
Yonghui Dong

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Department of Plant and Environmental Sciences

Weizmann Institute of Science, Israel

Education and Working Experience

2014.12-Now

Department of Plant and Environmental Sciences, Weizmann Institute of Science, Israel

- Postdoc, Supervisor: Prof. Asaph Aharoni
- Research project: Dual Isotope Labeling for Metabolome Analysis and Pathway Elucidation Using LC-MS and MALDI Imaging.

2014.07-2014.11

Bio-organic Chemistry Lab, Physics Department Physics Department. Trento University, Italy

- Research associate, Supervisor: Prof. Guella Graziano
- Research project: Coupled TLC-MALDI-TOF MS imaging analysis of the lipid extracts from *vitis vinifera* cell cultures

2010.11-2014.06

Biostatistics and Chemometric Group, Fondazione Edmund Mach, Italy

Mass Spectrometry Group, Max Planck Institute for Chemical Ecology, Germany

Bio-organic Chemistry Lab, Physics Department Physics Department, Trento University, Italy (*Magna Cum Laude*)

- *Ph.D in Sciences, June 2014, Supervisors: Dr. Pietro Franceschi, Dr. Fulvio Mattivi & Prof. Guella Graziano*
- *Ph.D Thesis: Mass Spectrometry Imaging: Looking Fruits at Molecular Level*

2008.09-2010.09

University of Bologna, Italy (110L/110, *Cum Laude*)

Munich University of Technology, Germany (Distinction)

University of Natural Resources and Applied Life Sciences, Austria (Distinction)

- *Multiple M.Sc. degrees in Horticultural Sciences, September 2010, Supervisors: Dr. Stefano Tartarini, Dr. Luca Dondini & Prof. Dieter Treutter*

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- *Master Thesis: QTL Analysis of Sugars and Organic Acids in Apricot (Gas Chromatography-based).*

2003.09-2008.09

Department of Life Sciences, Northwest A&F University, China

- *B.sc in Bioengineering, June 2007, Supervisor: Prof. Zhihui Cheng*
- *B.sc Thesis: Effects of UV-C on the control of cucumber powdery mildew*

Research Interests and Skills

1. MS Imaging

- MALDI/DESI imaging

2. Metabolomics

3. Biostatistics and Chemometrics

- High proficiency with R programming, intermediate level of Matlab and Python
- Data pre-processing
- Univariate and multivariate analysis
- Data visualization

4. MS Imaging Instrumentation and Related Software

- DESI/ESI/APCI/MALDI-Orbitrap(Thermo Fisher); Software: Imagequest, Xcalibur
- MALDI-micro MX-TOF (Waters); Software: Masslyn, Biomap
- MALDI-Ultraflex II TOF/TOF (Bruker); Software: Flexcontrol, Flexanalysis, FlexImaging
- ESI/MALDI FT-ICR Solarix, (Bruker); Software: FtmsControl, FlexImaging, ProfileAnalysis, SCiLS Lab

5. Histology

Papers Published & in Preparation

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| 2012 | Franceschi P, Dong Y , Strupat K, Vrhovsek U, Mattivi F. Combining Intensity Correlation Analysis and MALDI Imaging to Study the Distribution of Flavonols and Dihydrochalcones in Golden Delicious Apples. <i>Journal of Experimental Botany</i> . 63, 1123-1133. IF: 5.53 |
| 2015 | Dong Y , Graziano G, Mattivi F, Franceschi P. High production of small organic dicarboxylate dianions by DESI and ESI. <i>Journal of The American Society for Mass Spectrometry</i> . 26, 386-389. IF: 2.95 |
| 2016 | Li B, Dunham J.B.S, Dong Y , Yoon S, Zeng M, Sweedler J.V. Analytical capabilities of mass spectrometry imaging and its potential applications in food science. <i>Trends in Food Science & Technology</i> . 47, 50-63. IF: 4.65 |

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- 2016 Qu D, Meng R, Yan F, Jiang X, Yang H, Gao Z, **Dong Y**, Yang Y, Zhao Z. Identification and characterization of microRNAs and Their Targets to Fruit Bagging and Subsequent Sunlight Re-exposure in the 'Granny Smith' Apple exocarp Using High-throughput Sequencing. *Frontiers in Plant Science*. **7**, doi:10.3389/fpls.2016.00027. **IF: 3.95**
- 2016 **Dong Y**, Graziano G, Mattivi F, Franceschi P. Impact of tissue surface properties on the desorption electrospray ionization imaging of organic acids in grapevine stem. *Rapid communication in Mass Spectrometry*. **30**, 711-718. **IF: 2.25**
- 2016 **Dong Y**, Li B, Aharoni A, Malitsky S, Rogachev I, Kaftan F, Svatoš A , Franceschi P. Sample preparation for mass spectrometry imaging of plant tissues: a review. *Frontiers in Plant Science*. **7**, doi:10.3389/fpls.2016.00060. **IF: 3.95**
- 2016 **Dong Y**, Li B, Aharoni A. More than Pictures: When MS Imaging meets Histology. *Trends in Plant Sciences*. Doi: 10.1016/j.tplants.2016.04.007. **IF: 12.9**

Posters & Presentations

- 2012 **Dong Y**, Franceschi P, Mattivi F, Vrhovsek U, Wehrens R. **Oral Presentation**. MS Imaging of Small Metabolites in Fruits. Ourense Conference on Imaging Mass Spectrometry, Ourense, Spain
- 2013 **Dong Y**, Franceschi P, Mattivi F, Vrhovsek U, Wehrens R. **Poster**. MS Imaging of Metabolites in Fruits. *3rd MS Food day*, Trento, Italy
- 2014 **Dong Y**, Guella G, Mattivi F, Franceschi P. **Poster**. Tissue Surface Properties Jeopardize Quantitative DESI Imaging of Organic Acids in Grapevine Stem. **Poster**. 20th International Mass Spectrometry Conference, Geneva, Switzerland
- 2015 **Dong Y**, Malitsky S, Rogachev I, Heinig U, Aharoni A. **Poster**. Mass Spectrometry Imaging of Plant Metabolites. *Isranalytica*, Israel
- 2017 **Dong Y**, Aharoni A. **Oral Presentation**. Spring school for advanced Imaging in Biological research, Israel
- 2017 **Dong Y**, Aharoni A. **Invited speaker**. Mass Spectrometry Imaging Symposium, France

Honors and Awards

- 2014 COST Action FA1101 trainee fellowship in saffronomics, Spain
- 2011 Trento University PhD scholarship, Italy
- 2010 FEM GMPF scholarship, Italy
- 2008 Erasmus Mundus Scholarship, EU
- 2005 China Undergraduate Mathematical Contest in Modeling First Prize in Shaanxi Province, China

Language Skills

Chinese: Mother tongue

English: C1

Italian: B1

German: A2