

American Council for Medicinally Active Plants (ACMAP)

6th Annual Conference
June 9-12, 2015
Washington State University –
Spokane Riverpoint Campus
Spokane, WA USA



Tuesday, June 9, 2015

5:00 – 6:00 pm

ACMAP Board of Directors Meeting
Red Lion Hotel – Skyline 1 conference room

6:00 – 8:00 pm

Reception and Registration
Red Lion Hotel conference room – Skyline 1 conference room

Dr. Fabricio Medina-Bolivar – ACPMAP President
Arkansas State University

Dr. Amit Dhingra – ACPMAP 2015 Chair and Host
Washington State University

Dr. Kenneth P. Roberts – Acting Dean and Associate Professor
Washington State University

Special Guest Speaker -
Slaying dragons for science: the relentless barriers to *Cannabis* efficacy research

Dr. Suzanne Sisley
www.medicalcannabis.com

Wednesday, June 10, 2015

7:30 – 8:05 am

Registration at Washington State University (WSU) Spokane Riverpoint campus –
Spokane Academic Center building

Poster set-up - Spokane Academic Center building

8:05 – 8:30 am

Welcome and Greetings
WSU Riverpoint campus Academic Center building

Dr. Dennis Dyck – Vice Chancellor of Research
WSU-Spokane Riverpoint campus


Introduced by Dr. Amit Dhingra – ACPMAP 2015 Chair and Host

Dr. Fabricio Medina-Bolivar – ACPMAP President, Arkansas State University

<p>8:30 – 9:20 am</p>	<p style="text-align: center;">Plenary Session I <i>Introduced By Dr. Amit Dhingra</i></p> <p style="text-align: center;">Targeting inflammatory pathways by agents derived from mother nature for prevention and treatment of cancer</p> <p style="text-align: center;">Dr. Bharat Aggarwal</p> <p style="text-align: center;">Department of Experimental Therapeutics, The University of Texas - M. D. Anderson Cancer Center</p>
<p>9:25 – 11:05 am</p>	<p style="text-align: center;">Session I - Role of phenolics in human health <i>Chair – Dr. Christopher Hendrickson</i></p> <p style="text-align: center;">Epigenetic potential of dietary stilbenes in prostate cancer (9:25 am – 9:50 am) Dr. Anait Levenson Cancer Institute - The University of Mississippi Medical Center</p> <p style="text-align: center;">Further studies on pterostilbene as PPARα ligand (9:50 am – 10:15 am) Dr. Agnes M. Rimando Natural Products Utilization Research – USDA – Agricultural Research Service</p> <hr/> <p style="text-align: center;">Selective separation of polyphenolic compounds from grape pomace and their antioxidant properties (10:15 am – 10:40 am) Ayca Seker Department of Biological Systems Engineering - Washington State University, Pullman campus</p> <hr/> <p style="text-align: center;">Genomic approaches to understand the enhancement of phenolic compounds and other phytonutrients in plants grown under organic nitrogen regime (10:40 am – 11:05 am) Seanna Hewitt Department of Horticulture - Washington State University, Pullman campus</p> <hr/> <p style="text-align: center;"><i>Centella asiatica</i> phenolics - Modulation of the brain metabolome (11:05 am – 11:30 am) Dr. Claudia S. Maier Linus Pauling Institute, Department of Chemistry - Oregon State University</p>
<p>11:30 – 12:40 pm</p>	<p style="text-align: center;">Lunch break</p>

12:40 – 3:00 pm	<p align="center">Session II – Improving yield of plant bioactives: from agricultural production to post-harvest stages <i>Chair – Dr. Anait Levenson</i></p> <p align="center">Rapid growth of high quality goldenseal plants in controlled environment growth chambers (12:40 pm – 1:05 pm)</p> <p align="center">Dr. Jeffrey Adelberg School of Agricultural, Forest, and Environmental Sciences - Clemson University</p>
	<p align="center">Crop improvement in Stevia (<i>Stevia rebaudiana</i> Beroni.) through mutation breeding (1:05 pm – 1:30 pm)</p> <p align="center">Dr. Mariappa Vasundhara Department of Horticulture - University of Agricultural Sciences, India</p>
	<p align="center">Effects of various levels of coal-bed methane water on dill (<i>Anethum graveolens</i> L.) and its essential oil (1:55 pm – 2:20 pm)</p> <p align="center">Shital Poudyal Sheridan Research and Extension Center - University of Wyoming</p>
	<p align="center">Comparison of photosynthesis between treated and non-treated 3 year old root of <i>Panax ginseng</i> (C.A. Meyer) (2:20 pm – 2:45 pm)</p> <p align="center">Deok Jong-Ahn Punggi Genseng Institute - Kyungpook National University, Korea</p>
2:45 – 3:00 pm	Coffee break
3:00 – 4:40 pm	<p align="center">Session III – Role of indigenous diet in prevention of non-communicable chronic disease <i>Chair – Dr. G. N. Kumar</i></p> <p align="center">Medicinal plants used for human and animal health in a rural Guatemalan community (3:00 pm – 3:25 pm)</p> <p align="center">Amy Snively-Martinez Department of Anthropology - Washington State University, Pullman campus</p>
	<p align="center">Dominican explanations and herbal treatments of fright, a Caribbean ethnopsychiatric condition (3:25 pm – 3:50 pm)</p> <p align="center">Dr. Marsha Quinlan Department of Anthropology - Washington State University, Pullman campus</p>
	<p align="center">Essential oil of organically cultivated thyme has antimicrobial and shelf life extension activity on ancient indigenous gluten free Ethiopian <i>Teff injera</i> (3:50 pm – 4:15 pm)</p> <p align="center">Dr. Wudeneh Letchamo Center for Advanced Food Technology - Department of Food Science - Rutgers University</p>

	<p align="center">Metabolic biology of bioactive medicinal foods from American Indian food systems (4:15 pm – 4:40 pm)</p> <p align="center">Dr. Kalidas Shetty Department of Plant Sciences - North Dakota State University</p>
4:40 – 4:55 pm	Coffee break
<p>5:00 – 8:00 pm</p> <p>Luigi's Restaurant, 3rd Floor 245 W. Main Ave. Spokane, WA</p>	<p align="center">CONCURRENT BREAK-OUT EVENT – By special invitation</p> <p>Meet, greet and converse with regional cannabis industry members: Please come to this free event to meet others in the recreational and medical marijuana communities including our special guest scientists to ask your questions about plant physiology, medicinally active plants and any other topics you want to discuss. This is a special invitation to learn from these industry experts. Many growers understand their horticultural techniques for cannabis but are looking for ways to learn more about the plants themselves. Many clinicians and plant scientists are familiar with the biology, chemistry and therapeutic uses of cannabis. This event is intended to facilitate much-needed dialogue between these two communities. Please contact Amit Dhingra (ADHINGRA@WSU.EDU) to attend.</p>
4:55 – 6:35 pm	<p align="center">Session IV – Plant metabolic engineering and emerging areas in nutraceutical research <i>Chair – Fabricio Medina-Bolivar</i></p> <p align="center">Systems analysis of spatial and temporal control of metabolism in medicinal plants (4:55 pm – 5:20 pm)</p> <p align="center">Dr. David Gang Institute of Biological Chemistry - Washington State University, Pullman campus</p>
	<p align="center">Teasing out the unique biochemistry in specialized cell types that produce natural products in medicinal plants (5:20 pm – 5:45 pm)</p> <p align="center">Dr. Mark Lange Institute of Biological Chemistry - Washington State University, Pullman campus</p>
	<p align="center">Product specificity changes in mutants of a model monoterpene synthase (5:45 pm – 6:10 pm)</p> <p align="center">Narayanan Srividya Institute of Biological Chemistry - Washington State University, Pullman campus</p>
	<p align="center">Characterization of unknown plastid targeted genes involved in production of metabolic compounds in medicinally active plants (6:10 pm – 6:35 pm)</p> <p align="center">Ryan Christian Department of Horticulture - Washington State University, Pullman campus</p>

<p>6:35 – 7:30 pm</p>	<p align="center">Poster viewing session I – Ground floor, WSU Riverpoint campus Academic Center building <i>Graduate student and undergraduate presenters are asked to present their posters to viewers and judges during this time.</i></p>  <p align="center"><i>Thanks are extended to our sponsors for their generous contributions</i></p>
<p align="center">Thursday, June 11, 2015</p>	
<p>8:15 – 8:30 am</p>	<p align="center">Opening remarks and introductions WSU Riverpoint campus Academic Center</p> <p align="center">Dr. Fabricio Medina-Bolivar ACMAP President, Arkansas State University</p>
<p>8:30 – 9:20 am 8:30 – 9:20 am</p>	<p align="center">Plenary Session II <i>Introduced by Dr. Amit Dhingra</i></p> <p align="center">Dereplication strategy for the identification of bioactive compounds and their role in reducing risk from cancer</p> <p align="center">Dr. Bhimanagouda Patil Department of Horticultural Sciences - Texas A&M University</p>
<p>9:25 – 11:25 am</p>	<p align="center">Session V – Development of pharmaceutical products from plants and herbs <i>Chair: Dr. Mark Lange</i></p> <p align="center">Transcriptomic and targeted metabolomics approaches to elucidate the biosynthesis of prenylated stilbenoids: Cannabinoid receptor modulators from peanut (9:25 am – 9:50 am)</p> <p align="center">Dr. Fabricio Medina-Bolivar Arkansas Biosciences Institute/Department of Biological Sciences - Arkansas State University</p> <hr/> <p align="center">Mineral nutrition of <i>Curcuma longa</i> L. in bioreactors affects subsequent development of curcuminoids following transfer to the greenhouse (9:50 am – 10:15 am)</p> <p align="center">Dr. Jeffrey Adelberg School of Agricultural, Forest, and Environmental Sciences - Clemson University</p>

	<p>A standardized extract of the edible fruits of <i>Phyllanthus emblica</i> (Amla) – The next generation heart health product (10:15 am – 10:40 am)</p> <p>Dr. Sanni Raju Natreon, Inc.</p>
	<p>Antimicrobial activity of methanol leaf extract of <i>Moringa oleifera</i> Lam (<i>Moringaceae</i>) on some fungi and clinical bacterial wound isolates (10:40 am – 11:05 am)</p> <p>Dr. M. Eunice Coker Faculty of Pharmacy - University of Ibadan, Nigeria</p>
11:25 – 1:00 pm	Lunch break
1:00 – 2:40 pm	<p>Session VI – Production, Commercialization and regulation of medicinal plants and herbs including marijuana <i>Chair – Dr. Anait Levenson</i></p> <p>Concept of a field portable test for marijuana in breath (1:00 pm – 1:25 pm)</p> <p>Dr. Herbert H. Hill Department of Chemistry - Washington State University, Pullman campus</p>
	<p>Tissue culture technology: potential tool for conservation, cultivation and commercial production of medicinal plants (1:25 pm – 1:50 pm)</p> <p>Dr. Chellan Sudhersan Kuwait Institute for Scientific Research, Kuwait</p>
	<p>Characterization of polymorphisms for genetic tracking in <i>Cannabis</i> sp. for regulation and enforcement (1:50 pm – 2:15 pm)</p> <p>Dr. Amit Dhingra Department of Horticulture - Washington State University, Pullman campus</p>
	<p>Forest medicinal plant species for potential forest farming in the Southeastern United States (2:15 pm – 2:40 pm)</p> <p>Dr. S. Rao Mentreddy Department of Biological and Environmental Science – Alabama A&M University</p>
2:40 – 2:55 pm	Coffee break
	<p>Session VII – Functional foods and non-communicable diseases <i>Chair – Dr. Fabricio Medina-Bolivar</i></p> <p>Dietary modulation of gut microbiota, a key player under the scenes that might help to reduce risk factors for cardiovascular disease (2:55 pm – 3:20 pm)</p> <p>Dr. Giuliana Noratto School of Food Science - Washington State University, Pullman campus</p>

<p>2:55 – 5:10 pm</p>	<p>A randomized, double-blind, placebo controlled, parallel-group study to evaluate the effect of a standardized extract of <i>Terminalia chebula</i> (3:20 pm – 3:45 pm)</p> <p>Dr. Sanni Raju Natreon, Inc.</p>
	<p>Transverse thin cell layer culture to assist micropropagation and genetic transformation of <i>Scutellaria</i> (3:45 pm – 4:10 pm)</p> <p>Dr. Nirmal Joshee Department of Plant Science and Biotechnology - Fort Valley State University</p>
<p>2:55 – 5:10 pm</p>	<p>Understanding cannabis titration through edibles and cannabinoid effects on different diseases (4:10 pm – 4:35 pm)</p> <p>Dr. Suzanne Sisley and Butch Williams White Mountain Health Center</p>
	<p>Results from auditing medical cannabis operations in the United States (4:35 pm – 5:10 pm)</p> <p>Dr. Jahan Marcu - Green Standard Diagnostics, Inc.</p>
<p>5:10 – 5:30 pm</p>	<p>Coffee break</p>
<p>5:30 – 5:50 pm</p>	<p>Group picture of attendees – Outside WSU Riverpoint campus Academic Center</p> <p>Attendees are asked to congregate on the area outside the Academic Center building for a group photo. Images will be distributed digitally to confirmed attendees of the conference shortly after its conclusion.</p>
<p>6:00 – 6:30 pm</p>	<p>Poster viewing session II – Ground floor, WSU Riverpoint campus Academic Center</p> <p>Final poster viewing and judging. Presenters are asked to remove all posters upon the conclusion of this viewing.</p>
<p>7:00 – 9:30 pm</p>	<p>Conference banquet, talk and closing remarks Red Lion Hotel – Skyline Ballroom</p> <p>“I-502 marijuana law implementation in Spokane” Blaine Stum</p> <p>Spokane City Council</p>

	<p>Announcement of Journal of Medicinally Active Plants (JMAP) – Dr. Lyle Craker</p> <p>Announcement of 7th Annual Conference of ACMAP (2016) – Dr. Fabricio Medina-Bolivar</p> <p>Student Awards</p> <p>Closing remarks – Dr. Amit Dhingra (Chair) and Dr. Fabricio Medina-Bolivar (ACMAP President)</p>
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Friday, June 12, 2015

Field Trip Tours	
6:40 am – 11:00 am	Cannabis tour (departing from Red Lion hotel lobby)
9:00 am – 11:00 am	WSU-Spokane Riverpoint campus facilities and research tour (Departing from lobby of Student Academic Center building)
11:00 am	Return to Red Lion Hotel