



# Siddharthan Surveswaran

*Sid's Curriculum Vitæ*

## PERSONAL DETAILS

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<i>Address</i>	Department of Plant Sciences School of Life Sciences University of Hyderabad Hyderabad, 500019, India
<i>Mail</i>	siddhus@gmail.com
<i>Researchgate</i>	<a href="https://www.researchgate.net/profile/Siddharthan_Surveswaran">https://www.researchgate.net/profile/Siddharthan_Surveswaran</a>
<i>Google Scholar</i>	<a href="https://scholar.google.co.in/citations?user=4UH0bAAAAAJ">https://scholar.google.co.in/citations?user=4UH0bAAAAAJ</a>
<i>Metrics</i>	Citations: <b>1349</b> , h-index: <b>11</b> , i10-index: <b>12</b> (from Google Scholar)

## EDUCATION

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<b>PhD. Biological Sciences</b> <i>The University of Hong Kong</i>	Oct 2004 – Nov 2007
Major topics: Molecular phylogenetics of Asclepiadoideae (milkweeds), Antioxidant compounds from Indian medicinal plants. Thesis: <a href="#">Molecular phylogenetics and medicinal plants of Asclepiadoideae from India</a>	
<b>MSc. Plant Science</b> <i>University of Madras</i>	Jun 1996 – May 1998
GPA 4.2/5.0 (72% First Class). Major topics: Molecular plant pathology, Industrial microbiology. Dissertation: Pathogen response proteins in edible greens.	
<b>BSc. Botany</b> <i>Loyola College, University of Madras</i>	Jul 1993 – Apr 1996
GPA 3.7/5.0 (78% First Class). Major subjects: Botany, Zoology and Chemistry.	

## WORK EXPERIENCE

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<b>Associate Professor</b> <i>Department of Plant Sciences, School of Life Sciences, University of Hyderabad, Hyderabad, India.</i>	Jun 2022 – Present
<b>Associate Professor</b> <i>School of Life Sciences, CHRIST (Deemed to be University), Bangalore, India.</i>	May 2018 – Jun 2022
<b>Postdoctoral Research Associate</b>	Sep 2015 – Jun 2017

*School of Biological Sciences, The University of Hong Kong, Hong Kong.*

Population genetics, phylogeny and biogeography of Orchid genera

**CSIR Senior Research Associate**

Jun 2011 – Jul 2015

*Centre for Ecological Sciences, Indian Institute of Science, Bangalore, India.*

Research on molecular phylogenetics and biogeography of tribe Ceropegiae (Asclepiadoideae –Apocynaceae).

**Conservation Officer**

Jan 2011 – Mar 2011

*Kadoorie Farm and Botanic Garden, New Territories, Hong Kong.*

Conservation of orchids from the South China region using molecular phylogenetics and population genetics.

**Visiting Scientist**

Jul 2010 – Dec 2010

*School of Biological Sciences, Hong Kong Baptist University, Hong Kong.*

Carbon sequestration and development of Green Roof technology in Hong Kong.

**Postdoctoral Fellow**

Dec 2007 – Jun 2010

*School of Biological Sciences, The University of Hong Kong, Hong Kong.*

Phylogeny, biogeography and character evolution in family Annonaceae.

**Research Assistant**

Oct 2003 – Sep 2004

*School of Biological Sciences, The University of Hong Kong, Hong Kong.*

Acyl-CoA binding proteins (ACBPs) in *Arabidopsis thaliana*.

**Research Assistant**

Apr 1999 – Mar 2003

*Institute of Molecular Biology, Academia Sinica, Taiwan.*

RNA degradasome protein complexes in *Escherichia coli*.

## **RESEARCH INTERESTS**

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- Molecular Phylogenetics and Evolution, Population genetics, Pollination Ecology, Plant Taxonomy, Biogeography, Bioinformatics ([Researchgate profile](#))

## **TEACHING EXPERIENCE**

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- Environmental Science, Ecology, Molecular Evolution, Bioinformatics, Angiosperm Taxonomy, Pteridophytes, Biochemistry, Molecular Biology, Forensic Biology, Genetic Engineering, Phytochemistry, Bioanalytical Techniques.

## **RESEARCH GUIDANCE**

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Current PhD students: 4. Completed: Nil

## SELECTED PUBLICATIONS

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- [1] **Surveswaran, Siddharthan**, Tiwari N, Karanth PK, Deshmukh PV, and Lekhak MM (2022). Molecular phylogenetics and character evolution in *Haplanthodes* (Acanthaceae), an endemic genus from peninsular India. *Nordic Journal of Botany* (Accepted, available online), XX(X):XXX–XXX.
- [2] Deshmukh PV, **Surveswaran, Siddharthan**, Gore RD, and Lekhak MM (2021). Taxonomic studies in the genus *Haplanthodes* (Acanthaceae). *Phytotaxa*, 516(3):201–222.
- [3] Sharma SA, **Surveswaran, Siddharthan**, Arulraj J, and Velayudhannair K (2021). Bromelain enhances digestibility of Spirulina-based fish feed. *Journal of Applied Phycology*, 33(2):967–977.
- [4] **Surveswaran, Siddharthan**, Kambale SS, Srivastav M, Puneekar SA, Yadav SR, and Karanth KP (2021). Origin and diversification of Indian Ceropogieae (Apocynaceae) and its possible relation to the Indian monsoon. *Journal of Systematics and Evolution*, 59(1):93–112.
- [5] **Surveswaran, Siddharthan**, Gowda V, and Sun M (2020). Cryptic species and taxonomic troubles: a rebuttal of the systematic treatment of the Asian ladies' tresses orchids (*Spiranthes* species; Orchidaceae) by Pace et al.(2019). *Botanical Journal of the Linnean Society*, 194(3):375–381.
- [6] Gavade SK, **Surveswaran, Siddharthan**, van der Maesen LJG, and Lekhak MM (2019). Taxonomic revision and molecular phylogeny of *Flemingia* subgenus *Rhynchosioides* (Leguminosae). *Blumea*, 64:253–271.
- [7] **Surveswaran, Siddharthan**, Gowda V, and Sun M (2018). Using an integrated approach to identify cryptic species, divergence patterns and hybrid species in Asian ladies' tresses orchids (*Spiranthes*, Orchidaceae). *Molecular Phylogenetics and Evolution*, 124:106–121.
- [8] Prasad K, Chorghe A, **Surveswaran, Siddharthan**, and Venu P (2017). *Brachystelma mahendragiriense* (Apocynaceae), a new species from Odisha, India. *Rheedea*, 27(2):135–140.
- [9] Rebijith K, Asokan R, Hande HR, Joshi S, **Surveswaran, Siddharthan**, Ramamurthy V, and Krishna Kumar N (2017). Reconstructing the macroevolutionary patterns of aphids (Hemiptera: Aphididae) using nuclear and mitochondrial DNA sequences. *Biological Journal of the Linnean Society*, 121(4):796–814.
- [10] **Surveswaran, Siddharthan**, Kumar P, and Sun M (2017). *Spiranthes himalayensis* (Orchidaceae, Orchidoideae) a new species from Asia. *PhytoKeys*, 89:115–128.
- [11] Khanum R, **Surveswaran, Siddharthan**, Meve U, and Liede-Schumann S (2016). *Cynanchum* (Apocynaceae: Asclepiadoideae): A pantropical Asclepiadoid genus revisited. *Taxon*, 65(3):467–486.
- [12] Lekhak MM, **Surveswaran, Siddharthan**, and Yadav SR (2016). Generic identity of *Camptorrhiza indica* (Colchicaceae) based on cytogenetics and molecular phylogenetics. *Journal of Systematics and Evolution*, 54(1):75–82.

- [13] Gosavi KVC, Yadav SR, Karanth PK, and **Surveswaran, Siddharthan** (2015). Molecular phylogeny of *Glyphochloa* (Poaceae; Panicoideae), an endemic grass genus from the Western Ghats, India. *Journal of Systematics and Evolution*, **54**(2):162–174.
- [14] Page NV and **Surveswaran, Siddharthan** (2014). *Friesodielsia sahyadrica* (Annonaceae), a peculiar new species from the Western Ghats, India. *Phytotaxa*, **158**(3):275–282.
- [15] **Surveswaran, Siddharthan**, Sun M, Grimm GW, and Liede-Schumann S (2014). On the systematic position of some Asian enigmatic genera of Asclepiadoideae (Apocynaceae). *Botanical Journal of the Linnean Society*, **174**(4):601–619.
- [16] Thomas DC, **Surveswaran, Siddharthan**, Xue B, Sankowsky G, Mols JB, Keßler PJ, and Saunders RM (2012). Molecular phylogenetics and historical biogeography of the *Meiogyne–Fitzalania* clade (Annonaceae): Generic paraphyly and late Miocene–Pliocene diversification in Australasia and the Pacific. *Taxon*, **61**(3):559–575.
- [17] Asokan R, Rebijith K, Singh S, Sidhu A, **Siddharthan, S**, Karanth P, Ellango R, Ramamurthy V, et al. (2011). Molecular identification and phylogeny of *Bactrocera* species (Diptera: Tephritidae). *Florida Entomologist*, **94**(4):1026–1035.
- [18] **Surveswaran, Siddharthan**, Cai YZ, Xing J, Corke H, and Sun M (2010). Antioxidant properties and principal phenolic phytochemicals of Indian medicinal plants from Asclepiadoideae and Periplocoideae. *Natural Product Research*, **24**(3):206–221.
- [19] **Surveswaran, Siddharthan**, Wang RJ, Su YC, and Saunders RM (2010). Generic delimitation and historical biogeography in the early-divergent ‘ambavioid’ lineage of Annonaceae: *Cananga*, *Cyathocalyx* and *Drepananthus*. *Taxon*, **59**(6):1721–1734.
- [20] **Surveswaran, Siddharthan**, Kamble MY, Yadav SR, and Sun M (2009). Molecular phylogeny of *Ceropegia* (Asclepiadoideae, Apocynaceae) from Indian Western Ghats. *Plant Systematics and Evolution*, **281**(1-4):51–63.
- [21] **Surveswaran, Siddharthan**, Cai YZ, Corke H, and Sun M (2007). Systematic evaluation of natural phenolic antioxidants from 133 Indian medicinal plants. *Food Chemistry*, **102**(3):938–953.

## **BOOK CHAPTERS**

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1. Joseph A., Chandra J., **Surveswaran, Siddharthan** (2021) Genome Analysis for Precision Agriculture Using Artificial Intelligence: A Survey. In: Jat D.S., Shukla S., Unal A., Mishra D.K. (eds) Data Science and Security. Lecture Notes in Networks and Systems, vol 132. Springer, Singapore. [https://doi.org/10.1007/978-981-15-5309-7\\_23](https://doi.org/10.1007/978-981-15-5309-7_23)
2. **Surveswaran, Siddharthan** (2013). Molecular phylogenetics of *Caralluma sensu lato* from the Indian subcontinent. In: S Karuppusamy, A Ugraiyah, and T Pullaiah (eds), *Caralluma (sensu lato) - antiobesity plants*, pages 24–35. Regency Publications, New Delhi. ISBN-10: 8189233807 ISBN-13: 978-8189233808

3. **Surveswaran, Siddharthan** (2010). Assessment of monophyly of *Mitrephora*. In: RM Saunders and A Weerasooriya (eds) Monograph of *Mitrephora* (Annonaceae). Systematic Botany Monographs Vol. 90. ISBN-13: 978-0912861906

## **CONFERENCE PRESENTATIONS**

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1. Attendance: XIX International Botanical Congress, Shenzhen, **China**. July 2017.
2. Poster presentation: “Reticulate evolution and species delimitation in Asian *Spiranthes* (Orchidaceae). Evolution Meeting. Portland, **USA**. June 2017. [Figshare](#)
3. Poster presentation: “Molecular phylogenetics of *Caralluma* s.l. species occurring in India”. Conservation Genomics Conference (American Genetic Association), Hilo, Hawaii, **USA**. July 2010.
4. Oral presentation: “Phylogenetics of *Cananga–Cyathocalyx–Drepananthus* (Annonaceae)”. Annonaceae workshop, (Satellite meeting of the seventh biennial conference of Systematics Association (EU)). Leiden, **Netherlands**. August 2009.
5. Oral presentation: “Molecular phylogeny of the family Apocynaceae *s.l.*” based on *rbcL* sequences. Botany 2007 (American Society of Plant Biologists Conference), Chicago, **USA**. July 2007.
6. Poster presentation: “Molecular phylogeny of *Ceropegia* (Asclepiadoideae, Apocynaceae)”. 5th Asia Pacific Bioinformatics Conference, **Hong Kong**. April 2007.

## **INVITED TALKS**

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1. Molecular phylogenetics and historical biogeography of the *Meiogyne–Fitzalania* clade (Annonaceae): Generic paraphyly and late Miocene-Pliocene diversification in Australasia and the Pacific. Fakultas Biologi, Universitas Jenderal Soedirman, Purwokerto, Indonesia (02/10/2021)
2. Speciation and diversification in Plants: the Indian Story. Sameeksha Webinar Series (Virutal), Kerala Forest Research Institute, India (04/07/2020)
3. Plant Evolution: Endemic Radiation, AARI Bioscience World Wide Webinar Series (Virutal) (10/07/2020)
4. Cryptic speciation and species complexes, Keynote Speaker, Emerging Trends in Life Sciences, Waghire College of Arts Commerce and Science, Saswad, Pune, India (08/02/2020)
5. Resource person and Keynote speaker. Workshop on Molecular Phylogenetics. Centre for Ecological Sciences, Indian Institute of Science, Bangalore, India (05/10/2019)
6. International Symposium on “Genetic Diversity”, Department of Biotechnology, School of Life Sciences, Vel’s University, Chennai, India (02-03-2018)

7. National Workshop on Floristics, Monographs and Revisionary studies in the Age of Molecular Systematics, Center For Education Learning And Research Training in Angiosperm Taxonomy. Department of Botany, Shivaji University, Kolhapur, India (09-02-2018)
8. Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences. Menglun, Mengla, Yunnan 666303, China (12-07-2017)
9. XXVI Annual Conference of Indian Association for Angiosperm Taxonomy & International Seminar On Conservation and Sustainable Utilization of Biodiversity, Shivaji Univerity, Kolhapur, India (09-11-2016)
10. Ashoka Trust for Research in Ecology and the Environment (ATREE), Royal Enclave Srirampura, Jakkur Post, Bangalore, India (12-09-2014)

## **AWARDS AND FELLOWSHIPS**

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1. SERB - Young Scientist Fellowship grant for the project entitled: *Significance of Indian subcontinent on the evolution of Asclepiadoideae* (Grant no. SERC/LS-296/2011) – Grant amount Rs. 26 lakhs (2012-2015).
2. Junior Research Fellowship of the Council for Scientific and Industrial Research (CSIR), India. 2000
3. Ramasubbier medal for proficiency (Gold medal) in Botany, Loyola college, Madras, India. 1996

## **CERITIFCATE COURSES**

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- Hands-on workshop on Applied Genomics in Precision Medicine (Oncology) conducted by Bionivid Technology Pvt. Ltd.(25-10-2018 to 3-11-2018)
- Bioinformatic Methods I by University of Toronto - on Coursera
- Introduction to Genomic Technologies by Johns Hopkins University - on Coursera
- Programming for Everybody (Getting Started with Python) by University of Michigan - on Coursera

## **TECHNICAL SKILLS**

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- Next-generation sequencing data analysis - reference based assembly, *de novo* assembly, STACKS
- Molecular phylogeny / Population Genetics: DNA sequence analysis and alignment, AFLP, ISSR, DNA extraction /PCR from herbarium material.

- Molecular cloning and gene expression, Primer design, Southern Blotting, Northern Blotting, RNA extraction, cDNA library construction.
- Protein expression, SDS-PAGE, Western Blotting, Yeast two-hybrid system.
- Transcriptomics, cDNA library preparation.
- Plant tissue culture, Plant Transformation, Fluorescence imaging by Laser Confocal Microscopy.
- Transgenic plants, T-DNA mutagenesis using *Agrobacterium*, Particle gun mediated transformation.
- Soil testing, Green roof technology.

## COMPUTER SKILLS

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<i>Genomics</i>	VELVET, NEWBLER, STACKS, CUFFLINKS
<i>Office Suite</i>	MS Office, Libreoffice, WPS office, iWork
<i>Graphics</i>	GIMP, Inkscape, Adobe Illustrator, Gravit Designer
<i>Phylogenetics</i>	PAUP, PHYLIP, MrBayes, RAxML, BEAST, Lagrange, RASP
<i>Scripting</i>	PYTHON, BASH, SED, R
<i>Geoinformatics</i>	Arc-GIS, DIVA-GIS, QGIS
<i>Statistics</i>	R
<i>OS</i>	GNU/Linux, MacOSX and Windows
<i>Web</i>	HTML, CSS
<i>Typesetting</i>	L <sup>A</sup> T <sub>E</sub> X <sub>2</sub> e

## REFERENCES

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Professor,  
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Indian Institute of Science, India.  
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**Prof. S.R. Yadav,**  
(Mentor/Collaborator),  
Professor,  
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