Schweizer Arbeitsgruppe für Cannabinoide in der Medizin
Swiss Task Force for Cannabinoids in Medicine

STCM

Schweizerische Akademie der Pharmazeutischen Wissenschaften
Swiss Academy of Pharmaceutical Sciences

SCIENCE
EDUCATION
PRIVATE HEALTH
SINCE 2007

SACM-Tagung 3.0 2019
STCM Conference 3.0 2019

Medizinal-Cannabis heute und morgen
Medical Cannabis Today and Tomorrow

Samstag 19. Januar 2019, 9:15 – 18:15 Uhr
Saturday January 19, 2019, 9:15 am – 6:15 pm

Auditorium E. Rossi, Inselspital-Universitätsspital Bern
Auditorium E. Rossi, Inselspital-University Hospital Bern

Conference certified by IACM

cannabinoid medicines International Association for Cannabinoid Medicines

EINLEITUNG, ZIEL DER TAGUNG
INTRODUCTION, INTENTION OF THE CONFERENCE

Die interdisziplinäre «Schweizer Arbeitsgruppe für Cannabinoide in der Medizin SACM» wurde im Jahre 2009 gegründet. Mitglieder dieser Interessensgemeinschaft sind Kliniker, Pharmazeuten, Juristen und andere Personen, die in ihrer beruflichen Praxis - sei es im Sprechzimmer, universitären Forschungslabor, in der Apotheke oder Anwaltskanzlei - mit der Problematik des betäubungsmittelrechtlich noch unbefriedigend geregelten medizinischen Einsatzes von Cannabis und Cannabinoiden konfrontiert sind.

Die Schweiz verfolgt eine fortschrittliche Drogenpolitik und spielt, so im Falle der Entwicklung des 4-Säulen-Modells, der Schadensverminderung und heroingestützten Behandlung, eine internationale Pionierrolle. Dies gilt leider bis heute nicht für die Legalisierung des Medizinal-Cannabis, wo Länder wie beispielsweise Kanada, USA, Uruguay, Holland, Deutschland und Israel patientengerechte und praktikable Verschreibungsmodelle bereits etabliert haben. Obwohl etliche wissenschaftliche Studien den therapeutischen Nutzen von Cannabinoiden und Cannabis bewiesen haben, ist es leider heute eine Tatsache, dass in der Schweiz gewisse Patienten immer noch gezwungen sind, unkontrollierte Selbstmedikation mit qualitativ nicht abgesichertem Strassenhanf zu betreiben und allenfalls kriminalisiert werden.

Die Tagung 3.0 2019 der SACM hat nach den sehr erfolgreichenen Tagungen 1.0 im Jahr 2013 und 2.0 im Jahr 2016 wiederum zum Ziel, aktuelle grundlagenwissenschaftliche, klinische, rechtliche und regulatorische Fakten und Trends zu präsentieren, dies als Basis für eine möglichst sachliche Diskussion zur Remedizinalisierung der Cannabinoide und Cannabisprodukte. Im weiteren steht die Marktregulierung für den Freizeitkonsum zur Diskussion. Die Tagung richtet sich an Medizinalpersonen, Wissenschafter, Pflegefach-personal, Patienten, Patientenorganisationen, Politiker, Behördenmitglieder, Medienleute sowie die breite Öffentlichkeit.

The interdisciplinary «Swiss Task Force for Cannabinoids in Medicine STCM» was founded in 2009. Members of the STCM are clinicians, pharmacists, lawyers and other professionals, who are – either in the doctor‘s office, university research lab, public pharmacy or law office - confronted with the problems of the insufficiently regulated medical use of Cannabis and Cannabinoids.

Switzerland pursues a progressive drug policy and plays an international pioneering role, such as regarding the 4-pillar-model, harm reduction and heroin-assisted treatment. This does unfortunately so far not apply to the legalisation of Medical Cannabis, where countries as Canada, USA, Uruguay, Netherlands, Germany and Israel have already established patient-friendly and practicable dispensation models. Several scientific studies have shown the therapeutic benefits of Cannabinoids and Cannabis. However, it is unfortunately a fact, that in Switzerland some patients are still forced to uncontrolled self-medication by using qualitatively not defined illegal Street Cannabis, therefore eventually being criminalised.

After the very successful conference 1.0 of the year 2013 and 2.0 in 2016, the STCM conference 3.0 2019 aims again at presenting current basic scientific, clinical, legal and regulatory facts and trends, serving as base for an objective discussion of the re-medicinalisation of Cannabinoids and Cannabis products. In addition, the market regulation for recreational use is discussed. The conference addresses to medical professionals, scientists, caregivers, patients, patient organisations, politicians, regulatory authorities, media people, and the broad public.

TAGUNGSPROGRAMM
CONFERENCE PROGRAM

08:45 – 09:15	**Registrierung** **Registration**
09:15 – 09:30	**Begrüssungen, Einführung** **Welcome Addresses, Introduction** Rudolf Brenneisen Pascal Strupler
09:30 – 10:20	**Session 1** **Cannabis – Vom Labor zum Bett** **Cannabis – From Bench to Bedside** Moderation: Christian Lanz
09:30 – 09:55	**L-1 Die Zukunft Endocannabinoid-basierter Therapeutika** **The Future of Endocannabinoid-based Therapeutics** Daniele Piomelli
09:55 – 10:20	**L-2 Von der Farm zur Pharma** **From Farm to Pharm** Julie Dumouchel
10:20 – 10:50	**Panel 1** Moderation: Christian Lanz Speakers Session 1 Manfred Fankhauser Markus Lüdi Martin Ziak
10:50 – 11:20	**Kaffeepause, Networking, Besuch der Ausstellung** **Coffee Break, Networking, Visit of Exhibition**

11:20 – 12:00		**Session 2** **Cannabidiol** **Moderation: Claude Vaney**
11:20 – 11:45	**L-3**	**CBD – Hoffnung und/oder Hype?** **CBD – Hope and/or Hype?** **Gregor Zorn**
11:45 – 12:10	**L-4**	**Die hämodynamische Wirkung von CBD in Menschen** **The Haemodynamic Effect of CBD in Humans** **Saoirse O'Sullivan**
12:10 – 12:40		**Panel 2** **Moderation: Yvonn Scherrer** **Speakers Session 2** **Naiem Hakiemie** **Trevor M. Jones** **Beatrice Olearo** **Holger Rönitz**
12:40 – 14:00		**Lunch, Networking, Besuch der Ausstellung** **Lunch, Networking, Visit of Exhibition**
14:00 – 15:40		**Session 3** **Cannabis in der Klinik und Arztpraxis** **Cannabis in the Hospital and Doctor's Cabinet** **Moderation: Barbara Broers**

14:00 – 14:25	L-5	**Das klinische Potential von Cannabis** **The Clinical Potential of Cannabis** Mark Ware
14:25 – 14:50	L-6	**Medizinische Verwendung von Cannabis – Potential und Risiken** **Medical Use of Cannabis – Potential and Risks** Michael Schäfer
14:50 – 15:15	L-7	**Das Cannabis-Dilemma** **The Cannabis Dilemma** Franjo Grotenhermen (via Skype)
15:15 – 15:40	L-8	**Cannabis- und Cannabinoid-Schulung: Ein Tool für den Wechsel der klinischen Praxis** **Cannabis and Cannabinoids Education: A Tool for Changing Clinical Practice** Raquel Peyraube
15:40 – 16:10		**Panel 3** Moderation: Barbara Broers Speakers Session 3 Hans Gammeter Bea Goldman Melanie Joyce Rehli Catherine Ritter
16:10 – 16:40		**Kaffeepause, Networking, Besuch der Ausstellung** **Coffee Break, Networking, Visit of Exhibition**
16:40 – 17:30		**Session 4** **Cannabis im Spannungsfeld zwischen Medizinalisierung und Marktregulierung** **Cannabis at the Interface between Medicalization and Market Regulation** Moderation: Ambros Uchtenhagen

16:40 – 17:05	**L-9**	**Stand der globalen Gesetzgebung und Praxis von Medizinalcannabis** **State of Art in Legislation and Practice of Medical Cannabis Globally** Tomas Zabransky
17:05 – 17:30	**L-10**	**Freizeit-Cannabis aus der Apotheke - Die SCRIPT Studie** **Recreational Cannabis from the Pharmacy - The SCRIPT Trial** Matthias Egger
17:30 – 18:00		**Panel 4** Moderation: Ambros Uchtenhagen Speakers Session 4 Barbara Broers Julie Fry Robert Hämmig Markus Jann Margrit Kessler
18:00 – 18:15		**Schlussbemerkungen** **Final Remarks** Rudolf Brenneisen
18:15 –		**Apéro**

REFERIERENDE
CVs und ABSTRACTS
SPEAKERS
CVs and ABSTRACTS

L-1

Daniele Piomelli, PhD, Prof

Center for the Study of Cannabis, Department of Anatomy and Neurobiology, University of California, Irvine, CA, U.S.A.

CV:

Daniele Piomelli studied pharmacology and neuroscience with James H. Schwartz and Eric Kandel at Columbia University (1983-1988), and with Paul Greengard at the Rockefeller University (1988-1990). In 2000, two of his mentors (Kandel and Greengard) were awarded the Nobel Prize for their contributions to physiology and medicine. After working at the INSERM in Paris (France) and at the Neurosciences Institute in San Diego, with Nobel Laureate Gerald Edelman, Daniele joined the University of California, Irvine, where he is now Louise Turner Arnold Chair in Neurosciences and Professor of Anatomy and Neurobiology, Pharmacology and Biological Chemistry. Daniele is an author of >400 peer-reviewed articles in journals such as *Nature*, *Science*, *Nature Medicine, PNAS* and *Nature Neuroscience*, three full-length books, and 34 patents. He founded the department of drug discovery and development (D3) at the Italian Institute of Technology in Genoa (Italy), which he directed from 2007 to 2016, and three biopharmaceutical start-ups based on discoveries made in his lab. He is director of the UCI's Center for the Study of Cannabis and Editor-in-Chief of *Cannabis and Cannabinoid Research*, a peer-reviewed journal entirely dedicated to the study of cannabis, its derivatives, and their endogenous counterparts in the human body.

«The Future of Endocannabinoid-based Therapeutics»

Abstract:

The major psychoactive constituent of cannabis, Δ^9-tetrahydrocannabinol, produces its pharmacological effects by activating cannabinoid receptors in the brain and peripheral tissues. The two primary endogenous ligands for these receptors are the lipid-derived transmitters, anandamide and 2-arachidonoylglycerol (2-AG). Anandamide and 2-AG are released in select regions of the brain and throughout the periphery of the body, and are deactivated via a two-step process consisting of transport into cells followed by intracellular hydrolysis. Anandamide hydrolysis is catalyzed by fatty-acid amide hydrolase (FAAH), while 2-AG hydrolysis is primarily mediated by monoacylglycerol lipase (MGL). In my talk, I will provide a brief outline of drug classes that selectively interfere with the deactivation of anandamide and 2-AG, focusing on their pharmacological properties and therapeutic potential. These agents hold great promise for the treatment of human pathologies such as pain, addiction, anxiety and autism spectrum disorders.

Julie Dumouchel, MD

CV:
Julie Dumouchel is the Director of Clinical Research at Canopy Health Innovations (CHI) – the R&D subsidiary of Canopy Growth. Although fairly new to cannabis/cannabinoid research, over the past 20+ years, Julie held various R&D roles in the pharmaceutical industry (Merck then Bayer), biotechnology (Methylgene), and CRO (Quintiles), with a primary focus in Oncology. Recent anecdotal evidence from a handful of cannabis using cancer trial patients was certainly intriguing for Julie. Although considering herself a true «pharma girl», Julie knew that she could actively contribute to the development of a robust clinical research program at CHI in various indications for which cannabis/cannabinoids is being investigated.

«From Farm to Pharm»

Abstract:
Cannabis products have been used for a very long time and their effects, some therapeutic, well documented. Despite all of this, we still lack solid clinical evidence to support its numerous therapeutic uses. While most cannabis trials performed to date focused on its safety, well-designed placebo-controlled clinical trials must be done to prove its efficacy in each of these indications. Cannabis clinical trials pose a different set of challenges that should be considered prior to initiating a clinical program. With a controlled-substance classification in most countries, access to medicinal grade cannabis is not simple, even for clinical trials. Current regulations, which vary greatly from one country to the other, not only impact access to cannabis products, but also its packaging and distribution. Each new formulation brings a special set of considerations that can affect the trial design, type of placebo, packaging and patient administration. This talk will review the particularities of cannabis clinical trials and how these different challenges can be overcome.

L-3

Gregor Zorn, BSc

CV:
Gregor Zorn is a medical cannabis educator on a mission, to teach people about the endocannabinoid system, its importance in our health and the potential therapeutic role phytocannabinoids can have. He is also a cannabinoid therapy consultant, helping patients with the implementation of personalized holistic cannabinoid therapies for specific aliments. After getting his Bachelor's degree in Biology from the Biotechnical University of Ljubljana, he specialized in nutrition and got interested in holistic approaches to health. This led him to the discovery of cannabis and its therapeutic potential completely took over his research. He is the co-founder of the European Cannabinoid Therapy Association (ECTA) and one of the teachers at the first European Medicinal Cannabis post-graduate educational course, "Medicinal Cannabis: Agricultural, Botanical, Medical, Legal and Social Aspects" at Padua University Medical School in Italy. He is a member of the International Association for Cannabinoid Medicines (IACM), the International Cannabinoid Research Society (ICRS) and collaborates with the online scientific journal Nature Going Smart. He is also the founding member, author and scientific advisor to Zbudimo.se a Slovenian non-profit organization, dedicated to educating people on the potential therapeutic uses of cannabis.

«CBD – Hope and/or Hype?»

Abstract:
Cannabidiol (CBD), the second most studied phytocannabinoid, has lately been received a lot of attention, due to its wide range of potential clinical applications, its non-intoxicating nature and good safety profile. In various studies it has demonstrated anti-inflammatory, antioxidant, immunomodulatory, antipsychotic, and anticonvulsive effects. This makes it a good candidate for the treatment of various inflammatory, autoimmune and neurodegenerative diseases, such as Alzheimer's disease, multiple sclerosis, Parkinson's disease, amyotrophic lateral sclerosis, Huntington's disease and epilepsy. CBD has low affinity to the cannabinoid receptors, CB1 and CB2, and exerts its therapeutic effects by targeting a whole range of other receptors; as an agonist (TRPV1, 5-HT1A, PPARγ), antagonist (GPR55, GPR18) or inverse agonist (GPR3, GPR6, GPR12). It also targets various enzymes of the CYP450 family, ion channels and transporters. It also has the unique ability to reduce or counteract some of the potential unwanted side effects of delta-9-tetrahydrocannabinol (THC), such as anxiety, psychosis, tachycardia, hunger, and sedation. By inhibiting the enzymes that metabolize THC, it can also enhance the levels of THC in the blood and prolong its effects, making it an ideal companion in medical cannabis preparations. Besides its use in cannabinoid therapy, it is also being increasingly added to a variety of nutraceutical and cosmetic products, as well as beverages and e-cigarettes. With such an increase in the consumption of this cannabinoid, it is crucial to understand its long term effects, the potential side effects, create general guidelines on its use, and study its impact on various physiological systems in our body.

Saoirse O'Sullivan, PhD, Prof

Saoirse Elizabeth O'Sullivan, University of Nottingham, UK
mbzso@nottingham.ac.uk, @ScienceSaoirse

CV:
Dr. Saoirse Elizabeth O'Sullivan received her doctorate from Trinity College Dublin in 2001 and moved to the University of Nottingham in 2002 as a Research fellow where she began researching cannabinoid pharmacology. She was made Lecturer in 2007 and Associate Professor in 2011. She has over 30 original research articles, 6 systematic reviews/meta-analyses, 7 reviews and 3 books chapters on the topic of cannabinoid pharmacology. Her specific interests are on the effects of cannabinoids on the cardiovascular and gastrointestinal system, and therapeutic potential of cannabis-based medicines in disorders such as stroke, diabetes, and inflammatory bowel disease. Her research methodologies span from cellular and animal models, to human healthy volunteer studies and early phase clinical trials. In 2016 she was named the International Cannabinoid Research Society (ICRS) Young Investigator of the Year. She acts as a scientific advisor to Artelo Biosciences and Dragonfly Biosciences, and is the science lead for the Centre for Medicine Cannabis (CMC), a non-profit organisation working to shape the UK's new medicinal cannabis regime in the interests of patient.

«The Haemodynamic Effect of CBD in Humans»

Abstract:
Cannabidiol (CBD) is a non-psychoactive phytocannabinoid already on the market as part of a licensed treatment in multiple sclerosis (Sativex® GW Pharmaceuticals, Cambridge, UK) and alone as Epidiolex® (GW Pharmaceuticals, Cambridge, UK). There is also a considerable market for over-the-counter CBD products. CBD is the focus of much research because of its potential in a number of other therapeutic areas due to its anti-inflammatory, anti-convulsant, anti-oxidant, anxiolytic, anti-nausea, anti-tumoural and anti-psychotic properties.
A number of preclinical studies have also shown beneficial effects of CBD in disorders of the cardiovascular system (Stanley et al., 2013), which has been the focus of my research for a number of years. We have shown that CBD causes both acute and time dependent vasorelaxation of rat and human (Stanley et al., 2015) arteries as measured *ex vivo*, and can improve endothelial function and vasodilator responses in a rat model of type 2 diabetes both *ex vivo* and *in vivo* (Wheal et al., 2014; 2017). In healthy volunteers, we have shown that a single dose of CBD (600 mg) decreases resting blood pressure and the blood pressure response to stress (Jadoon et al., 2017). More recently, we have replicated this data in a separate group of healthy volunteers (that acute CBD decreases blood pressure), and additionally showed that repeated dosing of CBD (600 mg) for 7 days induced a significant reduction in arterial stiffness (through pulse wave velocity; p=0.05, n=11), improved endothelial function through flow mediation dilatation test (p=0.05, n=6).
Collectively, these data suggest that CBD is a compound of interest in the cardiovascular system and in cardiovascular disorders, which needs to be tested in relevant patient groups.

Mark Ware, MD, Prof

CV:
Dr. Mark A. Ware MBBS MRCP(UK) MSc
Dr. Mark Ware is currently the Chief Medical Officer of Canopy Growth Corporation. He has taken a leave of absence as Associate Professor in Family Medicine and Anesthesia at McGill University from July 2018 to work in this capacity. He previously served as Director of Clinical Research of the Alan Edwards Pain Management Unit at the McGill University Health Centre for over 10 years, and was the Executive Director of the non-profit Canadian Consortium for the Investigation of Cannabinoids since 2007. He has served as co-director of the FRQS-supported Quebec Pain Research Network, and sat on the executive management team of the Alan Edwards Centre for Research on Pain at McGill University. His research has been funded and supported by CIHR, FRQS, private foundations and pharmaceutical companies. He has published over 100 papers on cannabis and pain research in academic journals, has written 6 book chapters, and has given hundreds of lectures to health professionals and the public on cannabis over the last 20 years. He has served as a consultant to several large corporate and academic research programs internationally. He has advised the Canadian federal government on cannabis policy since 2001, and 2016, he served as the vice chair of the Federal Task Force on the Legalization and Regulation of Cannabis in Canada.

«The Clinical Potential of Cannabis»

Abstract:
Throughout this program, reference is made to the medical uses of cannabis and cannabinoids, the need for research, the therapeutic challenges, the balance between risk and benefit. In this presentation, the recent real-world experience of Canada with medical cannabis will be explored. Canada has had a medical cannabis regulatory framework in place since 1999, so the lessons learned through clinical research and observational studies is important as other countries and regions explore cannabis policy change. Issues around patient registries, safety monitoring and patient reported outcomes will be discussed. Opportunities to harness patient access mechanisms to data collection will be further reviewed.

Michael Schäfer, MD, Prof

Leitender Oberarzt, Klinik für Anästhesiologie mit Schwerpunkt op. Intensivmedizin, Campus Virchow-Klinikum und Campus Mitte, Charité – Universitätsmedizin, Berlin, Deutschland
Tel: +49 30 4 50 65 12 23
Fax: +49 30 4 50 55 19 00
Email: micha.schaefer@charite.de

CV:
Professor Michael Schaefer ist Anästhesiologe und Schmerzmediziner in leitender Position an der Klinik für Anästhesiologie mit Schwerpunkt op. Intensivmedizin, Charité-Universitätsmedizin Berlin.
Professor Schäfer ist Autor von mehr als 90 nationalen und internationalen Veröffentlichungen zum Thema Schmerz sowie zahlreichen Buchbeiträgen, welche durch zahlreiche nationale (z.B. der Deutschen Gesellschaft für Anästhesiologie und Intensivmedizin, der Deutschen Schmerzgesellschaft) und internationale (z.B. International Anesthesia Reserach Society, National Institutes of Health) Preise ausgezeichnet wurden. Seit mehr als 20 Jahren werden seine Projekte von der Deutschen Forschungsgemeinschaft gefördert und widmen sich Patienten, die zum Beispiel unter chronischen Entzündungsschmerz (z.B. bei Arthritis) oder chronischem neuropathischem Schmerz (z.B. bei diabetischer Polyneuropathie) leiden.

Seit 2015	Präsident der Deutschen Schmerzgesellschaft e.V.
Seit 2008	Entfristung der Professur für «Schmerzforschung und –therapie» an der Charité-Universitätsmedizin Berlin.
2008	Ruf auf den «Harold Griffith»-Lehrstuhl der McGill-University, Montreal.
Seit 2002	Univ.-Professur für «Schmerzforschung und –therapie» an der Charité- Universitätsmedizin Berlin, auf 5 Jahre befristet. Leitender Oberarzt an der Klinik für Anästhesiologie mit Schwerpunkt op. Intensivmedizin, Charité-Universitätsmedizin Berlin. Leiter der von der DFG und der Charité gesponserten Klinischen Forschergruppe 100 «Molekulare Mechanismen der Opioidanalgesie beim Entzündungsschmerz».
2001	Habilitation, Klinik für Anästhesiologie und op. Intensivmedizin, Campus Benjamin Franklin, Freie Universität Berlin.
1998-2002	Facharzt und Oberarzt an der Klinik für Anästhesiologie und op. Intensivmedizin, Campus Benjamin Franklin, Freie Universität Berlin.
1997-98	Wissenschaftlicher Mitarbeiter an der Klinik für Anästhesiologie und op. Intensivmedizin, Campus Benjamin Franklin, Freie Universität Berlin.
1992-96	Postdoctoral Fellow am Department of Anesthesiology and Critical Care Medicine, The Johns Hopkins University, Baltimore, USA. Guest Scientist, National Institutes of Health, National Institute on Drug Abuse, Division of Intramural Research, Baltimore, USA.
1988-92	Wissenschaftlicher Mitarbeiter, Institut für Anästhesiologie, Ludwig-Maximilians-Universität München.
1986	Studium Humanmedizin, Westfälische-Wilhelms-Universität Münster.

«Medical Use of Cannabis – Potential and Risks»

Abstract:
In Germany, two cannabis-based drugs are currently approved for a single indication each. The cannabis extract nabiximol is approved in spray form for the symptomatic treatment of patients with therapy-resistant spasticity due to multiple sclerosis. The active ingredient nabilone is approved in capsule form for the treatment of nausea and vomiting in cancer patients undergoing chemotherapy. On the other hand, German governmental health authorities have legalized the medical use of cannabis, cannabis extracts, and cannabis-based medicines for a wide array of divergent indications. Against this background Prof. Schäfer will present results of a novel scientific literature analysis (Cannabis: potentials and risks, CaPRis®) led by the Clinic of Psychiatry and Psychotherapy of the Ludwig-Maximilians-University Munich (PD Dr. Eva Hoch) and supported by the German Ministry of Health which investigated the benefits and risks for both the medicinal and recreational use of Cannabis and cannabis-based medicines by analyzing more than 2'000 studies.

The best investigated indications for the medical use of cannabis are spasticity and chronic pain. Spasticity is considered a painful symptom with harmful complications in the course of multiple sclerosis disorders; they may also occur as a result of spinal cord injury. In the meta-analysis by Whiting et al. (2015) there were 14 studies on spasticity, 11 in MS (n = 2'138) and 3 in paraplegia (n = 142). All studies had placebo-control arms. Overall, the studies provided a moderate advantage for nabiximole in MS-associated spasticity. Furthermore, the review mentions that nabiximol improved sleep quality more than placebo. Based on follow-ups of 3-15 weeks, the assessment of this large-scale analysis provided «moderate evidence» for an effect in multiple sclerosis-associated spasticity. For the outcome «50% reduction of spasticity at a follow-up of 6-14 weeks» and for the parameter «overall impression» the evidence was assessed only as «low grade». In chronic pain patients the use of cannabis-based medicines is the best studied for neuropathic pain. Petzke et al. (2016) documented in a systematic review of 15 randomized controlled trials with 1'619 participants that cannabinoids were marginally superior in their efficacy to placebo; in their compatibility, however, they were inferior. There was no difference in terms of safety. From this, the authors concluded that in selected patients with neuropathic pain cannabinoids may be considered for short- and medium-term therapy with insufficient effect of first- and two-line therapies. In the case of cancer pain, the additional use of cannabis or cannabis-based medicines showed no additional benefit in several larger clinical trials (Johnson et al., 2010 and 2013) and, therefore, should be regarded as an individual therapeutic trial. It is important to emphasize that cannabis and cannabis-based medicines should not be used as an isolated pharmacotherapy, but in combination with other, e.g. physiotherapeutic and pain-psychotherapeutic, procedures.

Franjo Grotenhermen, MD

Am Mildenweg 6, 59602 Rüthen, Germany
+492952-9708573; praxis@dr-grotenhermen.de; www.dr-grotenhermen.de
nova-Institut GmbH, Chemiepark Knapsack, Industriestraße 300, 50354 Hürth, Germany
franjo.grotenhermen@nova-institut.de

CV:
Franjo Grotenhermen, MD, born in 1957, academic studies of medicine at the University of Cologne. He is running a medical practice, mainly devoted to the medical use of cannabis and cannabinoids. Dr. Grotenhermen is founder and chairman of the German Association for Cannabis as Medicine (ACM), founder and executive director of the International Association for Cannabinoid Medicines (IACM) (www.cannabis-med.org). He is editor of the IACM-Bulletin, which is published bi-weekly in several languages. He is a principal of the nova-Institute based near Cologne and author of many articles, books and book chapters on the therapeutic potential, pharmacology and toxicology of the cannabinoids.

«The Cannabis Dilemma»

Abstract:
There are two important properties of medical cannabis, which make it not easy for governments and physicians to adequately handle access to a treatment with cannabis-based medicines.

1. Cannabis products are easily accessible by everybody if not prohibited by law. Patients do not have to wait until pharmaceutical companies have brought their molecules on the market. Thus, the question arises, whether there is still any convincing reason for governments to continue prohibition of access to this remedy by seriously ill people?
2. Cannabis products are not the same medications as others, because it is not sufficient to conduct large clinical trials for approval by the health authorities for 2 or 5 indications to exploit the complete therapeutic potential. How many decades do physicians have to wait until this potential is completly exploited in clinical studies? How can we justify letting patients wait for decades before they get access to a treatment?

Today, healthcare authorities in many countries handle cannabis and single cannabinoids just as completely newly detected medicinal drugs without taking the long history of their therapeutic uses into account. Thus, cannabis preparations introduced by pharmaceutical companies have to undergo rigid and expensive approval procedures comparable to entirely new molecules from pharmaceutical laboratories. Currently, we are confronted with a situation that can be called a «cannabis dilemma».
On the one hand, many patients benefit from cannabinoids and doctors report of a variety of positive effects in seriously ill patients, which makes it difficult to continue prohibition of medical use. On the other hand, only for a few indications reliable evidence is available based on randomized controlled clinical trials (RCT) including a large number of patients. For most possible medicinal uses, evidence is weak because only small clinical studies and case reports have been published.
Physicians and policymakers in different countries try to find reasonable ways to deal with this dilemma acknowledging not only our current knowledge on the medical uses of cannabis-based medicines, but also the still existing lack of research for most indications, which of course does not mean inefficacy. There is increasing awareness that seriously ill and otherwise treatment resistant patients cannot be deprived from effective therapy with cannabinoids, although not officially approved.
In order to investigate the complete therapeutic spectrum of cannabis and cannabinoids, large RCTs have to be performed in several different medical conditions, possibly in more than 50 different indications. Thus, an enormous amount of time and costs would be necessary to assess the efficacy of cannabis-based medicines in all suggested indications to comply with the principles of evidence-based medicine. What should governments and physicians do in the meantime?
Many patients know more about the efficacy of cannabis medicines in their condition than most doctors and scientists. This causes a credibility problem. If a patient experiences the efficacy of cannabis in his or her illness, but does not receive the support of doctors due to lack of knowledge, then the medical profession has a credibility problem. If they do not get access due to prohibitive laws, then governments have a credibility problem. Laws on the medical use of cannabis have to balance possible risks and benefits in a reasonable way.

The narcotic laws of the countries around the world and the international drug treaties were created to protect people from the dangers of narcotics. They were not created to harm sick people by denying access to an effective treatment.

Raquel Peyraube, MD

Researcher at Monitor Cannabis Uruguay, School of Social Science, Universidad de la República (Uruguay), President of the Uruguayan Society of Endocannabinology (SUEN).

CV:
Raquel Peyraube is a Uruguayan Medical Doctor graduated at the Medicine School of the Universidad de la República and specialist on Endocannabinology and Drug field. She is the founder and current president of the Uruguayan Society of Endocannabinology (SUEN). She is also Board Member of the International Association for Cannabinoid Medicines (IACM), and member of the International Cannabinoids Research Society (ICRS). Throughout her career she was involved in training, prevention, treatment and drug related harm reduction, including innovative theoretical and methodological developments with an emphasis on ethical issues, which earned her regional and international recognition. In her country, she has been ad hoc advisor of the National Board on Drugs (SND) and the Institute of Regulation and Control of Cannabis (IRCCA) of Uruguay, and actively participated in the elaboration of the law that regulates cannabis. Currently she is also ad hoc scientific advisor of policy makers in different countries. She designed and directs the International Medical Cannabis and Endocannabinology Course for physicians, nurses and pharmacists endorsed by IACM and protocoled it to be implemented in different jurisdictions.
Dr. Peyraube is researcher at the Social Sciences School of the Universidad de la República in Uruguay working on regulating models for medical cannabis, and member of the group of experts working on the public health recommendations for cannabis regulation coordinated by the O'Neill Institute of the Georgetown University, Washington DC, and the Washington Office for Latin America (WOLA).
She is also an active lecturer in many Universities and governmental events. Currently she is dedicated to Endocannabinology clinical practice, research, medical education, and advising on Drug Policy Reform towards models more efficient, pragmatic, and based on science and public health ethics, particularly in Cannabis regulation models.

«Cannabis and Cannabinoids Education: A Tool for Changing Clinical Practice»

Abstract:
The increasing availability of information about the potential benefits of cannabis and cannabinoid-based treatments to improve quality of life and symptoms of many diseases whose current treatments have poor results, is bringing to the field more and more physicians trying to do better for their patients, as well patients looking for relief. However, for both actors, the available information is not always of good quality, accurate and reliable. Very often patients get «medical advise» from suppliers and Internet blogs and forums. At least in Latin America, this is the most frequent way for patients to access information about these treatments. Some data from the research conducted by Monitor Cannabis Uruguay showed that mass media was the most prevalent way of access among interviewed patients (56.2%), while only 11.9% said they got the information from a health professional. On the other hand, only 10.6% of the reported ongoing treatments had been recommended by a phycisian. 57% of the patients haven't consulted a phycisian after getting the information for different reasons: they believe it is not an appropriate matter to discuss with a doctor (8.4%), fearing rejection from the doctor (4.2%), do not having a doctor to follow the treatment (23%), thinking they are not prepared to discuss the subject with their doctors because of lack of arguments and information (9.5%), knowing their doctors do not support these treatments (9.5%). Briefly, in 57,7% of the cases consultations with a medical doctor did not happen due to barriers in the doctor-patient relationship. Of the interviewees who did consult their doctors (42.2%), almost half of them reported adverse reactions: disapproval, ignorance, skepticism or indifference. These date will be updated with the final revision of this rearch. On the other hand, interviews with medical doctors – practitioners and medicine school faculty – showed that they feel unprepared for clinical interventions with cannabinoid-based medicines, that they haven't accessed reliable, science-based, relevant clinical information; and that this is not a subject studied at medicine school.
Data show that in this field there is a gap between doctors and patients, perhaps more serious than in other medical issues. Medical and general public education can be relevant tools to chang medical practice in order to improve this relationship. To design a relevant medical cannabis educational program we should consider not only the results of scientific research, but also the questions that both doctors and patients have on cannabis and cannabinoids-based treatments.

Tomas Zabransky, MD

CV:

Tomas Zabransky graduated from Medical Faculty, Palacky University Olomouc in 1993, where he also received his Ph.D. in epidemiology, hygiene and preventive medicine in 2001.

Tomas Zabransky was, inter alia, a principal researcher of the multidisciplinary PAD Study, which evaluated the impacts of amendments in the Czech drug legislature (1999) as requested by the Czech Government. He was responsible for establishing the Czech National Focal Point on Monitoring the Drug Situation and Addictions in 2000-2002. Recently, he serves as Reader in Addiction Science and Department of Addictology, Charles University, Prague, and at the Department of Epidemiology, Hygiene and Preventive Medicine at the Medical Faculty of the Palacky University. Since 2001, he runs a private research, education and consulting company ResAd LLC. In December 2015, he co-founded biomedical startup International Cannabinoids and Cannabinoids Institute, where he has served as Chief Scientist.

Between March 2014 and October 2017, Tomas served as Advisor on Drug Policy to the Czech Prime Minister. In 2014-16 he was an advisor on Medical Cannabis and Drug Policy to the Czech Minister of Health. In 2006-9, he served as Drug Policy Advisor to the Czech Minister of Interior, responsible, inter alia, for coordinating of the drug policy issues in the time of the Czech Presidency to the EU Council. Since 2015, Tomas is a Member of the EMCDDA Management Board elected by the EU Parliament.

He published over 120 peer-reviewed journal papers and chapters in monographs and authored 2 textbooks. Tomas is Deputy Editor of the scientific journal «Harm Reduction Journal» (Biomed Central), Associate Editor of the scientific journal «Medical Cannabis and Cannabinoids» (Karger Publishers), and Member of the Board of the International Society for Studies of Drug Policies.

«State of Art in Legislation and Practice of Medical Cannabis Globally»

Abstract:

Introduction: Signs exist that the Chinese used cannabis for medical treatment as early as in the 28th century BCE, but actual written records only go back to the 9th century BCE (the Chinese pharmacopoeia Shen-nung Pen Ts'ao Ching, which was founded on much older recipes handed down orally). No later than the 7th century BCE, cannabis was used medically in the area of what is now southern Russia. In the 18th and 19th centuries, cannabis and products made from it were, together with opium (aka laudanum), among the most used medications. A series of country-specific (most specifically the USA) and international (League of Nations, UN) laws and regulations have put cannabis among prohibited substances. The 1961 Single Convention on Narcotic Drugs ushered in its prohibition globally. In the last 20 years, we have seen a gradually strengthening wave of legalizing the medical use of cannabis in many states and countries.

Methods: Open web resources were searched using the combination of the keywords «cannabis», «legal status», and «medical». Where necessary, requests for clarification were sent to the respective state and Wikipedia® and Encyclopaedia Britannica® were used as centres of reference.

Results: The first state that legalized medical cannabis was California (1996), despite the US federal ban that remains valid until today and claims there is «no currently accepted medical use» of cannabis. Nowadays (10th December 2018), 33 US federal states (out of 50) and the District of Columbia (DC) have legalized medical cannabis. Besides the USA, there are 22 other countries worldwide where medical cannabis is explicitly legalized. Out of these, 13 countries are EU Member States. In every state of the world, theoretically, a physician can ask the government for a special permit to import medical cannabis products for his/her patient. The patient then pays the full price of the cannabis product. However, different states use this option differently. As for the cost of the medical cannabis products for patients, different countries handle this issue differently, too. The only country where general medical insurance pays for medical cannabis is Germany. Some countries impose a flat monthly rate for medical cannabis patients regardless of the amount (e.g. Israel), and in most countries the market prices of medical cannabis products are paid by the patients directly. Approved indications for the use of medical cannabis differ from one legal state to another, as do the major scientific reviews to date.

Discussion: 10 US federal states, plus Washington DC have legalized cannabis for recreational use. There are 2 countries (Uruguay and Canada) where growing, possessing, processing, selling, buying, and using cannabis for non-medical use are fully legal, and another 2 (South Africa and the Republic of Georgia) where using and possessing are legal but sales are not. This brings interesting challenges for the use of cannabis under medical control.

Conclusion: Altogether, 22 countries and 33 US states have legalized medical cannabis explicitly. Two countries have Supreme Court decisions legalizing the possession and cultivation of cannabis (for any

purpose), but not its sale. There exist 3 basic models of medical cannabis coverage: (i) in most cases, the patient pays the full price for it, while in several countries (ii) a monthly flat rate is paid by the patients regardless of the amount of cannabis prescribed, and (iii) in Germany, (obligatory) health insurance covers it. The approved indications for the usage of medical cannabis differ from state to state. The current legalization of cannabis in some countries and states brings challenges for its controlled medical use.

Matthias Egger, MD, Prof

CV:

Contributions to Science: My research is concerned both with methodological and substantive issues in clinical epidemiology and public health, with a focus on analyses of large cohort studies, pragmatic trials and meta-analytical research in infectious diseases and cancer. As a young epidemiologist I helped to set up the Swiss HIV Cohort Study (SHCS), a collaboration of all major HIV care providers in the country. I was one of the first to examine the real-world effectiveness of combination antiretroviral therapy (cART) after its introduction in 1996 (BMJ 1997). Using a latent variable approach I showed that the introduction of cART outside the selected patient groups included in clinical trials had led to comparable reductions in disease progression and mortality. I set up the ART Cohort Collaboration (ART-CC) of 13 HIV cohort studies from Europe and North America, and later helped establish the NIH-funded International epidemiological databases to Evaluate AIDS (IeDEA, Int J Epidemiol 2012), with over 2 million patients, and led the development of widely cited prognostic models of HIV infection (Lancet 2002, 2010). Recently, I contributed to the Ebola ring vaccination trial in Guinea (Lancet 2015, 2017). I have a long-standing interest in epidemiological methods, with a focus on meta-analysis, observational studies and randomized trials. Significant contributions include a graphical test of publication bias (BMJ 1997), a demonstration of language bias (where the language of publication is influenced by the results) (Lancet 1997) or an evaluation of scales to assess the quality of randomized controlled trials (JAMA 1999). More recently, I developed a nomogram to correct estimates from cohort studies for loss to follow-up (PLoS Med 2011) and contributed to a series of articles on pragmatic trials (J Clin Epidemiol 2017).

Present appointments: President, National Research Council, Swiss National Science Foundation (SNSF); Professor of Epidemiology & Public Health, Institute of Social and Preventive Medicine, University of Bern, Switzerland; Visiting Professor of Clinical Epidemiology, University of Bristol, UK; Visiting Professor of Epidemiology, University of Cape Town, South Africa.

Academic and professional qualifications: Fellow of the Faculty of Public Health of the Royal College of Physicians, London; Diploma in Tropical Medicine and Hygiene, Swiss Tropical Institute, Basel; MD University of Bern; MSc Epidemiology, London School of Hygiene and Tropical Medicine; Diploma in Medicine, University of Bern, Switzerland.

Fellowships, awards, and honors: Achievement award, Netherlands Epidemiology Society; Swiss Bridge Award for Cancer research; Member of the Swiss Academy of Medical Sciences; Swiss National Science Foundation Senior Fellowship; Distinction, London School of Hygiene and Tropical Medicine; British Council Fellowship.

Publications: I have authored or co-authored over 600 original articles, commentaries, letters, and reviews. According to Clarivate Analytics I rank in the top 1% of researchers for most cited articles («Highly Cited Researcher») in Clinical Medicine and Social Sciences (https://hcr.clarivate.com/#freeText%3DEgger). A full list of publications is available from https://orcid.org/0000-0001-7462-5132.

«Recreational Cannabis from the Pharmacy - The SCRIPT Trial»

Abstract:

Background: Cannabis is one of the most frequently used illegal substances in Switzerland. In 2012, 31% of men and 19% of women under age 75 indicated that they had used cannabis at least once in their lives. In the group of persons aged 15 to 24 years, 19% of men and 11% of women used cannabis in the past 12 months. Recently, the discourse on regulating the cannabis market in Switzerland gained momentum. There are now several potential models under discussion including the establishment of «Cannabis Social Clubs» or selling cannabis in pharmacies. In Switzerland and elsewhere, there is a movement that calls for evidence-based policy making; in particular, the increased use of randomized evidence in public policy. Several Swiss cities are planning pilot projects to evaluate models to regulate the cannabis market. In Bern we decided to pursue a randomized-controlled trial: The Safer Cannabis - Research In Pharmacies Trial (SCRIPT).

Objectives: The proposed project consists of 3 parts, an initial randomized-controlled trial, an observational extension study (with a nested second randomized trial), and a qualitative part. The primary objectives are to evaluate (a) whether the offer of approved cannabis sale in certain Bern pharmacies is utilized and (b) how the approved sale of cannabis affects usage behaviour in persons who already use cannabis. The primary endpoint for both randomized trials is the difference in consumption behaviours of both participant groups. Consumption behaviour is recorded with the aid of the revised version of the CUDIT questionnaire.

Design: The randomized trial is the core of the project. Over 18 months, current cannabis users of at least 18 years of age are consecutively randomized into 2 trial arms. One group of cannabis users is given the option to obtain cannabis legally in certain Bern pharmacies over a period of 6 months, while a (control) group does not have this option. Access to the regulated cannabis purchases is combined with a mandatory preventive intervention and the explicit offer for drug counselling. Only after the completion of the initial randomized trial phase will both groups then receive the option to purchase cannabis legally. At the beginning of this phase, participants are randomized for the second time to either regularly receiving text messages containing information about the health effects of cannabis use and possible strategies for abstinence or no text messages. The cohort is observed for a minimum of an additional 9 months and a maximum of 12 months with data collection every 6 months. Quantitative as well as qualitative methods will be used. In addition, data related to cannabis sale and use on a municipal level will be continuously collected before, during and after the implementation of the controlled cannabis sale.

MODERATOREN
MODERATORS

Session 1
Panel 1

Christian Lanz, PhD

Dr. Christian Lanz studied pharmacy at the Universities of Bern and Basel. Then, he joined the reserach group of Prof. Wolfgang Thormann at the University of Bern and achieved the PhD degree in Analytical and Clinical Chemistry in 2004. The research topic was the analysis of carbohydrate-deficient transferrin by capillary zone electrophoresis as a biomarker of heavy, chronic alcohol intake. After the thesis, he added a four year period as a postdoctoral student and research fellow at the University of Bern, working for Prof. Jeff R. Idle. This project dedicated to the discovery of radiation biomarkers in biological samples was part of the Columbia University Center for Medical Countermeasures against Radiation (P.I. David Brenner) and funded by the National Institute of Health from the U.S. Department of Health and Human Services. GC-MS technologies combined with multivariate data analysis were the key techniques used for this basic research. From 2010 – 2014, Dr. Christian Lanz was the head of the analytical laboratory of Prof. R. Brenneisen at the Department of Clinical Research at the University of Bern. This was the time when he entered the field of drug analysis in human biological samples by GC-MS and HPLC. The focus of the research group was the analysis of opioids, cannabinoids and endocannabinoids. In parallel, Dr. Christian Lanz started to work in a public pharmacy in Langenthal, which he took over in 2013 together with his brother, as well a pharmacist. Dr. Christian Lanz left the University in 2014 after the retirement of Prof. Brenneisen. In 2010, he became a member of the Swiss Task Force for Cannabinoids in Medicine (STCM) to represent the pharmacists.

Session 2

Claude Vaney, MD

Graduated from the Medical Faculty of the University of Bern; Swiss specialisation title in Neurology. University Professional in Sexual Medicine & Therapy. Thirty years of clinical teaching and research experience in different neurological Rehabilitation Hospitals. Vice-president of the Swiss MS Society and of the Swiss Parkinson Society. Former President of the Swiss federal expert group on medical cannabinoids. Founding member of the Swiss Taskforce for Cannabinoids in Medicine (STCM). Over 25 publications in peer-reviewed journals.

Panel 2

Yvonne Scherrer

Yvonn Scherrer is a theologian, radio journalist, writer, and aromatherapist. Holding degrees from universities in Basel and Fribourg, she has been working as an editorial journalist with Swiss Radio SRF since 1998, focusing on real-time recordings, feature stories, and live reportages. She has published 3 books in the Bernese dialect with Cosmos publishers: «Nasbuechli – Eine Duftreise» (2010) on the sense of smell, «Hänglisch – Ein Hand-Buch» (2015) on the sense of touch, and «Böimig» (2017) on the character of various trees. All books are available in printed as well as audio versions. In 2012 she started her own aromatherapy practice in Zürich, producing her own scents. Having lost her eyesight due to retinal cancer at the age of 7 months, she acquired a unique and very distinct access to the kingdom of the senses, which she is keen on communicating to the public.

Session 3
Panel 3

Barbara Broers, MD, Prof

Unit for Dependencies, Division for Primary Care, Department of Community Health, Primary Care and Emergencies, Geneva University Hospitals, 6 rue Gabrielle-Perret-Gentil, 1211 Geneva 14, Switzerland; Tel: *41-22-3729668, barbara.broers@unige.ch.
Graduated from the Medical Faculty of the University of Amsterdam, NL; Master's Degree in Epidemiology and Biostatistics, McGill University, Montreal; Swiss speciali-

sation title in Prevention and Public Health. Over 25 years of clinical, teaching and research experience at the Geneva University Hospitals in the field of substance use, addiction, HIV and harm reduction. Vice-president of the Swiss Society of Addiction Medicine (SSAM). Vice-president of the Swiss Federal Commission on Addiction-related Questions. Member of the Swiss federal expert group on medical cannabinoids, founding member of the Swiss Taskforce for Cannabinoids in Medicine (STCM).
Current positions: Professor, head of the Dependencies Unit of the Primary Care Division, Geneva University Hospitals. Academic advisor at the Faculty of Medicine, University of Geneva.

Session 4
Panel 4

Ambros Uchtenhagen, MD, Prof

Ambros Uchtenhagen, born 1928, was Professor of Social Psychiatry and past President of the Research Institute for Public Health and Addiction at Zurich University. He is member of the WHO Expert Panel on Drugs and was a board member of the European Association on Substance Abuse Research. His main research activities are in the epidemiology of addictive behaviour, implementation and evaluation of preventive and therapeutic interventions, and drug policy. He was involved in numerous research projects and missions for the WHO, the United Nations Organization on Drugs and Crime, the European Commission, the Council of Europe, the Swiss National Government and others.

PANEL-GÄSTE
PANEL GUESTS

Panel 1

Manfred Fankhauser, PhD

Born in 1963 in Trub in the Emmental region of Switzerland, Manfred Fankhauser attended the School of Transport in Spiez before completing a commercial apprenticeship in Langnau. He subsequently returned to college in Bern and went on to study pharmacy. Since 1990, he and his wife have been running their own pharmacy in Langnau, specialising in the medicinal use of cannabis. He has taught the history of pharmacy at ETH University in Zurich since 2004.

In Switzerland, patients require the approval of the Federal Department of Health for their doctor to be able to prescribe them cannabis (in the form of a tincture) or the active substances in hemp, CBD and THC. Dr. Fankhauser's pharmacy, the Bahnhof Apotheke, was the first pharmacy in Switzerland allowed to process prescriptions for natural cannabis tincture and for dronabinol; it has therefore established a reputation in both Switzerland and beyond.

Markus Lüdi

1977	Graduation Chemical Engineer (Bachelor of Science) at Ingenieurschule Burgdorf, Switzerland.
1978-79	Sales Engineer Switzerland at Fairtec Engineering AG, Basel Industrial Waste Water Treatment.
1981-83	Sales Manager Export at Prolab AG, Kirchberg Laboratory Equipment.
1984-90	Different sectors.
1990-2003	Chemical Engineer at Spagomed AG Heimisbach. Production, research and development, quality management homeopathics and phytos.
2003-14	Qualified person at Spagyrik Produktions AG, Burgdorf and Heidak AG, Emmenbrücke.
2014-	Regulatory Affairs at Spagyrik Produktions AG, Burgdorf and Heidak AG, Emmenbrücke.
2000-	CEO and Qualified person at Cannapharm AG, Burgdorf.

Martin Ziak, PhD

Head of Division Complementary and Herbal Medicines at Swissmedic, Swiss Agency for Therapeutic Products, Bern, Switzerland; e-mail: martin.ziak@swissmedic.ch; phone +41 58 462 14 66.

Martin Ziak is the Head of the Division of Complementary and Herbal Medicines at Swiss Agency for Therapeutic Products (Swissmedic). Martin Ziak was born in Winterthur, Switzerland and studied biochemistry at the University of Zurich. In 1991 he received his doctoral degree in biochemistry at the University of Zurich.

From 1992 to 1998 he worked as a junior scientist in the Division of Cell and Molecular Pathology, Department Pathology, University of Zurich. In 1999 he became scientific head-assistant in the Division of Cell and Molecular Pathology. From 1999 to 2009 he led a research team, involved in fundamental medical and biological research, e.g. glycosylation, cellular transport and protein folding as well as related diseases. From 2004 to 2009 he was lecturer at the Medical Faculty, University of Zurich. From 2009 to 2011 he was the Head of Unit 4, Case Management, Swissmedic dealing with Complementary and Herbal medicinal products as well as variations. From 2011 to 2014 he led the Unit for Rx and OTC products at Swissmedic. In 2014 he completed the training course in public management at Zurich University of Applied Sciences in Winterthur. Since 2015 he is the head of the Division of Complementary and Herbal medicinal products at Swissmedic.

Panel 2

Naiem Hakiemie

Naiem Hakiemie (1976) is Director Quality Assurance at Bedrocan International. He is a life-science professional with several years hands-on experience in Quality Assurance, Quality Systems, Quality Control, and research in the pharmaceutical industry. Naiem has a diverse pharmaceutical manufacturing background with experience in working under the applicable quality regimes (GMP, ISO9001, ISO13485 and cGMP).
Since 2003 Bedrocan provides standardised cannabis of pharmaceutical quality to the Dutch government. It's the oldest legal company in the world providing several, chemically different cannabis varieties to be used by patients on doctor's prescription and as a raw material for the pharmaceutical industry (API).
During these past 26 years, Bedrocan has developed and standardised unique methods of producing cannabis to pharmaceutical standards to a level achieved by no other company until today. A company-wide commitment to product quality resulted in the Dutch Bedrocan production facilities being approved for GMP/API (Good Manufacturing Practice/Active Pharmaceutical Ingredients) by the Dutch Health Authorities in 2017.
«It is my strong belief that there should be a clear distinction between medicinal and recreational use of cannabis and that patient needs for safe and consistent cannabis is a priority», Naiem says when talking about the company's mission and vision. He is convinced that this can be achieved by going through the formal drug approval process. «Only fully standardised medicinal cannabis is the foundation on which such approval can be achieved.»

Trevor M. Jones, PhD, Prof

PhD Hon DSc FmedSci FRSC FRSM FKC Hon FRCP FFPM FBPharmacolS
Prof. Jones is Chairman of the international CRO, Simbec-Orion Research Ltd., and a member of the Boards of eTherapeutics plc. and the Wales investment company, Arthurian Life Sciences Ltd. He is a visitng professor at King's College London and holds honorary degrees and Gold Medals from 6 universities. From 1987-94, he was a main board director of the Wellcome Foundation, where he was responsible for R&D including the development of AZT, Zovirax, Lamictal, Malarone and other medicines. He is founder member of the Geneva-based Public:Private Partnership, Medicines for Malaria venture (MMV) and in 2004 was appointed to WHO Commission on Intellectual Property Rights, Innovation and Public Health (C.I.P.I.H.). He was for 12 years a member of the UK Government regulatory agency ...The Medicines Commission and has also served as an advisor to the Cabinet Office on the Human Genome project. He ia a member of the UK Prime Minister's Task Force on the Competitiveness of the Pharmaceutical Industry (PICTF) and Chair of the Government Advisory Group on Genetics Research. For 10 years until September 2004 he was Director General of the Association of the British Pharmaceutical Industry (ABPI), a member of the Council of IFPMA and the Board of EFPIA. In 2005, he was the winner of the SCRIP Life Time Achievement Award for his contribution to the pharmaceutical sciences and industry. In 2016, Prof. Jones was elected as a Fellow of the Academy of medical Sciences FMedSci. He was honoured by Her Majesty Queen Elizabeth II by the award of CBE in the 2003 New Year's Honours List.

Beatrice Olearo, MSc

2011-2012 Training internship at San Matteo Hospital (I-Pavia: Clinical research activity in renal Amyloidosis); 2012 Bachelor in Biological Sciences (University of Pavia, degree thesis «Role of matrix metalloproteases in renal amyloidotic pathology» San Matteo Hospital); 2012 Training internship at Bottega Verde (I-Cossato: Research and Development and production of Cosmetic Products); 2014 Training internship as Nutritionist at Fundació Lluís Alcanyís (E-Valencia: Food education activities, preparation of blanaced diet); 2014 Master of Biology Applied to Nutritional Sciences (University of Milan and University of Valencia through the Erasmus project, Master's degree thesis «Assessment of body composition, through anthropometric and non-anthropometric methods, of university students from Valencia, Spain» (published in Nutr Hosp. 2014 Oct 1;30(4):911-8); 2014 Biologist state exam (University of Insubria, Varese); 2015 Nutritionist in pharmacy and medical clinic; 2016-2018 Research Assistant at Proparts SA (CH-Taverne Torricella: Research and development of protein extraction methods; production of finished products and raw materials, quality control and chemical analysis); 2016 Teacher of Nutrition at Hunger Ricci School (CH-Gentilino: Teaching of principles of Human Nutrition. Nutrients and Fuctional Food); 2017 Post-graduate course in Cosmetic Sciences

(University of Milan); 2018 Publication: «The BFMNU method as an alternative to the methods in use based on energy: study of the correlation between food energy and body mass» (Nutr Hosp. 2018 Mar 1;35(2):346-350); April 2018 Teacher of Dietetics and health at Centro Professionale Sociosanitario (CH-Mendrisio: Teaching of public health and dietary principles applied to various diseases); 2018 Nutritionist at Medical Consulting Center (I-Campione d'Italia: Processing of diets using the method N.I.Ge.F); 2018 Technical Manager at Purexis SA (CH-Manno: Production of food supplements, cosmetics, foodstuffs and raw materials for the pharmaceutical, food and cosmetic industries. Drafting and application of the procedures of GMP and GDP rules and issue of certificates of analysis. Research and development of new cannabinoid products, applications and extraction methods).

Holger Rönitz

Holger Rönitz cofounded THC Pharm and currently holds the position of Business Development Director. He started THC Pharm as a patient initiative in 1996 and ever since has been fighting for reimbursement of cannabinoids. Since 1998 THC Pharm has been supplying close to 40'000 patients with cannabinoids. Starting out with pure THC (or dronabinol) the company is presently the only GMP approved source for both dronabinol and cannabidiol as magistral preparations and as an API in Europe. Furthermore THC Pharm has been at the forefront of research, supplying over 50 medical trials with cannabinoids and other psychotropic substances.

Panel 3

Hans Gammeter, MD

Study of Medicine

1972-79	University Zurich: medical study
1978	4 months internship primary health care Chad (Africa)
1980-81	1½ years resident surgery
1982-83	1 year scholarship DEZA (EDA): - Diploma course tropical medicine STI Basel - 6 months intership in primary rural health care - Jamkhed Hospital Dr. Arole, Maharastra, India and CF Hospital, Dr.Cherian, Tamil Nadu, India
1983-1988	4½ years project in charge and district edical officer in Bhutan (Asia) (Sociomedical project of Helvetas in collaboration with Royal Government of Bhutan (intensified primary health care))
1988-90	2 years resident internal medicine
1990	½ year resident gynecology/obstetrics
1991	½ year editorial assistant «pharma-kritik»
1991-92	1 year guest physician Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand
1992	Thesis (STI /Universität Basel): «From the general practitioner to the family physician and primary care physician. The evolving concept of general medicine in primary health care. International experiences and considerations for a postgraduate programme in general medicine in Bhutan» (Prof. A. Degrémont, Prof.M.Tanner)
1992-93	1 year resident clinical psychiatry
1993-now	practice opening general medicine and tropical medicine (Wattwil)
2008-2018	Deputy cantonal officer of health (Kanton St. Gallen).

Bea Goldman, MSc

Experienced RN for Intensive Care
MND (ALS) Care specialist for ALS Switzerland and Swiss Muscle Society (Patient Organisations)
MSc University of Cardiff, Nursing Studies
Lecturer at University of Applied Science St. Gallen on Neuropalliation and Hope
Advisor in Medical Cannabis Industry
Founder and CEO of «Medcanned», Verein (independent organisation) for Medical Cannabis Education for Patients, Professionals and Public
Founder of Caregiver Center GmbH (from 2019) in ZH, Center for Education and Training of Caregivers.

Melanie Joyce Rehli, MD

Seit 2016	Institut für Anästhesiologie, Kantonsspital Graubünden, Chur, Leitung Schmerztherapie
2014	Fähigkeitsausweis «Akupunktur/TCM ASA» (360 h)
2013- 2015	Masterstudium «Interdisziplinäre Schmerzmedizin Ismed», M.Sci., Universität Wien Masterarbeit «Erarbeitung und Implementierung eines interdisziplinären Diagnose- und Behandlungspfades für Patienten mit CRPS (Complex Regional Pain Syndrome) in den klinischen Alltag des Kantonsspitals St.Gallen»
2010	Fähigkeitsausweis «Interventionelle Schmerztherapie SSIPM»
2008-2015	Klinik für Anästhesiologie, Intensiv-, Rettungs- und Schmerzmedizin, Kantonsspital St. Gallen; Kaderfunktion im Schmerzzentrum KSSG seit 11/2008
2008	Facharzttitel FMH Anästhesiologie
2002	Dissertation: «23 Fälle von Hirnabszessen am Universitätsspital Zürich von 1993 – 1997» unter der Leitung von Prof. Dr. Y. Yonekawa und Dr. E. Taub
1994-2001	Medizinstudium in Zürich und Lausanne Staatsexamen November 2001 in Zürich.

Mitgliedschaften:
FMH Verbindung der Schweizer Ärztinnen und Ärzte; Bündner und Churer Ärzteverein; Verein Bündner Anästhesieärzte; VSAO Verein Schweizer Assistenz und Oberärzte; SGAR Schweizerische Gesellschaft für Anästhesiologie und Reanimation; ESA European Society of Anaesthesiology; SACAM Schweizerische Ärztegesellschaft für Akupunktur, Chinesische Medizin und Aurikulomedizin; SGSS Schweizerische Gesellschaft zum Studium des Schmerzes; IASP International Association for the Study of Pain; SSIPM Swiss Society for Interventional Pain Management; SIS Spine Intervention Society; SACM Schweiz. Arbeitsgemeinschaft für Cannabinoide in der Medizin; SGNOR Schweizerische Gesellschaft für Notfall und Rettungsmedizin.

Catherine Ritter, MD

Catherine Ritter is a medical doctor, mainly experienced in drug related issues and health care for key affected populations. She joined the Federal Office of Public Health in 2015, after having worked numerous years as a prison doctor in Switzerland. There she contributed to implement harm reduction and treatment for people who use drugs. She shared this most useful experiences in her consultancies, both in Switzerland and abroad, where she worked with UNODC and the Pompidou Group of the Council of Europe. She is currently in charge of the exemption authorizations from the Federal Office of Public Health that allow the medical use of cannabis in Switzerland, as well as the diacetylmorphin (heroin) assisted treatment.

Panel 4 **Barbara Broers, MD, Prof**
(for her CV see Session 3)

Julie Fry, MSc.

jfry@juliepfry.com **JULIE P. FRY, MSc.** +41 76 204 2339

SUMMARY

My vision is to encourage and emphasize exploration and generation of novel solutions to challenges faced in the cannabis industry with a focus on high quality, method optimization, and scientific integrity. I am an effective and direct communicator capable of explaining the intricacies of cannabis science and the industry to experts and novices alike.

EDUCATION

Doctoral Candidate; Pharmocology *December 2016 – September 2017*
Masaryk University (Masarykova univerzita)

Master of Sciences; Biochemistry *December 2014*
Eidgenössische Technische Hochschule Zürich (Swiss Federal Institute of Technology)

Bachelor of Biological Sciences, Minor: Chemistry *May 2006*
Virginia Polytechnic Institute and State University (Virginia Tech)

EXPERIENCE

TheraCann International Corp., Chief Science Officer *June 2018 – August 2018*

Plant Consulting Group, LLC., Technical Consultant *January 2015 – May 2018*

Masaryk University, Technical Editor *May 2017 – December 2017*

alpha-CAT Lab, s.r.o., Scientific Accreditation Coordinator *June 2016 – October 2016*

PUBLISHED WORK

Tales of the Frenchfry: on Cannabis and uphill battles
Julie P. Fry
Drugs and Alcohol Today, 2018
https://www.emeraldinsight.com/doi/full/10.1108/DAT-02-2018-0005

Robert Hämmig, MD

Psychiatry and Psychotherapy FMH
Spec. Psychiatry and Psychotherapy of addictions
Schools in Zurich & Bern

1971 – 1978	Medical School at University of Bern
1978	Graduation
2000 - 2008	Studies in Cultural Anthropology, University of Bern
1980 – 2017	University Hospital for Psychiatry & Psychotherapy, specializing in addictions, residency and managing positions
2017	Retirement from University, working in own company
Since 2000	President of Swiss Society for Addiction Medicine SSAM.

Markus Jann

Markus Jann (62, married, with two adult children) studied Psychology and Journalism. He began his professional career as a psychologist in the world's first drug consumption room, in Bern in 1986. He subsequently spent 3 years carrying out addiction research, focusing on the topic of self detoxification in patients with alcohol and opiate dependence. During this period, he also edited the journal Drogalkohol. He then switched from research to practice, working for 4 years as an addiction counsellor and head of scientific services at the Contact Foundation in Bern. He then joined the Health Department of the Canton of Bern, serving for 5 years as the Substance Abuse and Health Promotion Officer. Here, he was responsible for the development of the «effect-oriented substance abuse prevention» plan. In 2002, he became Switzerland's National Drug Coordinator at the Federal Office of Public Health. In this role, he was responsible for further development and implementation of Switzerland's «four pillars» drug policy. This included the elaboration of the federal government's third package of measures to reduce drug-related problems. In addition, he was a key contributor to «The Challenge of Addiction», a report prepared by the 3 Federal Commissions for Alcohol Issues, Tobacco Control and Drug Issues, which provided the foundations for the comprehensive National Strategy on Addiction adopted by the Federal Council in 2017.

In 2015, following an internal reorganisation, he became head of the Section «Policies and Implementation» of the FOPH. He is currently focusing in particular on legislation relating to the recreational and medical use of cannabis.

Margrit Kessler

Ehem. Präsidentin der Schweizerischen Stiftung SPO Patientenschutz
Alt Nationalrätin der Grünliberalen
Pflegefachfrau für Intensivmedizin und Reanimation. Verheiratet mit einem Chirurgen, Mutter von vier Söhnen. Mitgründerin der Stiftung SPO Patientenschutz. Von 1999 bis 2017 Präsidentin der Organisation, Aufbau von sieben Beratungsstellen in der Schweiz.
Autorin von «Halbgötter in Schwarz und Weiss, Rückblick auf einen Medizinskandal, der zum Justizskandal wurde».
Von 2011 bis 2015 Nationalrätin der Grünliberalen Kanton St. Gallen. Am 11.12.2015 Eingabe der Motion «Cannabis für Schwerkranke 14.4164», diese wurde am 25.2.2015 angenommen.
Kontakt: margrit.kessler@gmx.ch

SPONSOREN
SPONSORS

- **Swiss Academy of Pharmaceutical Sciences, SAPhW**
  Platin Sponsor
- **Schweizerische Multiple Sklerose Gesellschaft**
  Platin Sponsor
- **Quadrimed**
  Platin Sponsor
- **pharmaSuisse**
  Platin Sponsor
- **Almirall AG Schweiz**
  Gold Sponsor
- **Stiftung Apothekerverband Kt. Bern**
  Gold Sponsor
- **Bundesamt für Gesundheit, BAG**
  Gold Sponsor
- **Northern Swan New York**
  Gold Sponsor
- **Mundipharma Medical Comp. Basel**
  Gold Sponsor
- **Parkinson Schweiz**
  Gold Sponsor
- **Karger Publishers Basel**
  Gold Sponsor
- **THC Pharm GmbH Frankfurt a.M.**
  Silver Sponsor
- **Max Zeller & Söhne AG Romanshorn**
  Silver Sponsor
- **Trigal Pharma GmbH Wien**
  Silver Sponsor
- **Bedrocan International Veendam**
  Silver Sponsor
- **AiLab Swiss Schönengrund**
  Silver Sponsor

- **Spektrum Cannabis**
  Silver Sponsor

- **Hänseler AG Herisau**
  Silver Sponsor

- **Swiss Safe Access for Cannabinoids, SSAC**
  Bronze Sponsor

- **Purexis SA Manno**
  Bronze Sponsor

- **Cannapharm AG Burgdorf**
  Bronze Sponsor

- **Nachtschatten-Verlag Solothurn**
  Bronze Sponsor

- **CannaTrade.ch AG Bern**
  Bronze Sponsor

- **Fourtwenty Bern**
  Bronze Sponsor

- **Harmonius GmbH Villmergen**
  Bronze Sponsor

- **Grüne-Zukunft.org**
  Bronze Sponsor

Bern, 19. Januar 2019

Schweizer Arbeitsgruppe für Cannabinoide in der Medizin SACM
Swiss Task Force for Cannabinoids in Medicine STCM
www.stcm.ch, sacm@bluewin.ch

Schweizerische Akademie der Pharmazeutischen Wissenschaften SAPhW
Swiss Academy of Pharmaceutical Sciences SAPhS
www.saphw.ch, saphw@saphw.ch

Prof. Dr. pharm. Rudolf Brenneisen
Frikartweg 9A, CH-3006 Bern