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I. Professional Experience:

- **04/2020 – Present:** Senior Scientist, CSIR-Institute of Himalayan Bioresource Technology, Palampur, INDIA
- **01/2019 – 03/2020:** PIFI Postdoctoral Fellow, Photosynthesis and Stress Signaling Group, Center for Excellence in Molecular Plant Sciences (CEMPS), Shanghai Center for Plant Stress Biology (PSC), Shanghai, CHINA.
- **11/2014 – 12/2018:** Postdoctoral Fellow, Photosynthesis and Stress Signaling Group, Center for Excellence in Molecular Plant Sciences (CEMPS), Shanghai Center for Plant Stress Biology (PSC), Shanghai, CHINA.
- **04/2012 - 10/2014:** Senior Research Fellow, CSIR-Institute of Himalayan Bioresource Technology, Palampur, INDIA.
- **10/2007 - 03/2012:** Junior Research Fellow, CSIR-Institute of Himalayan Bioresource Technology, Palampur, INDIA.
- **07/2006 – 10/2007:** Research Biologist and Radiological Safety Officer, Drug Discovery Research Center, Panacea Biotech Limited, Mohali, INDIA.

II. Education:

- **Ph.D., 01/2009 - 03/2015,** Plant Biotechnology, CSIR-Institute of Himalayan Bioresource Technology, Palampur, INDIA (registered at Department of Biotechnology, Guru Nanak Dev University, INDIA). (**Submitted in 05/2014; Defended and awarded in 03/2015**).
- **Masters of Science, 06/2004 - 05/2006,** Molecular Biology & Biochemistry, Guru Nanak Dev University, INDIA
- **Bachelors in Science, 06/2001 – 05/2004,** Biosciences, Himachal Pradesh University, INDIA

III. Research Grants received

- **05/2020 – 04/2025,** Ramalingaswami Re-entry fellowship and a research grant from Department of Biotechnology (DBT), Govt. of India.
- **01/2019 - 12/2020, Grant No. 31850410478** for **400,000 RMB**, Project ‘Linking the chloroplast-triggered programmed cell death with the coordination between chloroplast division and cell cycle in Arabidopsis thaliana’ under International (Regional) Cooperation and Exchange Project category from National Natural Science Foundation of China (NSFC).

- **01/2019 - 12/2020, Award No. 2019PB0066**, President's International Fellowship Initiative (PIFI) postdoctoral fellowship from the Chinese Academy of Sciences

IV. Publications:

Research/review articles

1. Medina-Puche L, Tan H, **Dogra V**, Wu M, Rosas-Diaz T, Wang L, Ding X, Zhang D, Fu X, Kim C and Lozano-Duran R (2020). A novel pathway linking plasma membrane and chloroplasts is co-opted by pathogens to suppress salicylic acid-dependent defences. *The Cell* (accepted) **F1000 recommended article**
2. Li B, Jun F, Singh RM, Lv S, Zi H, Liu R, **Dogra V*** and Kim C (2020). FATTY ACID DESATURASE 5 is Required to Induce Autoimmune Response in Gigantic Chloroplast Mutants of Arabidopsis. *The Plant Cell* (accepted) [*Co-corresponding author] doi.org/10.1105/tpc.20.00016
3. Wang F, Jun F, Guan K, Luo, S, **Dogra V**, Li B, Ma D, Zhao X, Lee KP, Sun P, Xin J, Liu T, Xing W and Kim C (2020). The Arabidopsis CRUMPLED LEAF protein, a homolog of the cyanobacterial bilin lyase, retains the phycocyanobilin binding pocket for a yet unknown function. *Plant Journal* (accepted)
4. Lee KP, Liu K, Kim EY, Medina-Puche L, Dong H, Duan J, Li M, **Dogra V**, Li Y, Lv R, Li Z, Lozano-Duran R and Kim C (2020). Intercellular signaling mediated by PNP-A and its cognate receptor protein PNP-R2 counteracts SA-mediated signaling and the SA-primed cell death pathway. *The Plant Cell* doi.org/10.1105/tpc.20.00018
5. Li Z[#], **Dogra V[#]**, Lee KP, Li R, Li M, Li M and Kim C (2020). N-terminal acetylation stabilizes SIB1 involved in salicylic acid-primed cell death. *Plant Physiology* doi.org/10.1104/pp.19.01417 [[#]Equal contribution]
6. **Dogra V** and Kim, C (2020). Singlet Oxygen Metabolism: from Genesis to Signaling. *Frontiers in Plant Science* 10:1640
7. **Dogra V** and Kim, C (2019). Chloroplast protein homeostasis is coupled with retrograde signaling. *Plant Signaling & Behavior* 14:11
8. **Dogra V[#]**, Li M[#], Singh S[#], Li M and Kim C (2019). Oxidative post-translational modification of EXECUTER1 is required for singlet oxygen sensing in plastids. *Nature Communications* 10:2834 [[#]Equal contribution] **F1000 recommended article**
9. Duan J[#], Lee KP[#], **Dogra V[#]**, Zhang S, Liu K, Caceres-Moreno C, Lv S, Xing W, Kato Y, Sakamoto W, Liu R, Macho AP and Kim C (2019). Impaired PSII proteostasis promotes retrograde signaling via salicylic acid. *Plant Physiology* 180(4):2182-2197. [[#]Equal contribution] **F1000 recommended article**
10. **Dogra V[#]**, Duan J[#], Lee KP, and Kim C (2019). Impaired PSII proteostasis triggers an UPR-like response in the var2 mutant of *Arabidopsis thaliana*. *Journal of Experimental Botany* 70(12):3075-3088 [[#]Equal contribution]
11. Lv R, Li Z, Li M, **Dogra V**, Lv S, Liu R, Lee KP* and Kim C* (2018). Uncoupled expression of photosynthesis-associated genes: its contribution to lesion-mimicking cell death. *The Plant Cell* 31 (1): 210-230
12. **Dogra V**, Rochaix, J-D, and Kim C (2018). Singlet oxygen-triggered chloroplast-to-nucleus retrograde signaling pathways: an emerging perspective. *Plant Cell and Environment* 41(8):1727-1738

13. **Dogra V**, Duan J, Lee KP, Lv S, Liu R and Kim C (2017). Proteolysis of EXECUTER1 is essential in mediating singlet oxygen-triggered retrograde signaling in *Arabidopsis thaliana*. *Front in Plant Science* 8:1145
14. Wang L, Kim C, Xu X, Piskurewicz U, **Dogra V**, Singh S, Mahler H and Apel K (2016). Singlet oxygen- and EXECUTER1-mediated signaling is initiated in grana margins and depends on the protease FtsH2. *PNAS USA* 113(26): E3792-800
15. **Dogra V**, Sharma R and Sreenivasulu Y (2016). Xyloglucan endo-transglycosylases/hydrolase (XET/H) gene is expressed during the seed germination in *Podophyllum hexandrum*: a high altitude Himalayan plant. *Planta* 244:505-515
16. Kaushal R, Sharma N and **Dogra V** (2016). Molecular characterization of Glycosyl hydrolases of *Trichoderma harzianum* WF5 - a potential strain isolated from decaying wood and their application in bioconversion of poplar wood to ethanol under separate hydrolysis and fermentation. *Biomass and Bioenergy* 85: 243-251
17. **Dogra V**, Bagler G and Sreenivasulu Y (2015). Re-analysis of protein data reveals the germination pathway and up accumulation mechanism of cell wall hydrolases during the radical protrusion step of seed germination in *Podophyllum hexandrum*- a high altitude plant. *Frontiers in Plant Science* 6:874
18. Kaushal R, Sharma N and **Dogra V** (2015). Optimization of the production and molecular characterization of cellulase-free xylanase from an alkalophilic *Bacillus subtilis* SD8 isolated from paper mill effluent. *Applied Biochemistry and Microbiology* 51(5): 551-559
19. Kaur D[#], **Dogra V**[#], Thapa P, Sood A, Bhattacharya A and Sreenivasulu Y (2015). *In vitro* flowering associated protein changes in *Dendrocalamus hamiltonii*. *Proteomics* 15:1291-1306 [[#]Equal contribution]
20. **Dogra V** and Sreenivasulu Y (2015). Cloning and functional characterization of β -1, 3-glucanase gene from *Podophyllum hexandrum* - A high altitude Himalayan plant. *Gene* 554(1):25-31
21. Shafi A, **Dogra V**, Gill T, Ahuja PS and Sreenivasulu Y (2014). Simultaneous Over-Expression of PaSOD and RaAPX in Transgenic Arabidopsis thaliana Confers Cold Stress Tolerance through Increase in Vascular Lignifications *PLOS One* 9(10): e110302
22. Deswal R, Gupta R, **Dogra V**, Singh R, *et al.* (2014). Plant Proteomics in India and Nepal: Current Status and Challenges Ahead. *Physiology and Molecular Biology of the Plants* 19(4): 461-477
23. **Dogra V**, Ahuja PS and Sreenivasulu Y (2013). Change in protein content during seed germination of a high altitude plant *Podophyllum hexandrum* Royle. *Journal of Proteomics* 78: 26-38
24. Gill T, **Dogra V**, Sreenivasulu Y, Kumar S and Ahuja PS (2012). Protein dynamics in Arabidopsis seeds over-expressing Potentilla superoxide dismutase during germination under copper stress. *Journal of Plant Research* 125(1):165-172

Book chapters:

1. Sarkar A, Islam MT, Zargar SM, **Dogra V**, *et al.* (2014). Proteomics potential and contribution towards sustainable agriculture. In: **Agroecology, Ecosystems, and Sustainability**. Ed: N. Benkeblia. CRC Press 1 edition (November 28, 2014) (ISBN-13: 978-1466565548)

Conference presentations

Oral Presentations

1. **Dogra V**, Duan J, Lee KP, Zhang S, Liu K and Kim C (2019). Impaired PSII proteostasis promotes retrograde signaling via salicylic acid. *In International Symposium for Plant Photobiology 2019 (ISPP2019)* held in **Barcelona, Spain** (June 3-8, 2019).
2. **Dogra V**, Li M, Singh S, Li M and Kim C (2019). Singlet oxygen: from oxidative damage to retrograde signaling. *In A Symposium Celebrating Barry Osmond: Reflections in a Flash* held in **Australian National University (ANU), Canberra, Australia** (September 12-13, 2019). (**Invited plenary speaker**)
3. **Dogra V**, Li M, Singh S, Li M and Kim C (2019). Singlet oxygen: from genesis to retrograde signaling. *In 4th National Arabidopsis Meeting 2019 (NAM2019)*, held in **NISER, Bhubaneswar, India** (December 29-31, 2019). (**Invited plenary speaker**)

Poster Presentations

4. **Dogra V**, Singh S, Li M, Li M and Kim C (2017). The putative singlet oxygen sensor EXECUTER1 undergoes oxidative post-translational modification in *Arabidopsis thaliana*. *In Gordon Research Conference- Posttranslational Modification Networks 2017*. (August 13-18,2017)
5. **Dogra V**, Wang L, Singh S, Apel K and Kim C (2016). Singlet oxygen, FtsH2 and EXECUTER1 constitute a chloroplast-to-nucleus retrograde signaling in *Arabidopsis thaliana*. *In The 2nd Molecular Plant International Symposium: From Genes to Networks* (August 11-14,2016)
6. **Dogra V**, Jun F, Zhanhg H, Liu R and Kim C (2015). Type I Lesion Mimic Mutant *crl*: a key to decipher chloroplast-to-nucleus retrograde signaling and plant-specific Programmed Cell Death (PCD). *In PSC annual retreat 2015* at Shanghai Center for Plant Stress Biology, Shanghai, China (December 4-5th 2015).
7. Singh S, Wang L, **Dogra V**, Xu X, She Y, Apel K and Kim C (2015). Photosystem II-associated EXECUTER proteins act as ROS sensor and mediate chloroplast-to-nucleus retrograde signaling under various environmental stresses. *In PSC annual retreat 2015* at Shanghai Center for Plant Stress Biology, Shanghai, China (December 4-5th 2015; **claimed Best Poster Award**)
8. **Dogra V** and Sreenivasulu Y (2013). Analysis of Seed Germination Mechanisms in *Podophyllum hexandrum* Royle – a high altitude medicinal plant. *In Proteomic Forum 2013*, international conference at Freie Universität Berlin, Berlin, Germany (March 17-21th 2013)
9. Sreenivasulu Y, **Dogra V**, Chanda S and Ahuja PS (2009). Molecular characterization of seed dormancy in *Podophyllum hexandrum* Royle - An important medicinal herb. Presented by Dr. Yelam Sreenivasulu in the **IVth International plant dormancy symposium** at Fargo, North Dakota, USA (June 8-11, 2009)
10. **Dogra V**, Chanda S, Sreenivasulu Y and Ahuja PS (2009). Proteomic analysis of germination specific proteins in *Podophyllum hexandrum* Royle – an important medicinal herb. *in National symposium ‘Biotechnology and Plant Tissue Culture’* held in CSIR-IHBT, organized by PTCA, India (April 3-4, 2009).
11. **Dogra V**, Chanda S, Sreenivasulu Y and Ahuja PS (2008). Molecular dissection of seed dormancy/ germination in *Podophyllum hexandrum* Royle – an important medicinal herb. *in National symposium on ‘New Biology in Agriculture’* held in Punjab University Chandigarh, India (November 07-08, 2008).

Invited Talks

1. Retrograde signals from Chloroplast to Nucleus, delivered at **Centre of Excellence on North East India Study, Utkal University, Bhubaneswar**, on December 28, 2019.

2. Delivered a lecture for **DBT-Vigyan Setu: Bridging Classical Biology and Biotechnology** at **Doaba College, Jalandhar** (on 16th May 2020), targeting school students aspiring to pursue a career in Sciences.
3. Delivered an invited lecture in a webinar **Emerging Trends in Biotechnology-2020** (on 25th June 2020), organized by **Mizoram University, Aizwal**.
4. Delivered an orientation lecture '**Why to Choose Botany as Career**' at **Career Point University (CPU), Hamirpur, Himachal Pradesh** (on 28th June 2020), for undergraduate students aspiring for postgraduation in sciences.

V. Conferences and symposiums attended :

- **4th National Arabidopsis Meeting 2019 (NAM2019)**, held in **NISER, Bhubaneswar, India** (December 29-31, 2019).
- **Reflections in a Flash: A Symposium Celebrating Barry Osmond** held in **Australian National University (ANU), Canberra, Australia** (September 12-13, 2019).
- **International Symposium for Plant Photobiology 2019 (ISPP2019)** held in **Spain, Barcelona** (June 3-8, 2019).
- **Gordon Research Conference: Posttranslational Modification Networks 2017** at **HKUAST, Hongkong**, during August 13-18, 2017.
- **The 2nd Molecular Plant International Symposium: From Genes to Networks** at **Tsinghua University, Beijing, China**, during August 11-14, 2016.
- **Proteomic Forum 2013**, organized by **European Proteomic Association (EuPA)** at **Freie Universität Berlin, Berlin, Germany**, during March 17-21, 2013).
- National symposium on **Biotechnology and plant tissue culture** at **CSIR-Institute of Himalayan Bioresource Technology** organized by **PTCA** held on April 3-4, 2009.
- National symposium **New Biology in Agriculture**, held at **Punjab University Chandigarh, INDIA**, during Nov 07-08, 2008.
- International conference **Human Genome Meeting-2008**, organized by **HUGO** at **Hyderabad, INDIA**, during Sept 27-30, 2008.
- International symposium and XXXI Annual Conference of **Indian Society of Human Genetics (ISHG)** held at **JNU** in May 2006.

VI. Workshops and Trainings:

- Attended a workshop on '**Network Biology**' at **CSIR-Institute of Himalayan Bioresource Technology, Palampur, India** (during March 30-31, 2012).
- Participated in a training course on **Safety Aspects in the Research application of Ionizing Radiations**, conducted by **Radiological Physics and Advisory Division, Bhaba Atomic Research Center (BARC), India** (during April 09-17, 2007).

VII. Memberships of societies:

- Member of **International Plant Proteomics Organization (INPPO)** www.inppo.com
- Member of **Asia-Pacific Chemical, Biological & Environmental Engineering Society (APCBEEES)** (member no **200340**) www.cbees.org
- Nominated member of the **German Society of Proteome Research (DGPF)** (2013-14).

VIII. Reviewing/editorial jobs:

- Nature Plants
- Nature Communications

- The Plant Cell
- Molecular Plant
- Plant Physiology
- Frontiers in Plant Science (Review Editor- Plant Abiotic Stress section)
- Protoplasma
- Plant Signaling and Behavior
- Gene
- PLoS ONE
- Molecular Biology Reports
- Plant Physiology and Biochemistry
- Industrial crops and Products
- Food chemistry
- Scientific Reports

IX. Honors and accomplishments:

- **Ramalingaswami Re-entry fellowship 2019-20** by Department of Biotechnology, GOI, in March 2020.
- **President's International Fellowship Initiative (PIFI) Postdoctoral fellowship** by the Chinese Academy of Sciences (CAS) in Dec 2018 for two years; 2019-2020).
- Received a **research grant as International Young Scientist** from National Natural Science Foundation of China (NSFC) in August 2018 for two years; 2019-2020.
- **Dr. D.S. Kothari Postdoctoral Fellowship** by University Grants Commission (UGC), GOI in June 2015.
- Received **International Travel Grant** from SERB, DST, under the Young Scientist category to attend international conference Proteomic Forum 2013 in Germany in March 2013.
- **Senior Research Fellowship** by CSIR, GOI, in Jan 2012.
- Qualified **CSIR/UGC NET LS in Life sciences** twice in June 2006 and Dec 2008.
- Qualified **Radiological Safety Officer (level 1)** exam at AERB, BARC, INDIA in April 2007.
- University **Gold Medalist** in Post-graduation (in 2006).

X. Mentorship/Supervision:

- Mentored 1 Post-doc, 4 PhD and 2 Master students at Shanghai Center for Plant Stress Biology, Shanghai, PR China (during 2014-2020)
- Supervised several undergraduate research trainees at CSIR-Institute of Himalayan Bioresource Technology, Palampur, India (during 2007-2014)

XI. Extracurricular Activities:

- Participated in XXXXII SSBMT outdoor games tournament Zonals and Finals, represented IHBT (CSIR) Palampur in Cricket held at IIP Dehradun and IICT Hyderabad in 10/2013 and 01/2014.
- Participated in XXXXII SSBMT outdoor games tournament and represented IHBT (CSIR) Palampur in Cricket held at CRRI, New Delhi in 11/2011 and at IIP Dehradun in 11/2009.
- Participated and represented school and college in various cultural, sports activities.
- Active participation in blood donation camps.

XII. Referees:

- **Dr. Sanjay Kumar, PhD**
Director,
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- **Prof. Chanhong Kim, PhD**
Professor of Excellence and Junior Group Leader,
Photosynthesis and Stress Signaling Group,
Shanghai Center for Plant Stress Biology (PSC), Shanghai, PR China
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Email: chanhongkim@sibs.ac.cn
- **Prof. Randeep Rakwal, PhD**
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1-1-1 Tennodai, Tsukuba 305-8577, Ibaraki, Japan
GGEC Program Office, Seino A 205, Life and Environmental Sciences
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Visiting Professor, Showa University School of Medicine, Tokyo, Japan
INPPO Vice President, Email: plantproteomics@gmail.com
- **Dr. Y Sreenivasulu, PhD**
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