FACULTY PROFILE

TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE (M) KAMAREDDY

DEPARTMENT OF BOTANY

Name: Dr. AGURLA SRINIVAS
Academic Qualifications: M.Sc. B. Ed. Ph.D. (2018)

RESEARCH AND TEACHING EXPERIENCE

(Total Teaching experience: 10 years)

- Worked as a High school teacher at Prathibha Vidyanikethan, Choppadandi, from June 1st 2005-March 30th 2008.

- Worked as a Research Associate at University of Hyderabad from March 8th 2017-June 1st 2018, under the supervision of Prof. A.S. Raghavendra in a project entitled "Role of proline in protection of photosynthesis under highlight and oxidative stress".

- Worked as a Senior Lecturer (SL) in the Telangana Tribal Welfare Residential Junior college (TTWR COE PVTG (B) HAYATHNAGAR), under the Government of Telangana from June 1st 2018 to July 24th 2024.

- Presently working as Degree Lecturer at Telangana Tribal Welfare Residential Degree College TTWRDC (M) Kamareddy, under the Government of Telangana from July 24th 2024.

PUBLICATIONS

Book Chapters

1. **Agurla S**, Gahir S, Murata Y and Raghavendra AS (2018) Mechanism of stomatal closure in plants exposed to drought and cold stress. In *Survival Strategies in Extreme Cold and Desiccation* (pp. 215-232). Springer, Singapore.

2. **Agurla S**, Gayatri G, Raghavendra AS (2017) Signal transduction components in guard cells during stomatal closure by plant hormones and microbial elicitors, in Mechanism of Plant Hormone Signaling under Stress (ed G. K. Pandey), ***John Wiley & Sons,*** *Inc*., Hoboken, NJ, USA.

3. **Agurla S**, Gayatri G, Raghavendra AS (2016) Nitric oxide (NO) measurements in stomatal guard cells. ***Methods Mol Biol*** 1424: 49-56.

Research Articles

4. **Agurla S,** Sunitha V, Raghavendra AS (2020) Methyl salicylate is more effective than salicylic acid to induce stomatal closure and raise the levels of ROS and NO in *Arabidopsis thaliana* guard cells *Plant* ***Physiology and Biochemistry*** 157: 276-283.
5. **Agurla S**, Gayatri G, Raghavendra AS (2018) Polyamines increase nitric oxide and reactive oxygen species in guard cells of *Arabidopsis thaliana* during stomatal closure. ***Protoplasma*** 255: 153-162.
6. Gayatri G, **Agurla S**, Kuchitsu K, Anil K, Podile AR, Raghavendra AS (2017) Stomatal closure and rise in ROS/NO of Arabidopsis guard cells by Tobacco microbial elicitors: Cryptogein and Harpin. ***Front Plant Sci*** 8: 1096.
7. **Agurla S**, Raghavendra AS (2016) Convergence and divergence of signaling events in guard cells during stomatal closure by plant hormones or microbial elicitors. ***Front Plant Sci*** 7: 1332.
8. Puli MR, Rajsheel P, Aswani V, **Agurla S**, Kuchitsu K, Raghavendra AS (2016) Stomatal closure induced by phytosphingosine-1-phosphate and sphingosine-1-phosphate depends on nitric oxide and pH of guard cells in *Pisum sativum*. ***Planta*****.** 244: 831-41.
9. **Agurla S**, Gayatri G, Raghavendra AS (2014) Nitric oxide as a secondary messenger during stomatal closure as a part of plant immunity response against pathogens. ***Nitric Oxide: Biology and Chemistry*** 43: 89-96.
10. Gayatri G, **Agurla S**, Raghavendra AS (2013) Nitric oxide in guard cell as an important second messenger during stomatal closure. ***Front Plant Sci*** 4: 1-11.

PRESENTATIONS (ORAL/POSTER) AT INTER NATIONAL CONFERENCES

1. **Srinivas Agurla**, and Agepati S. Raghavendra. "Importance of reactive oxygen species (ROS) and nitric oxide (NO) during stomatal closure by polyamines in *Arabidopsis thaliana*" 8th International Conference on **Photosynthesis and Hydrogen Energy Research for Sustainability-2017",** conducted by University of Hyderabad, Hyderabad. October 30th - November 4th, 2017 (**Achieved the best poster award**).

2. **Srinivas Agurla** and Agepati S. Raghavendra. "Role of reactive oxygen species (ROS) and nitric oxide (NO) in guard cells of Arabidopsis thaliana during stomatal closure by

polyamines" conducted by Okayama University, Japan under "**JST-SAKURA Youth Exchange Programme"** during 4th September 2017 to 11th September 2017 (**Oral presentation**).

3. Agepati S. Raghavendra and **Srinivas Agurla**. Rise in levels of reactive oxygen species and nitric oxide by polyamines in guard cells of Arabidopsis thaliana. **"American Society of Plant Biology-2016"** Austin, Texas. July 9-13th, (2016) (**Poster presentation**).

4. **Srinivas Agurla**, and Agepati S. Raghavendra. Polyamines induce stomatal closure and increase reactive oxygen species and nitric oxide levels in Arabidopsis thaliana stomatal guard cells. **"3rd International Plant Physiology Congress (IPPC-2015)"** Jawaharlal Nehru University, New Delhi. December 11-14th, 2015 (**Poster presentation**).

5. **Srinivas Agurla**, Gunja Gayatri and Agepati S. Raghavendra. Effect of salicylic acid and its esters (acetylsalicylic acid and methyl salicylate) on stomatal closure and increase in reactive oxygen species, nitric oxide in Pisum sativum guard cells. **"International Symposium on Plant Signaling and Behavior-2014"**, organized by Department of Botany, University of Delhi, March 7-10th, 2014 (**Poster presentation**).
6. Attended **International Conference on Green Energy Technologies: Challenges in Research and Human Development,** organized by Pondicherry University, Pondicherry. March 23-25th, 2010.
7. Attended one day symposium on **"Mass spectrometry, Scanning electron microscope, NMR, UV-Spectrometry** held at Pondicherry University, Pondicherry on 5th March, 2010.
8. Presented poster in **Indo-Japan Joint Workshop** organized by Department of Botany, University of Delhi, March 7-10th, **2013**.
9. Participated in international seminar on **Green technology** and national seminar on **Bio-informatics and novel technologies** conducted by Pondicherry University.
10. Given **oral presentaion in Bioquest 2015** and **A.P. Science Congress 2013** conducted by University of Hyderabad.

SEMINARS/WORKSHOPS ATTENDED

- Participated and presented research work in Annual events **"Plant Science Colloquium-2012, 2013, 2015, 2017**, conducted by Department of Plant Sciences, University of Hyderabad. Telangana, India.
- Participated in **National seminar on "Molecular Modeling and Drug Design"** organized by Pondicherry University, Pondicherry. October 14-16th, 2008.
- Attended hands on training on **Genomics work shop for quantitative PCR and Microarray,** organized by School of Life Sciences, University of Hyderabad, Telangana, from 07th February 2012 to 10th February 2012.

AWARDS/SCHOLARSHIPS/MERITS

- Achieved **"Outstanding Achievement Award"** in "**8th International Conference "Photosynthesis and Hydrogen Energy Research for Sustainability-2017**"
- Invited for **"Japan-Asia youth exchange program"** in Science conducted by **"Japan Science and Technology Agency (JSTA)"** (visited Okayama University, Japan for Oral presentation during 4 to 11th September 2017.
- Selected for **Young Scientist presentations** by **TWAS** (**The World Academy of Sciences for the advancement of science in developing countries-Regional Office for Central & South Asia** (TWAS-ROCASA), during December 21-22, 2015.
- **Qualified Council for Scientific and Industrial Research (CSIR-Junior Research Fellowship-National Eligibility Test (CSIR-JRF-NET)** (CSIR-Dec 2010). A national open competitive entrance exam organized by CSIR and University Grant Commission (UGC) together for graduate fellowship for the period of 5 years to pursue graduate (Ph. D) studies in India.
- Qualified and secured **86 percentiles** in **GATE (Graduate Aptitude Test)**-2011.
- Selected for **Student fellowship** in M. Sc. from the Department of Biochemistry and Molecular Biology by PCU entrance examination (July 2008-May 2010).
- Achieved **Merit scholarship** from Pondicherry University during the year 2008-2010.

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