoing support of the Chinese Course on Drug Development and Regulatory Sciences.

Finally, the Board of the International Health Economics Association awarded the University of Basel the honour of hosting the 2019 World Congress of Health Economics. This congress will welcome around 1,000 participants from around the globe. Prof. Szucs and Prof. Felder are members of the local Steering Committee and are representing the Faculties of Medicine and Economics, respectively.

Thomas is board certified in Pharmaceutical Medicine as well as in Prevention and Public Health. He has published more than 400 articles, book chapters and monographies. He has worked extensively in the field of pharmaceutical economics and epidemiology. In 2013 he started to practice in personalised medicine with special emphasis on pharmacogenomics at the Klinik Hirslanden in Zurich. In 2016 he was rated among the 20 most influential economists in Switzerland.

Education & Training
Personnel.

The ECPM training platform offers undergraduate and postgraduate training in the field of pharmaceutical medicine/drug development sciences at different levels. The structure includes an undergraduate/graduate level for medical and life sciences students and three postgraduate levels. The first postgraduate level represents the ECPM Course (Diploma of Advanced Studies Course, DAS, 30 ECTS), which then can be complemented by master modules plus a thesis to achieve the MAS title of MMD (Master of Advanced Studies in Medicines Development, 60 ECTS). The third level offers courses for continuing professional career development, which are also accredited by the Swiss Medical Society (FMH) for board certification, the Swiss Association of Pharmaceutical Professionals (SwAPP) Diploma and IMI PharmaTrain specialisation in Pharmaceutical Medicine/Medicines Development.

Head of Education & Training, Managing Director

Annette Mollet, PhD, dipl. Pharm. Med. SwAPP is managing director of ECPM and head of education & training of ECPM at the University of Basel since 1997.

She studied Pharmacy at the University of Basel and received her PhD in Neurobiology at the Swiss Federal Institute of Technology in Zurich.

Annette Mollet worked at F. Hoffmann-La Roche in the Clinical R&D department where she conducted clinical trials in the field of AIDS and Anticoagulation therapeutics and worked as a Medical and Product Manager responsible for oncology products at the Swiss affiliate of Roche Pharma. She is chairing the Federal Expert Committee for the Evaluation of Radioactive Drugs at Swissmedic (Swiss Agency for Therapeutic Products) and the BAG (Swiss Federal Office of Public Health) since 2007, being a member since 1994. She is a member of the board of SwAPP (Swiss Association of Pharmaceutical Professionals) since 1999 and the commission for specialty training and continuous education (CPD). She is also involved as a programme manager in the creation of a European Specialist title in Pharmaceutical Medicine and Master title in Medicines Development within IMI (Innovative Medicines Initiative). She chairs the PharmaTrain Federation (successor project after termination of the PharmaTrain project in 2014) working group of course providers in pharmaceutical medicine.

Programme Director

Isabelle C. Widmer, MD is ECPM Programme Director at the University of Basel. She completed the ECPM course in 2013 with a Diploma of Advanced Studies in Pharmaceutical Medicine and joined the team in August 2015. Beyond ECPM Isabelle also works as a pharmaceutical industry consultant in her company elytra GmbH.

Isabelle obtained her medical degree from the University of Basel (1997). She studied as a post-graduate scientist in experimental medicine and biology at the University of Zürich while completing her thesis at the Institute of Medical Microbiology in Basel. From 2001–2003, she was a post-doctoral fellow at the National Cancer Institute, National Institutes of Health, Bethesda, Maryland. She was a physician in the Cantonal Hospital Liestal (2003–2006) before joining F. Hoffmann-La Roche Ltd., where she worked in various local affiliate roles including Medical Advisor for the breast cancer portfolio and customer access project leadership roles before moving to global roles. As a Global Medical Information Leader Isabelle led global key Medical Information initiatives cross-functionally across 82 countries. Activities included defining and implementing Global Medical Information Strategy, leading Change Management and branding; as well as developing and implementing Minimum Standards and Compliance Models in Medical Information. As a European Lead she was responsible for Medical Information Harmonization for Western Europe and defining Medical Information strategy for all European Roche affiliates.

Isabelle founded her consulting company elytra GmbH in 2013. As a consultant she focuses on effective programme management, from strategy to implementation, and change management, predominantly in the global and regional Medical Affairs space, in the pharmaceutical industry. Isabelle has published a number of scientific articles in peer-reviewed journals and regularly presents at scientific and industry-focused meetings, most recently contributing to a book on Medical Information regulations. She serves on the DIA EU programme committee for the Annual European Medical Information and Communications Conference and is involved in a leadership capacity in DIA Medical Information activities in Europe.

Isabelle left ECPM in August 2016. We thank her for her great contributions, wishing her all the best for her future career.

Administrator and Course Organiser

Beatrice Schmid is responsible for the course organisation and administration as of March 2013. Since 1996 Beatrice was responsible for the management of different administrative secretariats. She started her career in a facility management company where she managed human resource matters. In 2000 she joined Novartis where she held different positions such as administrative assistant in the IT department and later as human resource assistant of the technical operations department. From 2002 until 2013 she worked for Helvetia, a Swiss insurance company. At that time she was involved in the administration of the IT support in headquarters and later she coordinated the executive secretariat of the sales management. In March 2013 she joined ECPM where she manages the course administration and organises the secretariat of the institute.

Scientific Course Assistant

Patricia R. Blank, PhD, MPH holds a position as Senior Research Scientist and University Lecturer at the Institute of Pharmaceutical Medicine (ECPM, University of Basel, Switzerland) and the Epidemiology, Biostatistics and Prevention Institute (EBPI, University of Zurich, Switzerland). She obtained her Master in Human Biology and PhD in Biology at the University of Zurich. In addition, she completed a Certificate of Advanced Studies in Pharmaceutical Medicine (Dipl.Pharm. Med., University of Basel) and a Master of Public Health (MPH) at the Harvard School of Public Health in Boston, USA.

Patricia gained experience in health economics and modelling of diagnostic and pharmaceutical interventions. Her main research interests are personalised medicine in oncology, vaccines and vaccination behavior (for influenza, pneumococcal and other infectious diseases) and therapies for iron deficiency. Patricia serves as a member of the board of the European Scientific Working Group on Influenza (ESWI) and the working group on "Raise Awareness of Influenza Strategies in Europe" (RAISE). Patricia published extensively in a number of peer-reviewed journals and has written several book chapters. Patricia dedicates 50% of her time to Education & Training and 50% to Research.

Patricia left ECPM in 2016. We thank her for her great contributions in the last years both in research and education and training, wishing her all the best for his future career.

Research.
Personnel.

ECPM's research activities focus on the health economic characteristics, cost-benefit implications and efficient use (e.g. guided by predictive testing or risk stratification models) of pharmaceuticals and other health care interventions in Switzerland and internationally. They have a close relationship with modern Health Technology Assessment and imply the use and integration of health economic and pharmacoeconomic evaluation methodology (cost effectiveness, cost utility, application of advanced modelling techniques), outcomes and clinical research (i.e., randomised clinical trial and observational study) methodology and biostatistics. Complementary activities occur in related fields such as health systems research, health services research and clinical epidemiology and pharmacoepidemiology.

Health economic evaluation studies, which are a mainstay of ECPM's research activities, integrate clinical evidence with medical resource use and cost data to analyse the value for money provided by new or long-used drugs or other healthcare interventions. The overarching question is how scarce health care resources can be optimally used to maximise patient benefit. The results of this type of research complement comparative effectiveness research and are an important prerequisite of informed and transparent decision making in the health care sector.

Clinical fields addressed by ECPM studies include oncology and haematology, cardiovascular disease and heart failure, geriatrics, postoperative pain management, infectious diseases and vaccinations.

Head of Research

Matthias Schwenkglenks, PhD, MPH has been Head of Research at ECPM since 2003. He also leads the Medical Economics Unit at the Epidemiology, Biostatistics and Prevention of the University of Zürich, Switzerland, since 2010. He obtained a Master of Arts in Sociology and Political Sciences from the University of Tübingen, Germany, a Master of Public Health from the Universities of Basel, Bern and Zürich, and a PhD in Epidemiology from the University of Basel.

In 2009, he received the Venia legendi in "Health Economics and Public Health" from the University of Zürich, and was subsequently appointed professor (Titularprofessor) in 2016. Current research interests and teaching activities are in the fields of health economics, health economic evaluation and modelling, health services research, epidemiology, observational study and trial design, and biostatistics. He previously headed the Department of Medical Economics at the Hirslanden Group of Private Clinics, Zürich, and worked as a research fellow at the Department of Medical Economics of the University of Zürich. He also has extensive professional experience in internal intensive care nursing.ment.

Senior Research Scientists

Klazien Matter-Walstra, PhD studied human biology in Groningen, Netherlands, followed by a PhD in cancer immunology at the University of Bern. Thereafter, she was a supervisor at the immune-cytology laboratory at the Institute of Pathology of the University of Bern. She became a research assistant at the "Paracelsus heute" foundation, a medical writer for Mediscope AG and a research assistant at the Institute of Evaluative Research in Orthopaedics at the University of Bern, where she received training in health services research and small area analysis. Dr Matter-Walstra completed courses in cancer diagnostics, epidemiology, medical pharmacology, evidence based medicine, evaluation research and health economics. Since 2007, she has been a senior researcher at ECPM where she is responsible for outcomes research and health economic activities in cooperation with the Swiss Group for Clinical Cancer Research (SAKK).

Senior Research Scientists

Patricia R. Blank, PhD, MPH holds a position as Senior Research Scientist and University Lecturer at the Institute of Pharmaceutical Medicine (ECPM, University of Basel, Switzerland) and the Epidemiology, Biostatistics and Prevention Institute (EBPI, University of Zurich, Switzerland). She obtained her Master in Humanbiology and PhD in Biology at the University of Zurich. In addition, she completed a Certificate of Advanced Studies in Pharmaceutical Medicine (Dipl.Pharm. med., University of Basel) and a Master of Public Health (MPH) at the Harvard School of Public Health in Boston, USA.

Patricia gained experience in health economics and modelling of diagnostic and pharmaceutical interventions. Her main research interests are personalized medicine in oncology, vaccines and vaccination behaviour (for influenza, pneumococcal and other infectious diseases) and therapies for iron deficiency. Patricia serves as a member of the board of the European Scientific Working group on Influenza (ESWI) and the working group on "Raise Awareness of Influenza Strategies in Europe" (RAISE). Patricia published extensively in a number of peer-reviewed journals and has written several book chapters. Patricia dedicates 50% of her time to Education & Training and 50% to Research.

Patricia left ECPM in 2016. We thank her for her great contributions in the last years and wish her all the best for her future career.

Senior Research Scientist

Zanfina Ademi, Pharm, MPH, PhD was trained as a Pharmacist before completing a Masters of Public Health at the University of Kuopio, Eastern Finland. In 2011, she was awarded a PhD by Monash University, Melbourne, Australia in epidemiological and health economic modelling. For three years she worked as a Research Fellow at the Melbourne EpiCentre of the University of Melbourne.

Her research involved Epidemiological studies that assess the long-term outcomes of cardiovascular disease and their predictors and application of decision analytic methods as a framework for cost-effectiveness analysis of chronic disease. While at The University of Melbourne, she was awarded an Early Career Research grant and in 2012 and 2013 she was a chief investigator in two awarded projects by National Health and Medical Research Council in Australia. She was involved in teaching undergraduate and graduate courses in Epidemiology, Evidence-based Medicine and Health Economics at The University of Melbourne and Monash University.

Since July 2014, Zanfina has been appointed as a Senior Research Scientist at ECPM. Her current research interests are in the field of epidemiology, health service research, as well as epidemiological and health economic modelling techniques. Zanfina has co-supervised two PhD students at Monash University, one who has graduated and one who will soon be completed.

Research Scientist

Nadine Schur, PhD studied Biomathematics at the University of Applied Science Zittau/Görlitz, Germany, before obtaining a Master of Science in Epidemiology at the University of Basel in 2008. Afterwards, she worked on her PhD thesis "Geostatistical modelling of schistosomiasis transmission in Africa" at the Department of Epidemiology and Public Health, Swiss Tropical and Public Health Institute (Swiss TPH), Basel, that she published in 2011.

She continued her work at the Swiss TPH on the spatial distribution of neglected tropical diseases in Africa for another year where she was also involved in teaching. Then, she started a new position as Research Associate at the Department of Infectious Disease Epidemiology, Imperial College London, UK, analysing demographic and behaviour-related factors as well as temporal trends associated with the HIV epidemic in Zimbabwe. She also gained knowledge on the conception and implementation of epidemiological field studies in the framework of the Manicaland Project.

Since 2015, she is employed as Research Scientist at the Institute of Pharmaceutical Medicine (ECPM, University of Basel, Switzerland). Her current research interests are in the field of epidemiology and biostatistics focused on multivariable regression analysis, cost calculations of drug developments in randomised controlled trials and epidemiological modelling in relation to the prevention of diseases.

Research Scientist

Joris van Stiphout, MSc studied Oefentherapie Mensendieck in Amsterdam, Netherlands, which is comparable to physiotherapy. Thereafter, he obtained a master in Health Sciences at the VU University Amsterdam. He completed courses in epidemiology, biostatistics, care and prevention research and quantitative research. During his master, he chose the specialisation "policy and organisation of health care". Within the specialisation he completed the courses advanced health economics, economic evaluations, management in health organisation and regulation and organisation in health care. Joris van Stiphout did his internship at EMGO+ Institute for Health and Care Research, VU University Amsterdam where he wrote his master thesis. He has been a trainee at ECPM since May and a research scientist since September 2014.

Research Scientist

C. Simone Sutherland, PhD worked as a clinical research professional for many years in Canada prior to developing an interest in health economics. In 2013, after working as a Research Associate at the Programs for Assessment of Technology in Health (PATH) Research Institute, she pursued a Master in Health Economics and Decision Modelling at the University of Sheffield. Upon graduating with merit, she returned to the PATH Research Institute, where she continued assessing the clinical and cost outcomes of new technologies for projects with Health Quality Ontario (HQO). In order to expand on her knowledge of diseases and modelling, she came to Switzerland in 2014 to complete a PhD in Epidemiology at the Swiss Tropical and Public Health Institute, with a combined focus on dynamical modelling and economic evaluation for interventions related to eliminating human African trypanosomiasis. Upon completion of her PhD in 2016, Simone joined ECPM as a Research Scientist.

Simone has been involved in teaching health economics to students at a master's level since 2015, and during her years of research, has had the opportunity to develop various techniques in health research methodology from systematic reviews to disease modelling. In addition, she has acquired knowledge of a wide range of diseases and interventions including diabetes, cardiovascular disease, COPD, schizophrenia, chronic kidney disease and diagnostic testing. Her current interests remain in health decision-making methods for ailments that are prevalent in the western hemisphere, but also expand to concerns in developing economies with a focus on neglected tropical diseases.

PhD Candidate

Renato Mattli, MSc ETH, MAS BA studied Human Movement Sciences at the ETH in Zurich. After working several years as a Clinical Research Associate in the medical device industry he acquired a MAS in Business Administration. Thereafter, he worked as a Health Economics and Market Access Manager EMEA for the same medical device company. Since 2012, Renato is working as a Research Associate at the Winterthur Institute of Health Economics (WIG) that belongs to the Zurich University of Applied Sciences (ZHAW). Since 2014, he is also the deputy head of the Health Economics Research Group within the WIG. His main research interests and teaching activities are in the fields of health economic evaluation and health technology assessment. Renato joined the ECPM in 2016 as a part time PhD student. The title of his thesis is "scaling up cost-effective physical activity interventions in a culturally diverse setting".

Education & Training.
Current Status.

ECPM, founded in 1991, has established a reputation as the premier European training centre in pharmaceutical medicine. Training is offered on undergraduate, graduate and post-graduate levels. On a postgraduate and continuing education level, courses provide expert knowledge in drug development, pharmaceutical medicine, clinical research, and regulatory sciences. The ECPM Diploma Course (ECPM Course) represents the core of the postgraduate training platform. It covers the training need of specialists working in one or the other phase in drug development to provide a holistic view of the process and comprehensive instructions for integrating cutting-edge concepts and best practices in medical product development and regulatory sciences. The focus of the ECPM training platform is to teach integrated medicines development with emphasis on requirements for rational and rapid development of a new product for the global market. The course programmes cover all aspects of pharmaceutical medicine and drug development sciences as defined by the IMI PharmaTrain syllabus

Undergraduate / Graduate Teaching

ECPM employees teach a variety of graduate-targeted courses in pharmaceutical medicine, health economics and health policy. Courses are offered within the Medical Faculty and the Pharmacenter of the University of Basel, as well as at the Medical/Science faculty of the University of Zurich. Lectures are given in English and German, please see respective title on the list below.

Postgraduate Training

Since January 2012 ECPM is recognised as IMI PharmaTrain Training Centre of Excellence. This certifies that ECPM adheres to the IMI Education & Training Quality Standards as well as to the PharmaTrain Syllabus, Learning Outcomes and Curriculum for training in pharmaceutical medicine. Within the lap of PharmaTrain 12 Universities in Europe were recognized as Centres of Excellence allowing now a mutual acceptance of trainees and credit points.

Health care specialists from Switzerland were introduced to the public and private health system of Singapore.

The following postgraduate courses were offered in 2016:

Project Management in Medicines Development

In collaboration with the CTU (Clinical Trial Unit) of the University Hospital Basel

This course is based on the PMBOK guide and includes 6 days of face to face teaching, a pre-assignment and a homework.

Genomics for Clinicians

At the University Hospital Basel and Hirslanden Clinic in Zurich

This course offered the basics of genomic medicine, including how to read a gene analysis, it was offered in German

Issues and Trends in Regulatory Sciences

In collaboration with the George Washington University

This one week programme included a visit to the FDA and the NIH hospital and National Library.

Study Trip to Singapore

In collaboration with the Swiss Society of Health Economics and Health Sciences

The Singapore health system, which is unique through the mixture of British tax based system and Chinese Confucian culture where individuals are self-responsible, was introduced. The trip included visits to hospitals, governmental departments and health authorities.

Ethical and Legal Aspects of Clinical Trials

In collaboration with the CTU (Clinical Trial Unit) of the University Hospital Basel

During this course the specific codes, rules, and policies relating to research ethics were presented. These aspects were discussed in the context of international and national principles and guidelines to approach and resolve ethical dilemmas.

Students from the Summer Institute at the George Washington University in front of the FDA campus in Silver Spring.

Education & Training.
Objectives for the coming years.

The backbone of ECPM Education and Training remains the ECPM Diploma Course with approximately 120 participants every second year. The current course started in September 2015 and will run until August 2017. In January 2012 ECPM received the "Centre of Excellence" accreditation by PharmaTrain and adapted the learning outcomes and examination mode to the Europe wide accepted standards.

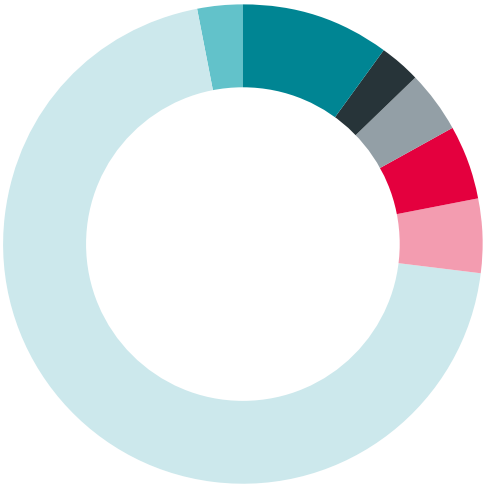
The aim is to maintain the high quality and our leading role in the training of medicines development. The ECPM Course is recognised by the Swiss Association of Pharmaceutical Medicine (www.sgpm.ch), by the Swiss Medical Association (www.fmh.ch) and the Swiss Association of Pharmaceutical Professionals (www.swapp.ch) to cover the theoretical training and the examination for specialisation and board certification. Collaboration with professional associations and our customers from pharmaceutical industry, academia and regulatory authorities are key. Through the PharmaTrain collaboration we can offer the master course participants to acquire courses and credit points à la carte in Europe. The first candidate finished his master thesis with the defence in September 2015 and a second one in January 2016. This system will be maintained through the PharmaTrain Federation, the follow up association which was founded in 2014 to sustain the network and achievements of the IMI project. At least 50% of the training and the master thesis must be completed at the University where the candidate is enrolled. The standards in education and training in pharmaceutical medicine will not only be harmonised in Europe but spread out internationally.

ECPM partners with the University of Beijing and the University of San Francisco to enhance training competencies and standards. Through a new collaboration with the School of Medicine and Health Sciences at the George Washington University ECPM offers a one week summer institute on "Issues and Trends in Regulatory Sciences" including a visit at the FDA. This course reveals ECTS credits which can be used for achieving the MAS title. A study trip to Israel to learn how they organise their health system is offered together with the Swiss association of health economics.

Education & Training.
Overview of activities.

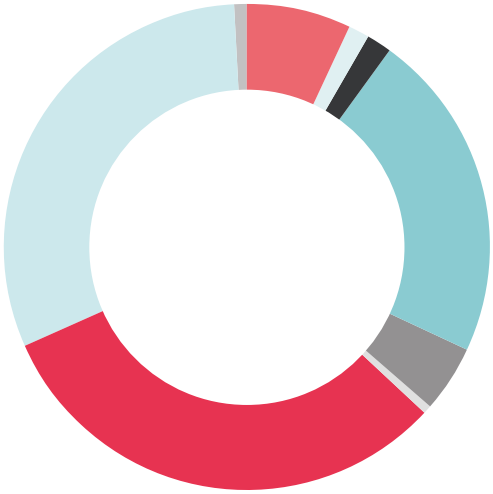
Overview of 2015–2017 Figures

Affiliations of Course Participants



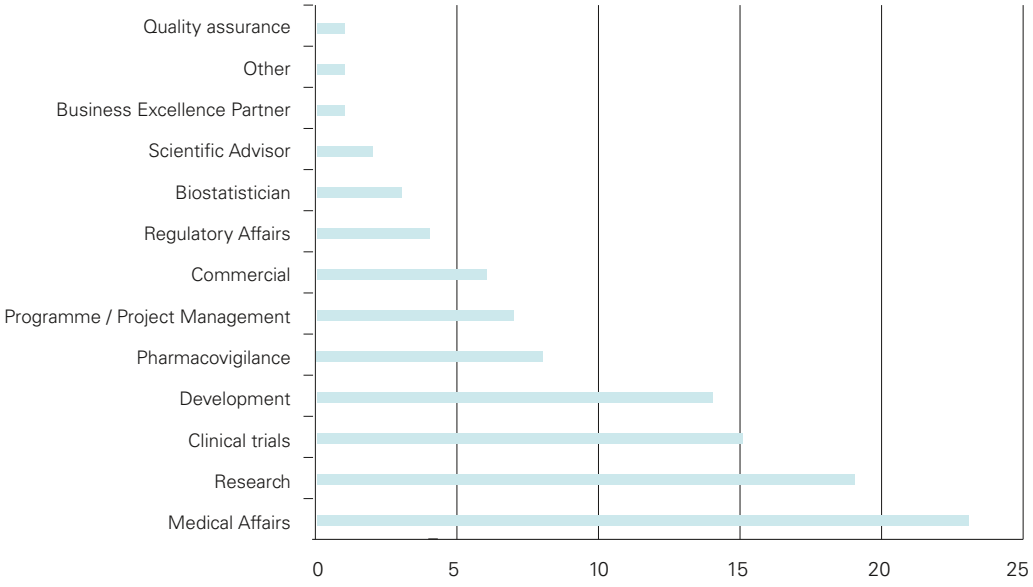
Academia / University hospital	10%
Biotech	3%
Consultancy	4%
CRO	5%
Other	5%
Pharmaceutical company	70%
Regulatory agency	3%

Educational Background

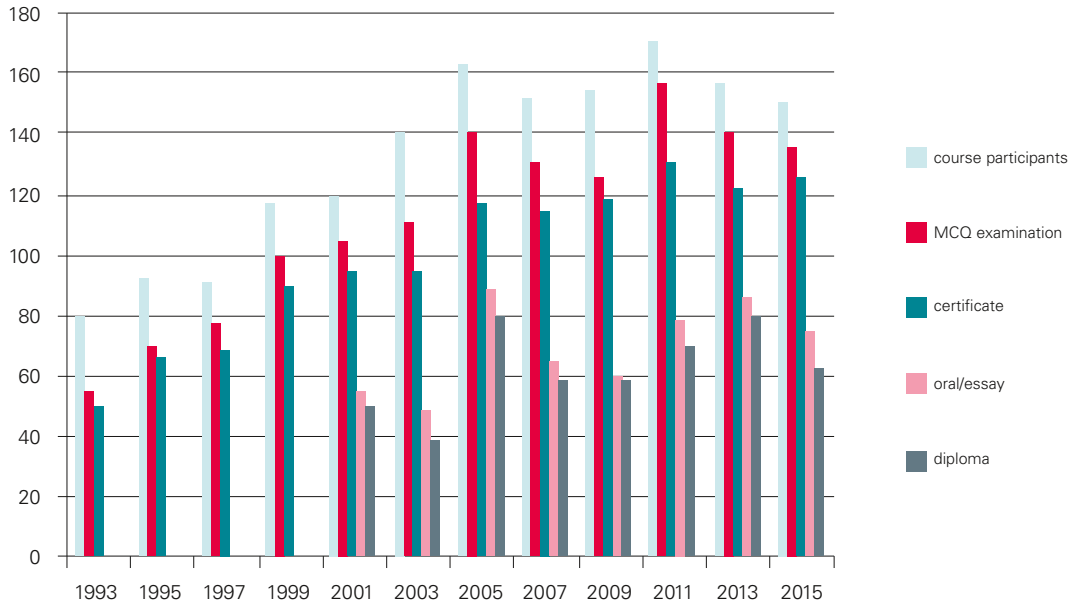


BSC	11%
Economics	2%
MBA	3%
MD	34%
MD PhD	7%
Law	1%
MSc	49%
PhD	48%
Veterinary	1%

Area of Work



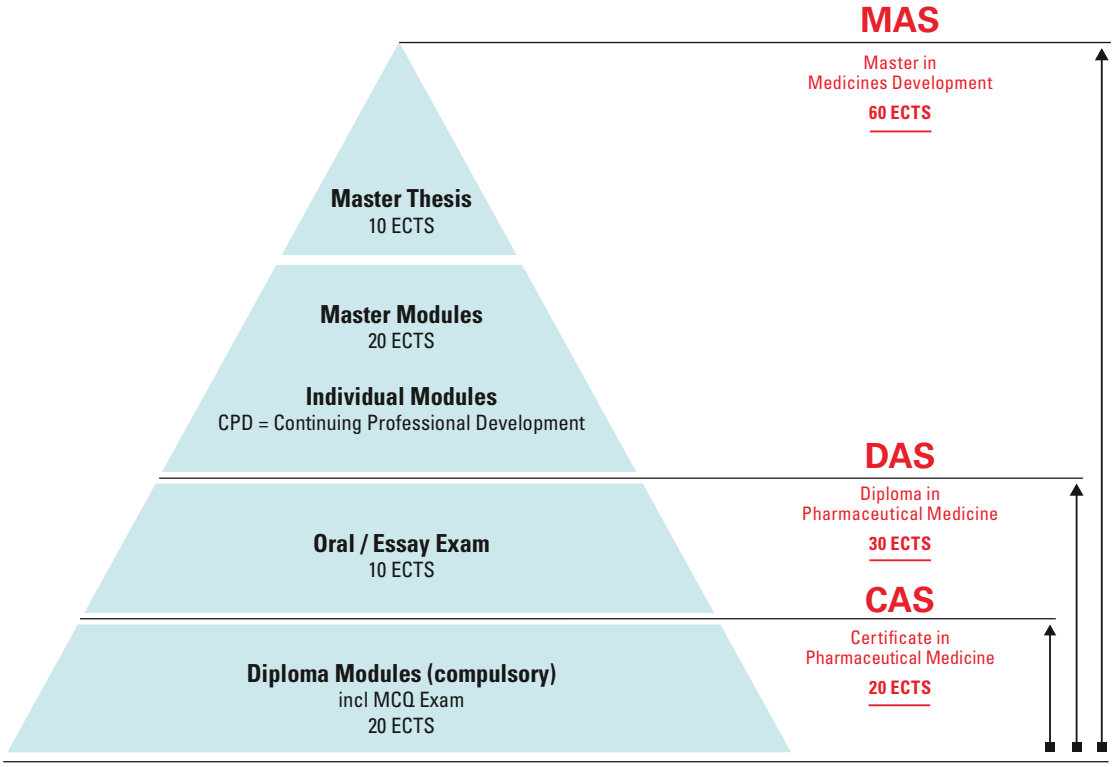
Examination



ECPM Platform

The ECPM training platform is conceived to provide profound training for scientists and managers in different areas of drug development. As such, its primary targets are to provide up-to-date knowledge on current trends in drug development and to train the leaders in drug development for their next career step. Additionally it offers a platform to share knowledge with colleagues and discuss with experts face-to-face.

The ECPM training platform contains undergraduate and postgraduate training in the field of pharmaceutical medicine/drug development sciences at different levels. The structure includes the undergraduate and graduate level for medical students and the three postgraduate levels where the ECPM Course forms the basis with a Diploma of Advanced Studies in Pharmaceutical Medicine (30 ECTS) The diploma can be complemented with master modules plus a thesis to achieve a MAS title in Medicines Development (MMD) (60 ECTS). The third level includes all diploma and master modules, many elective modules and short courses, which are accredited by the University of Basel and several professional associations for continuing professional development, please see www.ecpm.ch. ECPM collaborates with a science-driven and highly experienced international faculty including a network of experts in academia, pharmaceutical industry and regulatory agencies and bodies of the health care system. Within this network ECPM was the coordinating entity of the European IMI PharmaTrain project (2009–2014), which aimed at fostering the overall understanding and competence for successful execution of integrated drug development and life-cycle management of medicines by identifying training gaps and by harmonising the teaching programmes.



ECPM Diploma Course (DAS) in Pharmaceutical Medicine

The ECPM Course is a well-established postgraduate education and training programme targeted at representatives from industry, service industry, academic and government decision- and policy-makers who already have a good grounding in the basics and will benefit from a more in-depth, comprehensive and systematic immersion into modern medical product development, regulation and market introduction. Participants are involved in lectures, panel discussions, team-oriented case studies and interactive learning. Participation in the ECPM Course provides the opportunity to integrate work and education, to discuss with experts face-to-face or online, to gain in-depth knowledge while building an international network, and to put this into perspective with their own career plan.

A faculty network of experts from academia, pharmaceutical and biotechnology companies and regulatory authorities (including the EMA, FDA, Japan and Emerging Markets regulatory agencies) carry the teaching responsibility. A successful completion of the course and the final examination provides the title "Diploma of Advanced Studies (DAS) in Pharmaceutical Medicine" and includes 30 ECTS credits.

MMD-Master Course (MAS) in Medicines Development

The Master Course in Medicines Development is a postgraduate master course (Master of Advanced Studies, MAS). This programme extends the Diploma Course in Pharmaceutical Medicine. Master modules can be chosen according to the needs of the candidates to be able to cope with the challenges of drug development. Training and skills provide the basis to critically assess and improve challenges in the drug development process.

The programme is designed to be completed while working and through the IMI PharmaTrain network the course and ECTS credit points are mutually recognised between the participating Universities to offer the opportunity of mobility and availability.

Continuing Education

Back to back with the modules of the Diploma course, ECPM offers one-day seminars called "Frontiers in Drug Development" on current trends and hot topics. These seminars are open to the public and are accredited for continuing education by different professional organisations, such as the Swiss Medical Association (FMH). Topics covered in the past included. The complete list can be viewed on http://web.ecpm.ch/frontiers-in-drug-development.

Examination

The diploma and specialist examinations are offered once a year. In the intermediate year (during a course cycle) only a small number of candidates take the examination. Ten candidates participated in the multiple choice (June 7, 2016) and seven passed it successfully (failure rate 30 %). Three candidates took the oral/essay examination (June 21, 2016) and all passed. Together with two candidates who passed the oral/essay in 2015 five DAS in Pharmaceutical Medicine were awarded.

E-learning

To cope with the limited time resources and reduced budgets of specialists working in the health care environment, ECPM has produced three e-learning programmes. E-learning modules can be used for different teaching purposes. First they can be used as a self-learning tool for preparation or repetition of course material, second they can replace selected face-to-face modules required to achieve the Master in Medicines Development or to collect credits for continuing professional education:

- Basics in Health Economics (launched 2013)
- Drug Safety and Pharmacovigilance (launched 2014)
- Personalised Healthcare (launched 2015)

A Certificate of Attendance from the University of Basel will be awarded after successful completion of each e-learning programme (1 ECTS).

Current Projects

ECPM is working on several new training and teaching programmes:

- Module on *„Leadership and Business Development"* will be offered in a updated version
- Module on *"Medical and Scientific Writing"*
- Module on *„Project Management in Medicines Development"* (third edition)
- Additional master module: a survey among the ECPM alumni revealed that the following topics are highest interest: market access, safety, bioinformatics, genomics
- Summer school together with the School of Medicine and Health Sciences at the George Washington University on *"Issues and Trends in Regulatory Science"* (second edition)
- Study Trip to Israel jointly with the Swiss society of health economics and health sciences *"The Israel Healthcare Story"*

Completed Projects

- Second master thesis in medicine's development supervised and awarded
- Module on *„Project Management in Medicines Development"* (second edition)
- Module on *"Ethical and Legal Aspects of Clinical Trials"*

Scientific Presentations to External Audiences

Presenter (name, function)	Presentation title	Event (title, location, date)
Isabelle Widmer, course director	Medical Information	DIA Annual Medical Information and Communications Conference, Orlando, FL, April 2016

Expertise for Approval of Radioactive Diagnostics and Therapeutics

Annette Mollet chairs the Federal Expert Committee for radioactive drugs consulting Swissmedic and the Federal Office of Public Health regarding the approval of new diagnostic and therapeutic drugs and tools for nuclear medicine.

Postgraduate Training Activities[1]

ECPM has been provisionally recognized as a training centre for the board certification for physicians in Prevention and Public Health in August of 2013. A visitation of the training centre is pending.

For the board certification for physicians in pharmaceutical medicine ECPM is partnering with the SAKK (Swiss Group for Clinical Cancer Research) to create a joint-centre for continuing education in this field. ECPM has been provisionally recognized as a training centre in June of 2012. A visitation of the training centre is pending.

Undergraduate Teaching at the University of Zurich

1. Schwenkglenks M, Szucs TD, Blank PR, Matter-Walstra K., Mollet A. BIO 410 – Developing New Medicines: An Introduction. 3. Studienjahr Biologie Bachelor, Universität Zürich.
2. Szucs TD, Blank PR, Schwenkglenks M, Mollet A. BIO 429 – Research methodology for studies on human health and disease. 3. Studienjahr Biologie Bachelor, Universität Zürich.
3. Szucs TD, Blank PR, Mollet A. Mantelstudium Arzneimittelentwicklung. 2.–4. Studienjahr Medizin Bachelor, Universität Zürich.
4. Schwenkglenks M, Szucs TD, Matter-Walstra K. BIO 418 – Clinical epidemiology and quantitative research in health care. 3. Studienjahr Biologie Bachelor, Universität Zürich

Undergraduate Teaching at the University of Basel Medical School

5. Szucs TD. Tutorate im Wissenschaftsmonat (WiMo) für Medizinstudenten, 4./5. Studienjahr Medizin Master, Universität Basel.
6. Schwenkglenks M, Matter-Walstra K, Blank PR. Interprofessionelles Modul Medizinische Oekonomie. Major Clinical Medicine, 3. Studienjahr Medizin Bachelor, Universität Basel.
7. Schwenkglenks M, Matter-Walstra K. Kleingruppenseminare im Themenblock Körper, Subjekt, Umwelt, 1. Studienjahr Bachelor. (Themen: Soll man Statine in der Prävention der koronaren Herzkrankheit einsetzen? Neutropenie bei Krebspatienten – Ist der Einsatz von Granulozyten-Kolonie stimulierenden Faktoren sinnvoll? Sind Krebsmedikamente nicht zu teuer?)
8. Schwenkglenks M. Interprofessionelles Modul Gesundheitspolitik. Major Clinical Medicine, 3. Studienjahr Medizin Bachelor, Universität Basel.

[1] In Switzerland this is considered „Weiterbildung“ according to the „Weiterbildungsordnung“ of the Swiss Medical Association (FMH).

9. Szucs TD, Mollet A, Blank PR. Interprofessionelles Modul Medikamentenentwicklung. Major Clinical Medicine, 2. Studienjahr Medizin Bachelor, Universität Basel.
10. Mollet A, Szucs TD, Interprofessionelles Modul Arzneimittelsicherheit in der Klinik. Major Clinical Medicine, 3. Studienjahr Medizin Bachelor, Universität Basel
11. Szucs TD. Interprofessionelles Modul Pharmakogenomik und personalisierte/individualisierte Medizin. Major Clinical Medicine, 2. Studienjahr Medizin Bachelor, Universität Basel.
12. Zanfina Ademia, C. Simone Sutherland. 41127 Advanced Research Methods - Health Economics. 3. Master and PhD students, Universität Basel

Undergraduate Teaching at the University of Bern

13. Schwenkglenks M. Lectures on Health economic evaluation and Health Technology Assessment in Switzerland and Europe. Master Biomedical Engineering, Universität Bern.

Postgraduate Teaching at the University of Basel

14. Mollet A, Szucs TD, Schwenkglenks M, Blank PR. Lectures forming part of the ECPM Course in pharmaceutical medicine.
15. Schwenkglenks M. Lectures forming part of 20458-01 – Essentials in Drug Development & Clinical Trials.
16. Schwenkglenks M, Mattli M. Gesundheitsökonomische Modellierung – Hands-on. Course forming part of the Postgraduate Master Programme in Public Health.

Postgraduate Teaching at the University of Zurich Medical School

17. Blank PR, Mollet A, Schwenkglenks M, Szucs TD. Courses forming part of the Postgraduate Master Programme in Public Health.

Students of the ECPM Diploma Course 2015–2017.

Research.
Current Status.

ECPM has been active in research since 2003. In the early days, a majority of studies were run with industrial partners, as there was (and is) only limited public funding for pharmaceutical-related health economic evaluation and Health Technology Assessment in Switzerland. In 2016, our group was one of the most active health economic groups in Switzerland in terms of publication activity, and project scope and scale. Based on 6 fulltime equivalents of scientific staff, we pursued a broad range of research activities, including participation in EU-funded international projects.

An FP7-funded project was devoted to the detection of new biomarkers in breast cancer and a HORIZON 2020-funded project addresses pharmacotherapy optimisation in elderly patients. In both cases, ECPM is responsible for the health economics work packages. We also take responsibility, since 2007, for the outcomes research and health economic evaluation activities of the Swiss Group for Clinical Cancer Research (SAKK), the leading Swiss collaborative study group in the field of oncology and haematology. In a growing atmosphere of reform of the national approach to Health Technology Assessment (HTA), we are engaged in discussion and are developing cooperation with relevant academic and non-academic players in the field, including health insurance companies. In cooperation with partner institutions from several Swiss universities, we perform HTAs for the Swiss Medical Board (SMB), a non-profit institution funded by e.g. the Swiss cantons and the Swiss Academy of Medical Sciences (SAMW). Projects with industrial partners continue to also play a relevant role, which gives us opportunities to work with raw data from large, multinational randomised clinical studies and to be involved in Health Technology Assessment activities abroad, e.g. in the UK.

In cooperation with the Basel Pharmacoepidemiology Unit (BPU; Prof. Christoph Meier), and the Helsana Group, we have, for the second time, published a report on medication utilisation in Switzerland, based on health insurance claims data covering about 15 % of the Swiss population (Helsana Arzneimittelreport). Projects and resulting publications are listed in section Overview of Activities, below. Research staff is also involved in undergraduate and postgraduate university teaching. Another strategic goal is to intensify our cooperation with other units at the University of Basel pursuing related research activities, e.g. the Basel Institute for Clinical Epidemiology & Biostatistics, Swiss Tropical and Public Health Institute, Department of Health Economics at the Faculty of Business and Economics (DHE), Basel Pharmacoepidemiology Unit. The aforementioned units and ECPM have joined forces to establish an interdisciplinary network of excellence for comparative effectiveness and health economic research, S-CORE. S-CORE has recently achieved formal recognition as a Research Network of the University of Basel.

Key Areas of Expertise

- Pharmacoeconomics
- Health economics
- Decision-analytic modelling
- Epidemiology
- Outcomes research
- Clinical and observational study designs
- Biostatistics

Main Areas of Activity

- Oncology and haematology
- Cardiovascular disease and heart failure
- Influenza and other infectious diseases
- Geriatrics, specifically pharmacotherapy optimisation in the elderly
- Medication utilisation in Switzerland
- Variation in healthcare utilisation
- Approaches to health technology assessment and valuation of health service

Research.
Objectives for the coming years.

ECPM's situation and achievements in 2016 indicate the successful development of a small research unit. One main aim for the coming years is continued contribution to the shaping of new Swiss approaches to Health Technology Assessment and to the reimbursement of drugs and other health care services. In the future, Swiss authorities are expected to commission more related tasks from academia. If this situation occurs, we want to be prepared and make valid contributions.

Additional scientific aims are to expand research using administrative datasets provided by health insurance companies, and research on methodological topics in health economic evaluation. Establishing new grants from non-industry sponsors (cooperative study groups, non-profit organisations) and competitive grant givers remains important. However, as third-party funding of Health Technology Assessment-related and health economic evaluation-related research remains structurally uncertain, we also need to gain substantially more long-term university funding for our research group to ensure sustainability. Another important aim is to strengthen collaboration and develop potential for synergies with local partners from the Department of Public Health and beyond (e.g. Basel Institute for Clinical Epidemiology & Biostatistics; Basel Pharmacoepidemiology Unit at the Department of Pharmaceutical Sciences; Swiss Tropical and Public Health Institute; Prof Stefan Felder, representing health economics at the Faculty of Business and Economics). Steps to jointly establish an interdisciplinary network of excellence for comparative effectiveness and health economic research have recently led to formal recognition by the University, as mentioned above.

Research.
Overview of activities.

Sources of project funding in 2016

SAKK	22%
Health insurance companies	12%
University	12%
Swiss Federal Office of public Health and semi public sources	5%
EU (HORIZON 2020)	5%
Commision of Technology and Innovation	5%
Industry and health care providers	39%

Note: numbers are appproximate

Local academic collaborations

- Prof. Stefan Felder, Division of health economics, Faculty of Business and Economics, University of Basel
- Basel Institute for Clinical Epidemiology and Biostatistics (ceb)
- Prof. Christoph Meier, Pharmacoepidemiology Unit and Hospital Pharmacy Basel, University Hospital Basel
- Prof. Kurt Hersberger, Pharmaceutical Care Research Group, Faculty of Science, University of Basel
- Swiss Tropical and Public Health Institute

Collaborations with national and international academic and public entities

- Epidemiology, Biostatistics and Prevention, University of Zürich
- University Hospital Zürich
- Institute of Social and Preventive Medicine, University of Bern
- Swiss Group for Clinical Cancer Research (SAKK)
- Swiss Federal Office of Public Health (BAG)
- INC-EU Study Group, Switzerland/UK
- Harvard School of Public Health, USA
- St. George›s Hospital, London, UK
- Department of Medicine 3, Division of Gastroenterology and Hepatology, Christian Doppler Laboratory for Molecular Cancer Chemoprevention, Medical University of Vienna, Vienna, Austria
- Department of General Medical Oncology, University Hospitals Leuven,
- Leuven Cancer Institute, Leuven, Belgium

Collaborations with private entities:

- Helsana Group of health insurance companies
- Germany Breast Group, Neu-Isenburg, Germany
- Pharmaceutical companies

Research.
Current Projects.

The following list comprises projects that have been started and are still on-going.

Ongoing	
Title:	Pill Protect®: health-economic performance characteristics and implications for health care financing
Project lead & contributors:	**ZA**, CSS, MS
Hypothesis / Objectives:	Pill Protect: health-economic performance characteristics and implications for health care funding
Start date:	01.08.16
Partner(s):	Industry
Output:	Pending
Source of funding:	Commission for Technology and Innovation (CTI), industry

Ongoing	
Title:	Cost-effectiveness of hyperkalemia treatment
Project lead & contributors:	**ZA**, CSS, MS
Hypothesis / Objectives:	Cost-effectiveness of hyperkalemia treatment
Start date:	01.05.16
Partner(s):	Industry
Output:	Pending
Source of funding:	Industry

Ongoing	
Title:	Health economic properties of targeted cancer therapies
Project lead & contributors:	**MS**
Hypothesis / Objectives:	Health economic properties of targeted cancer therapies
Start date:	01.12.15
Partner(s):	Industry
Output:	Pending
Source of funding:	Industry

Ongoing	
Title:	Health economic properties of targeted cancer therapies
Project lead & contributors:	**MS**
Hypothesis / Objectives:	Early health economic assessment of targeted cancer therapies
Start date:	01.12.15
Partner(s):	Industry
Output:	Pending
Source of funding:	Industry

Ongoing

Title:	Performance-based pricing and reimbursement of pharmaceuticals (literature review)
Project lead & contributors:	**PB**, JS, MS
Hypothesis / Objectives:	Literature review of approaches to value-based pricing and reimbursement of pharmaceuticals
Start date:	01.12.15
Partner(s):	Industry
Output:	Report, abstract
Source of funding:	Industry

Ongoing

Title:	Effect of the Swiss human research legislation on the costs associated with randomized clinical trials in Switzerland
Project lead & contributors:	**NS**, MS
Hypothesis / Objectives:	Assessment of impact of Swiss human research legislation on clinical trial costs and application timelines
Start date:	01.08.15
Partner(s):	Clinical Trial Unit at University Hospital Basel
Output:	Report
Source of funding:	Swiss Federal Office of Public Health

Ongoing

Title:	OPERAM: Optimising PharmacothERApy in the Multimorbid elderly
Project lead & contributors:	**MS**, PB, ZA
Hypothesis / Objectives:	Most older adults have multiple chronic diseases (multimorbidity) and multiple medications (polypharmacy). However, multimorbid patients are often excluded from clinical trials and most guidelines address diseases in isolation. Inappropriate drug prescription and poor drug compliance are common and contribute to up to 30 % of hospital admissions. OPERAM investigators developed STOPP/START criteria to detect inappropriate drug use, both over- and underuse. Applying these criteria limits unnecessary polypharmacy and reduces underuse of indicated medications, but it remains uncertain whether systematic pharmacotherapy optimisation can improve clinical outcomes and reduce costs.We propose a multicentre randomised controlled trial to assess the impact of a userfriendly software-assisted intervention to optimise pharmacotherapy and to enhance compliance in 1900 multimorbid patients aged ≥75 years. Outcomes will include drug-related hospital admissions, health care utilisation, quality of life, patient preferences and cost-effectiveness. We will also perform several network meta-analyses (NMA) to provide new comparative evidence on the most effective and safest pharmacological and non-pharmacological interventions to reduce common causes of preventable hospital admissions (e.g. falls, fractures, bleeding). Therapy optimisation in the multimorbid elderly, enhanced compliance and discontinuation of less effective interventions have the potential to improve clinical, quality of life and safety outcomes, while reducing costs. We will provide a structured method with practical software solutions for optimal prescribing and new comparative evidence from NMAs for addressing multimorbidity and polypharmacy by means of customised, patient-centred guidelines. OPERAM ultimately aims at better healthcare delivery in primary and hospital care, based on effective, safe, personalised and cost-effective interventions that can be applied to the rapidly growing older population in Europe.
Start date:	01.05.15
Partner(s):	OPERAM Consortium: Universität Bern, University Catholique de Louvain, Universiteit Utrecht, University College Cork, Panepistimio Ioanninon, Università degli Studi Gabriele d`Annunzio di Chieti-Pescara, TP21 GmbH
Output:	Pending
Source of funding:	EU (HORIZON 2020, proposal 634238) and Swiss State Secretariat for Education, Research and Innovation (SERI; contract number 15.0137)

Ongoing

Title:	Cost-effectiveness analysis of chronic heart failure treatment
Project lead & contributors:	**ZA**, MS
Hypothesis / Objectives:	Assessment of the cost-effectiveness of sacubitril / valsartan in chronic heart failure patients with reduced ejection fraction, from a Swiss perspective
Start date:	01.03.15
Partner(s):	Industry
Output:	Report, peer-reviewed publication pending
Source of funding:	Industry

Ongoing

Title:	Several co-operative projects in the field of health economics and outcomes research topics.
Project lead & contributors:	**KM**, MS
Hypothesis / Objectives:	Several small co-operative projects with hospitals to evaluate costs of treatment for cancer patients. Outcomes research and health services research projects by means of database evaluations.
Start date:	01.12.14
Partner(s):	Schweizerische Arbeitsgemeinschaft für Klinische Krebsforschung (SAKK); University Hospital Basel, other hospitals.
Output:	Abstract, peer-reviewed publications.
Source of funding:	Public

Ongoing

Title:	Health Technology Assessments (HTAs) for the Swiss Medical Board
Project lead & contributors:	**MS** (lead for overall project), **ZA** (lead for specific HTAs), **PB** (lead for specific HTAs), JvS
Hypothesis / Objectives:	Performance of health economic parts of HTAs for the Swiss Medical Board
Start date:	01.06.2014
Partner(s):	Basel Institute for Clinical Epidemiology and Biostatistics (CEB), Basel; Institut für Sozial- und Präventivmedizin (ISPM), Universität Bern; Institut Ethique Histoire Humanités (iEH2), Universität Genf; Institut für Epidemiologie, Biostatistik und Prävention (EBPI), Universität Zürich
Output:	Health Technology Assessment Reports, peer-reviewed publications on specific topics
Source of funding:	Swiss Medical Board

Ongoing

Title:	Cost-effectiveness analysis of acute heart failure treatment
Project lead & contributors:	**MS**, TDS, AMP
Hypothesis / Objectives:	Cost-effectiveness analysis of serelaxin in the treatment of acute heart failure
Start date:	01.10.13
Partner(s):	Industry
Output:	Report, peer-reviewed publication pending
Source of funding:	Industry

Ongoing

Title:	Drug reports based on Swiss health insurance claims data
Project lead & contributors:	**MS, NS**, RP, AMP
Hypothesis / Objectives:	Analysis of drug use in Switzerland and related medical and economic aspects, based on Swiss health insurance data
Start date:	01.09.13
Partner(s):	Basel Pharmacoepidemiology Unit and Hospital Pharmacy, University Hospital Basel
Output:	Publicly available reports published in 2014 and 2015, 2016 report in preparation. Peer-reviewed publication of sub-topics in preparation
Source of funding:	Health insurance provider

Ongoing

Title:	Health economic analysis of PENELOPE trial.
Project lead & contributors:	**MS**, NN
Hypothesis / Objectives:	Health economic evaluation alongside the randomised controlled PENELOPE trial. PENELOPE is a phase III trial of palbociclib (PD-0332991) in patients with hormon receptor positive, HER2 negative patients with primary breast cancer and a high risk of recurrence after neoadjuvant chemotherapy.
Start date:	01.09.13
Partner(s):	GBG Forschungs GmbH, Neu-Isenburg, Germany
Output:	Pending
Source of funding:	Private entity, non-industry

Ongoing

Title:	CAMPOS study.
Project lead & contributors:	**MS**
Hypothesis / Objectives:	To assess patterns of outpatient osteoporosis treatment costs in Switzerland by way of a prospective observational study.
Start date:	01.10.11
Partner(s):	Universitätspoliklinik für Osteoporose, Inselspital Bern; Swiss osteoporosis specialists; industry.
Output:	Abstract, peer-reviewed publication in preparation
Source of funding:	Industry

Ongoing

Title:	Scientific Office for INC-EU Study Group
Project lead & contributors:	**JvS**, MS, NS
Hypothesis / Objectives:	Continuous monitoring of state of knowledge in the field of chemotherapy-induced neutropenia, content management for INC-EU website.
Start date:	01.01.11
Partner(s):	INC-EU Study Group; St. Georges Hospital, London, UK
Output:	Web content
Source of funding:	Industry

Ongoing

Title:	Health economic analysis alongside several SAKK clinical oncology trials.
Project lead & contributors:	**KM**, MS
Hypothesis / Objectives:	The treatment of patients with cancer with new drugs may not only increase overall survival but may also increase or decrease overall treatment costs. Therefore, a comparison of incurred costs with achieved benefit in the form of increased overall survival by way of a cost-effectiveness analysis is undertaken. Prospective health economic data collection is still ongoing in two randomised clinical trials. For two other clinical trials data collection was finalized by the end of 2014 and analysis started 2015. Tree new studies including health economic evaluations were initialized in 2014, one more in 2015.
Start date:	01.11.07
Partner(s):	SAKK.
Output:	Two abstracts (ESMO 2014, SABCS 2014), one peer-reviewed publication published, further publications to be expected.
Source of funding:	Public

Research.
Completed projects.

The following list comprises projects that were completed during 2016.

Completed	
Title:	Cost of HCV treatment in Switzerland
Project lead & contributors:	**PB**, MS
Hypothesis / Objectives:	To design of study on the cost of HCV treatment in Switzerland
Start date:	01.04.16
Partner(s):	University Hospital Geneva
Output:	Report
Source of funding:	Industry

Completed	
Title:	A cost-effectiveness analysis of nivolumab versus docetaxel for advanced non-squamous non-small cell lung cancer including PD-L1 testing.
Project lead & contributors:	**KM**, MS
Hypothesis / Objectives:	A literature review on the treatment of lung cancer patients with nivolumab
Start date:	01.12.15
Partner(s):	Schweizerische Arbeitsgemeinschaft für Klinische Krebsforschung (SAKK). Kantonal Hospital Luzern
Output:	Peer reviewed publication, poster at the world lung cancer conference in Vienna December 2016
Source of funding:	Cantonal Hospital Luzern, Public

Completed	
Title:	Is the EQ-5D suitable for use in oncology? An overview of the literature and recent developments.
Project lead & contributors:	**MS**, KM
Hypothesis / Objectives:	A literature review on the use and usefulness of the EQ-5D quality of life questionnaire in oncology
Start date:	01.12.15
Partner(s):	Schweizerische Arbeitsgemeinschaft für Klinische Krebsforschung (SAKK).
Output:	Review article
Source of funding:	Public

Completed	
Title:	Palbociclib as first-line treatment in oestrogen receptor-positive, HER2-negative, advanced breast cancer not cost-effective with current pricing; a health economic analysis of the Swiss Group for Clinical Cancer Research (SAKK).
Project lead & contributors:	**KM**, MS
Hypothesis / Objectives:	A literature based health economic analysis for the treatment of breast cancer patients with palbiciclib
Start date:	01.12.15
Partner(s):	Schweizerische Arbeitsgemeinschaft für Klinische Krebsforschung (SAKK); University Zürich
Output:	Abstract, peer-reviewed publications.
Source of funding:	Public

Completed	
Title:	Health economics of bronchitol dry powder.
Project lead & contributors:	**MS**
Hypothesis / Objectives:	Assessment of health economic characteristics and cost-effectiveness of mannitol dry powder in the treatment of cystic fibrosis, for different countries.
Start date:	15.02.13
Partner(s):	Industry
Output:	Abstract
Source of funding:	Industry

Publications, presentations and teaching activities of ECPM in 2016.

Publications

Matter-Walstra K, Schwenkglenks M, Aebi S, et al. A Cost-Effectiveness Analysis of Nivolumab versus Docetaxel for Advanced Nonsquamous NSCLC Including PD-L1 Testing. J Thorac Oncol. 2016;11(11):1846-1855.

Matter-Walstra K, Ruhstaller T, Klingbiel D, et al. Palbociclib as a first-line treatment in oestrogen receptor-positive, HER2-negative, advanced breast cancer not cost-effective with current pricing: a health economic analysis of the Swiss Group for Clinical Cancer Research (SAKK). Breast Cancer Res Treat. 2016;158(1):51-7.

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Matter-Walstra K, **Ademi Z**. Understanding literature-based health economic analyses in oncology. Schweizerisches Krebsbulletin. 2016;4:327.

Gautschi O, Li Q, **Matter-Walstra K**, Betticher D, et al. 143PD: Bevacizumab and pemetrexed versus pemetrexed alone as maintenance therapy for patients with advanced nonsquamous NSCLC: Results of the expanded SAKK19/09 trial. J Thorac Oncol. 2016;11(4 Suppl):S120.

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Kastien-Hilka T, Rosenkranz B, Bennett B, et al (including **Schwenkglenks M**). How to Evaluate Health-Related Quality of Life and Its Association with Medication Adherence in Pulmonary Tuberculosis – Designing a Prospective Observational Study in South Africa. Front Pharmacol. 2016;7:125.

Ademi Z, Gloy V, Glinz D, et al. Cost-effectiveness of primarily surgical versus primarily conservative treatment of acute and subacute radiculopathies due to intervertebral disc herniation from the Swiss perspective. Swiss Med Wkly. 2016;146:w14382.

Ademi Z, Pasupathi K, Liew D. Cost-Effectiveness of Eplerenone Compared to Usual Care in Patients With Chronic Heart Failure and NYHA Class II Symptoms, an Australian Perspective. Medicine (Baltimore). 2016;95(18):e3531.

Burton NW, **Ademi Z,** Best S, et al. Efficacy of brief behavioral counselling by allied health professionals to promote physical activity in people with peripheral arterial disease (BIPP): study protocol for a multi-center randomized controlled trial. BMC Public Health. 2016;16(1):1148.

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Collaborators (630) including **Ademi Z,** Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. Lancet. 2016;388(10053):1545-1602

Collaborators (644) including **Ademi Z,** Global, regional, and national comparative risk assessment of 79 behavioural, environmental and occupational, and metabolic risks or clusters of risks, 1990–2015: a systematic analysis for the Global Burden of Disease Study 2015. Lancet. 2016;388(10053):1659-1724.

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Book Chapter

Szucs TD, Fiorentzis A, Blank PR. Wird sich personalisierte Medizin rechnen? Betrachtungen aus gesundheitsökonomischer Sicht. ETH, 2016.

Monograph

Szucs TD. (Ed.) Das KV – eine Schweizer Erfolgsstory? 20 Jahre Krankenversicherungsgesetz in der Schweiz – 20 Experten ziehen Bilanz. Orell Füssli, Zürich, 2016.

Abstracts

Ademi Z, Hancock E, Trueman D, et al. Cost-effectiveness of sacubitril/valsartan in chronic heart failure patients with reduced ejection fraction – an analysis for Switzerland. ISPOR 19th Annual European Congress, Vienna, November 2016.

Van Stiphout J, Braunhofer PG, Rakov V et al. Cost-minimisation analysis of sucroferric oxyhydroxide and sevelamer carbonate in patients on dialysis with secondary hyperparathyroidism in the United Kingdom. 53rd congress ERA-EDTA, Vienna, May 2016.

Van Stiphout J, Vrouchou P, Branhofer PG et al. Cost-minimisation analysis of sucroferric oxhydroxide and sevelamer carbonate in patients on dialysis with secondary hyperparathyroidism in six European countries. ISPOR 19th Annual European Congress, Vienna, November 2016.

Matter-Walstra K, **Schwenkglenks M,** Aebi S, et al. A Cost-Effectiveness Analysis of Nivolumab versus Docetaxel for Advanced Nonsquamous NSCLC Including PD-L1 Testing. 17th IASLC World Conference on Lung Cancer, Vienna December 2016.

Matter-Walstra K, Ruhstaller T, Klingbiel D et al. Palbociclib as a first-line treatment in oestrogen receptor-positive, HER2-negative, advanced breast cancer not cost-effective with current pricing: a health economic analysis of the Swiss Group for Clinical Cancer Research (SAKK). ASCO, Chicago, June 2016.

Scientific Presentations to External Audiences

Presenter (name, function)	Presentation title	Event (title, location, date)
Matter-Walstra K, Senior Research Scientist	Health economic analyses alongside clinical trials.	Ludwig Center at University Lausanne, August 16
Matter-Walstra K, Senior Research Scientist	Continuous medical education: modelling in health economics.	SAKK Bern, November
Matter-Walstra K, Senior Research Scientist	Update meetings network outcomes research.	Semi-annual meetings SAKK, Zürich, June / November

Presenter (name, function)	Presentation title	Event (title, location, date)
Schwenkglenks M, Head of Research	Design klinischer Studien – Konzepte und Fallstricke – Celgene ITT Workshop.	Frankfurt am Main, February 11
Schwenkglenks M, Head of Research	Ökonomische Kernelemente von Health Technology Assessments: Kosten-Effektivität und Budget impact - Weiterbildung am Clinical Trials Center CTC, Zentrum für Klinische Forschung, UniversitätsSpital Zürich.	Universitätsspital Zürich, September 8
Schwenkglenks M, Head of Research	Finanzierung des Schweizer Gesundheitssystems - Gesundheitswesen Schweiz - Herausforderungen und Entwicklung.	Universitätsspital Basel, December 5

Presenter (name, function)	Presentation title	Event (title, location, date)
Szucs TD, Director	Von Sackgassen, Warteschleifen und falschen Fährten - Optimierungspotentiale der Gesundheitsversorgung als ewige Verpflichtung. 7. Symposium der SDK-Stiftung.	Stuttgart / Bad Cannstatt, January 21
Szucs TD, Director	Genomics in der psychiatrie schloessli.	Psychiatrie schloessli, January 28
Szucs TD, Director	Health economic CTU	CTU Basel, January 27
Szucs TD, Director	ERFA-Tagung «Wirksame Führung und Aufsicht von Spitälern». – Eröffnungsreferat zum Thema: Der Spital-VR als Innovationsgestalter und -controller.	Universität St.Gallen / Zürich, February 22
Szucs TD, Director	History & Principles, CCDRS.	Beijing, March 16
Szucs TD, Director	Trends in Drug Reimbursement and Market Access, CCDRS.	Beijing, March 16
Szucs TD, Director	Basic Concepts on Pharmacogenomics, CCDRS.	Beijing, March 16

Szucs TD, Director	Personalisierte Medizin und Gerinnung – Grundlagen und Herausforderungen. Österreichische Gesellschaft für Kardiotechnik	Linz, April 9
Szucs TD, Director	Einführung in die Pharmakoökonomie, Österreichische Apothekenkammer	Salzburg, May 6
Szucs TD, Director	Interpretation eine pharmakoökonomischen Studie, Österreichische Apothekenkammer	Salzburg, May 6
Szucs TD, Director	Genomische Medizin für Apotheker, Österreichische Apothekenkammer	Salzburg, May 7
Szucs TD, Director	Konzepte der gesundheitsökonomie MPH	May 5
Szucs TD, Director	Innovationen im Zeitalter der Kostendämpfung, Novartis Jubiläumssymposium.	Luzern, May 13
Szucs TD, Director	Pharmakogenetik, 72 Stunden Fachgebundene Fortbildung Genetik.	Frankfurt, May 6
Szucs TD, Director	Brücken spannen statt Schnittstellen schaffen – integrative Herz-Kreislauf-Medizin der Zukunft? Österreichische Kardiologische Gesellschaft, Jahrestagung.	Salzburg, Juni 3
Szucs TD, Director	Die Macht des Genoms. Gesundheitsmatinee.	Klink Hirslanden Zürich, Juni 4
Szucs TD, Director	Genomische Aspekte der Urologie, Fortbildung Zürcher Urologen.	Zürich, Juni 8
Szucs TD, Director	Big Data in der Medizin – heute und morgen. Medweek.	Davos, July 4
Szucs TD, Director	Die Macht des Genoms, Gesundheitsmatinee.	Hirslanden Klinik Zürich, Juni 16
Szucs TD, Director	Choice of Endpoints: Continuous, Dichotomous, Composite and Survival, CCDRS.	Beijing, August 16
Szucs TD, Director	Practice Session on Study Design, CCDRS.	Beijing, August 16
Szucs TD, Director	How to Deal with Missing Data, CCDRS.	Beijing, August 17
Szucs TD, Director	Systematic Reviews and Meta Analysis How to Get It Right, CCDRS.	Beijing, August 19

Szucs TD, Director	Personalisierte Medizin: Massanfertigung statt Massenware.	Hirslanden Academy Bern, September 2
Szucs TD, Director	Die Macht der Gene. Lions Club Dolder.	Zürich, October 26
Szucs TD, Director	Pharmacoeconomics – an Introduction, CCDRS.	Beijing, November 4
Szucs TD, Director	Multimorbidität – Welche Rolle spielt Big Data? 1. Multimorbidity Day.	Universitätsspital Zürich, November 11
Szucs TD, Director	Massenware versus Massanfertigung – Das Gesundheitswesen zwischen Industrialisierung und Individualisierung. Insurance Forum GDI.	Rüschlikon, November 22

Evaluation of Research Projects and Publications (peer review)

Thomas D. Szucs is a reviewer for a number of clinical and health economic journals including Annals of Oncology, Pharmacoeconomics, Lancet, Swiss Medical Weekly.

Matthias Schwenkglenks is a reviewer for a number of clinical and health economic journals including The American Journal of Managed Care; Cardiovascular Drugs and Therapy; European Journal of Cardiovascular Prevention and Rehabilitation; Health Policy; HEART; Infection; Journal of the American Medical Association (JAMA); Journal of Clinical Oncology, Medical Decision Making; Osteoporosis International; PharmacoEconomics; Swiss Medical Weekly, Value in Health. He serves as a member of the Editorial Board of Medical Decision Making, a renowned health economic journal.

C. Simone Sutherland is a reviewer for a number of journals including International Journal of Technology Assessment in Health Care (IJTAHC), Infectious Diseases of Poverty, Parasites & Vectors, Public Library of Science (PLOS) Neglected Tropical Diseases (NTDs), BioMed Central (BMC) Health Services and Value in Health.

Klazien Matter-Walstra is a reviewer for a number of clinical and health economic journals including Quality of Life Research, International Journal of Health Policy and Management, Comparative Effectiveness Research, Journal of Medical Economics and Family Practice.

Zanfina Ademi is a reviewer for a number of clinical journals including Stroke, Circulation, PLOS one, Atherosclerosis, Vaccine, Drugs, Clinical Therapeutics, Cardiovascular Therapeutics, Expert review of Clinical Pharmacology, and health economics journals including PharmacoEconomics and Value in Health.

Theses Supervised by ECPM Collaborators in 2016

Belinda von Niederhäusern, REDUCING WASTE IN CLINICAL RESEARCH: A COST-CONSEQUENCE APPROACH (PhD in cooperation with Department of Clinical Research).

Tanja Kastien-Hilka, Health-related Quality of Life and its Association to Medication Adherence in Active Pulmonary Tuberculosis in South Africa – an Integrated Patient-centred Outcomes Approach (PhD in ccoperation with Swiss TPH and University of Capetown).

Martina Hahn, Preventing Cervical Cancer with HPV Testing. What can we learn for the Swiss health system from evidence collected for the health systems of other countries? A systematic review of current health economic evaluations (MPH thesis).

Thathya Venu Ariyaratne, Comparison of Long-term Outcomes and Cost Effectiveness of Coronary Bypass Surgery versus Percutaneous Coronary Interventions in the Australian context. Ongoing at Monash University, Co-supervising at Monash University the following PhD thesis.

Christos Pouskoulas, Anwendung eines Einzelrechnungsprüfungssystems für stationäre Spitalleistungen im Kanton Luzern – eine Evaluationsstudie (MPH thesis).

Renato Mattli, Scaling up cost-effective physical activity interventions in a culturally diverse setting (PhD thesis in cooperation with Swiss TPH, Department of Sports Science and ZHAW Winterthur).

Alessandro Crimi - Novel approaches in antiretroviral therapies retention and demand estimation for AIDS patients in Zimbabwe – Master in Business Administration (MBA) International Health Management (IHM) thesis with Swiss TPH. External expert for a MSc defence.

Latham N. Wer soll was (das) bezahlen? Ein Discrete Choice Experiment gesellschaftlicher Präferenzen in Deutschland zu Prävention und Therapie (MPH thesis).

Johannes Voegel, Non-Invasive Pharmacodynamic Studies in Psoriasis: Protein Profiling of Stratum Corneum. (MMD Master thesis defence).

Jain Anand, A Comprehensive Study on Structural and Procedural Characteristics of Pharmaceutical Regulatory Authorities for Development, Evaluation and Filing of Drugs Globally (MMD thesis).

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