

Faculty Details

Name: Prof. K.P.M.S.V. Padmasree

Mail: kpssl@uohyd.ac.in

Contact: 040-2313-4507

Area Of Research: Plant Physiology, Biochemistry, Biotechnology, Proteomics, Nanotechnology

Faculty Details

Myself, K. Padmasree, Professor in the Department of Biotechnology and Bioinformatics, School of Life Sciences, University of Hyderabad (UoH), Hyderabad, India, is working in the area of Plant Physiology, Biochemistry and Biotechnology. I was born on 17th Feb 1968 in an educated middle class family in Guntur district. I qualified in Master's (Biochemistry, 1989) and Ph.D. (Plant Sciences, 1998), both at UoH. Also, worked as CSIR-Post-Doc (Plant Sciences, 1998-2001) at UoH, India and Alexander von Humboldt Research Fellow (2005-2006 & 2007) at University of Osnabruck, Germany. I joined the Faculty fraternity at UoH as Lecturer in 2001 and promoted as Associate Professor (2013) and Professor (2016), I am working in the direction of (i) metabolic interactions between chloroplasts & mitochondria and (ii) purification & structure-function relationships of two defense proteins – (a) Mitochondrial Alternative Oxidase (AOX) and (b) Proteinaceous seed Proteinase Inhibitors (PIs) using various physiological, biochemical, biophysical, rDNA technology, metabolic and proteomic approaches. Guided 8 students for their PhD Degree (besides six ongoing Ph.D. students); published 56 research papers in National & International Journals, Book Chapters/Proceedings/NCBI submissions; completed Ten Research Projects (DBT, DST, CSIR and UGC). Also, guided 47 project students for project dissertations/interships (both internal and external) and participated in several national and international conferences (108).

Notice Board

No Records Available

Students And Project Trainees

Students/Projects Trainees

Name	Joined As	Mail	Contact
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Tadiboina Veera Shankar	PhD Scholar	sankar.tadiboina1@gmail.com	---
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G. Mariyamma	PhD Scholar	mariya.g10691@gmail.com	---
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K Mahati	PhD Scholar	kmahati91@rediffmail.com	---
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V. Swaroop Kumar	PhD Scholar	swaroopvanka@gmail.com	---
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Former Students/Projects Trainees

Name	Joined As	Working
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Srinivasarao Yearla	Ph.D. Scholar	
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V. Lokya Naik	PhD Scholar	
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ER Prasad	PhD Scholar	
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Marri Swathi	PhD Scholar	Post Doc Fellow at ICRISAT
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C Dinakar	PhD Scholar	Assistant Professor at Central University of Tamil Nadu
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Publications

- 47 Tadiboina Veera Sankar, Moumita Saharay, Dharawath Santhosh, Abhaypratap Vishwakarma, Kollipara Padmasree (2022) , Structural and Biophysical characterization of purified recombinant *Arabidopsis thaliana* alternative oxidase 1A (rAtAOX1A): Interaction with inhibitor(s) and activator , *Frontiers in Plant Science*, *Frontiers*,(accepted),, IF - 5.753.
- 46 Chauhan VK, Dhanika NK, Lokya V, Bhuvanchandra B, Padmasree K and Dutta-Gupta A (2021) , Midgut aminopeptidase N expression profile in castor semilooper (*Achaea janata*) during sublethal Cry toxin exposure , *J Biosci* , Indian Academy of Sciences,46,,29-45 IF - 1.65.
- 45 Lokya V, Swathi M, Mallikarjuna N and Padmasree K* (2020) , Response of midgut trypsin- and chymotrypsin-like proteases of *Helicoverpa armigera* larvae upon feeding with peanut BBI: Biochemical and biophysical characterization of PnBBI. , *Frontiers in Plant Science*, *Frontiers*,11,266,doi: 10.3389/fpls.2020.00266 IF - 4.402.
- 44 Mohanraj, Soundappan S., Gujjarlappudi, Mariyamma., Lokya, Vadthya., Mallikarjuna, Nalini., Dutta-Gupta, Aparna., Padmasree, Kollipara., (2019) , Purification and characterization of Bowman-Birk and Kunitz isoinhibitors from the seeds of *Rhynchosia sublobata* (Schumach.) Meikle, a wild relative of pigeonpea , *Phytochemistry*, Pergamon,159,,159-171 IF - 4.072.
- 43 Mohanraj, Soundappan S., Tetali, Sarada D., Mallikarjuna, Nalini., Dutta-Gupta, Aparna., Padmasree, Kollipara., (2018) , Biochemical properties of a bacterially-expressed Bowman-Birk inhibitor from *Rhynchosia sublobata* (Schumach.) Meikle seeds and its activity against gut proteases of *Achaea janata* , *Phytochemistry* , Elsevier Ltd,151,,78-90 IF - 4.072.
- 42 5) Srikanth S, Swathi M, Padmasree K, Rao M.V. and Mallikarjuna N (2017) , Protease inhibitors of *Cajanus* conferring resistance to pod borer of pigeonpea (*Cajanus cajan* L. Millsp.). , *Electronic Journal of Plant Breeding* , ,8 ,,26-37 IF - NAAS Score : 4.97.
- 41 Yearla, Srinivasa Rao., Padmasree, Kollipara., (2016) , *Leucaena leucocephala* (Lam.) de Wit, "subabul" stem lignin: Isolation, structural characterization and thermal properties , *Indian Journal of Experimental Biology*, NISCAIR-CSIR, India,54,,406-413 IF - NAAS score : 7.17 .
- 40 Vishwakarma, Abhaypratap., Dalal, Ahan., Tetali, Sarada Devi., Kirti, Pulugurtha Bharadwaja., Padmasree, Kollipara., (2016) , Genetic engineering of AtAOX1a in *Saccharomyces cerevisiae* prevents oxidative damage and maintains redox homeostasis , *FEBS open bio* , ,6,2,135-146 IF - 2.231.
- 39 Yearla, Srinivasa Rao., Padmasree, Kollipara., (2016) , Preparation and characterisation of lignin nanoparticles: evaluation of their potential as antioxidants and UV protectants , *Journal of Experimental Nanoscience*, Taylor ,11,4,289-302 IF - 3.075.
- 38 Dinakar, Challabathula., Vishwakarma, Abhaypratap., Raghavendra, Agepati S., Padmasree, Kollipara., (2016) , Alternative oxidase pathway optimizes photosynthesis during osmotic and temperature stress by regulating cellular ROS, malate valve and antioxidative systems , *Frontiers in plant science*, *Frontiers*,7,,68 IF - 5.753.
- 37 Yearla, Srinivasa Rao., Padmasree, Kollipara., (2016) , Exploitation of subabul stem lignin as a matrix in controlled release agrochemical nanoformulations: a case study with herbicide diuron , *Environmental Science and Pollution Research*, Springer,23,18,18085-18098

IF - 4.223.

36 Swathi, Marri., Mishra, Prashant K., Lokya, Vadthya., Swaroop, Vanka., Mallikarjuna, Nalini., Dutta-Gupta, Aparna., Padmasree, Kollipara., (2016) , Purification and partial characterization of trypsin-specific proteinase inhibitors from pigeonpea wild relative *Cajanus platycarpus* L.(Fabaceae) active against gut proteases of lepidopteran pest *Helicoverpa armigera* , *Frontiers in physiology*, *Frontiers*,7,,388 IF - 4.566.

35 Swathi, Marri., Mohanraj, Soundappan S., Swaroop, Vanka., Gujjarlappudi, Mariyamma., Mallikarjuna, Nalini., Dutta-Gupta, Aparna., Padmasree, Kollipara., (2015) , Proteinase inhibitors from *Cajanus platycarpus* accessions active against pod borer *Helicoverpa armigera* , *Acta physiologiae plantarum*, *Springer*,37,11,242 IF - 1.760.

34 Vishwakarma, Abhaypratap., Tetali, Sarada Devi., Selinski, Jennifer., Scheibe, Renate., Padmasree, Kollipara., (2015) , Importance of the alternative oxidase (AOX) pathway in regulating cellular redox and ROS homeostasis to optimize photosynthesis during restriction of the cytochrome oxidase pathway in *Arabidopsis thaliana* , *Annals of botany*, *Oxford University Press*,116,4,555-569 IF - 4.357.

33 Dalal, Ahan., Vishwakarma, Abhaypratap., Singh, Naveen Kumar., Gudla, Triveni., Bhattacharyya, Mrinal Kanti., Padmasree, Kollipara., Viehhauser, Andrea., Dietz, Karl-Josef., Kirti, Pulugurtha Bharadwaja., (2014) , Attenuation of hydrogen peroxide-mediated oxidative stress by *Brassica juncea* annexin-3 counteracts thiol-specific antioxidant (TSA1) deficiency in *Saccharomyces cerevisiae* , *FEBS letters*, No longer published by Elsevier,588,4,584-593 IF - 4.124.

32 Swathi, Marri., Lokya, Vadthya., Swaroop, Vanka., Mallikarjuna, Nalini., Kannan, Monica., Dutta-Gupta, Aparna., Padmasree, Kollipara., (2014) , Structural and functional characterization of proteinase inhibitors from seeds of *Cajanus cajan* (cv. ICP 7118) , *Plant physiology and biochemistry*, *Elsevier*,83,,77-87 IF - 4.27.

31 Vishwakarma, Abhaypratap., Bashyam, Leena., Senthilkumaran, Balasubramanian., Scheibe, Renate., Padmasree, Kollipara., (2014) , Physiological role of AOX1a in photosynthesis and maintenance of cellular redox homeostasis under high light in *Arabidopsis thaliana* , *Plant physiology and biochemistry*, *Elsevier*,81,,44-53 IF - 3.720.

30 Shilpa K., Sunkad G., Kurella S., Marri S., Padmasree K., Jadhav D.R., Sahrawat K.L. and Mallikarjuna N (2013) , Biochemical composition and disease resistance in newly synthesized amphidiploids and autotetraploid peanuts. , *Food and Nutrition Sciences*, ,4,,169-176 IF - 0.4.

29 Swathi, Marri., Mohanraj, Soundappan S., Srinivas, Chilka., Prasad, Elaprolu R., Venkatrao, Vantaku., Mallikarjuna, Nalini., Dutta-Gupta, Aparna., Padmasree, Kollipara., (2012) , *Cajanus cajan* (cv. C11): an important non-host resource for proteinase inhibitors active against larval midgut proteinases of lepidopteran insect pest *Achaea janata* , *Funct Plant Sci Biotech*, ,6,,82-85.

28 Swathi, M., Prasad, ER., Mohanraj, SS., Geethanjali, T., Srinivas, Ch., Gupta, Aparna Dutta., Mallikarjuna, N., Padmasree, K., (2011) , Potential application of pigeonpea proteinase inhibitors in the management of lepidopteran insects , *National Symposium on Innovative and Modern Technologies for Agricultural Productivity, Food Security and Environmental Management*, ,,,.

27 Prasad, ER., Komera, Vijayaprasad R., Padmasree, K., Dutta-Gupta, A., (2011) , *Plant*

proteinase inhibitors and their potential in insect pest management , Entomology: Ecology and Biodiversity, Scientific Publishers, Jodhpur, India, ,,268-291.

26 Kokkiripati, Praveen K., Bhakshu, Lepakshi Md., Marri, Swathi., Padmasree, K., Row, Anupama T., Raghavendra, Agepati S., Tetali, Sarada D., (2011) , Gum resin of *Boswellia serrata* inhibited human monocytic (THP-1) cell activation and platelet aggregation , Journal of ethnopharmacology, Elsevier,137,1,893-901.

25 Dinakar, Challabathula., Abhaypratap, Vishwakarma., Yearla, Srinivasa Rao., Raghavendra, Agepati S., Padmasree, Kollipara., (2010) , Importance of ROS and antioxidant system during the beneficial interactions of mitochondrial metabolism with photosynthetic carbon assimilation , Planta, Springer,231,2,461 IF - 3.390.

24 Dinakar, Challabathula., Raghavendra, Agepati S., Padmasree, Kollipara., (2010) , Importance of AOX pathway in optimizing photosynthesis under high light stress: role of pyruvate and malate in activating AOX , Physiologia Plantarum, Wiley Online Library,139,1,13-26 IF - 4.148.

23 Prasad, Elaprolu R., Merzendorfer, H., Madhurarekha, C., Dutta-Gupta, A., Padmasree, K., (2010) , Bowman– Birk Proteinase inhibitor from *Cajanus cajan* seeds: purification, characterization, and insecticidal properties , Journal of agricultural and food chemistry, American Chemical Society,58,5,2838-2847 IF - 4.192.

22 Prasad, ER., Dutta-Gupta, A., Padmasree, K., (2010) , Purification and characterization of a Bowman-Birk proteinase inhibitor from the seeds of black gram (*Vigna mungo*) , Phytochemistry, Elsevier,71,4,363-372 IF - 3.044.

21 Prasad, ER., Dutta-Gupta, A., Padmasree, K., (2010) , Insecticidal potential of Bowman– Birk proteinase inhibitors from red gram (*Cajanus cajan*) and black gram (*Vigna mungo*) against lepidopteran insect pests , Pesticide Biochemistry and Physiology, Elsevier,98,1,80-88 IF - 2.751.

20 Strodtkötter, Inga., Padmasree, Kollipara., Dinakar, Challabathula., Speth, Birgit., Niazi, Pamela S., Wojtera, Joanna., Voss, Ingo., Do, Phuc Thi., Nunes-Nesi, Adriano., Fernie, Alisdair R., (2009) , Induction of the AOX1D isoform of alternative oxidase in *A. thaliana* T-DNA insertion lines lacking isoform AOX1A is insufficient to optimize photosynthesis when treated with antimycin A , Molecular Plant, Elsevier,2,2,284-297 IF - 12.084.

19 Prasad, ER., Dutta-Gupta, A., Padmasree, K., (2009) , Inhibitors from pigeonpea active against lepidopteran gut proteinases , Journal of economic entomology, Oxford University Press Oxford, UK,102,6,2343-2349 IF - 1.938.

18 Raghavendra, Agepati S., Padmasree, Kollipara., (2003) , Beneficial interactions of mitochondrial metabolism with photosynthetic carbon assimilation , Trends in plant science, Elsevier,8,11,546-553 IF - 14.416.

17 Padmasree, K., Padmavathi, L., Raghavendra, AS., (2002) , Essentiality of mitochondrial oxidative metabolism for photosynthesis: optimization of carbon assimilation and protection against photoinhibition , Critical Reviews in Biochemistry and Molecular Biology, Taylor & Francis,37,2,71-119 IF - 7.586.

16 Padmasree, K., Raghavendra, AS., (2001) , Photobiology and photosynthesis- Consequence of restricted mitochondrial oxidative metabolism on photosynthetic carbon assimilation in mesophyll protoplasts: Decrease in light activation of four , Physiologia Plantarum, Copenhagen, Munksgaard, 1948-,112,4,582 IF - 4.148.

- 15 Padmasree, K., Raghavendra, AS., (2001) , Restriction of mitochondrial oxidative metabolism leads to suppression of photosynthetic carbon assimilation but not of photochemical electron transport in pea mesophyll protoplasts , Current Science, JSTOR,81,,680-684 IF - 0.725.
- 14 Padmasree, K., Raghavendra, AS., (2001) , Consequence of restricted mitochondrial oxidative metabolism on photosynthetic carbon assimilation in mesophyll protoplasts: decrease in light activation of four chloroplastic enzymes , Physiologia plantarum, Munksgaard International Publishers Copenhagen,112,4,582-588 IF - 4.148.
- 13 Padmasree, K., Raghavendra, AS., (2000) , Photorespiration and interaction between chloroplasts, mitochondria and peroxisomes , Probing Photosynthesis. Mechanisms, Regulation and Adaptation, Taylor & Francis,,246-261.
- 12 Padmasree, K., Raghavendra, AS., (2000) , 15 Interaction with respiration and nitrogen metabolism , Photosynthesis: A Comprehensive Treatise, Cambridge Univ Pr,,197.
- 11 Padmasree, K., Raghavendra, AS., (1999) , Response of photosynthetic carbon assimilation in mesophyll protoplasts to restriction on mitochondrial oxidative metabolism: metabolites related to the redox status and sucrose biosynthesis , Photosynthesis Research, Springer,62,2,231-239 IF - 3.216.
- 10 Padmasree, K., Raghavendra, AS., (1999) , Prolongation of photosynthetic induction as a consequence of interference with mitochondrial oxidative metabolism in mesophyll protoplasts of the pea (*Pisum sativum* L.) , Plant Science, Elsevier,142,1,29-36 IF - 3.591.
- 9 Willmer, CM., Padmasree, K., Raghavendra, AS., (1999) , A novel method of measuring volume changes of mesophyll cell protoplasts and the effect of mercuric chloride on their osmotically-induced swelling , Journal of experimental botany, Oxford University Press,50,332,401-406 IF - 5.908.
- 8 Padmasree, K., Raghavendra, AS., (1999) , Importance of oxidative electron transport over oxidative phosphorylation in optimizing photosynthesis in mesophyll protoplasts of pea (*Pisum sativum* L.) , Physiologia Plantarum, Wiley Online Library,105,3,546-553 IF - 4.148.
- 7 Padmasree, K., Raghavendra, AS., (1999) , Photobiology and photosynthesis-Importance of oxidative electron transport over oxidative phosphorylation in optimizing photosynthesis in mesophyll protoplasts of pea (*Pisum sativum* L.) , Physiologia Plantarum, Copenhagen, Munksgaard, 1948-,105,3,546-553 IF - 4.148.
- 6 Padmasree, K., Raghavendra, AS., (1998) , Mitochondrial Oxidative Electron Transport Optimizes Photosynthesis in Mesophyll Protoplasts of Pea , Photosynthesis: Mechanisms and Effects, Springer,,3727-3730.
- 5 Saradadevi, K., Padmasree, K., Raghavendra, AS., (1996) , Correlation between the inhibition of photosynthesis and the decrease in area of detached leaf discs or volume/absorbance of protoplasts under osmotic stress in pea (*Pisum sativum*) , Physiologia Plantarum, Wiley Online Library,96,3,395-400 IF - 4.148.
- 4 Rao, A.M., Padmasree, K and Kavi Kishor, P.B. (1995) , Enhanced plant regeneration in grain and sweet sorghum by asparagine, proline and cefotaxime. , Plant Cell Reports , Springer,15 ,,72-75 IF - 3.825.
- 3 Raghavendra, AS., Padmasree, K., Saradadevi, K., (1994) , Interdependence of photosynthesis and respiration in plant cells: interactions between chloroplasts and mitochondria , Plant Science, Elsevier,97,1,1-14 IF - 3.591.

2 SARADADEVI, K., PADMASREE, K., RAGHAVENDRA, AS., (1992) , INTERACTION BETWEEN RESPIRATION, PHOTOSYNTHESIS AND PHOTOINHIBITION IN PEA MESOPHYLL PROTOPLASTS , PHOTOSYNTHESIS RESEARCH, KLUWER ACADEMIC PUBL SPUIBOULEVARD 50, PO BOX 17, 3300 AA DORDRECHT, NETHERLANDS,34,1,199-199.

1 39) Rao, A.M., Padmasree, K., Kavi Kishor, P.B. and Reddy, G.M. (1992) , Varietal differences on plant regeneration in grain and sweet sorghum. , Plant Tissue Culture , ,2,,109-113.

Students

List of Ph.D. Students Awarded/On-going and title of their Thesis

S. No.

Name of the Student

Title of Thesis

Year of Award / Status

1.

Ch. Dinakar

Department of Plant Sciences

School of Life Sciences

University of Hyderabad

Importance of Mitochondrial Oxidative

Electron Transport in Optimizing Photosynthesis under Light, Osmotic or Temperature Stress

Awarded

July 2008

2.

E. R. Prasad

Department of Plant Sciences

School of Life Sciences

University of Hyderabad

Purification and characterization of proteinase inhibitors from red gram (*Cajanus cajan*) and black gram (*Vigna mungo*) and evaluation of their insecticidal potential

Awarded

June 2009

3.

M. Swathi

Department of Plant Sciences

School of Life Sciences

University of Hyderabad

Purification and characterization of proteinase inhibitors from legume seeds: Evaluation of their insecticidal and pharmacological properties

Awarded

April 2016

4.

Y. Srinivasa Rao

Department of Plant Sciences

School of Life Sciences

University of Hyderabad

Fabrication of nanoparticles from subabul stem lignin: Exploitation of its potential as matrix in nanbioformulation

Awarded

May 2016

5.

AbhayPratap Vishwakarma

Department of Plant Sciences

School of Life Sciences

University of Hyderabad

Importance of AtAOX1a during oxidative stress in *Arabidopsis thaliana* and *Saccharomyces cerevisiae*

Awarded

May 2016

6.

S. S. Mohanraj

Department of Plant Sciences

School of Life Sciences

University of Hyderabad

Purification, identification and characterization of insecticidal protease inhibitors from

Rhynchosia sublobata (Schumach.) Meikle seeds against Helicoverpa armigera and Achaea janata: Molecular cloning of novel RsBBI and RsKI

Awarded

May 2018

7.

Swaroop Kumar

Department of Biotechnology & Bioinformatics

School of Life Sciences

University of Hyderabad

Effects of Vigna mungo (cv. T9) seed proteinase inhibitor on larval growth and expression of midgut proteins in Noctuid lepidopteran pests – A comparative study

Awarded

Feb 2021

8.

Vadthya Lokya

Department of Biotechnology

School of Life Sciences

University of Hyderabad

Characterization of Bowman-Birk inhibitor from Peanut and Evaluation of their Insecticidal and Anticoagulant Properties

Awarded

Jul 2020

9.

Mariyamma G

Department of Biotechnology

& Bioinformatics

School of Life Sciences

University of Hyderabad

Biochemical characterization of biotic stress inducible proteinase inhibitors in leaves of black gram (*Vigna mungo*)

Ongoing

10

Veera sankar T

Department of Biotechnology

& Bioinformatics

School of Life Sciences

University of Hyderabad

Molecular cloning of *Arabidopsis thaliana* AOX1A: biochemical characterization of recombinant AOX1a.

Ongoing

11.

K. Mahati

Department of Biotechnology

& Bioinformatics

School of Life Sciences

University of Hyderabad

Role of Brassinosteroids in mediating beneficial interactions between chloroplasts and mitochondria

Ongoing

12.

D. Santhosh

Department of Biotechnology

& Bioinformatics

School of Life Sciences

University of Hyderabad

Deciphering the role of alternative oxidase in C4 plant *Setaria italica*

Ongoing

13.

K. Bharti

Department of Biotechnology

& Bioinformatics

School of Life Sciences

University of Hyderabad

Evaluation of the PI based bioformulations in the management of lepidopteran pests

Ongoing

14.

Shreya Verma

Department of Biotechnology

& Bioinformatics

School of Life Sciences

University of Hyderabad

Insecticidal and therapeutic properties of chymotrypsin inhibitors

Ongoing

List of Post-Graduate/Graduate Students Guided for their Project-Work

S. No.

Name of the Student

Project Title

Year of Submission

(Duration)

1.

C. Toshisangba

(M.Sc. Biotechnology, Univ. of Hyderabad)

Regulation of Mitochondrial Pyruvate Dehydrogenase Complex (PDC) in Light and During Light Enhanced Dark Respiration (LEDR) in Mesophyll Protoplasts and Leaf Discs of Pea (*Pisum sativum*).

2004

(1 year)

2.

C.R.Raghavender

(M.Sc. Plant Sciences, Univ. of Hyderabad)

Nitrate Reductase (NR) Activity in Leaves of *Pisum sativum* during Light and Dark.

2004

(6 months)

3.

Ramanathan Sujay

(M.Sc. Biotechnology, Univ. of Hyderabad)

Purification and Partial Characterization of Trypsin Inhibitor from Pigeon pea (*Cajanus cajan*).

2005

(1 year)

4.

Vara Prasad

(M.Sc. Plant Sciences, Univ. of Hyderabad)

Assessment of Total Antioxidant Capacity (TAC) of Selected Medicinal Plants by ABTS Radical Cation Decolorization Assay.

2005

(6 months)

5.

P. Naga Prasuna

(M.Sc. Biotechnology, S.K.University, Anantapur)

Optimization of Methodology to evaluate the Antioxidant Potential of Selected Medicinal Plants.

2005

(5 months)

6.

Sherinmol Thomas

(M.Sc. Plant Sciences, Univ. of Hyderabad)

Restriction of Mitochondrial Oxidative Electron Transport Modulated Enzyme Activities of Superoxide dismutase and Catalase during Osmotic Stress.

2007

(1 year)

7.

Anurag Pandey

(M.Sc. Biotechnology, Univ. of Hyderabad)

Purification and Partial Characterization of Trypsin Inhibitor from Black gram Var. TAU1 (Vigna mungo)

2007

(1 year)

8

Kanad Sharma and Navatha Shree

(B.Tech. Biotechnology,

Sreenidhi Institute of Science and Technology, Hyderabad)

Isolation, Partial Purification and Characterization of Serine Proteinase Inhibitors from Black gram (Vigna mungo. Var.T-9) Seeds.

2007

(5 months)

9

Vinod Kumar Yata

(M.Sc Biotechnology

West Bengal University

of Technology, Kolkata)

Purification of Trypsin inhibitor using different chromatography methods from the seeds of Black gram (Vigna mungo)Var. TAU-1.

2007

(5 months)

10

Manoj Kumar

(M.Sc. Biotechnology,

Univ. of Hyderabad)

Purification and Characterization of Trypsin inhibitor from seeds of Black gram (Vigna mungo)

2008

(1 year)

11

Suresh

(M.Sc. Plant Sciences (Biotechnology),

Univ. of Hyderabad)

Plant Proteinase Inhibitors

2008

(1 year)

12

Pratibha

(M.Sc. Biotechnology, Andhra University, Visakhapatnam)

Differential expression of chloroplastic, mitochondrial and cytosolic enzymes in wild type and Aox1a knock out mutants of *Arabidopsis thaliana*

2008

(6 months)

13.

Inturi Sandhya

(M.Sc. Plant Sciences

Univ. of Hyderabad)

Purification and Chemical Modification of Trypsin Inhibitor from the Seeds of Black gram (*Vigna mungo*) Var. T-9

2009

(1 year)

14.

Shubhendu Dwivedi

M.Sc. Life Sciences

DAVV, Indore

Comparative analysis of differential expression of chloroplastic, mitochondrial and cytosolic enzymes between wild type and AOX1a knockout mutant of *Arabidopsis thaliana* under unlimited growth conditions".

2009

(6 months)

15.

Trinadh Rao

M.Sc. Molecular Microbiol

Purification of Proteinase inhibitors from red gram

2010

(1 Year)

16.

Geetanjali VilasThorat

M.Sc. Plant Biology & Biotechnology

University of Hyderabad

Screening of *Cajanus platycarpus* accessions for proteinase inhibitors active against midgut trypsin-like proteinases of *Achaea janata*, *Helicoverpa armigera* and *Spodoptera litura*

2011

(1 Year)

17.

P. Durgeshwar

M.Sc. Molecular Microbiology

University of Hyderabad

Screening of *Arachis hypogea* seeds for proteinase inhibitors active against the bovine pancreatic proteinases and *Spodoptera litura* midgut proteinases

2011

(1 Year)

18.

V. Keerthi

M.Sc. Biotechnology

Andhra Loyola College

Vijayawada

Effect of pH and temperature on the activity of proteinase inhibitor purified from *Cajanus platycarpus* (cv. ICPW 63) against *Helicoverpa armigera* (cotton bollworm)

2011

(3 months)

19.

N.N.V. Radharani

M.Sc. Biotechnology

University of Hyderabad

Screening and purification of *Arachis hypogea* proteinase inhibitors active against *Spodoptera litura* gut proteinases

2012

(1 Year)

20.

T. Geetanjali

M.Sc. Biotechnology

University of Hyderabad

Screening of *Cajanus cajan* varieties for proteinase inhibitors active against midgut trypsin-like proteinases of Lepidopteran insects

2012

(1 Year)

21.

G. Susmitha

M.Sc. Integrated Biotechnology

Department of Biotechnology

Sri Padmavathi Mahila Viswavidyalayam

Tirupathi – 517 502

Alternative oxidase pathway protects photosynthesis from photoinhibition during osmotic stress

2013

(3 months)

22.

Naila Fatima

M.Sc. Biotechnology

University of Hyderabad

Importance of Mal/OAA shuttle during light stress in mediating beneficial interactions between chloroplasts and mitochondria to optimize photosynthesis in *A. thaliana*

2013

(1 Year)

23.

Ajay Kesharwani

Int-M.Sc. Ph.D.

University of Hyderabad

Purification of proteinase inhibitors from *Arachis hypogea* with potential anticoagulant properties

2013

(1 Year)

24.

Priyatham Rayi

M. Tech. Biotechnology

CMR College of Engineering and Technology,

Hyderabad – 501 401

Effects of redox metabolite OAA on respiration, photosynthesis and NAD-MDH activity in pea plant (*Pisum sativum*)

2013

(1 Year)

25.

Joe Thomas

B. Tech. Biotechnology

School of Biotechnology & Health Sciences,

Karunya University,

Coimbatore – 641 114

Biochemical Characterization of Proteinase Inhibitor from *Cajanus cajan* (cv. BDN1)

2013

3-4 months

26.

Manish

M.Sc. Biotechnology

University of Hyderabad

Response of NAD-MDH and NADP-MDH to light in *Arabidopsis thaliana* : Effect of OAA and pyridoxal phosphate

2013 -2014

1 year

27.

Sangeetha

M.Sc. Biotechnology

University of Hyderabad

Beneficial interaction between chloroplast and mitochondria: Importance of malate/OAA shuttle

2013-2014

1 year

28.

Divya sree IISER,

Integ. M. Sc.,

IISER Trivandrum

Identification of Trypsin and Chymotrypsin inhibitors from Horse gram (*Macrotyloma uniflorum*) seeds and its effect on Insect gut (*Spodoptera litura* and *Helicoverpa armigera*)

2014

Two months

29.

DeviRam

GITAM University

Andhra Pradesh

Analysis of adenylates in leaf discs of *Arabidopsis thaliana* during oxidative stress

2014

Five months

30.

Mr. SaiKrishna

B. Tech. Biotechnology,

NIT, Warangal

Identification of trypsin and chymotrypsin inhibitors in the seed of horse gram

2014

Two months 1 week

31.

Yagnika

M.Tech. Biotechnology & Bioinformatics

University of Hyderabad

Molecular docking interaction studies of *Cajanus cajan* (pigeon pea) proteinase inhibitor (PI) against serine proteinases

2014-2015

1 year

32.

Kumaraswamy

M.Sc. Biotechnology

University of Hyderabad

The role of H₂O₂ in the modulation of proteinase inhibitor activity in the leaves of *Vigna mungo*

2014-2015

1 year

33.

Tripti Verma

Int-M.Sc. Ph.D

University of Hyderabad

Identification of proteinase inhibitors from leaves of black gram (*Vigna mungo*): Cloning of proteinase inhibitor gene

2014-2015

1 year

34.

Nupur Fangaria

M.Sc. Biotechnology

University of Hyderabad

Cloning, heterologous Expression of kunitz trypsin inhibitor from interspecific advanced variety of *Arachis hypogea* and its purification.

2015-2016

1 Year

(Completed

35.

Mohd. Faraz Alam

M.Sc. Biotechnology

University of Hyderabad

Differential responses of the gut serine proteases from the *Spodoptera litura* fed on natural and artificial diet.

2015-2016

1 Year

(Completed)

36.

G. Sreelatha

M.Tech, Bioinformatics

University of Hyderabad

Molecular dynamic and docking interaction studies of serine proteases with peanut Bowman-Birk Inhibitor

2016-2017

1 Year

(completed)

37.

P. Mazumdar

M.Sc. Biotechnology

University of Hyderabad

Evaluation of anticoagulant property of protease inhibitors from imbibed and heat-treated seeds of *V. mungo*

2016-2017

1 Year

(Completed)

38.

Umar Arsh

M.Sc. Biotechnology

Purification and characterization of proteinase inhibitor from wild relative of pigeonpea (*Cajanus platycarpus*- ICPW 68)

2017-2018

1 Year

(Completed)

39.

Fouzia

Integrated M.Sc. Ph.D

Proteome Analysis of *Saccharomyces cerevisiae* transformed with AtAOX1a under oxidative stress

2017-2018

1 Year

(Completed)

40.

Deborita

M.Sc. Biotechnology

2018-2019

1 Year

(Completed)

41.

Bhanu Pranav

M.Sc. Biotechnology

Isolation and Characterization of Protease Inhibitors from the seeds of *Cajanus platycarpus*
ICPW 68 b

2018-2019

1 Year

(Completed)

42.

Suneela

Int-M.Sc. Ph.D.

Cloning and expression of Bowman-Birk inhibitor from peanut cultivar (KADIRI-6)

2018-2019

1 Year

(Completed)

43.

Himanshu (Int. MSc.Ph.D)

Purification and Characterization of Bowman-Birk Inhibitor

from Roasted and Boiled seeds of *Arachis hypogaea*

2019-2020

1 Year

(Completed)

44.

Anushruti (M.Sc. Biotech)

Purification and Characterization of Bowman-Birk Inhibitor from Germinated and Imbibed seeds of *Arachis hypogaea*

2020-2020

1 Year

(Completed)

45.

Pallabi Kishu (M.Sc. Biotech)

Purification and characterization of Bowman-Birk inhibitor from the seeds of *Cajanus cajan* (cv. ENT-11): Evaluation of insecticidal potential against Lepidopteran pests, *Achaea janata* and *Spodoptera frugiperda*

2020-21

1 Year

(Completed)

46.

Sravan Kumar (M.Sc. Biotech)

Purification and Characterization of proteinase inhibitors from the seeds of *Arachis hypogea* (cv. K6): Evaluation of their insecticidal potential against Lepidopteran pests, *Achaea janata* and *Spodoptera frugiperda*

2020-21

1 Year

(Completed)

47.

Shreya Verma (Int. M.Sc./Ph.D.)

Purification of protease inhibitors from chickpea (cv. 506EB) and evaluation of their insecticidal potential against gut proteases of Lepidopteran pest, *Spodoptera frugiperda*

2020-21

1 Year

(Completed)

48.

Gopinath

Antibacterial properties of PIs

Ongoing

49.

Aqib Javaid

Anticancerous activities of PIs by in vitro studies

Ongoing

50.

Omprakashnath

Use of proteinaceous PIs in enzyme assays

Ongoing

CV

Curriculum Vitae of Dr. K. Padmasree (kpssl@uohyd.ac.in)

http://sls.uohyd.ac.in/new/fac_details.php?fac_id=98

Full Name

K. P. M. S. V. Padmasree

Date of Birth

17-02-1968

Age on Date

53 Years 07 months

Services at UoH

HoD

(30th July 2018 – 29th July 2021)

Department of Biotechnology & Bioinformatics
School of Life Sciences, University of Hyderabad

Professor

(2016 – Till date)

Department of Biotechnology & Bioinformatics
School of Life Sciences, University of Hyderabad

Associate Professor (2013-2016)

Department of Biotechnology & Bioinformatics
School of Life Sciences, University of Hyderabad

Reader

&

Assistant Professor (Senior Grade) (2010-2013)

Department of Biotechnology & Bioinformatics
School of Life Sciences, University of Hyderabad

Department of Plant Sciences

School of Life Sciences, University of Hyderabad

Lecturer (Sr. Scale) (2005- 2010)

Department of Plant Sciences

School of Life Sciences, University of Hyderabad

Lecturer

(2001- 2005)

Department of Plant Sciences,
School of Life Sciences, University of Hyderabad

Education

B.Sc. (1987)

Z.B.C., Govt. College for Women, Nagarjuna University, Guntur

M.Sc. (1989)

Biochemistry, University of Hyderabad, Hyderabad

Ph.D. (1998)

Life Sciences (Department of Plant Sciences), University of Hyderabad

Thesis Title : Biochemical basis of the importance of mitochondrial oxidative electron transport in optimizing photosynthesis in mesophyll protoplasts of pea (*Pisum sativum* L.)

Supervisor : Prof. A.S. Raghavendra

Post-Doctorate

(1998-2001)

CSIR-RA, University of Hyderabad, Hyderabad

Medals

R.D. Asana Gold Medal (2001)
Plant Physiology – Photosynthesis

Indian Society for Plant Physiology

Honours/Awards

- 1) Fellow, Telangana Academy of Sciences (2018)
- 2) Expert member, Department of Biotechnology (2012)
- 3) Associate Fellow (2011)

Andhra Pradesh Akademi of Sciences, India

- 4) Cullan Devarajan Memorial Award (2011)

Crop Protection

Society for Applied Biotechnology, India

- 5) Fellow Award (2011)

Plant Biotechnology

Society for Applied Biotechnology, India

- 6) SARC Excellence in Teaching Award (2011)

Scientific & Applied Research Center, Meerut, India

Alexander von Humboldt Research Fellowship

(Germany)

2005 – 2006

2007

Membership

- 1) Life Member, Telangana Academy of Sciences, India

- 2) Member, Andhra Pradesh Academy of Sciences, India
- 3) Life Member : Indian Photobiology society
- 4) Life Member : Society for Biological Chemists, India
- 5) Member : Indian Society for Plant Physiology
- 6) Member ; Society for Ethnopharmacology
- 7) Life Member : Society for Applied Biotechnology, India
- 8) Life Member: Scientific & Applied Research Center, Meerut, India

Editorial Board Member

Indian Journal of Natural Products and Resources, NISCAIR, CSIR
(2011-2015)

Reviewer for Journals

Crop Protection; J. Plant Physiol; J. Plant Biol.; Insect Sci.; Industrial Crops and Products;
Biochimica Biophysica Acta-General ; Plos One;

Industrial Crops and Products, Food and Function

Teaching Experience

(2001 – till date)

Theory: Biochemistry, Natural Products: Biochemistry and Biotechnology, Plant Physiology, Cell and Developmental Biology, Molecular Biology, Developmental Biology, Plants and Man, Medicinal Botany, Bridge Biology, Microbial Physiology and Biochemistry

Practicals: Macromolecular structure and Function, Biochemical and Analytical techniques, Upstream and Down-stream processing techniques

Research Experience

(1992 - till date)

Areas of Research Interest

Interdisciplinary areas of Life Sciences

1. Biotechnological application of proteinase inhibitors and alternative oxidase in agriculture and human health
2. Biochemistry and bioenergetics of chloroplasts and mitochondria
3. Synthesis and exploitation of lignin as matrix in bionanoformulations

Research Grants

Received as PI

Completed: Eight – DST(2), DBT(2), UGC(1), CSIR(1), ILS(1), UPE (3)

Total Grant Mobilized: Rs. 155 Lakhs
(Please refer Annexure I for details)

Publications

Total = 56 (Please refer Annexure II for List of Publications)

Referred Journals = 39 (Total I.F = 166.58 & Av. I.F. = 4.27)

Proceedings = 7

Opinion = 1

Book Chapters = 6

NCBI data base = 3

Scopus Citation Index: 1367; h-index: 19

Total Google Scholar Citations : 1967; h-index: 21

Citations for last five years (2016-2021) = 946; h-index: 21

Participation in Seminars / Conferences / workshops/
refresher courses

Total = 108 (Please refer Annexure III)

International = 38

National = 70

Research Guidance

Ph.D.Thesis : Eight (8) students - Degree awarded

Six (6) students - Under supervision

M.Sc. Dissertations : Forty eight (47)

(Pl. refer Annexure IV for details)

Organisation of Conferences / Committees:

1. Organising Secretary – ICIPBI-2017, International Conference on Innovations in Pharma and Biopharma Industry: Challenges and Opportunities for Academy and Industry (ICIPBI-2017), 20 - 22 December, 2017, Life Sciences, University of Hyderabad.
2. Coordinator – DST-WOSA-LS – 10-12th Aug 2018, School o Life Sciences, University of Hyderabad

Areas of Research Interest

Area(s) of Research Interest:

My research team is actively working on two agriculturally important defense proteins, (i) Novel seed proteinaceous proteinase inhibitors (PIs) and (ii) Mitochondrial Alternative Oxidase (AOX). These proteins are expressed under both biotic and abiotic stress conditions in plants

I. Novel Seed Proteinase Inhibitors in Pest management and Therapeutics

Our research team focused on screening, identification, purification and characterization of novel seed proteinaceous proteinase inhibitors (PIs) useful in protecting crop plants against insect pests. The biochemical and biophysical properties of PIs, their structure-function relationship was extensively studied from legume crop plants such as redgram, blackgram, greengram, chickpea and peanut. These PIs showed specificity in inhibiting the larval gut proteases of different lepidopteran pests such as Achaea janata, Manduca sexta, Spodoptera

litura and Helicoverpa armigera. The design of novel PI bioformulations and testing its efficacy in the green house is underway.

Also, a few medicinal properties such as anticoagulant

Publications

Total List of Publications of Prof. K. P. M. S. V. Padmasree
in Refereed Journals & Text Books

* Corresponding author

** Both authors contributed equally

Total Publications = 56

Referred Journals = 39 (Thomson Reuter Total Impact Factor = 166.58 & Av. I.F. = 4.27)

NCBI data base = 03

Book Chapters = 06

Proceedings = 07

Opinion = 01

Total Citation Index as per SCOPUS (AU-ID 6602794782) : 1367 & H index: 19

2016-2021 : 671

Google Scholar Citations :

All	Since 2016
Citations	
1967	946
h-index	

21	18
i10-index	
30	21

Referred Journals :

- 1) Chauhan VK, Dhanika NK, Lokya V, Bhuvanchandra B, Padmasree K and Dutta-Gupta A (2021) Midgut aminopeptidase N expression profile in castor semilooper (*Achaea janata*) during sublethal Cry toxin exposure. *J Biosci.*, 46: article 29 Impact Factor 1.826
- 2) Lokya V, Swathi M, Mallikarjuna N and Padmasree K* (2020) Response of midgut trypsin- and chymotrypsin-like proteases of *Helicoverpa armigera* larvae upon feeding with peanut BBI: Biochemical and biophysical characterization of PnBBI. *Frontiers in Plant Science* 11: article 266.doi: 10.3389/fpls.2020.00266 Impact Factor 5.753
- 3) Mohanraj SS, Gujjarlupudi M, Lokya V, Mallikarjuna N, Dutta-Gupta A and Padmasree K* (2019) Purification and characterization of Bowman-Birk and Kunitz isoinhibitors from the seeds of *Rhynchosia sublobata* (Schumacher.) Meikle, a wild-relative of pigeonpea. *Phytochemistry* 159: 159-171 Impact Factor : 4.072
- 4) Mohanraj SS, Tetali SD, Mallikarjuna N, Dutta-Gupta A, Padmasree K (2018) Biochemical properties of a bacterially-expressed Bowman-Birk inhibitor from *Rhynchosia sublobata* (Schumacher.) Meikle seeds and its activity against gut proteases of *Achaea janata*. *Phytochemistry*. 151:78-90 Impact Factor : 4.072
- 5) Srikanth S, Swathi M, Padmasree K, Rao M.V. and Mallikarjuna N (2017) Protease inhibitors of *Cajanus* conferring resistance to pod borer of pigeonpea (*Cajanus cajan* L. Millsp.). *Electronic Journal of Plant Breeding* 8:26-37 NAAS Score : 5.14
- 6) Swathi M, Mishra P.K., Lokya V., Swaroop V., Mallikarjuna N., Dutta-Gupta A. and Padmasree K* (2016) Purification and partial characterization of trypsin-specific proteinase inhibitors from pigeonpea wild relative *Cajanus Platycarpus* L. (Fabaceae) active against gut proteases of lepidopteran pest *Helicoverpa armigera*. *Front. Physiol.* 7:388. Doi: 10.3389/fphys.2016.00388. Impact Factor : 4.566

7) Yearla S.R. and Padmasree K* (2016) Exploitation of subabul stem lignin as a matrix in controlled release agrochemical nanoformulations: a case study with herbicide diuron. *Environ Sci and Pollution Res.* 23:18085–18098. DOI: 10.1007/s11356-016-6983-8. Impact Factor : 4.223

8) Dinakar Ch, Vishwakarma A, Raghavendra A.S. and Padmasree K* (2016) Alternative oxidase pathway optimizes photosynthesis during osmotic and temperature stress by regulating cellular ROS, malate valve and antioxidative systems. *Front. Plant Sci.* 7: article 68. doi: 10.3389/fpls.2016.00068 Impact Factor 5.723

9) Vishwakarma A., Dalal A., Tetali S. D., Kirti P. B. and Padmasree K* (2016), Genetic engineering of AtAOX1a in *Saccharomyces cerevisiae* prevents oxidative damage and maintains redox homeostasis. *FEBS Open Bio* 6: 135–146. doi:10.1002/2211-5463.12028. (Online ISSN No : 2211-5463) Impact Factor 2.231

10) Yearla S.R and Padmasree K* (2016) Preparation and characterization of lignin nanoparticles: Evaluation of their potential as antioxidants and UV protectants. *J. Exp. Nanoscience* 11: 289-302. (ISSN No: 1745-8080 (Print), 1745-8099 (Online) Impact Factor 3.075

11) Yearla S.R and Padmasree K* (2016) *Leucaena leucocephala* (Lam.) de Wit., “subabul” stem lignin: Isolation, structural characterization and thermal properties. *Ind J Exp. Biol.* 54: 406-413 (ISSN No: 0975-1009 (Online); 0019-5189 (Print) NAAS score : 7.17

12) Vishwakarma A., Tetali S D., Selinski J., Scheibe R., Padmasree K* (2015) Importance of the alternative oxidase (AOX) pathway in regulating cellular redox and ROS homeostasis to optimize photosynthesis during restriction of the cytochrome oxidase pathway in *Arabidopsis thaliana*. *Annals of Bot.* 116: 555-569. (ISSN No: 0305-7364) Impact Factor 4.357

13) Swathi M., Mohanraj S.S., Swaroop V., Gujjarlupudi M., Mallikarjuna N., Dutta-Gupta A. and Padmasree K* (2015) Proteinase inhibitors from *Cajanus platycarpus* accessions active against pod borer *Helicoverpa armigera*. *Acta Physiologia Plantarum* 37: 242. (ISSN No: 0861-1664) Impact Factor 2.354

14) Swathi M., Lokya V., Swaroop V., Mallikarjuna N., Kannan M., Dutta-Gupta A. and Padmasree K.* (2014) Structural and functional characterization of proteinase inhibitors from seeds of *Cajanus cajan* (cv. ICP 7118). *Plant Physiology and Biochemistry* 83: 77-87, (ISSN No:

0981-9428) Impact Factor 4.27

15) Vishwakarma A., Bashyam L., Senthilkumaran B., Scheibe R. and Padmasree K*. (2014) Physiological role of AOX1a in photosynthesis and maintenance of cellular redox homeostasis under high light in *Arabidopsis thaliana*. *Plant Physiology and Biochemistry* 81: 44-53. (ISSN No: 0981-9428) Impact Factor 4.27

16) Dalal A., Vishwakarma A., Singh N.K., Gudla T., Bhattacharyya M.K., Padmasree K., Viehhauser A., Dietz K-J and Kirti P.B. (2014) Attenuation of hydrogen peroxide-mediated oxidative stress by *Brassica juncea* annexin-3 counteracts thiol-specific antioxidant (TSA1) deficiency in *Saccharomyces cerevisiae*. *FEBS Letters* 588: 584-593. (ISSN No: 0014-5793) Impact Factor 4.124

17) Choudhury S.S., Bashyam L., Manthapuram N., Bitla P., Kollipara P. and Tetali S.D. (2014) *Ocimum sanctum* leaf extracts attenuate human monocytic (THP-1) cell activation. *Journal of Ethnopharmacology* 154: 148-155. (ISSN No:0378-8741) Impact Factor 4.36

18) Shilpa K., Sunkad G., Kurella S., Marri S., Padmasree K., Jadhav D.R., Sahrawat K.L. and Mallikarjuna N (2013) Biochemical composition and disease resistance in newly synthesized amphidiploids and autotetraploid peanuts. *Food and Nutrition Sciences*, 4: 169-176. (ISSN No: 2157-944X (Print), 2157-9458 (Online) Impact Factor. 0.971

19) Swathi M., Mohanraj S.S., Srinivas Ch., Prasad E.R., Venkatrao V., Mallikarjuna N., Dutta-Gupta A. and Padmasree K* (2012) *Cajanus cajan* (cv. C11): An important non-host resource for proteinase inhibitors of lepidopteran insect pest *Achaea janata*. *Functional Plant Sci. Biotech.* 6 (Special Issue 1) : 82-85. (ISSN No: 1749-0472)

20) Kokkiripati P.K., Bhakshu, L.Md., Marri, S., Padmasree, K., Row, A.T., Raghavendra, A.S., Tetali, S.D (2011) Gum Resin of *Boswellia serrata* Inhibited Human Monocytic (THP-1) Cell Activation and Platelet Aggregation. *Journal of Ethnopharmacology* 137: 893-901. (ISSN No: 0378-8741) Impact Factor 4.36

21) Prasad E.R., Dutta-Gupta A and Padmasree K.* (2010) Insecticidal potential of Bowman-Birk proteinase inhibitors from red gram (*Cajanus cajan*) and black gram (*Vigna mungo*) against lepidopteran insect pests. *Pesticide Biochemistry and Physiology* 98: 80-88. (ISSN No: 0048-3575 (Print), 1095-9939 (Online) Impact Factor: 3.963

22) Prasad E.R., Dutta Gupta A and Padmasree K.* (2010) Purification and characterization of

a Bown-Birk proteinase inhibitor from the seeds of black gram (*Vigna mungo*). *Phytochemistry* 71: 363-372. (ISSN No: 0031-9422) Impact Factor: 4.072

23) Prasad, E.R. Merzendorfer H., Madhurarekha, Ch. Dutta-Gupta A., Padmasree K.* (2010) Bowman-Birk Proteinase Inhibitor from *Cajanus cajan* Seeds: Purification, Characterization and Insecticidal Properties. *Journal of Agricultural & Food Chemistry* 58: 2838–2847. (ISSN No:1520-5118) Impact Factor: 5.279

24) Dinakar Ch., Raghavendra A.S. and Padmasree K.* (2010) Importance of AOX pathway in optimizing photosynthesis under high light stress: Role of pyruvate and malate in activating AOX. *Physiologia Plantarum* 139: 13–26. (ISSN No: 1399-3054) Impact Factor: 4.5

25) Dinakar Ch., Vishwakarma A.P., Yearla S.R., A.S Raghavendra and Padmasree K.* (2010) Importance of ROS and antioxidant system during the beneficial interactions of mitochondrial metabolism with photosynthetic carbon assimilation. *Planta* 231: 461-474. (ISSN No: 0032-0935) Impact Factor: 4.116

26) Prasad E.R., Dutta Gupta A. and Padmasree K.* (2009) Inhibitors from pigeonpea active against lepidopteran gut proteinases. *J. Econ. Entomol.* 102: 2343-2349. (ISSN No: 0022-0493) Impact Factor: 2.17

27) Strodtkötter**, I., Padmasree, K**, Dinakar, Ch., Speth, B., Wojtera, J., Voss, I., Do, P. T., Nunes-Nesi, A., Fernie, A. R., Linke, V., Raghavendra, A.S., Scheibe R. (2009) Induction of the AOX1D isoform of alternative oxidase in *A. thaliana* T-DNA insertion lines lacking AOX1A, is insufficient to optimize photosynthesis when treated with antimycin A. *Molecular Plant* 2: 284-297. (ISSN No: 1674-2052) Impact Factor: 12.084

28) Raghavendra, A.S. and Padmasree, K. (2003): Beneficial interactions of mitochondrial metabolism with photosynthetic carbon assimilation. *Trends in Plant Science* 8: 546-553. (ISSN No: 1878-4372) Impact Factor: 18.313

29) Padmasree, K., Padmavathi, L. and Raghavendra, A.S. (2002): Essentiality of mitochondrial oxidative metabolism for photosynthesis: Optimization of carbon assimilation and

protection against photoinhibition. *CRC Critical Reviews in Biochemistry and Molecular Biology* 37: 71-119. (ISSN No: 1040-9238) Impact Factor: 8.250

30) Padmasree, K. and Raghavendra, A.S. (2001): Restriction of mitochondrial oxidative metabolism leads to suppression of photosynthetic carbon assimilation but not of photochemical electron transport in pea mesophyll protoplasts. *Current Science* 81: 680-684. (ISSN No: 0011-3891) Impact Factor: 1.102

31) Padmasree, K. and Raghavendra, A.S. (2001): Consequence of restricted mitochondrial oxidative metabolism on photosynthetic carbon assimilation in mesophyll protoplasts: Decrease in light activation of four chloroplastic enzymes. *Physiologia Plantarum* 112: 582-588. (ISSN No: 1399-3054) Impact Factor: 4.5

32) Padmasree, K. and Raghavendra, A.S. (1999): Response of photosynthetic carbon assimilation in mesophyll protoplasts to restriction on mitochondrial oxidative metabolism: Metabolites related to the redox status and sucrose biosynthesis. *Photosynthesis Research* 62: 231-239. (ISSN No: 0166-8595 (Print), 1573-5079 (Online) Impact Factor: 3.573

33) Padmasree, K. and Raghavendra, A.S. (1999): Importance of oxidative electron transport over oxidative phosphorylation in optimizing photosynthesis in mesophyll protoplasts of pea (*Pisum sativum* L.). *Physiologia Plantarum* 105: 546-553. (ISSN No: 1399-3054) Impact Factor: 4.5

34) Padmasree, K. and Raghavendra, A.S. (1999): Prolongation of photosynthetic induction as a consequence of interference with mitochondrial oxidative metabolism in mesophyll protoplasts of pea (*Pisum sativum* L.). *Plant Science* 142: 29-36. (ISSN No: 0168-9452) Impact Factor: 4.729

35) Willmer, C.M., Padmasree, K. and Raghavendra, A.S. (1999): A novel method of measuring volume changes of mesophyll cell protoplasts and the effect of mercuric chloride on their osmotically-induced swelling. *Journal of Experimental Botany* 50: 401-406. (ISSN No: 0022-0957 (Print), 1460-2431 (Online) Impact Factor: 6.992

36) Saradadevi, K., Padmasree, K. and Raghavendra, A.S. (1996): Correlation between the

inhibition of photosynthesis and the decrease in area of detached leaf discs or volume/absorbance of protoplasts under osmotic stress in pea (*Pisum sativum*). *Physiologia Plantarum* 96: 395-400. (ISSN No: 1399-3054) Impact Factor: 4.5

37) Rao, A.M., Padmasree, K and Kavi Kishor, P.B. (1995): Enhanced plant regeneration in grain and sweet sorghum by asparagine, proline and cefotaxime. *Plant Cell Reports* 15: 72-75. (ISSN No: 0721-7714 (Print), 1432-203X (Online) Impact Factor: 4.570

38) Raghavendra, A.S., Padmasree, K. and Saradadevi, K. (1994): Interdependence of photosynthesis and respiration in plant cells: interactions between chloroplasts and mitochondria. *Plant Science* 97: 1-14. (ISSN No: 0168-9452) Impact Factor: 4.729

39) Rao, A.M., Padmasree, K., Kavi Kishor, P.B. and Reddy, G.M. (1992): Varietal differences on plant regeneration in grain and sweet sorghum. *Plant Tissue Culture* 2: 109-113. (ISSN: 1817-3721)

Submissions to NCBI:

1) Swaroop Kumar V., Swathi M., Tetali S.D. and Padmasree K*. (2015) *Vigna mungo* var. T9 proteinase inhibitor mRNA from mature seeds. NCBI.GenBank: KP966296.1

2) Mohanraj S.S. and Padmasree K*. (2015) Kunitz type chymotrypsin inhibitor from immature seeds of *Rhynchosia sublobata*. NCBI GenBank: KT119633.1

3) Mohanraj S.S. and Padmasree K*. (2016) Bowman Birk inhibitors from immature seeds of *Rhynchosia sublobata* NCBI GenBank: KT119632.2.

Proceedings:

1. Padmasree K.* and Dinakar Ch (2011) Metabolic interactions between chloroplasts and

mitochondria to optimize photosynthesis under high light. Plant Science in Post Genomic Era (A Special Bulletin of ICPSPGE), Orissa, India, February 2011, 113-118.

2. Padmavathi, L., Padmasree, K. and Raghavendra, A.S. (2001): Optimization by mitochondrial metabolism of photosynthetic carbon assimilation. PS2001 Proceedings of the 12th International Congress on Photosynthesis at Melbourne, Australia, September 2001 (in CSIRO).

3. Padmasree, K. and Raghavendra, A.S. (1998): Mitochondrial oxidative electron transport optimizes photosynthesis in mesophyll protoplasts of pea. Proceedings of the XIth International Congress on Photosynthesis at Budapest, Hungary, August 1998, Vol. V, 3727-3730 (in Kluwer).

4. Padmasree, K. and Raghavendra, A.S. (1995): Essentiality of both cytochrome and alternative pathways of respiration for photosynthesis in mesophyll protoplasts of pea (*Pisum sativum*). Proceedings of the Xth International Congress on Photosynthesis at Montpellier, France, August 1995, Vol. II, 899-902 (in Kluwer).

5. Saradadevi, K., Padmasree, K. and Raghavendra, A.S. (1993): Photoinhibition of photosynthesis in mesophyll protoplasts of pea (*Pisum sativum*): Protection by dark respiration and aggravation by osmotic stress and chilling. Proceedings of the DAE Symposium on Photosynthesis and Plant Molecular Biology at Jawaharlal Nehru University, New Delhi, March 1993, 130-135.

6. Raghavendra, A.S., Saradadevi, K. and Padmasree, K. (1992): Short-term interaction between photosynthesis and respiration in leaves and protoplasts. Transactions of Malaysian Society Plant Physiology (Special Edition) 3: 12-18.

7. Saradadevi, K., Padmasree, K. and Raghavendra, A.S. (1992): Interaction between respiration, photosynthesis and photoinhibition in mesophyll protoplasts of pea (*Pisum sativum*). Proceedings of the IXth International Congress on Photosynthesis at Nagoya, Japan, August 1992, Vol. III, 725-728 (in Kluwer).

Invited Chapters in books

1. Swathi M, Lokya V, Gujjarlupudi M, Verma S, Kisku P, Nukapangu SK & Padmasree K* (2021) Proteinase Inhibitors. In. Molecular Approaches for Sustainable Insect Pest Management, Ed. Omkar, Springer Nature Singapore Pte Ltd., Singapore (ISBN 978-981-16-3590-8) in press
2. Padmasree K*. and Dinkar Ch. (2015) Mitochondrial oxidative metabolism optimizes photosynthetic carbon assimilation through redox and ROS linked metabolite shuttles. In Photosynthesis: Basics to Applications, Eds. Itoh, S., Mohanty, P. and Guruprasad, K.N. (I.K. International Publishing House Pvt. Ltd., New Delhi), pp. 158-166. (ISBN 978-93-84588-54-0)
3. Padmasree, K*. and Dinakar, Ch. (2012) Mitochondrial oxidative metabolism optimizes photosynthetic carbon assimilation through redox and ROS linked metabolite shuttles. In Photosynthesis: Overviews on Recent Progress & Future Perspective, Eds. Itoh, S., Mohanty, P. and Guruprasad, K.N. (I.K. International Publishing House Pvt. Ltd., New Delhi), pp. 158-166 (ISBN: 978-93-81141-00-7)
4. Prasad, E.R., Vijayaprasad R. Komera, Padmasree, K. and Dutta-Gupta A (2011) Plant Proteinase inhibitors and their potential in insect pest management. In Entomology: Ecology and Biodiversity, Eds. Tyagi, B.K. and Vijay Veer (Scientific Publishers, Jodhpur, India. pp. 268-291. (ISBN: 978-81-7233-727-8)
5. Padmasree, K. and Raghavendra, A.S. (2000): Photorespiration and interaction between chloroplasts, mitochondria and peroxisomes. In: Probing Photosynthesis: Mechanism, Regulation and Adaptation., Eds. Yunus, M., Pathre, U. and Mohanty, P. (London: Taylor and Francis), pp. 246-262.

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6. Padmasree, K. and Raghavendra, A.S. (2000): Interaction with respiration and nitrogen metabolism. In: Photosynthesis: A Comprehensive Treatise, Ed. Raghavendra, A.S. (Cambridge: Cambridge University Press). pp. 197-211. (ISBN: 0521 78444 1 paperback)

7. Padmasree, K. and Raghavendra, A.S. (1998): Interaction with respiration and nitrogen metabolism. In: Photosynthesis: A Comprehensive Treatise, Ed. Raghavendra, A.S. (Cambridge: Cambridge University Press), pp.197-211. (ISBN: 0521 57000 X hardback)

Conferences / Seminars / Workshops

List of Abstracts/Posters/Oral Presentations at Seminars/Conferences/
Workshops/Training Programmes/Refresher Courses etc: 108
(One Hundred and eight)

1) Sankar T.V, Padmasree K (2021): A Proteomic Approach to Confirm the Purity of Recombinant *Arabidopsis thaliana* Alternative Oxidase (rAtAOX1a) Expressed in *E. coli* (Oral presentation). "Virtual Conference on Proteomics in Agriculture and Healthcare" held during March 13-14, 2021, at School of Life Sciences, University of Hyderabad, India-500046.

2) Sankar T.V, Tetali S.D, Padmasree K (2020): Molecular Cloning and Heterologous Expression of *A. thaliana* AOX1a in *E. coli*: Purification and Characterization of rAtAOX1a. National Conference on Frontiers in Plant Biology, held on 31st January - 1 st February -2020, at School of Life Sciences, University of Hyderabad, India-500046.

3) K. Padmasree (2019) Biochemical properties and functional characterization of Bowman-Birk inhibitors from seeds of pigeon pea as potential biopesticides against *Achaea janata*. Prof. N.C. Subrahmanyam Commemorative Symposium : A Tribute offered on behalf of M.Sc. Students (1987-1989), 03 Oct, University of Hyderabad, Hyderabad (Invited Talk).

4) V. Swaroop kumar, Vadthya Lokya and Kollipara Padmasree (2019). Role of arginine kinase in retardation of *Spodoptera litura* larval growth and development upon feeding with purified T9BBI from *Vigna mungo* (cv.T9). Eighth International symposium on Molecular insect science 7-10 July, Melia sitges, Sitges, Spain (Poster).

5) Mahati K and Padmasree K (2019) Role of brassinolide in optimization of photosynthesis through alternative oxidase under oxidative stress. Inspire fellow review meeting -2019, 21 July -2019, KLN University, Vaddeswaram, Guntur (Poster).

6) K. Padmasree (2019) Bowman-Birk Inhibitors - Purification, Characterization and their Insecticidal Potential. Induction Ceremony of the Newly Elected Fellows of the Telangana

Academy of Sciences, 15 Mar, TAS, IICT, Hyderabad (Invited).

- 7) M. Gujjarlupudi and K. Padmasree (2019) Purification and characterization of inducible proteinase inhibitors from leaves of blackgram (*Vigna mungo*) and monitoring their insecticidal potential. National Conference on Future India – Science and Technology: Research Innovations in Biology, 14-15 Feb, JAIN and Indian Science Congress Association (ISCA), Bengaluru, pp. 77 (poster)
- 8) Tadiboina V.S and K. Padmasree (2019) Molecular cloning of *Arabidopsis thaliana* AOX1a: Heterologous expression of functionally active recombinant AtAOX1a in *E.coli*. International Conference on Biomedical Engineering, Bioscience, Bioinformatics, Biochemistry, Cancer Biology, Molecular Biology and Applied Biotechnology (BCM-2019), 12 Jan, Krishi Sanskriti, New Delhi, pp. 15-16 (Poster) Received Best Poster Award
- 9) V. Swaroop and K. Padmasree (2017) Biochemical characterization and pharmacological activities of purified proteinase inhibitors (PIs) from the seeds of *Vigna mungo* (cv. T9). International Conference on Innovations in Pharma and Bipharma Industry (ICIPBI-2017): Challenges and Opportunities for Academy and Industry, 20-22 Dec, University of Hyderabad, Hyderabad, P28, pp. 82 (poster)
- 10) V. Lokya and K. Padmasree (2017) Potential Bowman-Birk Inhibitor of human Neutrophil Cathepsin G and evaluation of its biochemical properties. International Conference on Innovations in Pharma and Bipharma Industry (ICIPBI-2017): Challenges and Opportunities for Academy and Industry, 20-22 Dec, University of Hyderabad, Hyderabad, P2, pp. 60 (poster)
- 11) K. Padmasree (2017) Importance of alternative oxidase in optimizing photosynthesis during abiotic stress in higher plants. Humboldt Colloquium “Germany and India – Partners in Education and Research”, 23-25 Nov, Bengaluru, India, Invited Talk
- 12) Sarada D. Tetali (Kanakagiri) and K. Padmasree (2017) Importance of dark respiration in optimizing photosynthetic performance of plants – A turn of the role from in-significance to significance: A personal perspective dedicated to Prof. A.S. Raghavendra. 8th International Conference on Photosynthesis and Hydrogen Energy Research for Sustainability in honor of Agepati S. Raghavendra, William A. Cramer and Govindjee, 30 Oct – 4 Nov, University of Hyderabad, Hyderabad, pp.80, Invited Talk
- 13) K. Padmasree (2017) Purification and Biochemical Characterization of proteinase inhibitors with potential growth retardation properties. School Board of SLS, University of Hyderabad, 11 Sept, Invited Talk
- 14) K. Padmasree (2017) Purification and Biochemical Characterization of proteinaceous Bowman-Birk Inhibitors and their exploitation as biopesticides. UGC Academic Staff College, 01 Sept 2017, Invited Lecture

- 15) P. Prakash Babu, K. Padmasree et al. (2017) Role of Proteins and Protein Aggregates in Physiology and Disease Progression. Conference on Interface Studies, 3-5 Apr, School of Life Sciences, University of Hyderabad, Hyderabad.
- 16) S.V.S. Nageswara Rao, S. Venugopal, S.D. Tetali and K. Padmasree (2017) Nanoparticles/nanostructures assisted surface enhanced Raman spectroscopy: detection of oxidative stress in a biological system. Conference on Interface Studies, 3-5 Apr, School of Life Sciences, University of Hyderabad, Hyderabad.
- 17) G. Srilatha and K. Padmasree (2017) Molecular dynamic and docking interaction studies of serine proteases with peanut Bowman-Birk Inhibitor. Biotechnology Summer symposium – 2017 , 19 Apr, School of Life Sciences, University of Hyderabad, Hyderabad.
- 18) P. Majumdar and K. Padmasree (2017) Evaluation of anti-coagulant properties of proteinase inhibitors purified from imbibed and heat-treated seeds of *Vigna mungo*. Biotechnology Summer symposium – 2017 , 19 Apr, School of Life Sciences, University of Hyderabad.
- 19) T.V. Sankar, A. Vishwakarma and K. Padmasree (2016) Physiological role of AtAOX1a in alleviating oxidative stress and maintenance of cellular redox homeostasis. National Conference of Plant Physiology “Challenges in Crop Physiology Research: From Molecular to Whole Plant, University of Agricultural Sciences, Bengaluru, ISPP, New Delhi, 8-10 Dec, PB55, pp. 64 (Poster).
- 20) V. Lokya, M. Swathi, S.D. Tetali, N. Mallikarjuna, A. Dutta-Gupta and K. Padmasree (2016) Purification and characterization of Bowman-Birk Inhibitors from peanut: Evaluation of their insecticidal and pharmacological activities. Innovations in Biological Research on Health and Diseases, 65th Annual Meeting of Society for Biological Chemists (India) CSIR-CFTRI, Mysuru, 21-24 Nov, BTBE-7, pp. 152 (Poster)
- 21) V. Lokya and K. Padmasree (2016) Purification and characterization of peanut proteinase inhibitors active against midgut proteases of *Achaea janata*. Science and Technology for Health, 2nd Andhra Pradesh Science Congress, Amaravathi, 7-9 Nov, LASB-OP-004, pp.97 (Oral).
- 22) V. Lokya, G. Mariyamma and K. Padmasree (2016) Bowman-Birk inhibitors from peanut seeds: Purification, characterization and kinetic interactions with bovine pancreatic trypsin and chymotrypsin. Bioquest-2016, University of Hyderabad, Hyderabad, 20-21 Oct, P-50, pp. 122 (Poster) – Received Best Poster Award.
- 23) S.S. Mohanraj and K. Padmasree (2016) Bowman-Birk inhibitors from *Rhynchosia sublobata* seeds: sequencing, heterologous expression and insecticidal activity against *Achaea janta*. AS-UoH Joint Workshop on Frontiers in Life Sciences, University of Hyderabad, Hyderabad, 16-17 Sept, p. 27 (Poster) – Received Best Poster Award

- 24) M. Faraz Alam and K. Padmasree (2016) Differential responses of the gut serine proteases from the *Spodoptera* larvae fed on natural and artificial diet. Biotechnology Summer symposium – 2016 , 2nd May School of Life Sciences, University of Hyderabad.
- 25) F. Nupur and K. Padmasree (2016) Cloning, heterologous expression of *Arachis hypogaea* kunitz inhibitor and its purification. Biotechnology Summer symposium – 2016 , 2nd May School of Life Sciences, University of Hyderabad.
- 26) K. Padmasree (2016) Structure-based drug designing and applications to infectious diseases. International Conference and Workshop 1st-5th Feb, 2016.
- 27) K. Padmasree (2015) Exploitation of seed proteinase inhibitors as biopesticides and their biochemical characterization. 3rd International plant physiology congress: Challenges and Strategies in Plant Biology Research Jawaharlal Nehru University, New Delhi, 11-14 Dec, Abstract PE274 (IPPC0787), pp. 253 (Poster).
- 28) G. Mariyamma, V. Swaroop, V. Lokya, and K. Padmasree (2015) Biochemical characterization of host and non-host herbivore induced proteinase inhibitors in leaves of black gram (*Vigna mungo*). 3rd International plant physiology congress: Challenges and Strategies in Plant Biology Research, Jawaharlal Nehru University, New Delhi, 11-14 Dec, Abstract PE274 (IPPC0787), pp. 253 (Poster).
- 29) M. Swathi, S. S. Mohanraj, V. Swaroop, V. Lokya, M. Gujjalapudi, N. Mallikarjuna, A. Dutta-Gupta and K. Padmasree (2015) Insecticidal activity of proteinase inhibitors from seed reserves of pigeonpea against growth and development of *Helicoverpa armigera*. Bioquest-2015. University of Hyderabad, Hyderabad, 23-24 September (Poster).
- 30) V. Tripti and K. Padmasree (2015) Identification of proteinase inhibitors from leaves of *Vigna mungo*: Cloning of proteinase inhibitor gene. Biotech Summer Symposium, University of Hyderabad.
- 31) Ch. Kumaraswamy and K. Padmasree (2015) The role of H₂O₂ in the modulation of proteinase inhibitor activity in the leaves of *Vigna mungo*. Biotech Summer Symposium, University of Hyderabad. May 2015
- 32) S. Yagnika and K. Padmasree (2015) Molecular docking interaction studies of *Cajanus cajan* (pigeon pea) proteinase inhibitor (PI) against serine proteinases. Biotech Summer Symposium, University of Hyderabad. May 2015
- 33) S. S. Mohanraj and K. Padmasree (2015) Purification and identification and characterization of proteinase inhibitors active against *Achaea janata* from *Rhynchosia sublobata* seeds: Molecular cloning of novel BBI and Kunitz inhibitor genes. 7th Plant Sciences Colloquium, University of Hyderabad, Hyderabad, 10th Apr, (Oral).

34) V. Swaroop, M. Swathi, V. Lokya, P.K. Mishra, N. Mallikarjuna, A. Dutta-Gupta, K. Padmasree (2015). Identification, purification and biochemical characterization of proteinase inhibitors from *Cajanus platycarpus*, a wild relative of pigeon pea. ISPP south zonal seminar on crop physiology-emerging challenges and opportunities for sustainable agriculture. Department of crop physiology, S.V. Agricultural College and RARS, Tirupati plant physiology club (APAU) and Indian society for plant physiology, New Delhi, 3rd March, pp. 133 (Poster). Received Best Poster Award

35) V. Lokya, M. Swathi, V. Swaroop, N. Mallikarjuna, A. Dutta-Gupta and K. Padmasree (2015). Purification and biochemical characterization of proteinase inhibitors from *Cajanus cajan* (cv.ICP7118): Evaluation of their insecticidal potential against *Achaea janata*. 2nd International conference on frontiers in biological sciences (InCoFIBS-2015). National institute of technology, Rourkela, 22-24 January, pp.141 (Poster).

36) K. Padmasree (2014) Physiological importance of alternate oxidase pathway in optimizing photosynthesis. Hands on training in molecular biology. Parvatibai Chowgule College of Arts and Sciences, Goa, Nov (Invited Lecture).

37) K. Padmasree (2014) Seed proteinase inhibitors: Purification, characterization and exploitation of their biological properties. Hands on training in molecular biology. Parvatibai Chowgule College of Arts and Sciences, Goa, Nov (Invited Lecture).

38) Sangeeta and K. Padmasree (2014) Beneficial interaction between chloroplast and mitochondria: Importance of malate/OAA shuttle. Biotech Summer Symposium, University of Hyderabad. May 2014

39) Manish and K. Padmasree (2014) Response of NAD-MDH and NADP-MDH to light in *Arabidopsis thaliana*: Effect of OAA and pyridoxal phosphate. Biotech Summer Symposium, University of Hyderabad. May 2014

40) S.S. Mohanraj, Dutta Gupta A and K. Padmasree (2014) Proteinase inhibitors from *Rhynchosia sublobata* seeds: Purification and evaluation of their insecticidal potential. ISPP South zonal seminar on Physiological and Molecular Interventions for Improving Crop Productivity. A.N.G.R.A.U., Agricultural College, Bapatla, 23 Jan 2014, pp. 82, 03-11 (Poster).

41) M. Swathi and K. Padmasree (2014) Structural and functional characterization of proteinase inhibitors from seeds of *Cajanus cajan* (cv. ICP 7118). 6th Plant Sciences Colloquium, University of Hyderabad, Hyderabad, 7th March (Oral).

42) A.P. Vishwakarma, R. Scheibe and K. Padmasree (2013) Physiological impact of

alternative oxidase 1a against photoinhibition in *Arabidopsis thaliana*: Role of redox and ROS. Indo-Japan Joint Workshop "Signal sensing and transduction in photosynthetic organisms – from cyanobacteria to land plants", University of Hyderabad, Hyderabad, 16-18 Dec, pp. 40, PP-1 (Poster).

43) S.S. Mohanraj, Dutta Gupta A, K. Padmasree (2013) Purification and identification of proteinase inhibitors from *Rhynchosia sublobata* seeds. A.P. Science Congress-2013. Innovations in Science and Technology for Emerging Knowledge Society. University of Hyderabad, Hyderabad, 14-16 Nov, pp. 342, LS-PP-151 (Poster).

44) Y. Srinivasa Rao and K. Padmasree (2013) Thermal properties and antioxidant potential evaluation of dioxane lignin nanoparticles: Matrix material for control release of agrochemicals. 2013 Tappi International Conference on Nanotechnology for renewable materials, KTH Royal Institute of Technology, Stockholm, Sweden, 24-27 Jun, pp. 64 (Poster).

45) A.P. Vishwakarma, R. Scheibe and K. Padmasree (2013) Importance of AOX1a in sustaining photosynthesis and alleviating reactive oxygen species under high light in *Arabidopsis thaliana*. International Conference: Photosynthesis Research for sustainability in honour of Jalal A. Aliyev, Baku, Azerbaijan, 05-09 Jun, PS 63, pp. 131 (Poster).

46) N. Fatima and K. Padmasree (2013) Significance of AOX pathway of mitochondrial electron transport chain in optimizing photosynthesis during light stress. Biofest, University of Hyderabad, Hyderabad, 3rd Apr, 2013 (Poster).

47) Ajay Kesharwani and K. Padmasree (2013) Purification of proteinase inhibitors from *Arachis hypogea* with potential anticoagulant properties. Biofest, University of Hyderabad, Hyderabad, 3rd Apr, 2013 (Poster).

48) Y. Srinivasa Rao and K. Padmasree (2013) Preparation and physicochemical characterization of diuron loaded dioxane lignin nanoparticles. Plant Sciences Colloquium-2013, Hyderabad, 4th Mar, Abstract 8, pp.12 (Oral).

49) K. Padmasree (2013) Extraction and exploitation of lignins as nanobiocomposites. Technical and Management Advisory Committee Meeting, DST, Hyderabad, 28th Feb, (Oral).

50) S. Sandhya, M. Swathi, K. Padmasree, M.V. Rao, N. Mallikarjuna (2013) Evaluation of Pre-Breeding Lines of Pigeonpea. National conference on crop improvement and adaptive strategies to meet challenges of climate change, University of Agricultural Sciences, Bangalore, 22-24 Feb, pp. 103 (Poster).

51) K. Padmasree (2013) Evaluation of insecticidal potential of Proteinase inhibitors purified from *Cajanus cajan* (cv. C11) against *Achaea janata*. Project Monitoring Session, CSIR, New Delhi, 3rd Jan (Oral).

52) T. Saradadevi and K. Padmasree (2013) Assessment of anticoagulant activity of proteinase inhibitors purified from the seed extracts of *V. mungo*. UPE-II Research Project, University of Hyderabad, Hyderabad, 2nd Jan (Oral).

53) K. Padmasree (2012) Rapid Purification and Characterization of Proteinase Inhibitors from Cultivars and Wild-Types of *Cajanus Cajan* active Against Lepidopteran Insects. 6th Meeting of Task Force on Biological Agents for Agriculture, DBT, The Energy and Resources Institute (TERI), Bangalore, 29th Oct (Oral).

54) K. Padmasree (2012) Rapid Purification and Characterization of Proteinase Inhibitors from Cultivars and Wild-Types of *Cajanus Cajan* active Against Lepidopteran Insects. 3rd Meeting of Task Force on Biological Agents for Agriculture, DBT, The Energy and Resources Institute (TERI), Goa, 31st Jan (Oral).

55) Y. Srinivas Rao and K. Padmasree (2012) Structural characterization of *Leucaena leucocephala* (Lam.) de Wit. Stem lignin: Preparation of diuron loaded lignin nanoparticles. International conference on Nanoscience & Technology, ARCI, Hyderabad, 20-23 Jan, RD-38,

pp. 221 (poster).

56) V. Abhaypratap and K. Padmasree (2012) Importance of AOX1A in optimizing photosynthesis in *A. thaliana* under high light stress. Plant Sci. Colloquim-2012, Hyderabad, 10th Jan, pp. vii (oral).

57) Ch. Dinakar, A. Pratap and K. Padmasree (2011) Alternative oxidase pathway optimizes photosynthesis under hypo- and hyper-osmotic stress by modulating redox ratios of ascorbate and malate. International symposium on plant biotechnology towards tolerance to stresses and enhancing crop yield (ISPB-2011), BIT, Mesra, Ranchi, 28th Sept – 1st Oct, pp. 37 (oral).

58) M. Swathi, E.R. Prasad, S.S. Mohanraj, T. Geetanjali, Ch. Srinivas, Aparna Dutta Gupta, Nalini Mallikarjuna and K. Padmasree (2011) Potential application of pigeon pea proteinase inhibitors in the management of Lepidopteran insects. National Symposium on Innovative and Modern Technologies for Agricultural Productivity, Food Security and Environmental Management, Society for Applied Biotechnology, Mangalore, 22-23 Jul, pp. 9-10 (oral).

59) S. Marri and K. Padmasree (2011) Purification and partial characterization of proteinase inhibitors from *Vigna mungo* (cv.T-9). International Conference on Plant Science in Post Genomic Era (ICSPGE-2011), Sambalpur University, Jyoti Vihar, Orissa, 17-19 Feb, PMK-057, pp.108 (poster).

60) K. Padmasree (2011) Importance of CN-resistant alternative oxidase pathway of respiration in optimizing photosynthesis under normal light and high light. International Conference on Plant Science in Post Genomic Era (ICSPGE-2011), Sambalpur University, Jyoti Vihar, Orissa, 17-19 Feb, PSA-058, pp.13 (oral).

61) K. Padmasree (2010) Importance of mitochondrial oxidative electron transport in optimizing chloroplastic photosynthesis. A refresher course in Life Sciences on "Frontiers in Life Sciences", Department of Plant Sciences and Academic Staff College, UoH, Hyderabad, 09-29 Dec (oral presentation – resource person).

62) K. Padmasree (2010) Physiological and biochemical importance of COX and AOX pathways of mitochondrial electron transport in optimizing chloroplastic photosynthetic carbon assimilation under abiotic stress. National Conference of Plant Physiology on Physiological and Molecular Approaches for Crop Improvement under Changing Environment, BHU, Varanasi, 25-27 Nov, 03-07, pp.83 (oral).

63) Abhay Pratap Vishwakarma, Ch. Dinakar and K. Padmasree (2010) Effects of AOX1a deficiency on photosynthesis, reactive oxygen species, antioxidants and redox metabolism in presence of antimycin A in *Arabidopsis thaliana*. National Conference of Plant Physiology on Physiological and Molecular Approaches for Crop Improvement under Changing Environment, BHU, Varanasi, 25-27 Nov, 03-16, pp.97.

64) E.R. Prasad, Vijaya Prasad, Aparna D. Gupta and K. Padmasree (2010) Insecticidal potential of proteinase inhibitors from red gram and black gram seeds, and wild species of groundnut leaves. 3rd Conference Biopesticides: Emerging Trends: Biopesticides in Food and Environment Security, CCS Haryana Agricultural University, Hisar, 20-22 Oct, OP-18

65) K. Padmasree (2010) Refresher Course on “Introduction to Nanomaterials: Synthesis, Characterization and their Applications”. UGC-Academic Staff College, JNTU, Hyderabad, 13 Sept – 04 Oct.

66) K. Padmasree (2010) Role of mitochondrial cytochrome oxidase and alternative oxidase pathways in the optimization of photosynthetic carbon assimilation. International Conference and Humboldt Kolleg on Interface Between Biochemistry & Biology: A Perspective. IICT, Hyderabad, 21-24 Sept. (oral).

67) K. Padmasree (2010) Rapid Purification and Characterization of Proteinase Inhibitors from Cultivars and Wild-Types of *Cajanus cajan* active Against Lepidopteran Insects. Tenth Task Force meeting on “Biopesticides and Crop Management”, Kerala Forest Research Institute, Peechi, Kerala, 03-04 May (oral).

68) K. Padmasree (2010) International Conference & Humboldt Kolleg, Frontiers of

Environmental & Health Sciences Useful to Mankind: A Multidisciplinary Approach, University of Lucknow and Humboldt Academy Lucknow, 24 – 27 Feb

69) K. Padmasree (2010) Physiological significance of COX and AOX pathways in optimizing photosynthesis. Pflanzenphysiologie, University of Osnabruck, Germany, 28th Jan (invited lecture)

70) Yearla Srinivasarao, Marri Swathi, Elaprolu R. Prasad, Praveen K. Kokkiripati, Sarada D. Tetali, Aparna D. Gupta* and K. Padmasree (2010) Importance Of Purified Lignin And Bowman Birk Proteinase Inhibitors With Insecticidal And Pharmacological Activities In Nanoscience. Nanosciences Workshop Freie Universitat Berlin – University of Hyderabad – 25-27th Jan

71) Abhay Pratap Vishwakarma, Ch. Dinakar and K. Padmasree (2009) Significance of ROS in mediating beneficial interactions between chloroplasts and mitochondria in light. National symposium on Frontiers in Photobiology. BARC, Mumbai, 24-26 Aug, PB-14, pp. 57 (Received Best Poster Award)

72) K. Padmasree (2009) Characterization of knockout mutants for AOX1a in *Arabidopsis thaliana*. National symposium on Frontiers in Photobiology. BARC, Mumbai, 24-26 Aug, IL-10, pp15

73) Ch. Dinakar and K. Padmasree (2008) Importance of COX and AOX Pathways in Optimizing Photosynthesis Under Light, Osmotic or Temperature Stress. International Conference: Photosynthesis in the Global Perspective, DAVV, Indore, 27-29 Nov, pp.58

74) Ch. Dinakar and K. Padmasree (2008) Importance and Relative Contribution of COX and AOX Pathways in Optimizing Photosynthesis During Light, Osmotic or Temperature Stress. International Conference: Photosynthesis in the Global Perspective, DAVV, Indore, 27-29 Nov, P-38. pp.122 (Received Best Poster Award)

75) Ch. Dinakar and K. Padmasree (2008) Importance of COX and AOX pathways in optimizing photosynthesis under light, osmotic or temperature stress: Role of ROS and Antioxidants. First International AOX symposium pp. 42

76) K. Padmasree and Ch. Dinakar (2008) Relative importance of AOX pathway over COX pathway in optimizing photosynthesis under light, osmotic or temperature stress. First International AOX symposium Evora, Portugal, pp. 36

77) K. Padmasree (2008) Orientation Course. JNTU, Kukatpally, Hyderabad. 25th February to 22nd March

78) V. Linke, K. Padmasree, B. Bachmann, H. Metfies and R. Scheibe (2007) Restriction of cytochrome pathway induces photoinhibition and oxidative stress in AOX1a knock-out plants. Botanical Congress, University of Hamburg, Germany, 3-7 September.

79) Ch. Dinakar, V. Linke, K. Padmasree and R. Scheibe (2007) Functional aspects of AOX1a in protecting photosynthesis against photoinhibition in *A. thaliana*. International Symposium on Light and Life, University of Hyderabad, Hyderabad, 29-31 August. P-31. (Oral).

80) K. Padmasree, R. Scheibe (2007) Functional analysis of AOX1a in protecting photosynthesis against photoinhibition in *A. thaliana*. Workshop in Plant Biochemistry, Wallenfels, Germany 4-6 May. (Oral)

81) Ch. Dinakar, K. Padmasree (2007) Importance of mitochondrial oxidative electron transport in protecting photosynthesis against photoinhibition in mesophyll protoplasts of pea (*Pisum sativum*). National Seminar on Recent Advances in Plant Sciences. Acharya Nagarjuna University, Nagarjuna Nagar, 1-2 March. (Oral)

82) K. Padmasree and R. Scheibe (2006) Importance of cytochrome and alternative pathways

of mitochondrial oxidative metabolism in protecting photosynthesis against photoinhibition. 23. Workshop in Plant Biochemistry, Wallenfels, Germany, 19-21 May. (Oral)

83) Ch. Dinakar, K. Padmasree (2006) Importance of mitochondrial oxidative metabolism in protecting photosynthesis against photoinhibition under light, osmotic and temperature stress: Roles of alternative pathway and malate valve. 3rd International Symposium "Signals, Sensing and Plant Primary Metabolism". Potsdam, Germany, 26-29 April. P-15.

84) E.R. Prasad, K. Padmasree and Aparna Dutta Gupta (2006) Identification, purification and characterization of serine proteinase inhibitors from cultivars and wild relatives of chick pea and pigeon pea. 93rd Indian Science Congress. Acharya N. G. Ranga Agricultural University, Hyderabad, 3-7 January.

85) K. Padmasree (2005) National workshop on nano scale imaging and detection of biomolecules. AU-KBC Research Centre, MIT Campus Of Anna University, Madras. 17-19 March.

86) Ch. Dinakar, L. Padmavathi and K. Padmasree (2005) Importance of cyanide resistant alternative pathway and cyanide sensitive cytochrome pathway in protecting photosynthesis against photoinhibition in mesophyll protoplasts of pea. XVII National Symposium on Photosciences for the Millennium, Sambalpur University, Orissa, 19-21 February. P- 9.

87) Ch. Dinakar, L. Padmavathi and K. Padmasree (2004) Activity and engagement of cyanide resistant alternative oxidase pathway under light, osmotic and temperature stress in mesophyll protoplasts of *Pisum sativum* L. National Seminar on Plant Physiology (Physiological basis of Improving Agricultural, Horticultural and Medicinal Plants Productivity). University of Pune, Pune, 27-29 December. SR.NO.194 - P107. (Oral)

88) Ch. Dinakar, E.R. Prasad and K. Padmasree (2004) Significance of alternative and cytochrome pathways of mitochondrial oxidative electron transport in benefiting photosynthesis during light, osmotic and temperature stress. National Symposium on Recent Trends in Plant Sciences and XXVII All India Botanical Conference. Sri Krishnadevaraya University, Anantapur,

29-31 October. SV-P79.

89) K. Padmasree and A.S. Raghavendra (2003) Dependence of photosynthetic carbon assimilation on cyanide sensitive cytochrome and cyanide resistant alternative pathways of mitochondrial metabolism. 2nd International Congress of Plant Physiology on Sustainable Plant Productivity under Changing Environment. IARI, New Delhi, Jan 2003. S2-P20.

90) K. Padmasree and A.S. Raghavendra (2001) Optimization of photosynthesis by cytochrome and alternative pathways of mitochondrial electron transport in mesophyll protoplasts of pea: Regulation of light activation of chloroplastic enzymes. International Satellite Conference on Chloroplasts: Development and Function. INSA, New Delhi, Aug 2001. P-27.

91) K. Riazunnisa, L. Padmavathi, K. Padmasree and A.S. Raghavendra (2001) Evidence for a CO₂ concentrating mechanism in mesophyll protoplasts of pea (*Pisum sativum*). International Satellite Conference on Chloroplasts: Development and Function. INSA, New Delhi, Aug 2001. P-31.

92) K. Padmasree and A.S. Raghavendra (2000) Optimization of photosynthesis by cytochrome and alternative pathways of mitochondrial electron transport in mesophyll protoplasts of pea: Regulation of sucrose biosynthesis and redox state. National Seminar on Recent Advances in Plant Biology. Central Plantation and Crops Research Institute, Kasargod, February 2000. IX Oral 3.

93) K. Padmasree, L. Padmavathi and A.S. Raghavendra (1999) Essentiality of mitochondrial oxidative metabolism in optimizing photosynthesis in mesophyll protoplasts of pea (*Pisum sativum* L.). International Conference on Life Sciences in the Next Millennium. University of Hyderabad, Hyderabad, December 1999. Abstract No. PP-40

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