PAG XXX: 2023

13 International Phytomedomics and Nutriomics Consortium (ICPN) 1

Details

Location: Palm 3-4

Date: Tuesday, Jan 17 10:30 AM

Duration: 2 hours 10 minutes

About

Global concern for health and nutritional security has paved the way for identification of medicinally active and nutritionally important compounds in plants followed by their biochemical characterization and depiction of their physiological mode of action. Stupendous research efforts have been devoted for quantitative and qualitative improvement of these nutraceuticals through application of conventional breeding supplemented by molecular breeding. It is also highly encouraging that genomes of a number of medicinal plants including Aloe, Artemisia, Azadirachta, Calotropis, Catharanthus, Ginkgo, Lotus, Momordica, Moringa, Ocimum, Panax, Salvia, to name a few, have been sequenced. Genome sequencing has also been accomplished in an array of nutritionally important crops such as Alliums, berries, Brassicas, Capsicums, Chenopodiums, cherries, coconut, cardamom, carrot, fenugreek, grapes, kiwifruit, melons, millets, olive, papaya, saffron, stone fruits, tomatoes, turmeric, etc. Structural and functional genomics studies in these plants have provided precise depictions of the genes underlying production of the bioactive compounds for further genomic designing of these plants focusing at augmentation of content and amelioration of quality. All these aspects were discussed in the previous twelve workshops of the International Phytomedomics and Nutriomics Consortium (IPNC) organized since 2011 to 2020 during the Plant and Animal Genome (PAG) Conferences. The two workshops to be held in 2023 during the 30th PAG will present deliberations on the recent developments in the fields of nutraceutomics and next-gen breeding, facilitate interactions among the member scientists and foster collaborative research.

Presentation

10:30 AM Genome Designing for Health and Nutrition Security
Phullara Kole
Prof. Chittaranjan Kole Foundation for Science and Society

10:45 AM Chromosome-Scale Genome Assembly of Glycyrrhiza uralensis Revealed Metabolic Gene Cluster-Centered Specialized Metabolites Biosynthesis
Amit Rai
Metabolomics Research Group

11:00 AM Genomics and Molecular Breeding for Ginseng
Hyeonah Shim
Department of Agriculture, Forestry and Bioresources, Plant Genomics & Breeding Institute, College of Agriculture & Life Sciences, Seoul National University, 1 Gwanak-ro, Gwanak-gu, Seoul 08826, Korea

11:15 AM Genetic Analysis for Genetic Controls for Fruit Colors and Carotenoids in Capsicum chinense
Umesh K. Reddy
Department of Biology, West Virginia State University

11:30 AM Investigating the Genetic Basis of Bioactive Metabolites and Fruit Quality Traits in Blueberries (Vaccinium corymbosum L.).
Molla Fentie Mengist
NC State University

11:45 AM Genomic Characterization By Oxford Nanopore Long Read Sequencing to Improve the Nutritional Quality of Tomato
Saptarathi Deb
DAFNAE, Università degli Studi di Padova

12:00 PM Progress in Medicinal Plant Organelle Genome Studies
Chang Liu
Institute of Medicinal Plants/Chinese Academy of Medical Sciences

Chair, Organizer
Phullara Kole
Prof. Chittaranjan Kole Foundation for Science and Society

Co-organizers
Yong Pyo Lim
Human Friendly Agriculture Research Institute

Co-organizers
Chittaranjan Kole
Prof. Chittaranjan Kole Foundation for Science and Society

PAG XXX: 2023

14 International Phytomedomics and Nutriomics Consortium (ICPN) 2

Details

Location: Palm 3-4

Date: Tuesday, Jan 17 1:30 PM

Duration: 2 hours 10 minutes

About

Global concern for health and nutritional security has paved the way for identification of medicinally active and nutritionally important compounds in plants followed by their biochemical characterization and depiction of their physiological mode of action. Stupendous research efforts have been devoted for quantitative and qualitative improvement of these nutraceuticals through application of conventional breeding supplemented by molecular breeding. It is also highly encouraging that genomes of a number of medicinal plants including Aloe, Artemisia, Azadirachta, Calotropis, Catharanthus, Ginkgo, Lotus, Momordica, Moringa, Ocimum, Panax, Salvia, to name a few, have been sequenced. Genome sequencing has also been accomplished in an array of nutritionally important crops such as Alliums, berries, Brassicas, Capsicums, Chenopodiums, cherries, coconut, cardamom, carrot, fenugreek, grapes, kiwifruit, melons, millets, olive, papaya, saffron, stone fruits, tomatoes, turmeric, etc. Structural and functional genomics studies in these plants have provided precise depictions of the genes underlying production of the bioactive compounds for further genomic designing of these plants focusing at augmentation of content and amelioration of quality. All these aspects were discussed in the previous twelve workshops of the International Phytomedomics and Nutriomics Consortium (IPNC) organized since 2011 to 2020 during the Plant and Animal Genome (PAG) Conferences. The two workshops to be held in 2023 during the 30th PAG will present deliberations on the recent developments in the fields of nutraceutomics and next-gen breeding, facilitate interactions among the member scientists and foster collaborative research.

Presentation

1:30 PM Human Friendly Agriculture and Phytomedomic Research in Nutraceutical Crops
Presenting Author: Yong Pyo Lim

Yong Pyo Lim

Human Friendly Agriculture Research Institute

1:48 PM Translational Genomics for Breeding High Quality and Nutrition-Rich Peanuts
Presenting Author: Manish K Pandey

Manish K Pandey

ICRISAT

2:06 PM Recent Progress in Soybean Tocopherol Biosynthesis Studies
Maria Stefanie Dwiyanti

Hokkaido University

2:24 PM Molecular Characterization of Mature Fruit Color in Capsicum
Presenting Author: Byoung-Cheorl Kang

Byoung-Cheorl Kang

Department of Agriculture, Forestry and Bioresources, Research Institute of Agriculture and Life Sciences, Plant Genomics Breeding Institute, College of Agriculture and Life Sciences, Seoul National University

2:42 PM The Chile Race of Common Beans (Phaseolus vulgaris L.) Is a Unique Genetic Resource for Healthy Human Nutrition
Herman Silva

Lab Gen Func & Bioinfo - Facultad de Ciencias Agronómicas - Universidad de Chile

3:00 PM Exotic Gene Introgression for Enhancing Almond Nutritional Quality
Presenting Author: Thomas M. Gradziel

Thomas M. Gradziel

University of California

Organizer

Phullara Kole

Prof. Chittaranjan Kole Foundation for Science and Society

Co-organizers

Chittaranjan Kole

Prof. Chittaranjan Kole Foundation for Science and Society