CURRICULUM VITAE

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4. Institution : University of Calcutta

5. Designation : Assistant Professor

6. Gender (M/F/T) : F

7. Category Gen/SC/ST/OBC : Gen

8. Whether differently abled (Yes/No) : No

9. Academic Qualification (Undergraduate Onwards)

Degree	Year	Subject	University/Institution
B.Sc.	1990	Phys Chem Maths	University of Calcutta
M.Sc.	1992	Biophysics	University of Kalyani
Ph.D.	1999	Theoretical Biology	Jadavpur University (IICB)

10. Details of Ph.D. thesis

Ph.D thesis title	Guide's Name	Institute/Organization	Year of Award
Asymmetry as a key source of functional diversity in living systems	Dr. Chitra Dutta	Indian Institute of Chemical Biology, Jadavpur	1999

11. Work experience (in chronological order).

Positions held	Name of the Institute	From	To
Lecturer	West Bengal University of Technology	2004	2009
Assistant Professor (Stage 2)	West Bengal University of Technology	2009	2012
Assistant Professor (Stage 2)	University of Calcutta	2012	2014
Assistant Professor (Stage 3)	University of Calcutta	2014	Till date

12. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received.

Name of Award	Awarding Agency	Year
Wenner-Gren Fellowship	Wenner-Gren Foundation	1999
Foreign Travel Grant	DBT	2009

13. Publications *(List of papers published in SCI Journals, in year wise descending order).*

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1.	Dipanjana Dhar, Debayan Dey, **Soumalee Basu** and Helena Fortunato	Insight into the adaptive evolution of mitochondrial genomes in intertidal chitons	*Journal of Molluscan Studies*		In press	2020
2.	Ritwija Bhattacharya , Ranodeep Chatterjee , Abul Kalam Azad Mandal , Aniruddha Mukhopadhyay , **Soumalee Basu** , Ashok Kumar Giri , Urmi Chatterji & Pritha Bhattacharjee	Theaflavin-Containing Black Tea Extract: A Potential DNA Methyltransferase Inhibitor in Human Colon Cancer Cells and Ehrlich Ascites Carcinoma-Induced Solid Tumors in Mice	*Nutrition and Cancer*			2020
3.	Sucharita Das, Trety Majumder, Ankita Sarkar, Piyali Mukherjee and **Soumalee Basu**	Flavonoids as BACE1 inhibitors: QSAR modelling, screening and *in vitro* evaluation.	*International Journal of Biological Macromolecules*	165	1323	2020
4.	Madhu Sudan Dutta and **Soumalee Basu**	Identifying the key residues instrumental in imparting stability to amyloid beta protofibrils - a comparative study using MD simulations of 17-42 residues	*Journal of Biomolecular Structure and Dynamics*	Jan 13	1	2020
5.	Sucharita Das, Sandipan Chakraborty and **Soumalee Basu**	Hybrid approach to sieve out natural compounds against dual targets in Alzheimer's Disease.	*Scientific Reports*	9	3714	2019
6.	Dipanjana Dhar, Debayan Dey & **Soumalee Basu**	Insights into the evolution of extracellular leucine-rich repeats in metazoans with special reference to Toll-like receptor 4	*Journal of Biosciences*	44	18	2019
7.	SandipanChakraborty , JyotirmoyRakshit, JayaBandyopadhyay &**SoumaleeBasu**	Multi-functional neuroprotective activity of neohesperidindihydrochalcone: a novel scaffold for Alzheimer's disease therapeutics identified via drug repurposing screen	*New Journal of Chemistry*	42	11755-11769	2018
8.	Sucharita Das & **Soumalee Basu**	Multi-targeting Strategies for Alzheimer's Disease Therapeutics: Pros and Cons	*Current Topics in Medicinal Chemistry*	17	3017-3061	2017
9.	Sandipan Chakraborty & **Soumalee Basu**	Multi-functional activities of citrus flavonoid narirutin in Alzheimer's disease therapeutics: An integrated screening approach and in vitro validation	*International Journal of Biological Macromolecules*	103	733-743	2017
10.	Sandipan Chakraborty & **Soumalee Basu**	Dual inhibition of BACE1 and Aβ aggregation by β-ecdysone: Application of a phytoecdysteroid scaffold in	*International Journal of Biological Macromolecules*	95	281-287	2017

		Alzheimer's disease therapeutics				
11.	Ananya Marik, Haraprasad Naiya, Madhumanti Das, Gairik Mukherjee, **Soumalee Basu**, ChinmaySaha, Rajdeep Chowdhury, Kankan Bhattacharya &Anindita Seal	Split-ubiquitin yeast two-hybrid interaction reveals a novel interaction between a natural resistance associated macrophage protein and a membrane bound thioredoxin in *Brassica juncea*	*Plant Molecular Biology*	92	519-537	2016
12.	Sandipan Chakraborty, Jaya Bandyopadhyay, Sourav Chakraborty & **Soumalee Basu**	Multi-target screening mines hesperidin as a multi-potent inhibitor : implications in Alzheimer's Disease therapeutics	*European Journal of Medicinal Chemistry*	121	810-22	2016
13.	Sandipan Chakraborty & **Soumalee Basu**	Structural insight into the mechanism of amyloid precursor protein recognition by β-secretase 1: A molecular dynamics study	*Biophysical Chemistry*	202	1-12	2015
14.	Sucharita Das, Sandipan Chakraborty & **Soumalee Basu**	Fragment-based designing for the generation of novel leads against BACE1	*Central Nervous System Agents in Medicinal Chemistry*	15	52-64	2015
15.	Sandipan Chakraborty, Balaji Ramachandran &**SoumaleeBasu**	Encompassing receptor flexibility in virtual screening using ensemble docking-based hybrid QSAR model: discovery of novel phytochemicals for BACE1 inhibition	*Molecular Biosystems*	10	2684-2692	2014
16.	Sandipan Chakraborty & **Soumalee Basu**	Mechanistic insight into the radical scavenging activity of polyphenols and its application in virtual screening of phytochemical library: an in silico approach	*European Food Research Technology*	239	885-893	2014
17.	Sandipan Chakraborty &**Soumalee Basu**	Insight into the anti-amyloidogenic activity of polyphenols and its application in virtual screening of phytochemical database	*Medicinal Chemistry Research*	23	5141-5148	2014
18.	Sandipan Chakraborty, **Soumalee Basu** & SoumenBasak	Effect of β-cyclodextrin on the molecular properties of myrecetin upon nano-encapsulation: Insight from optical spectroscopy and quantum chemical studies	*Carbohydrate Polymers*	99	116-125	2014
19.	Sandipan Chakraborty, Barnali Mukherjee and **Soumalee Basu**	Pin-pointing Proline substitution to be responsible for the loss of amyloidogenesis in IAPP	*Chemical Biology & Drug Design*	82	446-452	2013
20.	Aditi Maulik and SoumaleeBasu	Study of Q224K, V152G double mutation in bean PGIP2, an LRR protein for plant defence - an in silico approach	*Proteins: Structure Function and Bioinformatics*	81	852-862	2013

21.	Sandipan Chakraborty, Barnali Mukherjee and **Soumalee Basu**	A mechanistic insight into the amyloidogenic structure of hIAPP peptide revealed from sequences analysis and molecular dynamics simulations	*Biophysical Chemistry*		168-169	2012
22.	Aditi Maulik, Asif I Sarkar, Suneeta Devi and **Soumalee Basu**	Study of polygalacturonase-inhibiting proteins (PGIP) – a leucine-rich repeat (LRR) protein in plant defense	*Plant Biology*	14	22-30	2012
23.	Sandipan Chakraborty, Sanjay Kumar and **Soumalee Basu**	Conformational transition in the substrate binding domain of β-secretase exploited by NMA and its implication in inhibitor recognition: BACE1-myricetin a case study	*Neurochemistry International*	58	914-923	2011
24.	Sumana Banerjee, **Soumalee Basu*** and Srimonti Sarkar	Comparative genomics reveals preferential distribution and domain organization of FYVE and PX domain proteins across eukaryotic lineages	*BMC Genomics*	11	83	2010
25.	Sandipan Chakraborty, **Soumalee Basu***, AnsumanLahiri and SoumenBasak	Inclusion of chrysin in β-cyclodextrinnanocavity and its effect on antioxidant potential of chrysin: A spectroscopic and molecular modeling approach	*Journal of Molecular Structure*	977	180-188	2010
26.	Aditi Maulik, Hiren Ghosh and **Soumalee Basu**	Comparative study of protein-protein interaction observed in PolyGalacturonase-Inhibiting Proteins from *Phaseolus vulgaris* and Glycine max and PolyGalacturonase from *Fusarium moniliforme*	*BMC Genomics*	10	S19	2009
27.	AnsumanLahiri and **Soumalee Basu**	Dynamics of Leucine-Rich Repeat Proteins	*Biophysical Reviews and Letters*	2	207-219	2007
28.	**Soumalee Basu**, Rabi Majumdar, Gourab K Das and Dhananjay Bhattacharyya	Energy barriers and rates of tautomeric transitions in DNA bases: *Ab initio* quantum chemical study	*Indian Journal of Biochemistry & Biophysics*	42	378	2005
29.	**Soumalee Basu*** and Hans Liljenström	Spontaneously active cells induce state transitions in a model of olfactory cortex	*Biosystems*	63	57	2001
30.	**Soumalee Basu**, Chitra Dutta and Jyotirmoy Das	Kinetic asymmetry as a key source of functional diversity in biochemical networks	*Biophysical Chemistry*	76	1-11	1999
31.	Chitra Dutta, **Soumalee Basu** and Jyotirmoy Das	Complex dynamics of mass-closed coupled autocatalytic systems in response to minute asymmetric perturbations	*Biophysical Chemistry*	69	199-207	1997
32.	**Soumalee Basu**, Archana Pan, Chitra Dutta and Jyotirmoy Das	Chaos Game Representation of Proteins. 15: 279 (1997).	*Journal of Computer Graphics and Modelling*	15	279-289	1997

33.	Archana Pan, **Soumalee Basu**, Chitra Dutta, Debi Prasad Burma and Ranjana Mukherjee	Nucleotide frequency map: A new technique for the pictorial representation of dinucleotide frequencies 70: 50 (1996).	*Current Science*	70	50-53	1996

14. Detail of patents.

S.No	Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/Country	Status
1.	PROCGR:A software for Chaos Game Representation of protein sequences	S. Basu, A. Pan, C. Dutta & J. Das	**(**Registration no. L-16425/97)	1996	CSIR, Govt. of India, New Delhi	Granted

15. Books/Reports/Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
1.	Translating the Knowledge of Functional Dynamics Toward Designing Inhibitors of BACE1, a Key Aspartate Protease in Alzheimer's Disease	Sandipan Chakraborty & Soumalee Basu	Springer	2017
2.	Proteases-The Sharp Scissors in Human Diseases	Sandipan Chakraborty & Soumalee Basu	Springer	2017
3.	Strategies for Multi-Target Directed Ligands: Application in Alzheimer's Disease (AD) Therapeutics	Sucharita Das & Soumalee Basu	Springer Protocols	2018