

## **FACULTY PROFILE**



**1. Name: Dr. H.S. Aparna**

**2. Designation: Professor**

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**4. Phone No.: +91 821 2419482 (O) 9448178576 (M)**

**5. Qualification: M.Sc., Ph.D.**

**6. Area of Specialization: Proteoglycomics and Molecular dynamics**

**7. Awards/Recognitions: i. INSA-JAPAN Scientists Exchange Fellowship, 2012**

**ii. Award for Research publication, 2012**

**Vision group of Science and Technology,**

**Govt. of Karnataka, Bangalore**

**8. Patent: A process for the extraction of novel immunogenic glycopeptides from buffalo colostrum.**

**Del. No. 274/Del/2001 dated 12.03.2001**

**9. Research projects:**

<b>Sl. No</b>	<b>Title of the project</b>	<b>Funding Agency</b>	<b>Amount (lakhs)</b>	<b>Year (From-To)</b>
<b>International</b>				
1	<b>Development of novel technology for disease prevention and diagnosis in East Africa and India. JSPS- Asia-Africa core-to-core project (Co-PI)</b>	JSPS, Japan	141	2013- 2016

<b>National</b>				
<b>2</b>	<b>Designing of inhibitors for the Malate Synthase, a potential target for anti-tubercular chemotherapy (Mentor)</b>	DST (Kiran Division) New Delhi	26	2020-2023
<b>3</b>	<b>Structural and functional characterization of bioactive glycoconjugates from buffalo (<i>Bubalus bubalis</i>) colostrum (PI)</b>	DST-SERB, New Delhi	38.67	2015-2018
<b>4</b>	<b>Proteoglycomic analysis of whey proteins from buffalo (<i>Bubalus bubalis</i>) colostrum (PI)</b>	UGC, New Delhi	10.91	2011-2015
<b>5</b>	<b>Proteomics analysis of heat shock proteins for bioprospecting of medicinal plants in model systems (PI)</b>	IOE-MHRD, New Delhi	10	2010-2014
<b>6</b>	<b>Proteome analysis of heat shock proteins in domesticated silkworm, <i>Bombyx mori</i> (Co-PI)</b>	UGC, New Delhi	15	2011-2015
<b>7</b>	<b>Characterization of buffalo colostrum glycoconjugates to determine their biological activity to use as neonatal food additive (PI)</b>	UGC, New Delhi	10	2006-2010
<b>8</b>	<b>Characterization of heat shock proteins in mulberry Silkworms (Co-PI)</b>	UGC, New Delhi	7.4	2004-2008

**10. Number of Ph.D candidates successfully completed: 06**

**11. Number of Ph.D candidates currently working: 04**

**12. Publications: (Since 2014 - till date)**

1. Milk Peptides as Novel Multi-Targeted Therapeutic Candidates for SARS-CoV2.  
H Pradeep, Umme Najma, **HS Aparna**  
Protein Journal, 40:310-327, 2021. (IF-2.371)
2. Identification of Potential Peptide Inhibitors of ACE-2 Target of SARS-CoV-2 from Buckwheat & Quinoa.  
Ashok NR, Arpitha Ashok, Pradeep H, Aparanji SC, Monika K, Pratibha H, Vaishali Sharma, **Aparna HS**  
International Journal of Peptide Research and Therapeutics, 27: 1799-1813, 2021. (IF-1.931)
3. *In silico* and *in vivo* evaluation of oxidative stress inhibitors against Parkinson's disease using the *C. elegans* model.  
HanumanthappaP, AshokA, PrakashI, PriyaCI, ZinzalaJ, MarigowdaVV, **Aparna HS**  
Combinatorial Chemistry and High Throughput Screening, 23:814-826, 2020 (IF-1.339)

4. Discovery, synthesis, and *in vitro* evaluation of a novel bioactive peptide for ACE and DPP-IV inhibitory activity.  
Arpitha Ashok, Brijesha N., **Aparna HS**  
European Journal of Medicinal Chemistry, 180: 99-110, 2019. (IF-6.514)
5. A new pyrrole based small molecule from *Tinospora cordifolia* induces apoptosis in MDA-MB-231 breast cancer cells via ROS mediated mitochondrial damage and restoration of p53 activity.  
Rashmi KC, Harsha Raj M, Paul M, Girish KS, Salimath BP, **Aparna HS**  
Chemico-Biological Interactions, 299:120-130, 2019. (IF-5.192)
6. Antioxidative Role of Buffalo (*Bubalus bubalis*) Colostrum Whey Derived Peptides during Oxidative Damage.  
Ashok NR, Vivek KH and **Aparna HS**  
International Journal of Peptide Research and Therapeutics, 25: 1501–1508, 2019.  
(IF-1.931)
7. Antioxidant, Chemo-Protective Role Of Buffalo Colostrum And Milk Whey Derived Peptide Against 2, 4-Dinitrophenol Induced-Oxidative Damage On Human Plasma, *In Vitro*.  
Alemayehu Letebo Albejo, Temam Abrar Hamza, **HS Aparna**  
International Journal of Scientific & Technology Research, 6 (9): 73-83, 2017.
8. Peptide Profiling of IgG and their Interaction with Receptor Outer Membrane Porin of *Klebsiella pneumoniae*.  
Mamatha Bhanu L.S and **Aparna HS**  
JSM Biochemistry and Molecular Biology, 4(2): 1026, 2017.
9. A pyrrole-based natural small molecule mitigates HSP90 expression in MDA-MB-231 cells and inhibits tumor angiogenesis in mice by inactivating HSF-1.  
KC Rashmi, HS Atreya, MH Raj, BP Salimath, **HS Aparna**  
Cell Stress and Chaperones, 22(5):751-766, 2017. (IF-3.667)
10. Facile Green Reduction of Graphene oxide using *Ocimum sanctum* Hydroalcoholic Extract and Evaluation of its Cellular Toxicity.  
P. Shubha, K. Namratha, **HS. Aparna**, NR. Ashok, MS. Mustak, Jit Chatterjee, K. Byrappa  
Materials Chemistry and Physics, 198: 66-72, 2017. (IF-4.049)
11. Comprehensive characterization of bioactive peptides from Buffalo (*Bubalus bubalis*) colostrum and milk fat globule membrane proteins.  
Brijesha N and **Aparna HS**  
Food Research International, 97: 95–103, 2017. (IF- 6.475)
12. Buffalo (*Bubalus bubalis*) colostrum and milk fat globule membrane fractions are potent antioxidants.  
Brijesha N and **Aparna HS**  
Journal of Applied Biology & Biotechnology, 5: 89-93, 2017.
13. A comparative glycomics of fat globule membrane glycoconjugates from Buffalo (*Bubalus bubalis*) milk & colostrum.  
Brijesha N, Nishimura S –I. and **Aparna HS**  
Journal of Agricultural and Food Chemistry, 65: 1496-1506, 2017. (IF- 5.279)

14. Inhibition of Snake Venom Metalloproteinase by  $\beta$ -Lactoglobulin Peptide from Buffalo (*Bubalus bubalis*) Colostrum.  
Arpitha A, Sebastin Santhosh M, Rohit A.C, Girish K. S, Vinod D and **Aparna HS**  
Applied Biochemistry and Biotechnology, 182: 1415–1432, 2017. (IF-2.926)
15. Empirical and bioinformatic characterization of buffalo (*Bubalus bubalis*) colostrum whey peptides & their angiotensin I- converting enzyme inhibition.  
Ashok N.R and **Aparna HS**  
Food Chemistry, 228: 582-594, 2017. (IF-7.514)
16. DNP induced oxidative stress on blood components ameliorated by Pyrrole derivative of *Tinospora cordifolia*.  
Rashmi K.C and **Aparna HS**  
Journal of Applied Biology & Biotechnology, 5: 59-65, 2017.
17. Inhibitory potential of Buffalo (*Bubalus bubalis*) colostrum immunoglobulin G on *Klebsiella pneumoniae*.  
Mamatha Bhanu L. S, Nishimura S –I. and **Aparna HS**  
International Journal of Biological Macromolecules, 88:138-145, 2016. (IF-6.593)
18. Glycome characterization of immunoglobulin G from buffalo (*Bubalus bubalis*) colostrum.  
Mamatha Bhanu LS, Amano M, Nishimura S –I and **Aparna HS**  
Glycoconjugate Journal, 32:625-634, 2015. (IF- 2.916)

### 13. Chairman/Member of Authority/Committee etc: (Since 2014 - till date)

Sl. No	Chairman/Member /Secretary	Committee/Authority	Year (From-To)
1	DBT nominee	IBSC of Vipragen, Biosciences Private Ltd. Mysore	2017- till date
2	DBT nominee	IBSC of Prosetta, Bioconformatics Private Ltd. Mysore	2015-2018
3	DBT nominee	IBSC, Central Silk Research & Training Institute, Mysore	2019- 2022
4	Editorial Member	Food Research International, Elsevier	2016 – till date
5	Chairman	BOS in Biotechnology, Univ. of Mysore, Mysore	2021- till date
6	Member	BOS in Biotechnology, Univ. of Mysore, Mysore	
7	Member	BOS in Biochemistry	2016 - 2019
8	Member	BOS in Molecular biology	2014 - till date
9	Member	BOS in Genetics	2015 - 2018
10	Member	BOS in Physics	2015 - 2018
11	Member	BOS in Bioscience	2019 - 2022
12	Member	BOS in Biotechnology, Yuvaraja's College, Mysore	2016 - 2018
13	Member	BOS in Biotechnology, St.Philomena's College, Mysore	2015 - 2019
14	Member	BOS in Biotechnology, Maharani's Women Science College, Mysore	2018 - 2021
15	Member	BOS in Biotechnology, Bharathi College, Mandya	2021 - 2024
16	Member	BOS in Biotechnology, Mangalore Univ., Mangalore	2016 - 2019
17	Member	BOE in Biotechnology	2014 – till date

18	Member	BOE in Genetics	2015 - 2016
19	Member	BOE in Molecular biology	2015 - 2016

**14. Membership to professional Organization/Associations:**

<b>Sl. No</b>	<b>Name of the Association/Organizations</b>	<b>Life member/Ordinary member</b>
1	Society of Biological Chemists (India)	Life member
2	Association of Carbohydrate Chemists and Technologists (India)	Life member
3	Indian Science Congress Association (India)	Life member