

# **International Association for Cannabis as Medicine**

in cooperation with

Institute of Biology, Pharmacognosy/Metabolomics, Leiden University  
Office of Medicinal Cannabis, Ministry of Health, Welfare and Sports

## **IACM 3rd Conference on Cannabinoids in Medicine**

**9-10 September 2005**

**Leiden University**

# 2005 Conference on Cannabinoids in Medicine

<b>Place</b>	Institute of Biology, Pharmacognosy/Metabolomics Leiden University, Einsteinweg 55, 2300 RA Leiden
<b>Registration Fee</b>	150 Euros for both days Students pay a reduced fee of 75 Euros for both days Members of the IACM pay a reduced fee of 100 Euros for both days
<b>Organizer</b>	IACM Rueckertstrasse 4, 53819 Neunkirchen, Germany Phone: +49-2247-968083 Fax: +49-2247-9159223 E-mail: <a href="mailto:info@cannabis-med.org">info@cannabis-med.org</a> Internet: <a href="http://www.cannabis-med.org">http://www.cannabis-med.org</a>
<b>Cooperation Partners</b>	Leiden/Amsterdam Center for Drug Research of the Leiden University Office of Medicinal Cannabis, Ministry of Health, Welfare and Sports
<b>Program Committee</b>	Vincenzo Di Marzo Franjo Grotenhermen Raphael Mechoulam Kirsten Müller-Vahl Ethan Russo Willem Scholten Rob Verpoorte

**We would like to thank our sponsors for their generous support.**

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Special thanks go to our gold sponsors who allow us to have a wonderful evening dinner on Friday and to create the IACM Award. Another special thank goes to Bedrocan that allows participants of the meeting to visit its cannabis nursery and covers the costs of the travel from Leiden to Veendam.

# Friday, September 9

08:00 – 08:45      **Registration**

08:45 – 09:00      **Greetings**

## 09:00 – 10:30      **First Session (Clinical Studies)**

- |               |   |   |
|---------------|---|---|
| 09:00 – 09:15 | Philip Robson, Derick Wade, Petra Makela, Heather House, Cynthia Bateman  | Cannabis-based medicinal extract (Sativex) produced significant improvements in a subjective measure of spasticity which were maintained on long term treatment with no evidence of tolerance |
| 09:15 – 09:30 | Donald I. Abrams, Cheryl A. Jay, Hector Vizoso, Starley B. Shade, Haatem Reda, Scott Press, Mary Ellen Kelly, Michael Rowbotham, and Karin Petersen                             | Smoked cannabis therapy for hiv-related painful peripheral neuropathy: results of a randomized, placebo-controlled clinical trial   |
| 09:30 – 09:45 | F. Markus Leweke, Dagmar Koethe, Christoph W. Gerth, Brit M. Nolden, Daniela Schreiber, Anita Hänsel, Miriam A. Neatby, Antje Juelicher, Martin Hellmich, Joachim Klosterkötter | Cannabidiol as an antipsychotic. a double-blind, controlled clinical trial on Cannabidiol vs. Amisulpride in acute schizophrenia.   |
| 09:45 – 10:00 | Andrea Pelliccia, Gianpaolo Grassi, <u>Angela Romano</u> , Paolo Crocchiolo   | Treatment with CBD in oily solution of drug-resistant paediatric epilepsies   |
| 10:00 – 10:15 | Jeffrey Y. Hergenrather, Tod H. Mikuriya, David Bearman   | Clinical improvement and reduction of immunosuppressive drug therapy in cannabis treated patients with Crohn's disease  |
| 10:15 – 10:30 | Gernot Ernst, Claudia Denke, <u>Marcus Reif</u> , Martin Schnelle, Hartmut Hagmeister   | Standardized cannabis extract in the treatment of postherpetic neuralgia – a randomized, double-blind, placebo-controlled cross-over study  |

10:30 – 11:00      **Break**

## 11:00 – 12:30      **Second session (Political and Social Issues)**

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|---------------|--------------------|---|
| 11:00 – 11:15 | Marco van de Velde | Two years of experience with legal production and distribution of medicinal cannabis in the Netherlands |
|---------------|--------------------|---|

11:15 – 11:30	Annemarie Janse, Nancy Breekveldt-Postma, Joelle Erkens, Ron Herings	Medicinal cannabis in the Netherlands
11:30 – 11:45	Louise Déry	Canadian Medical Marijuana Research Program: main purpose and accomplishments
11:45 – 12:00	Dolors Capellà, Marta Duran, Sergio Abanades	The therapeutic use of cannabis project in Catalonia: information, prescription and research
12:00 – 12:15	Dale Gieringer	The growth of cannabis medicine in the U.S.: practice & usage in a semi-legal regime
12:15 – 12:30	Mark Gibson	Canna-Biz Chocolate, production, and despatch to sufferers of multiple sclerosis

12:30 – 14:00 **Lunch**

## 14:00 – 15:00 IACM General Meeting

15:00 – 15:45	<b>Review</b> David Baker	Potential use of cannabinoids in multiple and amyotrophic lateral sclerosis
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15:45 – 16:15 **Break**

## 16:15 – 17:45 Third session (Basic Research)

16:15 – 16:30	Ester Fride, Tatiana Bregman, Oded Edelheit, Israel Hanukoglu, and Amiram Raz	Cannabinoids and cystic fibrosis (CF): different regulation of the endocannabinoid CB receptor system in CF mice
16:30 – 16:45	Natalya M. Kogan, Manuel Guzman, Ester Priel, Michael Schlesinger, Gergana Marincheva, Ronen Beeri and Raphael Mechoulam	Quinone type cannabinoids as anticancer compounds
16:45 – 17:00	Krisztina Monory, Federico Massa, Heike Blaudzun, Giovanni Marsicano, Beat Lutz	The role of different neuronal populations in the pharmacological actions of delta-9-tetrahydrocannabinol
17:00 – 17:15	Dagmar Koethe, Christoph W. Gerth, Daniela Schreiber, Brit M. Nolden, Sonja Gross, Antje Juelicher, Joachim Klosterkötter, Andrea Giuffrida, Daniele Piomelli, F. Markus Leweke	The endocannabinoid anandamide in CSF is related to the patterns of cannabis use in first-episode schizophrenia

17:15 – 17:30	Philipp-Alexander Brand, Andrea Paris, Jens Scholz, Kristina Lueken, Peter Tonner	Cannabinoids and their interaction with anesthesia in mice
17:30 – 17:45	Roger G. Pertwee, Lesley A. Stevenson, Ruth A. Ross, Martin R. Price, Gemma L. Baillie, Kerrie N. Wease and Adèle Thomas	The plant cannabinoid, delta-9-tetrahydrocannabivarin, selectively antagonizes R-(+)-WIN55212, anandamide and delta-9-tetrahydrocannabinol

## 18:00 Bus to Kurhaus Scheveningen

### IACM Award Ceremony

During the evening dinner in the Kurhaus Scheveningen we would like to honour four people for their major contributions to cannabinoid research and the re-introduction of cannabis-based drugs into modern medicine.

We would like to thank our gold sponsors Solvay Pharmaceuticals, GW Pharmaceuticals, Biocanna and Bayer plc for making this evening dinner and the IACM Award possible.

### Evening Dinner

Dinner will be served in the Kurhaus, Jan Toorop Room, Gevers Deynootplein 30, Scheveningen (phone: +31 70 416 26 36) at 19.00. The evening dinner and one drink is included in the registration fee.

Transportation to the Kurhaus: Busses ('Brouwers' Tours') will leave from the conference centre at 18.00. Arrival at the Kurhaus between 18.30 and 19.00. Please come to the busses immediately after the end of the lectures.

On arrival in Scheveningen you can choose to have a stroll along the beach or on the boulevard, or have a drink in the bar near the Jan Toorop-room (own cost). If you choose to have a stroll, it is a good moment to buy presents, if you wish so.

Transportation to Leiden after the dinner: Busses will leave shortly after dinner. Please make sure to be in time for your bus. Departure time will be announced at the end of the dinner. Busses will stop at: Van der Valk Hotel Leiden, Holiday Inn Leiden and Hotel Het Witte Huis, and then end up at Leiden Central Station, where cabs are available usually for going to other hotels. (For a stop at Den Haag Central Station ask the driver on leaving the Kurhaus.)

For those who want to stay in Scheveningen and return later: (1) Take a city tram (line 9) or a bus (line 22) to the Central Station. This takes approximately 30 to 45 minutes. A ticket can be bought in the tram or bus. (2) Buy a ticket to Leiden in the Central Station Hall (2nd class, one way costs € 2,90). Trains are leaving 4 times per hour at 10, 29, 40 and 59 minutes after the hour, until 0.29. It takes 13 to 19 minutes to go to Leiden (depending on the hour). In Leiden you can take a cab to the hotel.

Public transportation in the Netherlands is safe, even after dark. Nevertheless we advise to take a seat in the front part of city trams. Especially in the station hall there can be pickpockets and people interested in the code of your bank pass.

# Saturday, September 10

08:30 – 09:00      **Registration**

## 09:00 – 10:30      **First session (Application and Pharmacokinetics)**

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|---------------|---|---|
| 09:00 – 09:15 | L. Zuurman, C. Roy, A. Hazekamp, R. Schoemaker, J. den Hartigh, J.C.M.E. Bender, R. Verpoorte, J.L. Pinquier, A.F. Cohen, J.M.A. van Gerven | Effect of THC administration in humans: methodology study for further pharmacodynamic studies with cannabinoid agonist or antagonist  |
| 09:15 – 09:30 | Tjeert Mensinga, Irma de Vries, Maaïke Kruidenier, Wim Scholten, and Jan Meulenbelt   | Pharmacokinetics and effects of cannabis at higher exposure levels  |
| 09:30 – 09:45 | Arno Hazekamp, Renee Ruhaak, Lineke Zuurman, Joop van Gerven, Rob Verpoorte   | Optimized administration of THC for clinical use by vaporizing  |
| 09:45 – 10:00 | Donald I. Abrams, <u>Hector P. Vizoso</u> , Starley B. Shade, Cheryl Jay, Mary Ellen Kelly and Neal Benowitz                                | Vaporization as a smokeless cannabis delivery system: a pilot study   |
| 10:00 – 10:15 | Thomas Nadulski, Fritz Pragst, Gordon Weinberg, Patrik Roser, Martin Schnelle, Eva-Maria Fronk and Andreas Michael Stadelmann               | Randomized, double-blind, placebo-controlled study about the effects of cannabidiol (CBD) on the pharmacokinetics of delta-9-tetrahydrocannabinol (THC) after oral application of THC vs. standardized cannabis extract |
| 10:15 – 10:30 | Floris de Jong, Frederike Engels, Jaap Verweij, and Ron Mathijssen  | Influence of medicinal cannabis on the pharmacokinetics of the anti-cancer agents docetaxel and irinotecan  |

10:30 – 11:00      **Break**

## 11:00 – 12:30      **Second session (Miscellaneous)**

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|---------------|---|--|
| 11:00 – 11:15 | Richard E. Musty and Jose Andre de Sousa Crippa | Potential therapeutic effects of cannabinoids on anxiety, a review |
|---------------|---|--|

11:15 – 11:30	Marieke van Haaster	Facts and phantasy, cannabis and MS
11:30 – 11:45	Yosef Sarne, Bella Tselnicker, Chagi Pick and Ora Keren	Dissociating between the neuroprotective and neurotoxic effects of THC (delta-9 tetrahydrocannabinol)
11:45 – 12:00	Anita Holdcroft, Caroline Doré, and Susan Tebbs	Qualitative measures of mood and sensory responses to cannabis extract (Cannador) in THE CANPOP Study
12:00 – 12:15	Christian Giroud, Frank Sporkert, Arno Hazekamp, Marc Augsburg, Florianne Monnet-Tschudi, Patrice Mangin	Chromatographic-mass spectrometry procedures for determination of cannabinoids in blood and brain tissues. Application to forensic cases and pharmacological studies
12:15 – 12:30	Jörg Fachner	Comparing topographic EEG brainmapping changes of cannabis induced and sound-trance induced altered state of consciousness
12:30 – 14:00	<b>Lunch</b>	
<b>14:00 – 15:00</b>	<b>Poster session</b>	
15:00 – 15:45	<b>Review</b> Vincenzo Di Marzo	The role of endocannabinoids in gastrointestinal inflammation
15:45 – 16:15	<b>Break</b>	
<b>16:15 – 17:45</b>	<b>Third session (Side effects, risks and problems)</b>	
16:15 – 16:30	John Zajicek	Lessons learnt from the CAMS study
16:30 – 16:45	Aaron B. Ilan, Alan Gevins, Kemi Role, Hector Vizoso, Donald I. Abrams	The cognitive neurophysiological effects of medicinal marijuana in HIV+ patients with peripheral neuropathy
16:45 – 17:00	Sergio Abanades	Cannabis and neuropsychological performance: results from a 3 year follow-up study
17:00 – 17:15	F. Grotenhermen, G. Leson, G. Berghaus, O. Drummer, H.P. Krüger, M. Longo, H. Moskowitz, B. Perrine, J. Ramaekers, A. Smiley, R. Tunbridge	Developing per se laws for driving under the influence of cannabis (DUIC)
17:15 – 17:30	Emmanuel S. Onaivi	An endocannabinoid hypothesis of substance abuse

17:30 – 17:45      Ethan B. Russo      Sativex adverse event profile and comparison with Marinol and “medical grade cannabis” in clinical studies

**17:45              End of the Meeting**

## Posters

### Poster Session on Saturday, 14:00 – 15:00

Marta Duran, Eva Montané, Xavi Vidal, Joan-Ramon Laporte, Dolors Capellà	Cannabinoids as antispastic agents for multiple sclerosis: a qualitative systematic review
Arno Hazekamp, Rob Verpoorte	Solubilizing THC in water by cyclodextrins
Jonathon Arnold, Michelle Holland, Nathan Gunasekaran and John Allen	Cannabinoids exert potent anti-proliferative effects on human breast cancer cells
M.I. Martin, E. Burgos, C. Goicoechea, D. Pascual	WIN 55,212-2 versus ketamine in a peripheral neuropathy induced by paclitaxel
Patrick Meybohm, Philipp-Alexander Brand, Felix Renhof; Jens Scholz, Peter H. Tonner	Interaction of the general anaesthetic propofol and selective agonists for cannabinoid-receptor type 1 and 2
Michelle Holland, John Allen, Mary Bebawy, Basil Roufogalis, Jonathon Arnold	Cannabinoid modulation of p-glycoprotein efflux activity and expression
Rudolf Brenneisen, Johannes Mathis, Thomas Loher, Corinne Roth and Matthias Gugger	Add-on delta-9-tetrahydrocannabinol (THC) is ineffective in drug-resistant restless legs syndrome (RLS)
Andrei Sibaev, Birol Yucece, Martin Storr	Cannabinoid-1 receptor functioning within the ascending peristaltic reflex: new electrophysiological tools to investigate the spatial neuronal projections
Kirsten R. Müller-Vahl, Udo Schneider, Peter Gielow, Ralph Buchert, Georg Berding	I-124-AM281 PET imaging of CB1-receptors in schizophrenia: a case study
Inmaculada Crespo, Raquel Gómez, Guillermo Moreno, Gustavo González-Cuevas, Jose Antonio López-Moreno And Miguel Navarro	Interaction between cannabinoid system and orexin A in feeding regulation

Luciano Angelucci, Mauro Bianchi, Claudio Cappuccino, Francesco Crestani, Salvatore Grasso, Lucia Palmisano and Massimiliano Verga on behalf of the Scientific Committee of ACT

Preliminary data from an ongoing survey on the therapeutic use of cannabis in Italy

Marta Duran, Segio Abanades, Rafael de la Torre, Magí Farré, Dolors Capellà

Pilot clinical trial protocol to evaluate preliminary efficacy and tolerability of a cannabis medicinal extract in patients with chemotherapy induced nausea and emesis

Mohamed Ben Amar

Therapeutic potential of cannabinoids

T.H. Mikuriya, W. North, F. Lucido, R. Jaffee, J. Weirick

Cerebrospinal delayed allergic reaction to pesticide residue

Floris de Jong, Desirée van Boven-van Zomeren, Arno Hazekamp, Robert Oostrum, Johan Bender, Erik Wiemer, and Jaap Verweij.

In vitro cytotoxicity of four cannabinoids (THC, THC-acid, CBD, and CBN) in a panel of six cancer cell lines

Zlatko Mehmedic, Jason Martin, Susan Foster and Mahmoud A. ElSohly

Delta-9-THC and other cannabinoids content of confiscated marijuana: potency trends, 1993-2003

Tatiana Bregman, Yankel Gabet, Itai Bab, Oded Edelheit, Israel Hanukoglu, and Ester Fride

The endocannabinoid system and cystic fibrosis CFTR<sup>-/-</sup> mice: a look at osteoporosis and sex differences as revealed by cannabinoid administration

E. Gkoumassi, M. J. Dröge, B. G. J. Dekkers, C.R.S. Elzinga, H. Meurs, J. Zaagsma and S. A. Nelemans

Cannabinoid signaling in human bronchial epithelial cells

R. J. M. Niesink, S.M. Rigter, F.T.A. Pijlman, M.G. Bossong

Increase in total delta-THC in nederwiet as sold in Dutch coffee shops

Matthijs G. Bossong, Raymond J.M. Niesink.

How cannabis induces schizophrenia. An integrative hypothesis from the neurobiological literature.

Tom Scheffer, Birgit Stürmer, Werner Sommer, Martin Schnelle, Andreas Stadelmann

Effects of cannabis and delta-9-tetrahydrocannabinol on response priming in humans

Hassan Rashidi, Wouter A. Duetz, Rob Verpoorte

Production of more soluble cannabinoids by bacterial biotransformation

## Visit to Bedrocan BV

On Thursday, 8 September, and on Sunday, 10 September, there will be a possibility to visit the cannabis nursery of Bedrocan. The bus will depart at 12:00 on Thursday from the Van der Valk Hotel and be back at about 21:00. On Sunday the bus will depart at 9:00 and be back at about 18:00.