# A.H. SNEHA RANI, Ph. D.

#### **Professional Address**

Department of Studies in Biochemistry Jnana Kaveri P. G. Centre, Mangalore University Chikka Aluvara, Somwarpet Taluk, Kodagu District-571232

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# **Research Areas**

Proteases and Protease inhibitors, Enzymology (industrially important enzymes), Biomimetic nanostructures, Gut microbiome

# **Education**

Ph. D. (Biochemistry)	CFTRI, University of Mysore,	2011
	India	
M. Sc. (Biochemistry)	University of Mysore, India	1999
B. Sc.	University of Mysore, India	1997

#### **Research and professional experience**

Dec-2013	Assistant Professor (II), Department of Studies in		
	Biochemistry, Jnana Kaveri P. G. Centre, Mangalore		
	University		
April-2013 to	CSIR- Research Associateship, CSIR-Central Food		
Dec-2013	Technological Research Institute, Mysore, India		
Jan-2011 to	Postdoctoral fellow, Blood Research Institute, BloodCenter of		
2012	Wisconsin, Milwaukee, <b>USA</b>		
May - 2005 to	Doctoral Degree Program, CSIR-Central Food Technological		
Dec-2010	Research Institute, Mysore, India		
1999-2005	Lecturer, Constituent colleges, University of Mysore		

#### **Academic Fellowships and Honors**

2004	Junior Research fellowship, DBT sponsored project, CSRTI, India
2005	Junior Research Fellow, CSIR/UGC, India
2005	National Eligibility Test, CSIR/UGC, India



2007	Senior Research Fellow, CSIR/UGC, India
2013	Research Associateship, CSIR, India
2017	UGC (Mangalore University) Travel Grant to attend International Conference
2019	INSA-Bilateral Exchange Program

### **Membership of Professional Organizations**

Society of Biological Chemists Indian National Science Congress Indian Biophysical Society NMR Society Association of Food Science and Technology

### **Sponsored Projects**

#### **Principal Investigator**

SI. No.	Title	Agency	Period	Grant/Amount Mobilized (Rs. in lakhs)
1	Setting up on Animal Cell Culture facility	VGST, GoK	2015-2018	30 Lakhs
2	Understanding the therapeutic potential of legume serine protease inhibitor and there of	SERB-DST	2015-2018	22.1 Lakhs
3	designing small cyclic peptides Therapeutic effect of Bioactive Principles on Melanogenesis in Melanoma Cells	MHRD/UGC	2014-2016	6 Lakhs

### **Doctoral Research Advisor under Biochemistry Discipline**

Pursuing 04 Mr. Prabhudev Mr. H.R. Sachin Mr. D. N. Ganesh Prasad Mr. M.A. Pavan Kumar

#### **RESEARCH PUBLICATIONS**

**AH Sneharani**, SA Singh, AGA Rao. Interaction of  $\alpha$ S1-Casein particles with Curcumin and Its Biological Implications *J Agri Food Chem* 57: 10386-10391, 2009

**AH Sneharani**, VK Jimsheena, SA Singh, AGA Rao. Interaction of Curcumin with β-Lactoglobulin Nanoparticles; Stability, Spectroscopic Analysis, and Molecular Modeling of the Complex *J Agri Food Chem* 58: 11130-11139, 2010

**AH Sneharani**, SA Singh, AGA Rao. Inhibition of lipoxygenase-1 by tetrahydrocurcumin. *Eur Food Res Technol* 233: 561-568, 2011

**AH Sneharani**. Curcumin as a tool to assess the surface hydrophobicity of proteins, *Spectroscopy lett,* 49: 568-572, 2016

**AH Sneharani**. Cis-parinaric Acid: A non-redox Inhibitor of Lipoxygenase-1. *Asian J. Biochem* 12(2)27-35,2017

**AH Sneharani** *et al.*, Human pleural fluid PLA2 inhibition and in vitro antioxidant activity of ethanolic root extract of *Toddalia asiatica*. IJRSR 7: 9592-98, 2016

AH Sneharani. Serine Protease inhibitor from Guizotia abyssinica. IAJPS, 6 (04), 5045-50, 2016

**AH Sneharani**. Mechanistic Effect of dietary components in managing Obesity. WJPR, 6 (13), 176-183, 2017

**AH Sneharani**. Serine Protease Inhibitors as Potential Therapeutic agents: A perspective. EJPS, 4 (07), 2017

AH Sneharani. Assessing zinc levels: Is it the need of hour? IAJPS, 2017, 4 (10), 3946-3649

**AH Sneharani\***, Prabhudev SH, Sachin, Effect of phytochemicals on optical absorption spectra during biogenic synthesis of self-assembled silver nanoparticles and studies relevant to food applications. Spectroscopy Letters, 2019,Vol. 52, no. 7, 413–422

**AH Sneharani\*** Curcumin–sunflower protein nanoparticles—A potential antiinflammatory agent. Journal of Food Biochemistry , 2019, DOI: 10.1111/jfbc.12909

Prabhudev SH and **AH Sneharani\***, Extraction and characterization of pectin methylesterase from muskmelon biowaste for pectin remodelling Journal of Food Biochemistry , 2020 DOI: 10.1111/jfbc.13237

**AH Sneharani\*,** Interaction of curcumin with erythrocytes: A microscopic study Biomedicine, 2020, Vol. 40, no. 2,

Sachin HR, Prabhudev SH, Ganesh Prasad DN, **A.H. Sneharani\***, Immobilization of trypsin enzyme on silver nanoparticles, Biomedicine, 2020, Vol. 40, no. 2

H.R. Sachin, M.N. Sharath Kumar, S. Devaraja and **A.H. Sneharani\* (2020)** Anticoagulant and antiplatelet activities of novel serine protease purified from seeds of *Cucumis maderaspatensis*, 3Biotech

#### **Book Chapters**

 Facile Chemical Fabrication of Designer Biofunctionalized Nanomaterials (Chapter 2) (*Book Title: Functionalised Nanomaterials I*; Taylor and Francis, CRC Press, *In Press*)

#### **Impact of publications**

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Citations 257

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<ul> <li>Interaction of curcumin with β-lactoglobulin Stability, spectroscopic analysis, and molecular modeling of the complex</li> <li>AH Sneharani, JV Karakkat, SA Singh, AGA Rao Journal of agricultural and food chemistry 58 (20), 11130-11139</li> </ul>	167 2010	alth	20
Interaction of a <sub>S1</sub> -Casein with Curcumin and Its Biological Implications AH Sneharani, SA Singh, AG Appu Rao Journal of agricultural and food chemistry 57 (21), 10386-10391	68 2009	2013 2014 2015 2016 2017 2018 201	9 2020 0
Inhibition of lipoxygenase-1 by tetrahydrocurcumin AH Sneharani, SA Singh, P Srinivas, AGA Rao	9 2011		

# **Conferences, Paper presentation**

H11B2C2 products (hyaluronan binding protein) form a complex with TSG and other proteins: A possible H11B2C2 mediated transactivation in tumor progression protein'. Paper presentation, Symposium, 22<sup>nd</sup> Annual convention of Indian Association for Cancer Research

'Cloning of PECAM-I' Indian Science Congress, Jan  $3^{rd}$  -  $7^{th}$  2016

'Isolation of Serine protease inhibitor from *Clitoria sp*' International Conference on Importance of Herbal Medicine in the Era of Globalization, Dec 21<sup>st</sup> to 23<sup>rd</sup>, 2016

'Synthesis and Characterization of SFPI nanoparticles' Oral presentation, International Conference on Materials for Advanced Technologies, ICMAT 2017, Singapore

International conference on, NANOS 14<sup>th</sup> to 17<sup>th</sup> Dec 2015, GITAM Institute of Science

Interaction of curcumin with  $\alpha_{S1}$ -casein-A spectroscopic approach' 77<sup>th</sup> annual meeting, Society of Biological Chemists, IITM, Chennai, December, 2008

Spectroscopic analysis of curcumin-β-lactoglobulin complex and nanoparticle preparation' Symposium on Recent trends in biophysics' Paper Presentation, Banaras Hindu University, February 2010

'Isolation and Characterization of Serine protease inhibitor from Guzatica *sp*' National conference on Emerging Protein Technologies for formulation solutions, National Conference on Recent Trends in Novel Carbon Materials, 22<sup>nd</sup> September 2015

'Avocado seed: A treasure of polyphenols', 85th annual meeting, Society of Biological Chemists, CFTRI, Mysore, 21<sup>st</sup> to 24<sup>th</sup> November, 2016

'Plant based protein nanoparticles' Oral presentation, International conference on Nanomaterials and their Applications. 1<sup>st</sup> to 2<sup>nd</sup> March, 2018

'Biogenic green synthesis of Avocado Aqueous extract facilitates silver nanoparticles', Oral presentation, International Conference on Recent Advances in Materials Science and Biophysics, 23<sup>rd</sup> to 25<sup>th</sup> January, 2018

'Isolation of thermostable trypsin and chymotrypsin inhibitor from the seed of niger (Guizotia abyssinica)- preliminary studies', Oral presentation, National Conference on Emerging Protein Technologies for formulation solutions, October 16<sup>th</sup>, 2014

Gut bacterial diversity in worker adults of Apis florea and Apis cerena indica assessed by MALDI-TOF, 16S rRNA and NGS, Oral presentation, International workshop on Biology and Applications of Actinomycetes, 30<sup>th</sup> October and 1<sup>st</sup> November, 2019, University of Mysore

### **Conferences/Workshops Participation**

'Genomic instability and human diseases', One day International Symposium, 30th Jan, 2017

State level Seminar on 'Frontiers of Science and Technology' at Yuvaraja's College, Mysore on 5<sup>th</sup> January 2004 - Participation

Workshop on Biotechnology and Bioinformatics in Sericulture' held at CSRTI, Mysore on December  $9^{th}$  to  $10^{th}\,2004$ 

Workshop on 'Emerging techniques of Biophysics' held by Indian Biophysical Society and Banaras Hindu University, February 16<sup>th</sup> 2010

National seminar on 'Microbes in the present Scenario',  $28^{th}$  Feb to  $1^{st}$  March, 2014

International Webinar on 'Fundamentals of Effective Scientific Writing: Manuscripts and Grants', ACS society, USA, 9<sup>th</sup> June, 2020

'Current Concepts on the role of Indian medicine and phytoceuticals in maintenance of health', 33<sup>rd</sup> International Conference and annual summit of IABMS, 15<sup>th</sup> to 17<sup>th</sup> November, 2018

'2-Days International Workshop on COVID-19 Mass Disaster & Possible Management : Challenges for Immediate Future',  $5^{th}$  to  $6^{th}$  May, 2020

 $103^{rd}$  Indian Science Congress, Jan  $3^{rd}$  to  $7^{th}$  , 2016

National Seminar on 'Ornamental plants-Scope, opportunities and challenges',  $21^{st}$  to  $22^{nd}$  March, 2017

Workshop on NMR/MRI, From molecules to Human Behaviour, Nov 15<sup>th</sup> to 21<sup>st</sup>, 2015

85<sup>th</sup> annual meeting, Society of Biological Chemists, CFTRI, Mysore, 21<sup>st</sup> to 24<sup>th</sup> November, 2016

Conference on 'Recent Advances in Computational Drug Design', 16th to 17th Sep, 2013

International Conference on Green Chemistry and Nanotechnology Opportunities and Challenges 2017, 27th to 28th Feb, 2017

3<sup>rd</sup> International Festival of Science, Technology, Engineering & Mathematics' 17<sup>th</sup> to 20<sup>th</sup> Oct, 2016

One day workshop on X-Ray Crystallography, 10th November, 2014

'Applications of functionalised carbon nanotubes in nanomedicine', 29th May, 2020

# CHAIR/Invited talk in CONFERANCES/SYMPOSIUM

'Trends in Bioactive natural products and health care', Two days National conference,  $6^{\rm th}$  to  $7^{\rm th}$  October 2017

'Current Concepts on the role of Indian medicine and phytoceuticals in maintenance of health', 33<sup>rd</sup> International Conference and annual summit of IABMS

#### Invited talk

'Current Concepts on the role of Indian medicine and phytoceuticals in maintenance of health',  $33^{rd}$  International Conference and annual summit of IABMS,  $15^{th}$  to  $17^{th}$  November, 2018