

28TH ANNUAL
SYMPOSIUM
OF THE

INTERNATIONAL CANNABINOID
RESEARCH SOCIETY

LEIDEN
NETHERLANDS

JUNE 30 – JULY 5, 2018

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SYMPOSIUM OF THE

INTERNATIONAL CANNABINOID
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2018 SYMPOSIUM ON THE CANNABINOIDS

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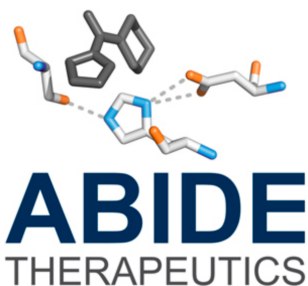
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REGISTRATION: JUNE 30TH, 2018 (16.00 – 18.00)
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WELCOME RECEPTION

DAY 1
SUNDAY, JULY 1ST

8.45	WELCOME AND OPENING REMARKS		
<p>ORAL SESSION 1. CANNABIS EVOLUTION AND CHEMOVARS CHAIRS: JOHN MCPARTLAND AND JORDYN STUART</p>			
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9.15	Michel McElroy, Hugo Maassen, Arno Hazekamp and Sean Myles*	CANNABIS RECLASSIFIED: REDEFINING 'INDICA' AND 'SATIVA' BY GENETICS AND CHEMISTRY	2
9.30	Mallory Loflin*, Philippe Lucas, Joshua Eades, Graham Eglit, Ryan Vandrey and Marcel O. Bonn-Miller	CANNABIS TERPENE PROFILES PARTIALLY ASSOCIATED WITH C. SATIVA/C. INDICA/HYBRID CLASSIFICATION	3
9.45	Kayla M. Hardwick and Alisha K. Holloway*	EVOLUTION OF CANNABINOID SYNTHASE PATHWAY GENES IN LANDRACE VARIETIES AND DRUG CULTIVARS	4
10.00	Malcolm Kavarana*, Richard Peet, Yuri Khmel'nitsky and Peter Michels	CHARACTERIZATION OF BIOCATALYTICALLY PRODUCED CANNABINOID AND CANNABINOID PRODRUGS	5

10.15	COFFEE BREAK		
ORAL SESSION 2. SYNTHETIC CANNABINOIDS CHAIRS: CHRIS BREIVOGEL AND DAN MORGAN			
10.45	Samuel D. Banister*, Richard C. Kevin, Christa MacDonald, Rochelle Boyd, Michelle Glass, Mark Connor, Roy R. Gerona and Iain S. McGregor	STRUCTURE-ACTIVITY RELATIONSHIPS OF EMERGENT SYNTHETIC CANNABINOID NEW PSYCHOACTIVE SUBSTANCES AND THEIR PROPHETIC ANALOGUES	6
11.00	Igor Spigelman*, Yatendra Mulpuri, Brian L. Schmidt, Todd W. Vanderah, Hong Zhang, Tally M. Largent-Milnes and Herbert H. Seltzman	SYNTHETIC CANNABINOID SUPPRESSES CANCER AND CISPLATIN-INDUCED NEUROPATHIC PAIN SYMPTOMS BY PERIPHERAL CB1 RECEPTOR ACTIVATION	7
11.15	Zoltan V. Varga*, Katalin Erdelyi, Resat Cinar, Raphael Mechoulam, George Kunos and Pal Pacher	THE SELECTIVE CB2-R AGONIST, HU-910 ATTENUATES HEPATORENAL SYNDROME DEVELOPMENT IN A MOUSE MODEL OF LIVER FAILURE	8
11.30	U. Grether*, S. M. Ametamey, K. Atz, E. M. Carreira, C. Davies, J. Fingerle, T. Gazzi, L. Gobbi, W. Guba, A. Haider, T. Hartung, L. Heitman, M. Honer, A. Ijzerman, A. Kimbara, J. Kretz, A. Martella, R. E. Martin, A. Mason, M. Nazare, M. Nettekoven, P. Pacher, A. de Paepe, A. Pedrina-McCarthy, M. Rogers-Evans, E. Roome, S. Röver, A. Rufer, R. Sarott, M. Soethoudt, C. Ullmer, M. van der Stelt, Z. Varga, D. B. Veprintsev and M. Westphal	RECENT PROGRESS TOWARD ENHANCED CHEMICAL PROBES FOR STUDYING THE CANNABINOID RECEPTOR 2	9

11.45	<p>Marjolein Soethoudt*, Sara C. Stolze, Matthias V. Westphal, Luuk van Stralen, Andrea Martella, Eva J. van Rooden, Wolfgang Guba, Zoltan V. Varga, Hui Deng, Sander I. van Kasteren, Uwe Grether, Adriaan P. IJzerman, Pal Pacher, Erick M. Carreira, Herman S. Overkleeft, Andreea Ioan-Facsinay, Laura H. Heitman and Mario van der Stelt</p>	<p>A SELECTIVE PHOTOAFFINITY PROBE ENABLES ASSESSMENT OF CANNABINOID CB2 RECEPTOR EXPRESSION AND LIGAND ENGAGEMENT IN HUMAN CELLS</p>	10
12.00	LUNCH		
12.00	NIDA NETWORKING SESSION		
13.30 - 14.30	<p><u>ICRS LIFETIME ACHIEVEMENT AWARD</u></p> <p>CB2 RECEPTORS IN THE CNS CECILIA J. HILLARD, PH.D. Professor, Director of the Neuroscience Research Center Medical College of Wisconsin Milwaukee, WI USA</p>		
<p>ORAL SESSION 3. CANNABIDIOL CHAIRS: HEATHER BRADSHAW AND NETA RIMMERMAN</p>			
14.30	<p>Daniel Couch*, Catherine Ortori, David Barrett, Jon Lund and Saoirse O'Sullivan</p>	<p>THE SWEETPEA STUDY: A RANDOMISED DOUBLE BLIND CONTROLLED TRIAL EXAMINING THE EFFECT OF PEA AND CBD ON THE PERMEABILITY OF THE HUMAN GUT <i>IN VIVO</i></p>	11

14.45	Moshe Yeshurun, Oren Pasvolsk, Pia Raanani, Sari Prutchi-Sagi* and Liat Shargian	CANNABIDIOL – AN INNOVATIVE STRATEGY FOR THE TREATMENT OF GRAFT VERSUS HOST DISEASE (GVHD)	12
15.00	Ashleigh L. Osborne*, Nadia Solowij, Jeremy S. Lum, Ilijana Babic, Kelly A. Newell, Xu-Feng Huang and Katrina Weston-Green	MECHANISMS UNDERLYING THE PRO-COGNITIVE EFFECTS OF CANNABIDIOL: INSIGHTS FROM THE RAT BRAIN AND SEX-SPECIFIC IMPLICATIONS	13
15.15	Emma Leishman*, Sally Miller, Ken Mackie and Heather B Bradshaw	WIDESPREAD EFFECTS OF ACUTE CBD ON THE ENDOGENOUS CANNABINOID RELATED LIPIDOME IN 8 BRAIN REGIONS OF WT AND NAPE-PLD KO MICE	14
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Notes:

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DAY 2
MONDAY, JULY 2ND

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9.00	David J. Marcus, Gaurav Bedse, Andrew Gaulden, Andre Haymer and Sachin Patel*	PHYSIOLOGY AND FUNCTION OF AMYGDALO-CORTICAL ENDOCANNABINOID SIGNALING	15
9.15	Roger Hudson*, Walter Rushlow and Steven R. Laviolette	DELTA-9-TETRAHYDROCANNABINOL AND CANNABIDIOL PRODUCE DISTINCT EFFECTS ON EMOTIONAL MEMORY FORMATION AND SALIENCE ATTRIBUTION THROUGH ACTIONS IN THE VENTRAL HIPPOCAMPUS	16
9.30	Elizabeth Hay*, Philip Cowie, Roy Gray, Ruth Ross, Perry Barrett, Roger Pertwee and Alasdair MacKenzie	EXPLORING THE EFFECTS OF GENETIC AND EPIGENETIC VARIATION ON CANNABINOID RECEPTOR-1 GENE EXPRESSION; IMPLICATIONS FOR PERSONALISED AND STRATIFIED MEDICINE	17
9.45	Mariam Alaverdashvili*, Quentin Greba, Michael Anderson, Andrew J. Roebuck, Wendie N. Marks, Sumanta Garai, Terrance P. Snutch, Ganesh A. Thakur, John G. Howland and Robert B. Laprairie	EFFECTS OF THE TYPE 1 CANNABINOID RECEPTOR POSITIVE ALLOSTERIC MODULATOR GAT211 ON ABSENCE SEIZURES AND THE ANXIETY-LIKE PHENOTYPE OF GENETIC ABSENCE EPILEPSY RATS FROM STRASBOURG	18
10.00	Nageeb Hassan*, Victoria Elizabeth Mackey, Courtney Clarke, Jordan Osmond, Sarah Bugden, Shannon Waye, Joshua Dean Conway and Francis Rodriguez Bambico	PREFRONTOCORTICAL ENDOCANNABINOID-CB1 TRANSMISSION MEDIATES THE ANTIDEPRESSANT-LIKE BEHAVIOURAL AND NEUROPLASTIC EFFECTS OF STRESS CONTROLLABILITY	19

10.15	COFFEE BREAK		
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10.45	Collin R. Warrick, Hayden R. Wright, Janelle M. Lugo and Ryan J. McLaughlin*	MATERNAL CANNABIS VAPOR EXPOSURE DOSE-DEPENDENTLY IMPAIRS BEHAVIORAL FLEXIBILITY IN ADULT OFFSPRING	20
11.00	Vanessa Montoya- Uribe*, Cun Li, Stacy Martinez, Peter Nathanielsz and Natalia Schlabritz-Loutsevitch	FETAL HEPATIC AND PLACENTAL CANNABINOID RECEPTOR 1 (CB1a AND CB1b) TRANSCRIPT VARIANTS IN MATERNAL UNDERNUTRITION	21
11.15	S. Beggiato*, R. Schwarcz and L. Ferraro	GESTATIONAL CANNABINOID EXPOSURE INFLUENCES EXTRACELLULAR KYNURENIC ACID AND GLUTAMATE LEVELS IN THE MEDIAL PREFRONTAL CORTEX OF ADOLESCENT OFFSPRING	22
11.30	Dilara Bahceci*, Nicole A. Hawkins, Lyndsey L. Anderson, Jordyn M. Stuart, Iain S. McGregor, Jennifer A. Kearney and Jonathon C. Arnold	ENDOCANNABINOID SYSTEM- RELATED GENETIC MODIFIERS IN A MOUSE MODEL OF DRAVET SYNDROME	23
11.45	Lyndsey L. Anderson*, Ivan K. Low, Iain S. McGregor and Jonathon C. Arnold	ANTICONVULSANT EFFICACY OF PHYTOCANNABINOIDS IN A MOUSE MODEL OF DRAVET SYNDROME	24
12.00	LUNCH		

12.30	INDUSTRY BREAKOUTS		
13.30 - 14.00	<p style="text-align: center;"><u>ICRS YOUNG INVESTIGATOR AWARD</u></p> <p style="text-align: center;">CHEMICAL TOOLS TO STUDY ENDOCANNABINOID BIOSYNTHESIS AND METABOLISM</p> <p style="text-align: center;">MARIO VAN DER STELT, PH.D. Professor of Molecular Physiology Leiden University Leiden, Netherlands</p>		
<p>ORAL SESSION 6. ENDOCANNABINOID REGULATION AND SIGNALING</p> <p>CHAIRS: JACKIE BLANKMAN AND EMMA LEISHMAN</p>			
14.00	Vasudev Kantae*, Annelot C. M. van Esbroeck, Floor Stevens, Rob C. van Wijk, Amy Harms, Piet H. Van der Graaf, Mario van der Stelt and Thomas Hankemeier	SYSTEMS PHARMACOLOGY OF AN ENDOCANNABINOID SYSTEM MODULATOR IN ZEBRAFISH LARVAE	25
14.15	Kata Kenesei, Benjámín Barti, Marco Ledri, Barna Dudok, Judit Glavinics, Vivien Miczán and István Katona*	QUALITATIVE AND QUANTITATIVE PROPERTIES OF TONIC CANNABINOID SIGNALING AT HIPPOCAMPAL GABAERGIC SYNAPSES	26
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15.00	Elliot D. Mock*, Mohammed Mustafa, Resat Cinar, Vasudev Kantae, Zoltan V. Varga, Ioli Kotsogianni, Anouk M.F. van der Gracht, Giulia Donvito, Janos Paloczi, Annelot C.M. van Esbroeck, Marjolein Soethoudt, Tom van der Wel, Ming Jiang, Timo J. Wendel, Antonius P.A. Janssen, Jesse Wat, Helma Rutjes, Constant A.A. van Boeckel, Thomas Hankemeier, Pal Pacher, Aron H. Lichtman and Mario van der Stelt	DISCOVERY AND CHARACTERISATION OF AN <i>IN VIVO</i> ACTIVE NAPE-PLD INHIBITOR	29
15.15	Jacqueline L Blankman*, Jason R Clapper, Cassandra Henry, Anna Knize, Aundrea R Coppola, Justin Cisar, Olivia Weber, Micah Niphakis, Evan Friedman, Danielle Bocchino, Nicole White, Vinh Ngo, Forrest Hull, Julianne Hunt, Cheryl Grice, Iain Fraser, Chan Beals, Gary O'Neill and Alan Ezekowitz	PRECLINICAL AND EARLY CLINICAL CHARACTERIZATION OF THE MONOACYGLYCEROL LIPASE INHIBITOR ABX-1431 FOR THE TREATMENT OF NEUROLOGICAL DISORDERS	30
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16.00 – 18.00	POSTER SESSION 2 RECEPTION		P2
18.00	BUSINESS MEETING		

Notes:

Presenting Author*

DAY 3
TUESDAY, JULY 3RD

8.45	OPENING REMARKS		
<p>ORAL SESSION 7. IMMUNE SYSTEM</p> <p>CHAIRS: SHARON ANAVI-GOFFER AND ALEX STRAIKER</p>			
9.00	<p>Petteri Rinne, Raquel Guillamat-Prats, Martina Rami, Larisa Ring, Laura Bindila, Leo-Pekka Lyytikäinen, Emma Raitoharju, Niku Oksala, Terho Lehtimäki, Emiel P.C. van der Vorst and Sabine Steffens*</p>	<p>PALMITOYL-ETHANOLAMIDE PROMOTES A PRO-RESOLVING MACROPHAGE PHENOTYPE AND ATTENUATES ATHEROSCLEROTIC PLAQUE FORMATION IN MICE</p>	31
9.15	<p>Hava Karsenty Avraham*, Othman Benchama, Michael Malamas and Alexandros Makriyannis</p>	<p>FUNCTION OF THE BIOACTIVE LIPID PALMITOYL-ETHANOLAMIDE (PEA) AND ITS HYDROLYZING ENZYME N-ACYLETHANOLAMINE ACID AMIDASE IN TNBC PROGRESSION, INFLAMMATION AND METASTASIS</p>	32
9.30	<p>Carmen Navarrete*, Adela García, Belén Palomares, Leyre Mestre, Miriam Mecha, Ana Feliú, Martín Garrido, Marco A Calzado, M. Luz Bellido, Carmen Guaza and Eduardo Muñoz</p>	<p>EFFECT OF ORAL VCE-004.8, A CANNABIDIOL QUINOL DERIVATIVE, ON EXPERIMENTAL AUTOIMMUNE ENCEPHALOMYELITIS</p>	33
9.45	<p>Alex Straiker, Natalia Murataeva*, Matthew Lashmet and Sally Miller</p>	<p>ENDOCANNABINOIDS AS CHEMOTAXIC REGULATORS OF EARLY STAGE CORNEAL WOUND HEALING</p>	34

10.00	Resat Cinar*, Nathan J. Coffey, Joshua K. Park, Tony Jourdan, Tadafumi Yokoyama, William A. Gahl, May Christine V. Malicdan and George Kunos	OVERACTIVITY OF CB1 RECEPTORS (CB1R) ON MYELOID CELLS PROPAGATE FIBROGENIC MICROENVIRONMENT IN LUNG FIBROSIS	35
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11.00	Louise Corcoran*, Darragh Mattimoe, Michelle Roche and David P. Finn	REGULATION OF NOCICEPTIVE BEHAVIOUR AND FEAR-CONDITIONED ANALGESIA BY 2-AG IN THE RAT MEDIAL PREFRONTAL CORTEX	37
11.15	S. Boccella, C. Cristiano, L. Luongo, R. Romano, C. Belardo, M. Iannotta, M. Mazzitelli, D. De Gregorio, F. Guida, I. Marabese, E. Palazzo, V. de Novellis, Luigia Cristino, Vincenzo Di Marzo, A. Calignano and S. Maione*	PALMITOYL-ETHANOLAMIDE, VIA PPAR-ALPHA RECEPTOR, RESTORES THE ALTERED PLASTICITY AND AMELIORATES THE COMPROMISED PAIN-RELATED BEHAVIORS IN THE HIPPOCAMPUS OF NEUROPATHIC MICE	38

11.30	Divya Ramesh*, Emma Leishman, Katherine Bernier, Angela R. Starkweather and Heather Bradshaw	AN EXPLORATORY ANALYSIS OF CIRCULATING ENDOCANNABINOID-RELATED LIPIDOME ASSOCIATED WITH THE TRANSITION FROM ACUTE TO CHRONIC LOW BACK PAIN	39
11.45	Josée Guindon, Henry Blanton, Seth Brauman, Kelsey Donckels and Khalid Benamar*	HORMONALLY DRIVEN SEX-DIFFERENCES AND SPINAL CHANGES IN ENDOCANNABINOID LEVELS IN HIV- 1 GP120-INDUCED NEUROPATHIC PAIN	40
12.00 – 12.30	<p style="text-align: center;"><u>ICRS YOUNG INVESTIGATOR AWARD</u></p> <p style="text-align: center;">TARGETING FABP5 TO TREAT PAIN, INFLAMMATION, AND CANCER</p> <p style="text-align: center;">MARTIN KACZOCHA, PH.D.</p> <p style="text-align: center;">Assistant Professor Department of Anesthesiology Stony Brook University, NY USA</p>		
12.30	<p style="text-align: center;">FOR OUTING PARTICIPANTS – BOX LUNCH FOR ALL OTHER DELEGATES – BUFFET LUNCH</p>		
14.00 – 17.00	<p style="text-align: center;">OUTING</p>		

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Presenting Author*

DAY 4
WEDNESDAY, JULY 4TH

8.45	OPENING REMARKS		
<p>ORAL SESSION 9. CANNABINOID INTERACTIONS WITH DRUGS OF ABUSE (ETHANOL AND OPIOIDS)</p> <p>CHAIRS: MARY ABOOD AND MATT HILL</p>			
9.00	<p>Grzegorz Godlewski*, Resat Cinar, Tony Jourdan, Nathan Coffey, Bani Mukhopadhyay, Jie Liu, Ziyi Liu, Joshua Park, Douglas Osei-Hyiaman, Malliga R. Iyer and George Kunos</p>	<p>PERIPHERAL CANNABINOID CB1 RECEPTOR BLOCKADE REDUCES ETHANOL DRINKING IN MICE VIA THE GUT-BRAIN AXIS, BY LIMITING GHRELIN ACYLATION IN THE STOMACH</p>	41
9.15	<p>Christopher Norris*, Hanna J. Szkudlarek, Brian Pereira and Steven R. Laviolette</p>	<p>Δ^9-TETRAHYDROCANNABINOL (THC) PRODUCES BI-PHASIC REWARDING AND AVERSIVE EFFECTS IN THE ANTERIOR VS. POSTERIOR NUCLEUS ACCUMBENS SHELL THROUGH DISSOCIABLE MU VS. KAPPA OPIATE RECEPTOR MECHANISMS AND DIFFERENTIAL MODULATION OF MEDIUM SPINY NEURON ACTIVITY STATE</p>	42
9.30	<p>Shanna Babalonis*, Michelle R. Lofwall, Paul A. Sloan, Paul A. Nuzzo, Laura C. Fanucchi and Sharon L. Walsh</p>	<p>CANNABINOID MODULATION OF THE ANALGESIC EFFECTS OF OPIOIDS IN HUMANS</p>	43
9.45	<p>Joel E. Schlosburg*, Anush R. Karnati, Leandro Vendruscolo, Benjamin F. Cravatt and George F. Koob</p>	<p>RATS LACKING FATTY ACID AMIDE HYDROLASE (FAAH) ACTIVITY SHOW REDUCED INTAKE AND MOTIVATION IN MODELS OF OPIOID ADDICTION</p>	44

10.00	Sara Jane Ward*, Zachary W Reichenbach, Patricia Reggio, Dow Hurst, Thomas J. Rogers, William G. Cornwell, Lee-Juan.Liu Chen and Ronald F Tuma	MODULATION OF MORPHINE ANTINOCICEPTIVE EFFECTS AND MU OPIOID RECEPTOR BINDING BY A SELECTIVE CB2 RECEPTOR AGONIST IN MICE	45
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10.45	Natasha L. Mason*, Eef L. Theunissen, Nadia R.P.W. Hutten, Desmond Tse and Johannes G. Ramaekers	BRAIN KINETICS OF NEUROTRANSMISSION DURING THC INTOXICATION	46
11.00	Ryan Vandrey*, Marcel O. Bonn-Miller, William E. Fantegrossi, Staci A. Gruber, Nalin Payakachat, Nicolas J. Schlienz, Rosemary T. Smith and Mark A. Ware	DEVELOPMENT OF A CORE ASSESSMENT BATTERY FOR OBSERVATIONAL CANNABIS RESEARCH STUDIES	47
11.15	Angela D. Bryan*, Sophie YorkWilliams, Arielle S. Gillman, Charleen J. Gust, Gregory Giordano, Timothy B. Helmuth, L. Cinnamon Bidwell and Kent E. Hutchison	DOES CANNABIS USE FACILITATE EXERCISE BEHAVIOR AMONG OLDER ADULTS? RESULTS FROM A SUPERVISED EXERCISE INTERVENTION	48
11.30	Elisa Pabon* and Harriet de Wit	FIELD SOBRIETY TEST FOR CANNABIS	49

11.45	Maria-Fernanda Arboleda*, Erin Prosk, Guy Chamberland and Antonio Vigano	THE TRUTH IS IN TITRATION: IMPROVING SAFETY OUTCOMES OF THE WORLD'S FIRST INHALED CANNABIS PRESCRIPTION DRUG	50
12.00	LUNCH		
12.30	INDUSTRY BREAKOUTS		
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13.30	Balsevich G*, Petrie G, Singh A, Sticht M, Chelikani PK and Hill MN	A GENETIC VARIANT OF FATTY ACID AMIDE HYDROLASE (FAAH) EXACERBATES GLUCOCORTICOID-MEDIATED METABOLIC OUTCOMES	51
13.45	Francesca Guida*, Carmela Belardo, Francesca De Filippis, Serena Boccella, Monica Iannotta, Livio Luongo, Fabiana Piscitelli, Ida Marabese, Danilo Ercolini, Vincenzo Di Marzo and Sabatino Maione	ALTERED GUT MICROBIOTA AND ENDOCANNABINOID SYSTEM TONE IN VITAMIN D DEFICIENCY-MEDIATED CHRONIC PAIN	52
14.00	Ya Wang, Diederik Esser, Michiel Balvers, Yong-hao Chen, Sophie Schutte, Jean-Paul Vincken, Harry Gruppen, Lydia A. Afman, Renger F. Witkamp and Jocelijn Meijerink*	POSTPRANDIAL EFFECTS ON ENDOCANNABINOID PLASMA PROFILES AND FAT TISSUE CB1 EXPRESSION WITH A HIGH CALORIE MIXED-MEAL TEST IN OBESE HUMANS UPON A 12 WEEKS RANDOMISED CONTROLLED TRIAL WITH 2 DIFFERENT ENERGY-RESTRICTED DIETS	53
14.15	Isabel González-Mariscal*, Rodrigo A. Montoro and Josephine M. Egan	MUSCLE CANNABINOID 1 RECEPTOR GOVERNS PHYSICAL PERFORMANCE AND WHOLE-BODY METABOLISM	54

14.30 – 15.30	<p style="text-align: center;"><u>KANG TSOU MEMORIAL LECTURE</u></p> <p style="text-align: center;">STEM CELL-BASED ORGANOIDs AS AVATARS IN HUMAN DISEASE</p> <p style="text-align: center;">HANS CLEVERS, M.D., PH.D.</p> <p style="text-align: center;">University Medical Center Utrecht, Utrecht, The Netherlands University of Utrecht, The Netherlands Hubrecht Institute of the Royal Netherlands Academy of Arts, Utrecht, The Netherlands Princess Maxima Center for Pediatric Oncology, Utrecht, The Netherlands</p>	
15.30 – 16.00	FLASH TALKS 3	F18 - F27
16.00 – 18.00	POSTER SESSION 3	P3
18.00	<p>RECEPTION</p> <p>Pieterskerk</p>	
19.00	<p>AWARDS CEREMONY</p> <p>AND</p> <p>ICRS BANQUET</p> <p>Pieterskerk</p>	

DEPARTURE: THURSDAY, JULY 5TH

FLASH TALKS 1

SUNDAY, JULY 1ST: 15:30 - 16:00

Chloe Jordan*, Guo-Hua Bi, Peng Yang, Xiang-Qun Xie and Zheng-Xiong Xi	XIE2-64, A NOVEL CB2 RECEPTOR INVERSE AGONIST, INHIBITS COCAINE SELF-ADMINISTRATION AND OPTOGENETIC BRAIN-STIMULATION REWARD IN RATS AND MICE	F1 [P1-70]
Ali Mokhtar Mahmoud*, Viviana Marolda, Aniello Schiano Moriello, Luciano De Petrocellis, Vincenzo Di Marzo, Roberto Ronca and Alessia Ligresti	CANNABINOIDS AS METABOLIC REPROGRAMING AGENTS IN PROSTATE CANCER CELLS	F2 [P1-71]
Kent E. Hutchison*, L. Cinnamon Bidwell, Sophie YorkWilliams, Reaghan Mueller and Angela D. Bryan	HIGH POTENCY CANNABIS PRODUCTS: PUBLIC HEALTH THREAT OR RED HERRING?	F3 [P1-72]
Georgia Watt, Kani Shang, Magdalena Przybyla, Arne Ittner, Lars Ittner, Hongyun Li, Brett Garner and Tim Karl*	THE THERAPEUTIC POTENTIAL OF CANNABIDIOL (CBD) FOR ALZHEIMER'S DISEASE – A PRECLINICAL PERSPECTIVE	F4 [P1-73]
Philippe Lucas*	CANNABIS SIGNIFICANTLY REDUCES THE USE OF OPIOIDS AND IMPROVES QUALITY OF LIFE IN PATIENTS; PRELIMINARY RESULTS OF A LARGE PROSPECTIVE STUDY	F5 [P1-74]
Stevie C. Britch*, Jenny, L. Wiley and Rebecca M. Craft	CANNABIDIOL AND Δ^9 -TETRAHYDROCANNABINOL TREATMENT OF HINDPAW PAIN AND INFLAMMATION IN MALE VS FEMALE RATS	F6 [P1-75]

<p>Dow P. Hurst*, David B. Finlay, Diane L. Lynch, Michelle Glass and Patricia H Reggio</p>	<p>CB1 MUTATIONS TO TEST THE RELEVANCE OF N-TERMINAL RESIDUES F102 AND M103 CONTACT WITH TARANABANT</p>	<p>F7 [P1-76]</p>
<p>Chris Bladen*, Marina Santiago, Mitchell Longworth, Michael Kassiou, Sam Banister and Mark Connor</p>	<p>CHARACTERIZATION AND MODULATION OF HUMAN CAV3.2 CHANNELS BY SYNTHETIC CANNABINOIDS <i>IN VITRO</i></p>	<p>F8 [P1-77]</p>
<p>Chris Breivogel* and Jacob Wells</p>	<p>THE SEIZURE-INDUCING ACTIVITY OF VARIOUS CLASSES OF CANNABINOIDS</p>	<p>F9 [P1-78]</p>

Notes:

Presenting Author*

FLASH TALKS 2

MONDAY, JULY 2ND: 15:30 - 16:00

Hilary A. Marusak*, Craig Peters, Farrah Elrahal, Kyle J. Burghardt and Christine A. Rabinak	GENETIC VARIATION IN ENDOCANNABINOID SIGNALING AND BRAIN AND BEHAVIORAL MECHANISMS UNDERLYING FEAR EXTINCTION IN CHILDREN AND ADOLESCENTS	F10 [P2-75]
Andras Bilkei-Gorzo*, Onder Albayram, Kerstin Michel, Anastasia Piyanova, Mona Dvir-Ginzberg, Ildiko Rácz and Andreas Zimmer	A CHRONIC LOW DOSE OF Δ^9 -THC RESTORES FAILING CANNABINOID SIGNALLING AND THUS BRAIN AGEING IN OLD MICE	F11 [P2-76]
Caitlin M. Nealon, Angela N. Henderson-Redmond, David E. Hale, Diana E. Sepulveda, Henry Blanton, Josée Guindon and Daniel J. Morgan*	EVIDENCE FOR AGONIST-SPECIFIC MECHANISMS OF CANNABINOID TOLERANCE IN PATHOLOGICAL PAIN	F12 [P2-77]
Zahir Hussain*, Toru Uyama, Katsuhisa Kawai, Smriti Sultana Binte Mustafiz, Kazuhito Tsuboi, Nobukazu Araki and Natsuo Ueda	CHARACTERIZATION OF CYTOSOLIC PHOSPHOLIPASE A2 ϵ : PHOSPHATIDYLSERINE-STIMULATED PRODUCTION OF N-ACYL-PHOSPHATIDYLETHANOLAMINE	F13 [P2-78]
Lesley D. Schurman*, Terry L. Smith, Linda L. Phillips, Thomas M. Reeves and Aron H. Lichtman	DIACYLGLYCEROL LIPASE- β KNOCKOUT MICE DISPLAY A SURVIVAL PROTECTIVE PHENOTYPE FOLLOWING TRAUMATIC BRAIN INJURY	F14 [P2-79]
Xiaoyan Lin*, Lawrence M. Carey, Julian Romero, Alexandros Makriyannis, Cecilia J. Hillard, Ken Mackie, Philip J. Albrecht, Frank L. Rice and Andrea G. Hohmann	ELUCIDATION OF THE ROLE OF CANNABINOID CB2 RECEPTORS IN MODULATING NEUROPATHIC PAIN USING A CB2 REPORTER MOUSE	F15 [P2-80]
Matthew W. Elmes*, Dale G. Deutsch and Martin Kaczocha	FATTY ACID BINDING PROTEINS REGULATE CANNABINOID METABOLISM	F16 [P2-81]
Szabolcs Dvorácskó*, Attila Keresztes, Adriano Mollica, Ferenc Zádor, Gyöngyi Horváth and Csaba Tömböly	TARGETING THE MU OPIOID AND CANNABINOID RECEPTORS WITH HETEROBIFUNCTIONAL LIGANDS	F17 [P2-82]

FLASH TALKS 3

WEDNESDAY, JULY 4TH: 15:30 - 16:00

Bogna Ignatowska-Jankowska*, Douglas J. Hermes, Changqing Xu, Ian R. Jacobs, Rick B. Meeker, Micah J. Niphakis, Benjamin F. Cravatt, Ken Mackie, Aron H. Lichtman and Sylvia Fitting	INHIBITION OF FAAH PROTECTS AGAINST MICROGLIAL ACTIVATION AND NEUROTOXICITY INDUCED BY HIV-1 TAT PROTEIN IN VITRO	F18 [P3-66]
Baptiste Buisseret*, Owein Guillemot-Legriss, Mireille Alhouayek and Giulio G. Muccioli	THE 2-AG METABOLITE PGD2-G DECREASES INFLAMMATORY PAIN IN MICE	F19 [P3-67]
Stephanie Lake*, Thomas Kerr, Daniel Werb, Rebecca Haines-Saah, Benedikt Fischer, Gerald Thomas, Zach Walsh, Mark A. Ware, Evan Wood and M-J Milloy	GUIDELINES FOR PUBLIC HEALTH AND SAFETY METRICS TO EVALUATE THE POTENTIAL HARMS AND BENEFITS OF CANNABIS REGULATION IN CANADA	F20 [P3-68]
Thomas K. Henthorn*, Cristina Sempio and Susan K. Mikulich-Gilbertson	ESTIMATING PLASMA PHARMACOKINETICS OF THC, THC-OH, TCH-COOH AND THC-COOH-GLUCURONIDE	F21 [P3-69]
Diane Bogdan, Jerome Falcone, Martha P. Kanjiya, Sang Hoon Park, Gregory Carbonetti, Keith Studholme, Yong Lu, Matthew W. Elmes, Su Yan, Iwao Ojima, Michelino Puopolo and Martin Kaczocha*	FATTY ACID BINDING PROTEIN 5 INHIBITION SUPPRESSES MICROSOMAL PROSTAGLANDIN E SYNTHASE-1 INDUCTION AND PROSTAGLANDIN E2 BIOSYNTHESIS DURING INFLAMMATION	F22 [P3-70]
Nicholas Lintzeris*, David Allsop, Adrian Dunlop, Anjali Bhardwaj, Llew Mills, Iain McGregor, Jan Copeland and Mark Montebello	FINDINGS FROM A RANDOMISED PLACEBO CONTROLLED TRIAL OF NABIXIMOLS IN THE TREATMENT OF CANNABIS DEPENDENCE	F23 [P3-71]

<p>Adi Drori*, Anna Permyakova and Joseph Tam</p>	<p>CANNABINOID-1 RECEPTOR REGULATES MITOCHONDRIAL DYNAMICS AND FUNCTION IN RENAL PROXIMAL TUBULAR CELLS</p>	<p>F24 [P3-72]</p>
<p>Belén Palomares*, Francisco Ruiz- Pino, Miguel A. Sanchez-Garrido, Martin Garrido, María E. Prados, Xavier Nadal, Carlos Ferreiro- Vera, Gaetano Morello, Giovanni Appendino, Marco A Calzado, Manuel Tena-Sempere and Eduardo Muñoz</p>	<p>TETRAHYDROCANNABINOLIC ACID TARGETS PPARγ AND PREVENTS DIET- INDUCED OBESITY</p>	<p>F25 [P3-73]</p>
<p>Aarón del Pozo Sanz*, María Villa Cruz, Guillermo Pagés Hernando, Carlos Vargas Coronado, María Ceprián Costoso, Wild Hind, José Martínez Orgado and Ana Gutiérrez Rodríguez</p>	<p>CANNABIDIOL REDUCES INTRAVENTRICULAR HAEMORRHAGE EXTENSION AND SECONDARY BRAIN DAMAGE IN NEWBORN RATS</p>	<p>F26 [P3-74]</p>
<p>María Ceprián*, María Villa, Guillermo Pagés, Carlos Vargas, Aarón Del Pozo, Adrián Olmos- Alonso, Will Hind, Rapahel Mechoulam, Javier Fernández-Ruíz, Ana Gutiérrez-Rodríguez, María Ruth Pazos and José Martínez-Orgado</p>	<p>ROLE OF CB2 RECEPTOR IN THE NEUROPROTECTIVE EFFECT OF CBD IN A NEONATAL RAT MODEL OF HYPOXIA ISCHEMIA</p>	<p>F27 [P3-75]</p>

Notes:

Presenting Author*

POSTER SESSION 1

SUNDAY, JULY 1ST: 16:00 - 18:00

Chandni Hindocha*, Tom P Freeman, Meryem Grabski, Jack B Stroud, Holly Crudgington, Alan C Davies, Ravi K Das, Will Lawn, Celia JA Morgan and H Valerie Curran	CANNABIDIOL REVERSES ATTENTIONAL BIAS TO CIGARETTE CUES IN A HUMAN EXPERIMENTAL MODEL OF TOBACCO WITHDRAWAL	P1-1
Christine A. Rabinak*, Craig Peters, Hilary A. Marusak, Samiran Ghosh and K. Luan Phan	EFFECTS OF ACUTE Δ^9 -TETRAHYDROCANNABINOL ON POST-EXTINCTION RESTING- STATE DYNAMICS WITHIN FEAR- EXTINCTION NEURAL CIRCUITRY	P1-2
Sophie A. Millar*, Andrew S. Yates and Saoirse E. O'Sullivan	A SYSTEMATIC REVIEW ON THE PHARMACOKINETIC PROFILE OF CANNABIDIOL IN HUMANS	P1-3
Carrie Cuttler*, Alexander Spradlin and Ryan J. McLaughlin	A NATURALISTIC EXAMINATION OF THE PERCEIVED ACUTE EFFECTS OF CANNABIS ON NEGATIVE AFFECT	P1-4
Iman Khuja, Reuven Or and Osnat Almogi-Hazan*	THE ANTI-INFLAMMATORY EFFECT OF CANNABINOIDS ADMINISTRATION IN GRAFT VERSUS HOST DISEASE MAY BE HAMPERED BY SUPPRESSIVE EFFECT ON LYMPHOCYTE RECONSTITUTION – COMPARISON OF Δ^9 -TETRAHYDROCANNABINOL (THC), CANNABIDIOL (CBD) AND CANNABIS EXTRACTS TREATMENT IN BONE MARROW TRANSPLANTATION MURINE MODELS	P1-5
Eef L. Theunissen*, Nadia R. P. W. Hutten, Natasha L. Mason, Stefan W. Toennes, Kim P. C. Kuypers and Johannes G. Ramaekers	NEUROCOGNITION AND SUBJECTIVE EXPERIENCE FOLLOWING ACUTE DOSES OF THE SYNTHETIC CANNABINOID JWH-018: RESPONDERS VERSUS NON-RESPONDERS	P1-6
Richard Peet*, Malcolm Kavarana and Mingyang Sun	PHYSICOCHEMICAL PROPERTIES OF CANNABINOIDS PRODUCED BY BIOCATALYSIS	P1-7

Marcus R. Goetz*, Javier Fernández-Ruiz, Bernd L. Fiebich, Laura García-Toscano, María Gómez-Cañas, Oskar Koch, Eduardo Muñoz, María R. Pazos and Ulrike Holzgrabe	<i>IN VITRO</i> AND <i>EX VIVO</i> EFFECTS OF NOVEL SEMI-SYNTHETIC CANNABINOID DERIVATIVES	P1-8
Torsten Lowin* and Georg Pongratz	ACTIVATION OF TRPM3 DECREASES CANNABIDIOL-INDUCED LARGE CATION UPTAKE VIA INTRACELLULAR TRPA1 IN RHEUMATOID ARTHRITIS SYNOVIAL FIBROBLASTS	P1-9
Sara J. Abdallah*, Benjamin M. Smith, Mark A. Ware, Michelle Moore, Pei Zhi Li, Jean Bourbeau and Dennis Jensen	EFFECT OF INHALED VAPORIZED CANNABIS ON PULMONARY FUNCTION IN PATIENTS WITH ADVANCED CHRONIC OBSTRUCTIVE PULMONARY DISEASE	P1-10
Yingpeng Liu, Lipin Ji, Marsha Eno, Shalley Kudalkar, Alex Straiker, Marion Schimpfen, Othman Benchama, Chandrashekar Honrao, Anisha Korde, Paula Morales, Shu Xu, Michaela Dvorakova, Dow Hurst, Simiao Wu, JodiAnne T. Wood, Nikolai Zvonok, Demetris P. Papahadjis, Subramanian K. Vadivel, Patricia Reggio, Ken Mackie, Lawrence Marnett, Alexandros Makriyannis and Spyros P. Nikas*	DISCOVERY OF CHIRAL ENDOCANNABINOID PROBES	P1-11
Sytze W. Elzinga*, Kevin F. Nolan, Raquel Keledjian and Jeffrey C. Raber	A HIGH-RESOLUTION LC-MS/MS METHOD FOR PESTICIDES IN CANNABIS PRODUCTS	P1-12
Sergiy Tyukhtenko*, Xiaoyu Ma, Kiran Vemuri and Alexandros Makriyannis	RATIONAL MODULATION OF DRUG-TARGET RESIDENCE TIME FOR MONOACYLGLYCEROL LIPASE INHIBITORS	P1-13
Alicia López*, M.Asunción de la Barreda-Manso, Noelia Aparicio, M.Teresa Grande, Mario Amores, Gonzalo Ruiz, Rosa M Tolón, M. Ruth Pazos, Cecilia J. Hillard and Julián Romero	EFFECTS OF CB2 RECEPTOR MODULATION IN ALZHEIMER'S DISEASE	P1-14

<p>Kushal Gandhi*, Maira Carrillo, Stacy Martinez, Iram P. Rodriguez-Sanchez, Cathy Perez, Edward Dick and Natalia Schlabritz-Loutsevitch</p>	<p>HEPATIC ENDOCANNABINOID SYSTEM (ECS) IN COMMON MARMOSETS (<i>Callithrix jacchus</i>)</p>	<p>P1-15</p>
<p>Erica Wymore*, Claire Palmer, George Sam Wang, Torri Metz, David Bourne, Cristina Sempio, Jost Klawitter and Maya Bunik</p>	<p>EXCRETION AND PERSISTENCE OF MARIJUANA IN HUMAN BREAST MILK</p>	<p>P1-16</p>
<p>Kushal Gandhi*, Cun Li, Peter Nathanielsz and Natalia Schlabritz-Loutsevitch</p>	<p>MATERNAL NUTRIENT RESTRICTION DOES NOT INFLUENCE FETAL CEREBRAL ENDOCANNABINOID AEA (ANANDAMIDE) PATHWAY</p>	<p>P1-17</p>
<p>Khalil Eldeeb*, Kassim Traore, Sandra Leone-Kabler and Allyn C. Howlett</p>	<p>THE CANNABINOID 1 RECEPTOR ANTAGONIST O2050 POTENTIAL CARDIOPROTECTIVE EFFECTS IN CARDIOMYOBLAST CELLS</p>	<p>P1-18</p>
<p>Gregory Carbonetti*, Xiaoxue Peng, Tessa Wilpshaar, Jessie Kroonen, Cynthia Converso, Simon D'Oelsnitz and Martin Kaczocha</p>	<p>FABP5 CONTROLS LIPID SIGNALING THAT PROMOTES PROSTATE CANCER METASTASIS</p>	<p>P1-19</p>
<p>Jahan Marcu*, David Mangone, Beth Collins, Debbie Churgai and Steph Sherer</p>	<p>ANALYSIS OF REGULATORY IMPROVEMENTS AND SETBACKS FOR MEDICAL CANNABIS PROGRAMS AND PRODUCT SAFETY STANDARDS</p>	<p>P1-20</p>
<p>Jana Hajslova*, Frantisek Benes, Jiri Hricko, Jahan Marcu, Pavel Kubu, Steph Sherer and Ethan Russo</p>	<p>CANNABINOIDS DECARBOXYLATION AND METABOLOMIC TRANSFORMATION OF ENTOURAGE EFFECT BIOACTIVE COMPLEXES</p>	<p>P1-21</p>
<p>Henry Blanton, Kelsey Donckels, Isabel Castro, Kevin Pruitt and Josée Guindon*</p>	<p>CHRONIC ADMINISTRATION OF ACEA, A CBI AGONIST, FAILED TO PREVENT TUMOR GROWTH IN A XENOGRAFT ECTOPIC OVARIAN CANCER MODEL</p>	<p>P1-22</p>
<p>Wajd AlKabbani*, Silvia Alessi-Severini, Shawn Bugden, Ruth Ann Marrie, Paul Daeninck and Christine Leong</p>	<p>PRESCRIPTION CANNABINOID USE IN A CANADIAN PROVINCE: A POPULATION-BASED STUDY (2004-2014)</p>	<p>P1-23</p>

Mikael A. Kowal*, Wouter Dijkstra and Femke Starrenburg	THE USAGE OF AN INHALATION DEVICE FOR PULMONARY ADMINISTRATION OF CANNABIS ('BEDROMEDIC') AMONG MEDICINAL CANNABIS PATIENTS	P1-24
Qing-Rong Liu*, Nicholas S. Huang, Hong Qu, Jennifer F. O'Connell, Isabel Gonzalez-Mariscal, Sara Santa-Cruz Calvo, Maire E. Doyle, Zheng-Xiong Xi, Yun Wang and Emmanuel S. Onaivi	IDENTIFICATION OF NOVEL MOUSE AND RAT CB1R ISOFORMS AND <i>IN SILICO</i> MODELING OF HUMAN CB1R FOR PERIPHERAL CANNABINOID THERAPEUTICS	P1-25
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Zachary Bellman*, Sophie A. Millar, Tim England and Saoirse E. O'Sullivan	A SYSTEMATIC REVIEW OF CANNABIDIOL DOSING IN PATIENT STUDIES	P1-28
Thais Gazzi*, Kenneth Atz, Wolfgang Guba, Christoph Ullmer, Mathias Christmann and Marc Nazare	DESIGN, SYNTHESIS AND EVALUATION OF NOVEL IMAGING PROBES FOR THE VISUALIZATION OF THE CANNABINOID TYPE 2 RECEPTOR (CB2R)	P1-29
Luis Arruza, Lorena Barata, Eva Vierge, Carlos Vargas, Ana Gutiérrez-Rodríguez*, Guillermo Pagés, Aarón del Pozo, María Villa, Will Hind and Jose Martínez-Orgado	BENEFICIAL EFFECTS OF CANNABIDIOL IN SEVERE LUNG DAMAGE FOLLOWING MECONIUM ASPIRATION IN NEWBORN PIGLETS	P1-30
Antonius P.A. Janssen*, Jacob M.A. van Hengst, Hui Deng and Mario van der Stelt	THE (IR)REVERSIBILITY OF DAGL- α INHIBITORS	P1-31
Daniel J. Farkas*, Jeffrey D. Foss, Joe J. Meissler, Toby K. Eisenstein, Ronald F. Tuma and Sara J. Ward	SINGLE AND COMBINATIVE EFFECTS OF CANNABIDIOL AND β -CARYOPHYLLENE ON THE LIEBER-DECARLI DIET	P1-32

Tiah Lee*, David P. Overy and Cory S. Harris	COMPARISON OF VAPORIZED AND NON-VAPORIZED <i>CANNABIS SATIVA</i> L. CHEMICAL COMPLEXITY USING HPLC-DAD AND MS-BASED METABOLOMICS	P1-33
Paula Morales*, Noori Sotudeh, Dow P. Hurst, Pingwei Zhao, Nadine Jagerovic, Mary Abood and Patricia H. Reggio	DESIGN OF NOVEL GPR18 ANTAGONISTS USING A FRAGMENT REPLACEMENT SCAFFOLD HOPPING APPROACH	P1-34
Sarah H. Shrader*, Alyssa S. Laun, Herbert H. Seltzman, Frank Navas, III, Patricia H. Reggio and Zhao-Hui Song	THE EFFECTS OF SR144528 ANALOGUES ON GPR3 AND GPR6	P1-35
Michael Udoh*, Marina Santiago, Iain McGregor and Mark Connor	CANNABICHROMENE IS A CB2-SELECTIVE PHYTOCANNABINOID	P1-36
Richard C. Kevin*, Samuel D. Banister, Rochelle Boyd, Alexander L. Kovach, Brian F. Thomas, Michelle Glass, Mark Connor and Iain S. McGregor	PHARMACOLOGY, TOXICOLOGY, AND THERMAL STABILITY OF EMERGENT SYNTHETIC CANNABINOID 4-CYANO CUMYL-BUTINACA	P1-37
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Marta Bryk*, Jakub Mlost, Alessia Ligresti, Federico Corelli and Katarzyna Starowicz	ANALGESIC EFFECTS OF NEW PYRAZOLYL-PYRIDINE BASED SCAFFOLDS TARGETING CB2 RECEPTORS IN OSTEOARTHRITIS-RELATED PAIN	P1-39
Przemysław Kac*, Marta Bryk, Jakub Mlost and Katarzyna Starowicz	ANALGESIC EFFECT OF (<i>E</i>)- β -CARYOPHYLLENE IN RAT MODEL OF OSTEOARTHRITIS	P1-40
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Matthias Winkler*, Bernd L. Fiebich and Marcus R. Goetz	EFFECTS OF NOVEL SYNTHETIC (+)- ENANTIOMERS OF NATURAL OCCURRING CANNABINOIDS AND THEIR DERIVATIVES ON CB1 AND CB2 SIGNALLING	P1-45
Barbara Malinowska*, Rafał Kossakowski, Jolanta Weresa and Eberhard Schlicker	CANNABIDIOL AFFECTS THE BEZOLD- JARISCH REFLEX VIA TRPV1 AND 5-HT3 RECEPTORS AND HAS PERIPHERAL SYMPATHOMIMETIC EFFECTS IN SPONTANEOUSLY HYPERTENSIVE AND NORMOTENSIVE RATS	P1-46
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Kristi Sadler* and Susan Snycerski	EDUCATIONAL AND EMPLOYMENT DEMOGRAPHICS OF MEDICAL CANNABIS PATIENTS IN THE CALIFORNIA BAY AREA	P1-48
Olga Karpińska*, Marta Baranowska-Kuczko, Monika Kloza, Mirosław Kozłowski, Hanna Kozłowska and Barbara Malinowska	HYPERTENSION MODIFIES THE CANNABIDIOL-MEDIATED VASCULAR RESPONSE IN ISOLATED HUMAN PULMONARY AND RAT SMALL MESENTERIC ARTERIES	P1-49
Franciele F Scarante, Rafael P Aguiar, Eduardo J Fusse, Francisco S Guimaraes and Alline C Campos*	CANNABIDIOL, BUT NOT URB597, ENHANCES BEHAVIORAL EFFECTIVENESS OF ESCITALOPRAM IN MICE SUBMITTED TO CHRONIC STRESS	P1-50
Richard Peet*, Malcolm Kavarana, Mingyan Sun, John Rabenstein, Yuri Khmel'nitsk and Peter Michels	THE BIOCATALYTIC PRODUCTION OF CANNABINOIDS IN HIGH VOLUMETRIC EFFICIENCIES	P1-51

<p>Heather B Bradshaw* and Emma Leishman</p>	<p>Δ^9-TETRAHYDROCANNABINOL (THC), CANNABIDIOL (CBD) OR A THC/CBD COMBINATION DRIVE DIFFERENTIAL CHANGES IN ENDOCANNABINOIDS, PROSTAGLANDINS, AND RELATED LIPIDS IN MICROGLIA, ASTROCYTES, AND NEURONS</p>	<p>P1-52</p>
<p>Matthijs Geert Bossong*, Hendrika Heiltje van Hell, Chris Schubart, Wesley van Saane, Tabitha Iseger, Gerry Jager, Martijn Jansma, René Kahn, Marco Boks and Nick Ramsey</p>	<p>ACUTE EFFECTS OF Δ^9-TETRAHYDROCANNABINOL (THC) ON RESTING STATE BRAIN FUNCTION AND THEIR MODULATION BY COMT GENOTYPE</p>	<p>P1-53</p>
<p>Debra Kimless*</p>	<p>USE OF SUBLINGUAL ADMINISTRATION OF CANNABIDIOL AND PALMITOYLETHANOLAMIDE FOR THE TREATMENT OF MILD TO MODERATE MUSCULO-SKELETAL PAIN</p>	<p>P1-54</p>
<p>Linda E. Klumpers* and David L. Thacker</p>	<p>DEVELOPMENT OF A DATA-DRIVEN TOOL TO EDUCATE PATIENTS ON EFFICACY AND TOLERABILITY OF CANNABIS-BASED PRODUCTS</p>	<p>P1-55</p>
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Notes:

Presenting Author*

POSTER SESSION 2

MONDAY, JULY 2ND: 16:00 - 18:00

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Kunal Sudan*, Henry Moller and Lee Saynor	PILOT DATA FROM A PROSPECTIVE OBSERVATIONAL NATURALISTIC STUDY OF CANNABIDIOL-RICH DRIED FLOWER IN THE TREATMENT/REDUCTION OF ANXIETY	P2-65
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Notes:

Presenting Author*

POSTER SESSION 3

WEDNESDAY, JULY 4TH: 16:00 - 18:00

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Donovan A. Argueta, David D. Lo and Nicholas V. DiPatrizio*	ENDOCANNABINOIDS IN THE GUT CONTROL NUTRIENT SENSING AND GUT-BRAIN SATIATION SIGNALING	P3-6
Nadia Solowij*, Samantha Broyd, Camilla Beale, Lisa-marie Greenwood, Hendrika van Hell, Chao Suo, Peter Galettis, Jennifer Martin and Murat Yücel	THERAPEUTIC EFFECTS OF PROLONGED CANNABIDIOL TREATMENT ON PSYCHOLOGICAL SYMPTOMS, COGNITIVE FUNCTION AND HIPPOCAMPAL SUBFIELD VOLUMES IN REGULAR CANNABIS USERS: A PRAGMATIC OPEN-LABEL CLINICAL TRIAL	P3-7

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<p>Andrea Chicca*, Inés Reynoso Moreno, Vanessa Petrucci, Daniela Nieri, Silvia Tietz, Beat Lutz, Britta Engelhardt, Juan Manuel Viveros- Paredes and Jürg Gertsch</p>	<p>POTENT AND SELECTIVE ENDOCANNABINOID REUPTAKE INHIBITORS: PHARMACOLOGICAL POTENTIAL FOR THE MODULATION OF THE ENDOCANNABINOID SYSTEM</p>	<p>P3-9</p>
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ICRS LIFETIME ACHIEVEMENT AWARD

SUNDAY, JULY 1, 2018

13:30 – 14:30

CB2 RECEPTORS IN THE CNS

Cecilia J. Hillard, Ph.D.

Professor, Director, Neuroscience Research Center

Department of Pharmacology and Neuroscience Research Center

Medical College of Wisconsin

Milwaukee, WI

USA

My laboratory has been interested in the enigmatic CB2 receptors since the early 1990s. CB2 receptors can be expressed by microglia, although at very low levels in the healthy brain. Microglial CB2 expression is up-regulated in a variety of pathological conditions, particularly when neuroinflammation is involved.

I will review our previous studies, and discuss our recent data regarding microglial CB2 receptor involvement in responses to cocaine

YOUNG INVESTIGATOR AWARD PRESENTATION

MONDAY, JULY 2, 2018

13:30 – 14:00

CHEMICAL TOOLS TO STUDY ENDOCANNABINOID BIOSYNTHESIS AND METABOLISM

Mario van der Stelt, Ph.D.

Department of Molecular Physiology

Leiden University

Leiden, Netherlands

The success of new drugs depends on our ability to understand their molecular and cellular mechanism of action. Modulation of cannabinoid CB1 and CB2 receptors activity by the endocannabinoids is associated with therapeutic benefits in humans. Poor understanding of the physiological role of endocannabinoids and lack of detailed selectivity profiling of experimental drugs, however, led to the market withdrawal of Acomplia[®], a CB1 receptor antagonist, and the death of one volunteer in a phase 1 clinical trial exposed to the FAAH inhibitor BIA 10-2474. To assess the therapeutic potential of the endocannabinoid system and its drug candidates, we have developed and characterized β -lactone-based activity-based probes (MB064) and a photoaffinity probe (LEI121) that targets brain lipases and the cannabinoid CB2 receptor, respectively. In a competitive activity-based protein profiling and chemical proteomics format these tailor-made probes were employed to discover the first brain active inhibitors of endocannabinoid biosynthesis [1-3], reported the off-target landscape of BIA 10-2474 [4] and to profile CB2 receptor expression and its ligands in human cells [5-6]. Finally, in this lecture I will also discuss the discovery of in vivo active NAPE-PLD inhibitors.

1. Baggelaar et al. *J. Am. Chem. Soc.*, **2015**, 137, 8851
2. Ogasawara et al., *Proc. Natl. Acad. Sci.*, **2016**, 113, 26
3. Van Rooden en al., *Nature Prot.* **2018**, 13, 752
4. Van Esbroeck et al., *Science*, **2017**, 356, 1084
5. Soethoudt et al., *J. Am. Chem. Soc.*, **2018**, 140, 6067
6. Soethoudt et al. *Nature Comm.*, **2017**, Jan 3, 13958

YOUNG INVESTIGATOR AWARD PRESENTATION

TUESDAY, JULY 3, 2018

12:00 – 12:30

TARGETING FABP5 TO TREAT PAIN, INFLAMMATION, AND CANCER

Martin Kaczocha, Ph.D.

Department of Anesthesiology
Department of Biochemistry and Cell Biology
Institute of Chemical Biology and Drug Discovery
Stony Brook University, Stony Brook, NY, USA

Fatty acid binding proteins (FABPs) are a family of intracellular lipid carriers that modulate diverse biological functions. In addition to their canonical roles in fatty acid metabolism and nuclear receptor signaling, accumulating evidence has pointed to FABPs as critical modulators of endocannabinoid signaling and inactivation. Since the discovery that FABP5 serves as a carrier for endocannabinoids nearly a decade ago, my laboratory has sought to elucidate the functions of FABP5 in endocannabinoid signaling in the brain and peripheral tissues and has embarked on a program to develop small molecule inhibitors targeting FABP5 to modulate the endocannabinoid tone. Here, I will first discuss our current understanding of the mechanistically distinct functions of FABP5 in endocannabinoid signaling in the brain and peripheral tissues. I will then discuss our efforts to develop small molecule FABP5 inhibitors for the treatment of pain and inflammation. Lastly, I will discuss our recent foray into the area of prostate cancer and our discovery that FABP5 plays an obligate role in controlling pro-tumorigenic lipid signaling and will highlight the therapeutic potential of targeting FABP5 to treat metastatic prostate cancer. Future directions and gaps in the current knowledge of FABP function will also be discussed.

Acknowledgements: This work was supported by the National Institutes of Health (DA035949 and DA035923) and the Stony Brook University Department of Anesthesiology.

KANG TSOU MEMORIAL SPEAKER

WEDNESDAY, JULY 4, 2018

14:30 – 15:30

STEM CELL-BASED ORGANOID AS AVATARS IN HUMAN DISEASE

Hans C. Clevers, M.D., Ph.D.

University Medical Center Utrecht, Utrecht, The Netherlands
University of Utrecht, The Netherlands
Hubrecht Institute of the Royal Netherlands Academy of Arts, Utrecht, The Netherlands
Princess Maxima Center for Pediatric Oncology, Utrecht, The Netherlands

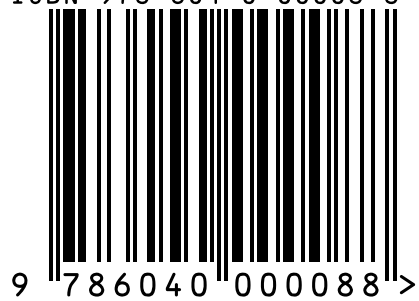
Stem cells are the foundation of all mammalian life. Stem cells build and maintain our bodies throughout life.

Every organ in our body is believed to harbor its own dedicated stem cells. These adult stem cells replace tissue that is lost due to wear and tear, trauma and disease. Adult stem cells are highly specialized and can only produce the tissue in which they reside; they are 'multipotent'. Examples are bone marrow stem cells that make all blood cells, skin stem cells and gut stem cells. Even the brain is now known to harbor its specialized stem cells. The adult stem cells allow us to live 80-90 years, but this comes at a cost: they are the cells that most easily transform into cancer cells.

We have identified a gene (*lgr5*) that marks a series of known and novel adult stem cells, in organs such as the gut, the liver, the lung and the pancreas. We have learned to grow these stem cells in a dish into mini-versions of the human organs from which they derive. This so called organoid technology opens a range of avenues for the study of development, physiology and disease, and for personalized medicine. In the long run, cultured mini-organs may replace transplant organs from donors and hold promise in gene therapy.



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9. Boutique Hotels van Leyden



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