

Trends in Natural Product Research

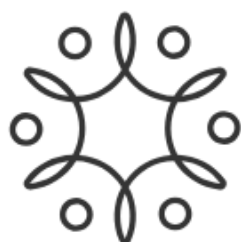
PSE Young Scientists' Meeting

on Biochemistry, Molecular Aspects and
Pharmacology of Bioactive Natural Products



BUDAPEST, June 19-22, 2019

Programme



YSM 2019
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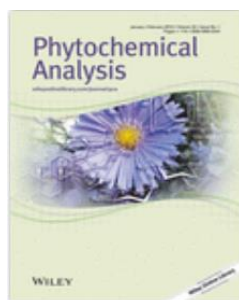
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Welcome to PSE-YSM 2019 Budapest!

On behalf of Phytochemical Society of Europe (PSE), and the Organising and Scientific Committee of the PSE-YSM 2019 Budapest, we are delighted to welcome you to Budapest and the Phytochemical Society of Europe's Young Scientists' Meeting! This year's conference focuses on Trends in Natural Product Research - Biochemistry, Molecular Aspects and Pharmacology of Bioactive Natural Products, and promises to be an outstanding platform for scientists working on the field of natural product research, including phytochemistry, molecular biology, phytochemical analysis, bioactivity of natural products, phytotherapy. The conference takes place in Hotel Benczúr (Budapest), which is located in the heart of the city centre.

The aim of the conference is to serve as a forum for discussions on trends, most current topics and latest results of natural product research, and bringing together senior scientists, young researchers, and PhD students from all over the world. The scientific program includes 15 plenary lectures by leading scientists, 34 short lectures and 37 poster presentations. Moreover, the winner of the Pierre Fabre Research and Development Innovation Prize will present his results. Young scientists will have the opportunity to win Harborne and OlChemIm awards, honouring with them the best oral and poster presentations, respectively, in addition with the traditional PSE travel bursaries and PCA/Wiley Grant.

During your stay in Budapest, we hope that you take the opportunity to explore the beautiful metropolis with a history dating back over 2000 years. Budapest situating on both sides of the Danube River and having a vibrant cultural life and friendly atmosphere provided opportunity for the attendees to become acquainted with the monuments of the historical past of the city and discover its present with contemporary museums, spas and restaurants.

We hope that you will find the conference stimulating and rewarding, and we look forward to your contribution to make this an exciting and fruitful meeting.

Welcome to Budapest!

The organizers

Judit Hohmann, Dezső Csupor

SCIENTIFIC PROGRAMME

Venue: Hotel Benczúr (Benczúr utca 35, H-1068 Budapest, Hungary)

Lectures: Budapest Room

Poster session: Lobby

For the Book of abstracts (doi: 10.14232/tnpr.2019.af),
scan the QR code



Wednesday June 19th, 2019

10:00-18:00	Registration	
12:00-13:30	Lunch	
Welcome and Opening Lecture		
13:30-14:00	Inauguration	Welcome and Announcements: Prof. Judit Hohmann Welcome: Prof. Éva Szökő, President of Pharmaceutical Committee of Hungarian Academy of Sciences PSE update: President of the PSE, Prof. Satyajit D Sarker
14:00-14:30	Satyajit D Sarker	PL-1: Libyan medicinal plants and their cytotoxic compounds
Session 1 Chaired by Satyajit D. Sarker		
14:30-15:00	Virginia Lanzotti	PL-2: NMR spectroscopy and mass spectrometry in the discovery of bioactive natural products
15:00-15:15	Odetta Celaj	SL-1: <i>In vitro</i> antioxidant and enzyme inhibitory properties, metabolomic profile and computational studies <i>Cistanche phelypaea</i> (L.)
15:15-15:30	Lina Yousef	SL-2: Metabolomics and <i>in vitro</i> cytotoxicity of extracts obtained from a desert plant and its soil
15:30-15:45	Aleksandra Burdziej	SL-3: Metabolomic alterations in elicitor-treated grapevine <i>Vitis vinifera</i> leaves monitored by ¹ H NMR
15:45-16:00	Laura Grauso	SL-4: Metabolomics of the alimurgic plants <i>Taraxacum officinale</i> , <i>Papaver rhoeas</i> and <i>Urtica dioica</i> by combined NMR and GC-MS analysis
16:00-16:30	Coffee break	
Session 2 Chaired by Virginia Lanzotti		
16:30-17:00	Matthias Hamburger	PL-3: Searching for the needle in the haystack – targeted identification of pharmacologically active natural products
17:00-17:30	Anders Backlund	PL-4: Applications of chemography in natural products
17:30-17:45	Didem Şöhretoğlu	SL-5: Investigations on secondary metabolites of a relict oak: <i>Quercus pontica</i>
17:45-18:00	Gokay Albayrak	SL-6: Coumarins and polyacetylenes from <i>Prangos uechtritzii</i> Boiss&Hauskn roots
18:00-21:00	Welcome reception	Hotel Benczúr

Thursday June 20th, 2019

Session 3 Chaired by Luc Pieters		
8:30-9:00	Veronika Butterweck	PL-5: Polyphenols as biogenic additives and value added products
9:00-9:30	Rudolf Bauer	PL-6: The important role of gut microbiota for the therapeutic activity of herbal extracts
9:30-9:45	Kenneth J. Ritchie	SL-7: The conundrum of phytochemicals and cancer
9:45-10:00	Petr Voňka	SL-8: Molecular mechanisms of action of selected steroids in breast cancer cells
10:00-10:15	Wee Sim Choo	SL-9: Inhibitory activity of a betacyanin formulation from red pitahaya (<i>Hylocereus polyrhizus</i>) and red spinach (<i>Amaranthus dubius</i>) against polymicrobial biofilms of <i>Staphylococcus aureus</i> and <i>Pseudomonas aeruginosa</i>
10:15-10:30	Sushmita Nath	SL-10: Effects of major secondary metabolites of <i>Ricinus communis</i> on porcine uterine contractility
10:30-11:00	Coffee break	
Session 4 Chaired by Maria Jose U. Ferreira		
11:00-11:30	Giovanni Appendino	PL-7: Electrophilic natural products: friends or foes in natural products drug discovery?
11:30-11:45	Mayuri Napagoda	SL-11: <i>Plectranthus zeylanicus</i> Benth: A potent source of secondary metabolites with antimicrobial, disinfectant and anti-inflammatory activities
11:45-12:00	Karel Šmejkal	SL-12: Prenylated phenolics with anti-inflammatory effects
12:00-12:15	Hiba A Jasim	SL-13: Bioactivity of synthetic chalcones in MRC-5 SV2 cells
12:15-12:30	Nóra Gampe	SL-14: <i>Ononis</i> isoflavonoids aiming the CNS
12:30-14:00	Lunch	
Session 5 Chaired by Kenneth J. Ritchie		
14:00-14:30	Fang-Rong Chang	PL-8: Development of traditional complex formulas as therapeutic agents
14:30-15:00	Attila Hunyadi	PL-9: ROS scavenging by small-molecule antioxidants: key to a neglected treasury of bioactive compounds
15:00-15:15	Katalin Patonay	SL-15: Main phenolic constituents of <i>Mentha longifolia</i> (L.) L. samples from Northern Hungary – extractability, variability and contribution to some in vitro antioxidant properties of the plant
15:15-15:30	Kimel Katarzyna	SL-16: Comparative phytochemical analysis of active compounds from <i>Symphytum officinale</i> roots and leaves
15:30-15:45	Surat Laphookhieo	SL-17: Bioactive prenylated xanthenes from the young fruits and flowers of <i>Garcinia cowa</i>
15:45-16:00	Marina Kritsanida	SL-18: Centrifugal Partition Chromatography method optimization for the isolation of antibacterial compounds from the fruits of <i>Pistacia lentiscus</i>
16:00-17:00	Coffee + Posters	16:00-18:30 SCM

Session 6 Chaired by Vassilios Roussis		
17:00-17:30	Jean-Luc Wolfender	PL-10: Do we still need to isolate Natural Products for their identification? – A paradigm shift in pharmacognosy
17:30-17:45	Anca Miron	SL-19: Plant-derived antimicrobials: combination strategies to mitigate antibiotic resistance
17:45-18:00	Aimond Axelle	SL-20: Anti-oxidant seasonal variation study of <i>Sideritis hyssopifolia</i> by untargeted metabolomics
18:00-18:15	Shaymaa Al-Majmaie	SL-21: Antimicrobial activity and mechanisms of action of selected flavonoids from the Rutaceae
19:30-22:00 Gala dinner in Városliget Café & Restaurant anno 1895		

Friday June 21th, 2019

Session 7 Chaired by Karel Šmejkal		
8:30-9:00	Maria-José U. Ferreira	PL-11: Exploring plant metabolites to overcome multidrug resistance in cancer chemotherapy
9:00-9:30	Luc Pieters	PL-12: Biological activity of naturally occurring glycosides after gastrointestinal biotransformation
9:30-9:45	Afaf Gerushi	SL-22: <i>In vitro</i> cytotoxicity of <i>Asphodelus aestivus</i> against human cancer cell lines
9:45-10:00	Nancy A. ElNaker	SL-23: Antioxidant capacity and <i>in vitro</i> breast cancer cytotoxicity of aqueous extracts from <i>Arthrocnemum macrostachyum</i> are affected by drying method
10:00-10:15	Agata Rogowska	SL-24: Tracer method (¹⁴ C-labelling) for investigating the metabolic flux pattern in triterpenoid biosynthetic pathway in <i>Calendula officinalis</i> hairy roots after elicitation with jasmonic acid
10:15-10:30	Marie Pokorná	SL-25: Biological active compounds from <i>Morus alba</i> root bark
10:30-11:00 Coffee break		
Session 8 Chaired by Anca Miron		
11:00-11:30	Rudolf Brenneisen	PL-13: Medical Cannabis – An Update
11:30-11:45	Claudio Ferrante	SL-26: Phytochemical and pharmacological approach for the evaluation of water flower extract activity of four commercial Italian hemp cultivars
11:45-12:00	Misaki Ono	SL-27: Anti-tumour activity of four soy isoflavone components against Src-activated human adenocarcinoma cells
12:00-12:30 AGM		
12:30-14:00 Lunch		
Session 9 Chaired by Krystyna Skalicka-Woźniak		
14:00-14:30	Pierre Fabre Awards	PF Award Winner: Marc Diederich: Natural compound inducers of immunogenic cell death
14:30-15:00	Bruno David	PL-14: Pharma industry and plant natural products: today and tomorrow

15:00-15:15	Johanna Gasser	SL-28: Polyphenols from waste streams of industrial marzipan production
15:15-15:30	Aidilla Mubarak	SL-29: Edible film incorporated with ternary blend cinnamon oil: a natural source for fruit preservation
15:30-15:45	Fatma Sezer Senol Deniz	SL-30: Evaluation of possible cosmeceutical effects of Turkish plants
15:45-16:00	Emil Jivishov	SL-31: Aromatic sulphur compounds from <i>Allium</i> species induce antioxidant signalling in human bladder cancer cells
Session 10 Chaired by Bruno David		
16:00-16:30	Gábor Vasas	PL-15: Nonribosomal peptides from cyanobacteria
16:30-16:45	Nellie Francezon	SL-32: Marennine-like pigments: microalgae blue mystery
16:45-17:00	Ahmed Latif	SL-33: <i>In vitro</i> antitumor activity of protoflavone-based hybrid compounds on human gynecological cancer cell lines
17:00-17:15	Marta Oliveira	SL-34: A first insight into the nutritional value, phenolic content and biological activities of the halophyte <i>Cladium mariscus</i> L. Pohl
17:15-17:30	PSE Award Ceremony	
17:30	Closing Ceremony	

Poster presentations

	Authors	Title
PO-1	<u>Raviraja Shetty G</u> , Anitha T M, P. E. Rajasekharan	Evaluation of bioactive compounds in leaves of <i>Moringa concanensis</i> accessions
PO-2	<u>Mebeaselassie Andargie</u> , Zana Jamal, Anna Rathgeb, Petr Karlovsky	Targeted HPLC-MS analysis of sesame (<i>Sesamum indicum</i> L.) seeds, roots and hairy roots
PO-3	<u>Rajesh Mohanraj</u> , Kamal Hassan, Balaji Venkataraman	Nootkatone elicits hepatoprotective and anti-fibrotic actions in a murine model of liver fibrosis by suppressing oxidative stress, inflammation, and apoptosis
PO-4	<u>Milan Malaník</u> , Monika Paulíková, Kateřina Pomykalová, Tereza Pospíšilová, Hana Šafářová, Karel Šmejkal	Isolation and characterization of bioactive compounds from <i>Broussonetia papyrifera</i> (L.) L'Hér. ex Vent.
PO-5	<u>Mindaugas Liaudanskas</u> , Elena González-Burgos, Jonas Viškelis, Vaidotas Žvikas, M. Pilar Gómez-Serranillos	The beneficial effect of extracts from <i>Eucalyptus globulus</i> leaves on modulation of antioxidant enzymatic defense system
PO-6	<u>Shreesh Ojha</u> , Hayate Javed, Nagoor Meeran MF, Sheikh Azimullah	α -Bisabolol mitigates rotenone-induced dopaminergic neurodegeneration by suppressing oxidative stress, neuroinflammation and apoptosis in rat model of Parkinson's disease
PO-7	<u>Jung-In Kim</u> , Ae-Jin Jo	Hypolipidemic effect of autumn olive berry in mice fed a high-fat, high-sucrose diet

	Authors	Title
PO-8	<u>Sarayut Radapong</u> , Satyajit D. Sarker, Kenneth J. Ritchie	Gene expression profiles of MCF-7 cells treated with oxyresveratrol
PO-9	Jostina Rakoma, Emmanuel Tshikalange, <u>Sekelwa Cosa</u>	<i>Calpurnia aurea</i> ethanol extract reduces <i>Pseudomonas aeruginosa</i> quorum sensing-dependent virulence factors
PO-10	<u>Baloyi Itumeleng</u> , Cosa Sekelwa, Combrinck Sandra, Leonard Carmen, Viljoen Alvaro	Anti-quorum sensing and antibiofilm activities of South African medicinal plants against uropathogens
PO-11	Maria Daskalaki, Dimitra Vyrla, Maria Harizani, Christina Doxaki, Aristides Eliopoulos, <u>Vassilios Roussis</u> , Efstathia Ioannou, Christos Tsatsanis, Sotirios Kampranis	Neurogioltriol and related diterpenes from the red alga <i>Laurencia</i> inhibit inflammatory bowel disease in mice by suppressing M1 and promoting M2-like macrophage responses
PO-12	<u>Bayar Chuluunbaatar</u> , Božena Muszyńska, Joanna Gdula-Argasińska, Judit Hohmann, Attila Ványolós	Anti-inflammatory activity of steroids from <i>Hypholoma lateritium</i>
PO-13	<u>Ling Jin</u> , Eun-Yeong Kim, Tae-Wook Chung, Jung-Hee Lee, So Young Park, Jung Ho Han, Jong Rok Lee, Young Woo Kim, Se Bok Jang, Kibong Kim, Ki-Tae Ha	A novel pyruvate dehydrogenase kinase inhibitor hemistepsin A increases mitochondria-dependent apoptosis of colorectal cancer
PO-14	Hye-Rin Park, Hee-Jung Choi ¹ , Mi-Ju Park, <u>Ki-Tae Ha</u>	Paeoniflorin increases the adhesion of trophoblast to the endometrium by upregulating the expression of Integrin $\alpha V\beta 3$ and $\alpha V\beta 5$
PO-15	<u>Kristóf B. Cank</u> , Tyler N. Graf, Christopher A. Rice, Dennis E. Kyle, Cedric J. Pearce, Nicholas H. Oberlies	Isolation and characterization of fungal secondary metabolites with anti- <i>Naegleria fowleri</i> (brain eating amoeba) activity
PO-16	Manh Tuan Ha, Jeong Ah Kim, Jae Sui Choi, <u>Byung Sun Min</u>	Inhibition of PTP1B of phenolic compounds from the root bark of <i>Morus alba</i>
PO-17	Mohamed Tammam, Susana Agusti, <u>Efstathia Ioannou</u> , Carlos M. Duarte, Vassilios Roussis	Polychlorinated pyrrolidinones from a Saudi Arabian Red Sea sponge of the genus <i>Lamellodysidea</i>
PO-18	<u>Dóra Stefkó</u> , Anita Barta, Norbert Kúsz, Attila Csorba, Zoltán Kele, László Bakacsy, Ágnes Szepesi, Péter Bérđi, István Zupkó, Judit Hohmann, Andrea Vasas	Mono- and diphenanthrenes with antiproliferative activity from <i>Juncus gerardii</i>
PO-19	<u>Reham Hammadi</u> , Norbert Kúsz, Peter Waweru Mwangi, Ágnes Kulmány, István Zupkó, Péter Orvos, László Tálosi, Judit Hohmann, Andrea Vasas	Isolation and pharmacological investigation of compounds from <i>Euphorbia matabelensis</i>
PO-20	<u>Zsuzsanna Csilla Dávid</u> , Norbert Kúsz, Gyula Pinke, Péter Bérđi, István Zupkó, Judit Hohmann, Andrea Vasas	Isolation and pharmacological investigation of jacaranone derivatives from <i>Crepis pulchra</i>

	Authors	Title
PO-21	<u>Balázs Kovács</u> , Tivadar Kiss, Boglárka Csupor-Löffler, Elek Ferencz, Norbert Kúsz, Yu-Chi Tsai, Judit Hohmann, Dezső Csupor	Isolation of sesquiterpene lactones from common ragweed (<i>Ambrosia artemisiifolia</i> L.)
PO-22	<u>Javad Mottaghipisheh</u> , Norbert Kúsz, Judit Hohmann, Yu-chi Tsai and Dezső Csupor	Isolation and structural elucidation of secondary metabolites from <i>Eremurus persicus</i>
PO-23	<u>Mayuri Napagoda</u> , Chamika Liyanaarachchi, Shamila Malkanthi, Kaumadhi Abayawardana, Sanjeeva Witharana, Lalith Jayasinghe ³	Development of herbal sunscreen formulations from the flowers of <i>Osbeckia octandra</i> DC.
PO-24	Irina Macovei, Valeria Harabagiu, Liviu Săcărescu, Petronela Pascariu, Alina Diaconu, Cristina Lungu, Bianca Ivănescu, Elvira Gille, <u>Anca Miron</u>	Green synthesis of silver nanoparticles using <i>Pinus nigra</i> bark aqueous extract and their potential applications
PO-25	Mustafa T. Ardah, Madiha Mohieldine Merghani, <u>M. Emdadul Haque</u>	Thymoquinone prevents neurodegeneration against MPTP <i>in vivo</i> model of Parkinson’s disease and modulates α -synuclein aggregation <i>in vitro</i>
PO-26	<u>Prosuntsova Daria</u> , Fedorova Elizaveta, Rodin Igor, Ananieva Irina, Stavrianidi Andrey	Standardization of extracts from roots <i>P. ginseng</i> and <i>P. quinciphola</i> by the use of HPLC/MS
PO-27	Stavrianidi Andrey, Shpigun Oleg, Rodin Igor, <u>Fedorova Elizaveta</u>	Preparative isolation and structure determination of three steroidal saponins and their isomers from <i>Dioscorea deltoidea</i> based on an NMR and HRMS methods
PO-28	<u>Sylvia Kalli</u> , Yiran Lin, Carla Araya-Cloutier, Jean-Paul Vincken	Maximizing plant’s capacity to synthesize antimicrobial compounds
PO-29	Levente Tyukodi, Mónika Kuzma, <u>Tímea Bencsik</u>	Examination of cannabinoid content of different extracts prepared from <i>Cannabis sativa</i> L.
PO-30	<u>Mindaugas Liaudanskas</u> , Monika Tallat-Kelpšaitė, Jonas Viškelis, Pranas Viškelis, Norbertas Uselis, Darius Kviklys	Quantitative and qualitative differences of phenolic compounds in apples grown in different geographical regions
PO-31	<u>Michał Markowski</u> , Abdulwadood S. M. Alsoufi	Increase of phytosterols content in response to cytokinin kinetin treatment of marigold (<i>Calendula officinalis</i>) hairy roots
PO-32	<u>Aleksandra Burdziej</u> , Magdalena Chojak, Cezary Pączkowski, Stéphanie Cluzet, Anna Szakiel	Metabolism of sterols and pentacyclic triterpenoids in grapevine <i>Vitis vinifera</i> leaves elicited with methyl jasmonate
PO-33	<u>Rafał Becker</u> , Cezary Pączkowski, Agata Bogdańska, Agnieszka Wojtaszko, Tomasz Golis, Anna Szakiel	Exploring free and glycosidic forms of triterpenoids in cuticular waxes and tissues of chokeberry and blackberry leaves

	Authors	Title
PO-34	<u>Rafał Becker</u> , Cezary Pączkowski, Agata Bogdańska, Agnieszka Wojtaszko, Anna Szakiel	Insights into epicuticular wax composition of fruits and leaves of Saskatoon (<i>Amelanchier alnifolia</i> Nutt. cv. Smoky and Northline)
PO-35	<u>Martin Vollár</u> , Dezső Csupor, Boglárka Csupor-Löffler, Norbert Kúsz, Katalin Kövér E., Attila Mándi, Tibor Kurtán, Péter Szűcs, Marianna Marschall, Judit Hohmann	Isolation of phenanthrenes from the moss <i>Paraleucobryum longifolium</i>
PO-36	Elek Ferencz, Norbert Kúsz, Judit Hohmann, Martin Vollár, Ágnes Kerekes, Zoltán Péter Zomborszki, Boglárka Csupor-Löffler	Chemical characterization of common ragweed (<i>Ambrosia artemisiifolia</i> L.) root
PO-37	<u>Eszter Laczkó Zöld</u> , Attila Horváth, Blanka Bacsadi and Dezső Csupor	Development and validation of a HPLC-UV method for the quantification of charantin in <i>Momordica charantia</i> products

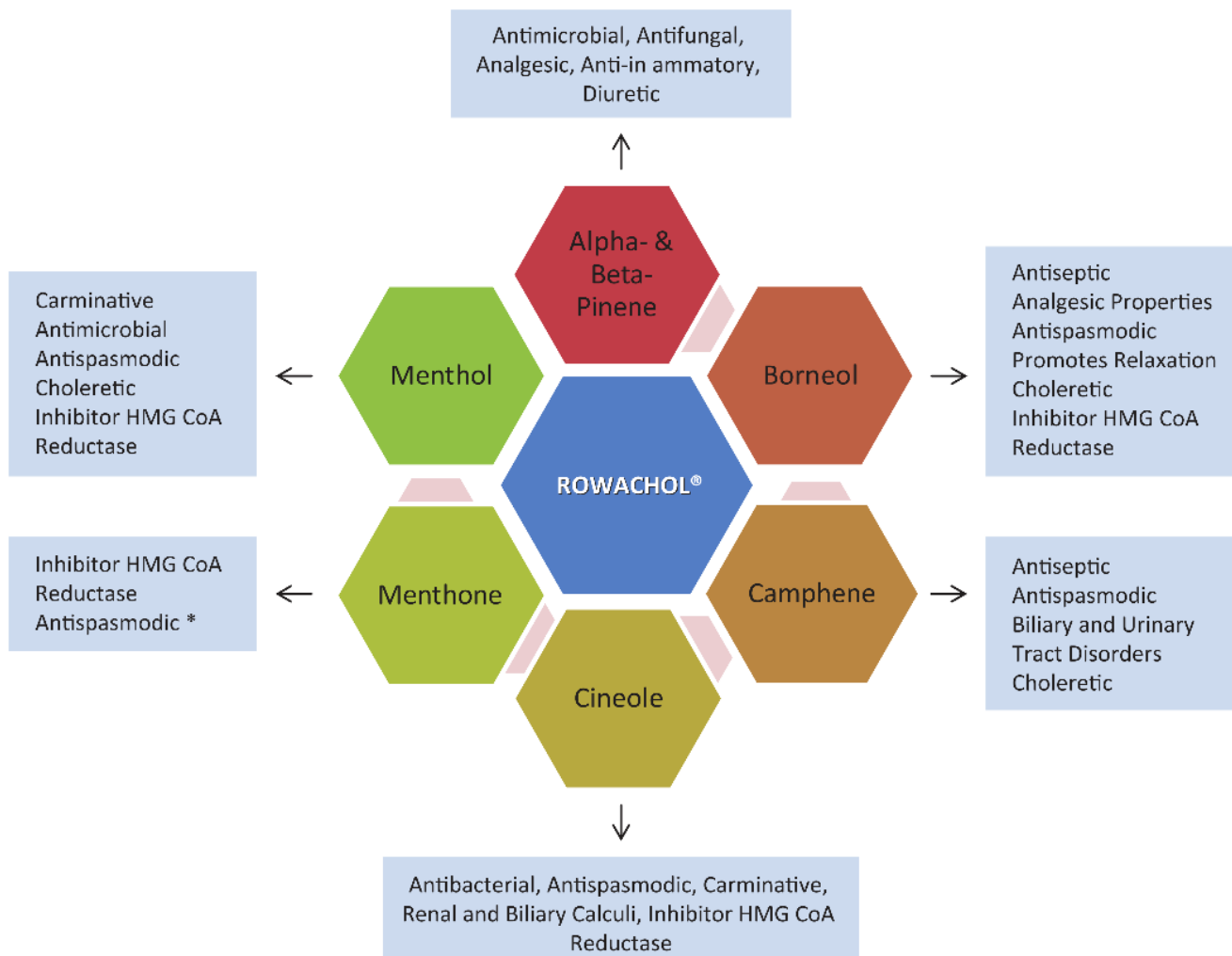
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References: * EMA Assessment report on mentha x piperita L. aetherolatum Sep 2008