

Publications

Author(s)	Year	Title	Journal
Sobhakumari V.P., Mohanraj K. and Mohana Prabha M.	2021	Genomic in situ hybridization in five consecutive generations of <i>Erianthus x Saccharum</i> hybrids to understand the introgression pattern of <i>Erianthus</i> genome	Proceedings of International Conference on Sugarcane Research: Sugarcane for Sugar and Beyond (CaneCon-2021), 19-22 June 2021, Coimbatore, India. Pp 202
Vijay. K., Sobhakumari V.P., Mohanraj. K., Haruni Priya.P., Mathumathe. R.and Mohana Prabha. M.	2021	Molecular and cytogenetic approaches to understand the genome constitution of backcross progenies of <i>Erianthus x saccharum</i> hybrid	Proceedings of International Conference on Sugarcane Research: Sugarcane for Sugar and Beyond (CaneCon-2021), 19-22 June 2021, Coimbatore, India. Pp 231
Sobhakumari V. P.	2020	Exploration of diversity and distribution of cytotypes of <i>Saccharum spontaneum</i> , a wild species of sugarcane, in India	Caryologia 73(4): 45-54. doi: 10.13128/caryologia-1024 DOP: May 19, 2021
Vijay. K., Sobhakumari V. P., Mohanraj. K	2021	Understanding the introgression of <i>Erianthus procerus</i> genome in back cross progenies of <i>Erianthus x Saccharum</i> hybrids by GISH analysis of microsporogenesis.	Proceedings of International Plant Physiology Virtual Symposium 2021 "Physiological Interventions for Climate Smart Agriculture". Held at ICAR - Sugarcane Breeding Institute, Coimbatore on 11-12 March 2021. Pp.164
Preethi S., Sobhakumari V. P., Mohanraj K	2021	Utilisation of new set of <i>Saccharum officinarum</i> and <i>Saccharum spontaneum</i> accessions in pre - breeding: Cytogenetic analysis of F1	Proceedings of International Plant Physiology Virtual Symposium 2021

		hybrids.	“Physiological Interventions for Climate Smart Agriculture”. Held at ICAR - Sugarcane Breeding Institute, Coimbatore on 11-12 March 2021. Pp.161
Sobhakumari V.P. and Mohanraj K.	2021	Identify the introgression of <i>Erianthus</i> chromosomes into <i>Saccharum</i> and study its impact on agronomical traits	Proceedings of International Plant Physiology Virtual Symposium 2021 “Physiological Interventions for Climate Smart Agriculture”. Held at ICAR - Sugarcane Breeding Institute, Coimbatore on 11-12 March 2021. Pp 166
Sobhakumari V.P	2020	Application of Molecular Cytogenetics to introgress novel traits in sugarcane	Lecture note: Advanced National Training Programme on “Recent Scientific Interventions and Practices of Sugarcane Breeding, Production, Protection and Utilization for Doubling Farmers Income”-Organized by ICAR-SBI, Coimbatore, And National Agriculture Development Cooperative Ltd. Baramulla, J&K. [Dec 1 st -21 st , 2020]
Imtiyazahemed S., Mahalingam L., Premalatha N., Senguttuvan K., Sobhakumari VP and Kumar M	2021	Developmant and hybridity confirmation of F1interspecific hybrids between <i>Gossypium barbadense</i> and <i>Gossypium anomalum</i> .	Journal of Cotton Research and Development 35(1), 19-28.
Sobhakumari V.P., Mohanraj K, Nair NV, Mahadevaswamy HK and Ram B	2020	Cytogenetic and molecular approaches to detect alien chromosome introgression and	Cytologia 85(4): 341-346 https://doi.org/10.1

		its impact in three successive generations of <i>Erianthus procerus</i> X <i>Saccharum</i>	508/cytologia.85.341
Sobhakumari V.P.	2020	Evolutionary dynamics of chromosomal diversity in <i>Saccharum spontaneum</i> population from Punjab and Haryana, India	Cytologia 85(4): 313-318 https://doi.org/10.1508/cytologia.85.313
Imtiyazahmed S., Mahalingam L., Premalatha N., Senguttuvan K., and Sobhakumari V. P.	2020	Interspecific hybrid confirmation in wide crosses of cotton (<i>Gossypium spp</i>) through morphological, cytological and molecular analysis.	Electronic Journal of Plant Breeding. Vol.11(2):451-460. https://doi.org/10.37992/2020.1102.078
Sobhakumari V.P	2019	Parental genome differentiation by Genomic in situ hybridization (GISH) in intergeneric hybrid of <i>Saccharum</i> x <i>Zea</i>	Journal of Sugarcane Research 9 (2) 130-137 http://doi.org/10.37580/JSR.2019.2.9.130-137
Sobhakumari V.P., Anjana Krishna and Sreya Antony	2020	Classical and molecular cytogenetic (GISH) studies in species and hybrids of sugarcane	Abstracts of National conference on “Plant Biotechnology: Present and future, PBPF-2020” Held at St. Berchman’s College, Changanassery, Kerala. 27-28 February, 2020
Sreya Antony and Sobhakumari V.P.	2020	Genomic <i>in situ</i> hybridization (GISH) studies in sugarcane hybrids involving <i>Saccharum officinarum</i> (cultivated species) X <i>Saccharum spontaneum</i> (wild species)	Abstracts of National conference on “Plant Biotechnology: Present and future, PBPF-2020” Held at St. Berchman’s College, Changanassery, Kerala. 27-28 February, 2020
Sobhakumari VP	2020	Advances in plant cytogenetics	Abstract and Souvenir of <i>National Seminar on Exploring the scope of plant science – 2020</i> - Plenary lecture – Pp.3 Held at Queen Mary’s College, Chennai-600004 on 9-10 Jan, 2020.

Sobhakumari VP, Mohanraj K	2019	Direct visualization of chromosome transmission from related genera to sugarcane and its impact on agronomical characters	In: Souvenir and Abstract of National conference of Plant Physiology-2019 Pp.42. Held at Kerala Agricultural University, Thrissur 19-21 Dec., 2019
V.P. Sobhakumari, N.V. Nair, K. Mohanraj and Maya Lekshmi	2018	Molecular cytogenetic characterization of <i>sorghum</i> chromosomes in <i>saccharum</i> background and vice versa using genomic <i>in situ</i> hybridization.	Journal of Sugarcane Research (2018) 8 (1) : 269 - 277
V.P.Sobhakumari	2018	Cytological techniques in sugarcane	In: Book of abstracts and protocols. Published during National workshop on 'Techniques for chromosome analysis' Held at Department of Botany, University of Kerala, Karyavattom, Trivandrum, Kerala on 21 st – 23 rd Nov., 2018. Pp.7
V.P.Sobhakumari	2017	Unraveling the genome structure of <i>Saccharum</i> hybrids using molecular cytogenetic techniques, GISH and FISH	International symposium on sugarcane research since Co 205: 100 years and beyond. (SucroSym 2017)" held at Hotel Le Meridian (by ICAR-SBI), Coimbatore on 18-21, Sept., 2017.
V.P.Sobhakumari	2017	Cytotype diversity in <i>Saccharum spontaneum</i> (a wild species of sugarcane): predominance of specific ploidy levels in western India	National seminar on 'Modern trends in conservation, utilization and improvement of plant genetic resources' held at Department of Botany, University of Kerala, Thiruvananthapuram on 23 & 24 Nov., 2017. Invited lecture -

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V.P.Sobhakumari	2017	'Cell division and mitosis'.	National Hands-on Workshop on 'Mitotic and meiotic behavior of chromosomes' held at Post graduate and Research Dept. of Botany, Sree Neelakanta Govt. Sanskrit College, Pattambi, Kerala on 18 th -19 th , Dec., 2017
V.P.Sobhakumari and M. Abiraham Stanly	2017	High ploidy diversity in <i>S. spontaneum</i> population of North-East region of India	Journal of Sugarcane Research. 7 (1) 52 - 59
V.P.Sobhakumari, Maya Lakshmi and M.N. Premachandran	2016	Genomic in situ hybridization (GISH) to reveal the cytogenetic constitution of sugarcane intergeneric hybrids	Proceedings of International Seminar on New Frontiers in Cytogenetics. CYTO-11.pp7-8
Maya Lekshmi, Adhini S.Pazhany . Sobhakumari. V. P.. Premachandran M N	2016	Nuclear and cytoplasmic contributions from <i>Erianthus arundinaceus</i> (Retz.) Jeswiet in a sugarcane hybrid clone confirmed through genomic <i>in situ</i> hybridization and cytoplasmic DNA polymorphism	Genet Resour Crop Evol. DOI 10.1007/s10722-016-0453-5
M.N. Premachandran, Sobhakumari V. P., Mayalekshmi, V. Raffee Viola	2017	Genome Characterization of <i>In Vitro</i> Induced Amphiploids of An Intergeneric Hybrid <i>Erianthus arundinaceus</i> x <i>Saccharum spontaneum</i>	Sugar Tech Volume 19, 4, pp 386-393 DOI 10.1007/s12355-016-0482-6
Sobhakumari V. P.	2015	Tissue culture induced variation: A strategy for Sugarcane Improvement	Sugar Journal, SISSTA. Pp. 24-29
Sobhakumari V.P. and P.T. Prathima	2015	Isolation of a novel centromere-associated cenH3 gene and its characterization from sugarcane.	Journal of Sugarcane research 5(2): 22-29
Sobhakumari V. P.	2015	Tissue culture induced variation: A strategy for sugarcane improvement	Proceedings of 45 th Annual Convention of SISSTA, 24 th – 25 th July, 2015 at Bangalore.
Sobhakumari V. P.	2015	Cytotype diversity in <i>S. spontaneum</i> population of	Proceedings of Indian Genetics Congress

		North east region of India.	Page 111. Held at SRM University, Chennai. March 4-6, 2015.
Sobhakumari V. P. , Jayabobe C. and Amalraj V.A.	2014	Exploration of intraspecific cytomorphological diversity in <i>S. spontaneum</i> from Himachal Pradesh and Uttaranchal , India.	Souvenir de presentation IS-2014 Page: 107-108 (Nov. 25-28, 2014) held at Nanning, P.R.China
Sobhakumari V.P. and Asmita Dutta	2014	Cytogenetics and performance analysis of pre-breeding hybrids of <i>Saccharum officinarum</i> and <i>Saccharum spontaneum</i>	Journal of Sugarcane Research Vol.4(1),33-39
Sobhakumari V.P. and Nair N.V	2014	Cytological mechanism of male sterility in intergeneric hybrids of <i>Sorghum x Saccharum</i> .	Cytologia 79 (1) 79-83
Sobhakumari V.P.	2014	<i>In vitro</i> growth and morphogenesis in sugarcane by different levels of Ammonium and Potassium nitrates	73 rd Annual convention of STAI (9-11 Sept, 2014) held at Bangalore.
Sobhakumari V.P. and Nair N.V.	2014	The potential of somaclones of <i>Sorghum x Saccharum</i> hybrid as raw materials for bioenergy.	Symposium on Bioenergy for sustainable development – the potential role of sugar crops. (23-25 June, 2014) held at Coimbatore.
Mohanraj K., Suganya A., Sobhakumari V.P. and Vijayan Nair N.	2014	Evaluation of sugarcane x sweet sorghum intergeneric hybrids and their somaclones for yield and juice quality	International conclave on Sugar crops. (Feb 15-17, 2014) held at IISR, Lucknow. Proceedings Page 104.
Sobhakumari V.P.	2014	Diversity in chromosome number among <i>S. spontaneum</i> L., from three geographical regions of India.	National Seminar on emerging trends in Biodiversity conservation and sustainable utilization January 29-30, 2014 held at Bharathiar University.

Sobhakumari V.P.	2014	Production and analysis of interspecific hybrids of <i>Saccharum</i> involving <i>S. officinarum</i> (cultivated species) and <i>S. spontaneum</i> (wild species).	National seminar on recent advances and challenges in sugarcane research. (January 23-24, 2014) held at Mysore. Proceedings page 8.
Vijayan Nair, N., Amalraj, V.A., Jayabose, C., Sobhakumari V.P. , Balakrishnan R. and Remadevi A.K.	2013	A catalogue on sugarcane genetic resources, <i>Saccharum spontaneum</i> L.	ISBN (978-81-926387-3-7) Sugarcane Breeding Institute, Coimbatore.
Sobhakumari V.P. , Premachandran M.N., Amalraj V.A and Govindaraj P.	2013	New <i>Saccharum spontaneum</i> accessions with low chromosome number (2n=40) identified.	SBI Newsletter Vol.33 July – September, Pp 3-4.
Sobhakumari V.P.	2013	New determinations of somatic chromosome number in cultivated and wild species of <i>Saccharum</i>	Caryologia. 66(3)268-274.
Sobhakumari V.P.	2013	Tissue culture in Sugarcane- A means for Women employment	Proc. National Conference on Women in Sugarcane agriculture and industry. (August 29-31, 2013), IISR Lucknow. Pp189.
Sobhakumari V.P. , M.N.Premachandran and R.Nithiyanantham	2013	Karyomorphological studies in four cytotypes (2n=20, 30, 40 & 60) of <i>Erianthus</i> – a wild related genera of <i>Saccharum</i> .	Proc. 100 th Indian Science Congress. Calcutta.
Sobhakumari V.P. and P.Malathi	2013	<i>In vitro</i> induction and evaluation for smut resistance in Sugarcane.	Proc. International Conference on Advances in Biotechnology and Patenting. Bharathidasan University, Trichy. Pp 24
V.P.Sobhakumari	2012	Assessment of somaclonal variation in sugarcane.	African Journal of Biotechnology.11(87), 15303-15309.
V.P.Sobhakumari , R.Nithiyanantham and P.Thiriveni	2012	Effect of NH ₄ NO ₃ and KNO ₃ as sources of nitrogen on <i>in vitro</i> cultures of sugarcane.	Proc. International Symposium on New Paradigms in

V.P.Sobhakumari and R. Nithiyanantham	2012	Differential Influence of parental genome and stimulatory effect of desiccation on callus culture of sugarcane hybrids	Sugarcane Research. Coimbatore. Pp 31. STAI (24-26 Sept, 2012) - 71 st Annual Convention and Sugar Expo-2012. Proceedings page 227-237.
V.P.Sobhakumari, P.Thiriveni and R.Nithiyanantham	2011	Effect of nitrogen on in vitro cultures of sugarcane variety, Co 86032.	SBI Newsletter Vol.31 . JulyApril - June, 2011. 4.
V.P.Sobhakumari, A.V.R.Janani and R. Nithiyanantham	2011	Improved method of <i>in vitro</i> culture in hybrids of sugarcane.	Proc. National seminar on Genetics, Breeding and Biotechnology. Calicut-BT-7Sp.21.
V.P.Sobhakumari and A. Archana	2011	Developmental and hormonal regulation for organogenesis and somatic embryogenesis in sugarcane and its histological characterization.	Proc. 4 th IAPSIT International Sugar Conference. New Delhi. 794-800
Sobhakumari V.P., Sreedivyva M.J., and Sanu Mary Abraham	2010	Genetic and non-genetic factors affecting callus induction and regeneration in sugarcane.	Gregor Mendel Foundation Journal 1 (1&2): 5-9.
V.P. Sobhakumari and Sanu mary abraham	2009	Effect of genotype and plant growth regulators on callus induction and regeneration in sugarcane	Proc. 70th Annual Conv. STAI: 91-97.
V.P.Sobhakumari and S.D.Mathew	2009	Effect of Hybrid vigor on callus induction and regeneration of Sugarcane.	Cytologia 74(1)71-77
V.P.Sobhakumari	2009	Chromosome survey of wild and cultivated species of Saccharum.	The Nucleus, 52 (1&2)17-23
V.P.Sobhakumari and S.Mallika	2007	A cytological survey of Saccharum officinarum and <i>S. spontaneum</i> clones.	The Nucleus, 50 (1): 27-32
V.P.Sobhakumari and N.V.Nair	2007	<i>In vitro</i> induction of colchipoidey in an intergeneric hybrid of Sorghum x <i>Saccharum</i>	Cytologia, 72 (3): 303-308
D.Neelamathi, V.P.Sobhakumari and S.Mallika	2007	<i>In vitro</i> storage and regeneration of encapsulated micro propagules in sugarcane.	Phytomorphology, 57 (1&2) 103-107
V.P.Sobhakumari and D.Lalithakumari	2007	Factors enhancing <i>Agrobacterium tumefaciens</i> mediated gene transfer in Chilli (<i>Capsicum annum L.</i>)	Plant cell Biotechnology and MolecularBiology, 8 (1&2): 47-52.

V.P.Sobhakumari and Vijayan Nair	2006	<i>In vitro</i> production of polyploids of an intergeneric hybrid of Sorghum x <i>Saccharum</i> through colchicine treatment of calli.	National Plant Breeding Congress 138-139
V.P.Sobhakumari and N.V.Nair	2005	Induction of flowering in a <i>Sorghum x Saccharum</i> hybrid through gamma irradiation of calli.	Cytologia, 70(4): 393-397
V.P.Sobhakumari, K.Hari, D.Neelamathi and S.P.Anad Kumar	2005	Sugarcane micropropagation responses to <i>Azospirillum</i> , <i>Methylobacterium</i> and Nitrogen.	Sugarcane International, 24(2): 6-8,12
V.P.Sobhakumari	2005	Chromosome numbers of some noble sugarcane clones.	Journal of Cytology and Genetics, 6: 25-29
V.P.Sobhakumari and D. Lalithakumari	2005	High frequency shoot regeneration and Agrobacterium mediated DNA transfer in red Chilli (<i>Capsicum annum L.</i>)	Plant Cell Biotechnology and Molecular Biology, 6(1&2):9-16
S.P.Anand Kumar, V.P.Sobhakumari, P.Loganathan and P.Vimalvenkitesh	2004	Improved <i>in vitro</i> culture methodology in sugarcane by introduction of <i>Azospirillum</i> and <i>Glucanoacetobacter</i> .	Sugar Tech, 6 (1&2): 69-72
V.P.Sobhakumari, K.Hari and D.Neelamathi	2004	Tissue culture of sugarcane with beneficial microbes.	Newsletter, Sugarcane Breeding Institute, 23 (4)
V.P.Sobhakumari	2003	Cytomorphological studies of <i>Saccharum</i> in relation to yield and quality characters.	Sugar Tech, 5(4): 279-283.
V.P.Sobhakumari and D.Lalithakumari	2003	Direct plant regeneration and shoot bud elongation in shoot tip cultures of <i>Capsicum annum L.cv.PLR-1</i>	Phytomorphology, 53 (3&4): 235-242.
V.P.Sobhakumari and D.Lalithakumari	2002	A stable transformation method for red chilli (<i>Capsicum annum L.</i>)	National Symposium on Genetically modified crops.P.93
N.C.Jalaja, D.Neelamathi and V.P.Sobhakumari	2002	Sugarcane micropropagation through tissue culture	Interaction meeting on prospects of large scale investment by public and private in Agriculture
V.P.Sobhakumari, B.Rajangam and D.Lalithakumari	1999	Agrobacterium mediated genetic transformation in Chilli pepper (<i>Capsicum annum L.</i>)	Asia-Pacific congress on the Biology of environment-Singapore.
V.P.Sobhakumari	1999	Agrobacterium mediated genetic transformation in Chilli pepper (<i>Capsicum annum L.</i>)	Annual meeting symposium of Indian Phytopathological

V.P.Sbhakumari	1998	Monitoring In vitro conditions for regeneration and transformation in <i>Capsicum annuum</i> using <i>Agrobacterium tumifatiens</i> .	Society National Symposium on recent developments in plant pathology.
V.P.Sobhakumari and D.Lalithakumari	1997	In vitro morphogenesis and plant regeneration of Pepper (<i>Capsicum annuum</i> L.)	XX Botanical Conference
R.S.Shirly, V.P.Sobhakumari and A.U Gadewar	1994	Agroforestry potential in Northern Kerala	Kurukshetra 43: (3) 24-28
P.T.Annie, V.P.Sobhakumari and P.Gopinathan Nair	1992	Intra and interspecific variability in grain protein distribution pattern in cultivated and wild species of <i>Oryza</i>	Rice Genetic Newsletter 9: 40-42

Books or Chapter Published

S.No	Title (Books/Book chapters)	Author's Name	Publisher
1	<u>Book</u> : Sugarcane Breeding, Geneti and seed production	Eds: R Nagarajan, N.Vijayan Nair,...and V.P.Sobhakumari.	ICAR- Sugarcane breeding Institute
2	<u>Book chapter</u> : Tissue culture techniques in sugarcane. In: Sugarcane Breeding, Genetics and seed production. pp163-168.	V.P.Sobhakumari	ICAR-Sugarcane Breeding Institute
3	<u>Book chapter</u> : Utilization of tissue culture derived variation in sugarcane improvement. In: Current status of sugarcane research in India - ISBN: 978-1-63463-458-8	V.P.Sobhakumari (Eds: Lal M., Singh A.K. and Tiwari A.K)	Studium Press LLC, U.S.A
4	<u>Bookchapter</u> :Sugarcane improvement through tissue culture derived variation. In: Recent Technologies for increased sugarcane productivity ISBN 978-93-808002-5-7	V.P.Sobhakumari (Eds:Rajula Shanthly et al.)	ICAR-Sugarcane Breeding Institute
5	A <u>catalogue</u> on sugarcane genetic resources, <i>Saccharum spontaneum</i> ISBN No. 978-81-926387-3-7	Vijayan Nair, N., Amalraj, V.A., Jayabose,C., Sobhakumari V.P., Balakrishnan R. and Remadevi A.K.	ICAR-Sugarcane Breeding Institute
6	<u>Book</u> : Sugarcane Technologies	Eds :T. Rajula Shanthly,	ICAR-Sugarcane

	ISBN No. 978-93-85267-00-0	Bhakshi Ram, S. Alarmelu, MN Premachandran.....VP Sobhakumari	Breeding Institute.
7	<u>Book chapter:</u> Tissue culture induced variation - a strategy for stress management in sugarcane. In: Biotechnological and conventional tools for biotic and abiotic stress management in sugarcane. ISBN No. 978-93-85267 07-9	V.P.Sobhakumari Eds: Bakshi Ram, P. Govindaraj, A. Ramesh Sundar and A. Bhaskaran	ICAR-Sugarcane Breeding Institute
8	<u>Lab Manual:</u> Practical manual for Cytogenetics	V P Sobhakumari and MN Premachandran	ICAR-Sugarcane Breeding Institute
9	<u>Book chapter:</u> Sugarcane genetic resources: Collection, conservation and cytogenetic characterization for its utilization in crop improvement programmes. In: Proceedings of International conference 'PROVECTUS PLANTAE 19' [ISBN No.978-81-940888-0-6].	V. P. Sobhakumari	Department of Botany, University of Kerala, Karyavattom, Trivandrum
10	<u>Book chapter:</u> Application of Molecular Cytogenetics to introgress novel traits. In: Recent Scientific Advances in Sugarcane Cultivation for Doubling Farmers' Income. Eds. Bakshi Ram, G. Hemaprabha, Ratna Nashine, K. Mohanraj, P. Murali, Rayees Ahmad Sha. Dilpreet publishers & Distributors.[ISBN 978-81-953726-0-7] Pp. 78-85.	V.P.Sobhakumari	ICAR-Sugarcane Breeding Institute
11	<u>Book chapter:</u> Modern perspectives in Plant Cytogenetics with special reference to Sugarcane. Proceedings of International conference on New Horizons in Plant Science-NHPS 2020 [ISBN No. 978-81-940888-3-7]	V.P. Sobhakumari	Department of Botany, University of Kerala, Karyavattom, Trivandrum, Kerala