

TS-1 : **Date: December 18 -2013**
Session: Plant Virology: Impact on Science and Society
(Chairperson: Prof. Anupam Varma)
(09:30- 11:00 hrs)

Time (Min)	(09:30 – 11:00 hrs)	TS- 1
09:30-10:00 hrs	Key Note TS-1 / KN-1	Evolving as a Friend from an Adversary: The case of Citrus tristeza Closterovirus Siddarame Gowda, USA
	Invited Talk	
10:00-10:20 hrs	TS-1 / INT-1	Plant Virus Research in achieving Food Security SM Paul Khurana
10:20-10:40 hrs	TS-1 / INT-2	Current Scenario of grapevine viruses in India <u>V.K.Baranwal</u>
10:40-11:00 hrs	TS-1/ INT-3	Cassava Brown Streak Disease: a threat to global food security Basavaprabhu L. Patil

TEA- 11:00- 11:15

TS-2: **Date: December 18 -2013**
Session: Viruses of Vegetative Propagated crops
(S.K.Chakraborty)
(11:15- 14:45)

Time (min)		TS- 2
11:15-11:35 hrs	Key Note TS-2 / KN-1	Diagnostics for tuber borne viruses S.K.Chakraborty
	Invited Talk	
11:35-11:55 hrs	TS-2 / INT-1	Challenges of rapidly evolving PVY strains and their containment Rudra Pratap Singh
11:55- 12:15 hrs	TS-2 / INT-2	Potato viruses & their management SM Paul Khurana
12:15:- 12:30 hrs	TS-2 / INT-3	Management of viral diseases of vegetatively propagated crops using cryotherapy <u>D.B. Parakh</u>
12:30- 12:45 hrs	TS-2 / INT-4	Advance diagnostic techniques for viruses infecting banana and plantain R. Selvarajan
	LUNCH	12-45-13-45 hrs
14:00- 14:15 hrs	TS-2 / INT-5	Molecular characterization of suppressor genes in three major RNA virus infecting sugarcane <u>R. Viswanathan</u>
14:15- 14:25 hrs	TS-2 / INT-6	Tropical tuber crops – a reservoir for plant viruses and its challenges <u>T.Makeshkumar</u> , M.L.Jeeva & S.K.Chakrabarti
14:25- 14:35 hrs	TS-2 / INT-7	Management of Srilankan cassava mosaic virus (SLCMV) disease using conventional and advanced techniques R. Rabindran, Janavi, G.J., Indranil Dasgupta, Valentine Otang Ntui
14:35-14:45 hrs	TS-2 / OP-1	Apical leaf curl disease- an emerging viral disease of potato in India <u>A. Jeevalatha</u>

TS-3:

Date: December 18 -2013

Session: Advances in Diagnostics

(Chairperson: Dr. R.K. Jain)

(14:45- 17:15 hrs)

Time (min)		TS- 3
14:45- 15:15 hrs	Key Note TS-3 / KN-1	Protein modeling and linear epitope mapping provide new strategies for the generation of immunodiagnostic reagents for <i>Banana streak virus</i> <u>Andrew Geering</u> , Australia
15:15-15:35	TS-3 / KN-2	Diagnostics: Symptomatology to next generation sequencing R.K.Jain
	Invited Talk	
15:35- 15:45 hrs	TS-3 / INT-1	Viral diseases of grain legumes in India: Research advances and challenges <u>N. Nadarajan</u>
15:45- 15:55 hrs	TS-3 / INT-2	<i>Ageratum enation virus</i> : an-emerging threat to commercially cultivated crops in India <u>S. K. Raj</u>
15:55- 16:05 hrs	TS-3 / INT-3	Characterization and diversity of <i>Groundnut bud necrosis virus</i> associated with fabaceous and solanaceous crops <u>Mohammad Akram</u>
16:05- 16:15 hrs	TS-3 / INT-4	Molecular diagnostics, characterization and management of major virus, viroid and greening bacterium infecting citrus in India <u>Dilip K Ghosh</u>
16:15- 16:25 hrs	TS-3 / INT-5	Viral diseases of soybean in India S.K. Srivastava and Moly Saxena
16:25- 16:35 hrs	TS-3 / INT-6	An Overview of <i>Bean common mosaic virus</i> Research in Asia Prem N Sharma
16:35- 16:45 hrs	TS-3 / OP-1	Molecular characterization of begomovirus causing dwarf mosaic disease of french bean (<i>Phaseolus vulgaris</i> L.) in India <u>Bhavin S. Bhatt</u>
16:45- 16:55 hrs	TS-3 / OP-2	Duplex RT-PCR for specific detection of <i>Watermelon bud necrosis virus</i> and <i>Groundnut bud necrosis virus</i> , the two closely related tospoviruses in India <u>S. K. Holkar</u>
16:55- 17:05 hrs	TS-3/ OP-3	Emergence of Indian chilli infecting begomoviruses : role of recombination and mutation in their evolution <u>R Vinoth Kumar</u>
17:05- 17:15 hrs	TS-3 / OP-4	Analysis of the sequence diversity among <i>HC-pro</i> , <i>Nla-pro</i> and <i>CP</i> coding regions of <i>Papaya ringspot virus</i> isolates of Indian origin <u>Basavaraj, Y.B</u>

TS-4:**Date: December 18 -2013****Session: Structural & Functional Genomics of Plant Viruses****(Chairperson: Prof. Indranil Das Gupta)****(17:15 – 18:30 hrs)**

Time (min.)		TS- 4
17:15-17:30 hrs	TS-4 / KN-1	Mutations in <i>Sri Lankan cassava mosaic virus</i> genes affect its accumulation, intracellular localization and symptom production in the experimental host <i>Nicotiana benthamiana</i> Prof. Indranil Das Gupta
	Invited Talk	
17:30-17:50 hrs	TS-4 / INT-1	Mapping of the host protein interactome network regulating the replication of <i>Cucumber mosaic virus</i> and its satellite RNA A.L.N. Rao
17:50-18:00 hrs	TS-4 / INT-2	Mutant and recombinant <i>Cotton leaf curl Burewala virus</i> crossed resistant barrier in <i>Gossypium hirsutum</i> <u>Luqman Amrao</u>
18:00-18:10 hrs	TS-4 / INT-3	Betasatellite mediated symptom development: bringing in a new perspective <u>Supriya Chakraborty</u>
18:10-18:20 hrs	TS-4 / INT-4	Host proteins associated with development of infection by <i>Cucumber mosaic virus</i> in <i>Cucumis sativus</i> <u>Vipin Hallan</u>
18:20-18:30 hrs	TS-4 / INT-5	Post-transcriptional and epigenetic arms of RNA silencing: A defense machinery of naturally tolerant tomato plant against Tomato leaf curl New Delhi virus Manoj Prasad

TS-5:**Date: December 19 -2013****Session: Epidemiology and Management: past, present and future
(Chairperson: Prof. V. Muniyappa)****(9:30 – 12:35 hrs)**

Time		TS-5
09:30-09:45 hrs	TS-5/ KN-1	Epidemiology and management of tomato leaf curl virus disease in India V. Muniyappa
09:45-10:00 hrs	TS-5/ INT -1	Genetic diversity of Emerging and re-emerging potyviruses of Horticultural crops in India M. Krishna reddy,
10:00-10:15 hrs	TS-5/ INT-2	Viral Proteins: Evader & re-Programmer of plant defense Shelly Praveen
10:15-10:25 hrs	TS-5/ INT -3	Viral Suppressors of RNAi: the beautiful manipulators <u>Sunil Mukherjee</u>
10:25-10:35 hrs	TS-5/ INT -4	Induction of systemic resistance in susceptible plants against viruses by protein of plant origin <u>Vivek Prasad</u>
10:35-10:45 hrs	TS-5/ INT -5	Exploring strategies for generating resistance against cotton leaf curl disease Jawaid A. Khan
10:45-10:55 hrs	TS-5/ INT -6	Further progress in management of peanut stem necrosis disease caused by <i>Tobacco streak virus</i> <u>K. Vemana</u>
10:55-11:05 hrs	TS-5/ INT -7	Screening pepper (<i>Capsicum</i> spp.) lines for resistance to potyviruses at AVRDC-The World Vegetable Center <u>Wen-Shi Tsai</u>
	TEA	11:00- 11:15 hrs
11:15-11:25 hrs	TS-5/ INT -8	<i>Croton yellow vein mosaic virus</i>: a prolific <i>Begomovirus</i> in the Indian sub-continent <u>Anirban Roy, Alok Kumar & Sweta Singh</u>
11:25-11:35 hrs	TS-5/ OP-1	Occurrence of virus diseases on oilseed <i>Brassica</i> in India <u>Dhiraj Singh & P.D. Meena</u>
11:35-11:45 hrs	TS-5/ OP-2	Begomoviruses of pulse crops: An emerging challenge <u>Naimuddin & Mohd. Akram</u>
11:45-11:55 hrs	TS-5/ OP-3	Identification of resistant sources of black gram germplasm against yellow mosaic disease through screening under natural epiphytotic condition and challenged inoculation condition <u>Manas Kumar Bag</u>
11:55-12:05 hrs	TS-5/OP-4	Affinity of aphid vector with the fourkey affected large cardamom plant <u>Amalendu Ghosh, Amrita Das, S. Vijayanandraj & Bikash Mandal</u>
12:05-12:15 hrs	TS-5 / OP-5	Characterization of a <i>Geminivirus</i> infecting muskmelon (<i>Cucumis Melo</i> L.) from Western India <u>Savarni Tripathi</u>
12:15-12:25 hrs	TS-5/ OP-6	Expression of micro RNA targeting silencing suppressor gene in <i>Gossypium hirsutum</i> plant Mohammad Akmal
12:25-12:35 hrs	TS-5/ OP-7	Molecular identification and genetic diversity among the begomoviruses infecting <i>Jatropha</i> species from India S. K. Snehi

LUNCH- 12:45- 13:45

TS-6:**Date: December 19 -2013****Session: Challenges in Certification of Seed and Other Planting Material for Viruses****(Chairperson: Dr. R.K. Khetrpal)****(13:45 – 15:40 hrs)**

Timing (Min.)		TS- 6
13:45-14:00 hrs	TS-6/ KN-1	Agricultural Biosecurity against Viruses in Asia Pacific R.K.Khetrapal
	Invited Talk	
14:00-14:20 hrs	TS-6/ INT-1	Certification of Tissue Culture-raised Plants in India: A Unique Initiative Anupam Verma
14:20-14:40 hrs	TS-6/ INT -2	Certification Challenges of Planting Material in the Era of Virus Discovery by Next-gen Technology Lava Kumar
14:40-15:00 hrs	TS-6/ INT -3	New Detection/ Diagnostic Strategies to Monitor Health Status of Crops and/or Spreading of Regulated Diseases Francisco M. Ochoa Corona
15:00-15:20 hrs	TS-6/ INT -4	Estimating the effectiveness of management strategies to reduce seed degeneration in vegetatively propagated crops Sara Thomas, USA
15:20-15:40 hrs	TS-5/ INT -5	Quarantine Certification of Seed and Other Planting Material for Viruses Celia Chalam

TEA:- 15:45- 16:00

Ts-7 Emerging Plant Viruses and novel approaches for Virus disease managementSession**Date: December 19- 2013****(16:00 – 17:15)**

Timing (Min.)		TS-7
16:00- 16:15 hrs	TS-7/INT-1	<i>Piper yellow mottle virus</i>- a important production constraint of black pepper I. Bhatt
16:15- 16:30 hrs	TS-7/INT-2	Management of Viral Diseases of Crops through Antiviral Agent isolated from <i>Boerhaaviadiffusaroots</i>. L.P. Awasthi
16:30- 16:45 hrs	TS-7/INT-3	Studies of a novel virus isolate causing Yellow Mosaic Disease of Patchouli [<i>Pogostemon cablin</i> (Blanco) Benth] <u>M. Zaim</u> & Feroz Khan
16:45 – 17:00 hrs	TS-7/INT-4	Mycoviruses: An overview of a newer field in Indian Virology. <u>Sharmita Gupta</u> & Sakshi Sharma
17:00 – 17:15 hrs	TS-7/INT-5	Status of maize virus disease research in India G.P.Rao

December: 20/12/13
Special Session: Young Scientist Award
(09:30- 10:40 hrs)

15	Oral	
09:30-09:40 hrs	1	Detection, identification and management of two viruses infecting chrysanthemum <u>Susheel Kumar</u> & Sri Krishna Raj
09:40-09:50 hrs	2	Rolling circle based complete genome characterization of episomal banana streak virus species associated with banana in India and development of polyclonal antisera using in vitro expressed protein and synthetic peptides <u>Susheel Kumar Sharma</u> , P. Vigneshkumar, A. Swapna Geethanjali & V.K.Baranwal
09:50-10:00hrs	3	Genome characterization and molecular diagnosis of Large cardamom chirke virus- <u>S. Vijayanandraj</u> ¹ , Amrita Das, M. Yogita, Amalendu Ghosh & Bikash Mandal
10:00-10:10 hrs	4	Recombinant antibody fragment to groundnut bud necrosis virus <u>Yogita Maheshwari</u> , Vijayanandraj, R.K.Jain & Bikash Mandal
10:10-10:20 hrs	5	<i>Frangipani mosaic virus</i> and <i>Plumeria mosaic virus</i>: Identification of two tobamovirus infecting Frangipani in India <u>Alok Kumar</u> , Vikas Solanki & Bikash Mandal
10:20-10:30 hrs	6	Characterisation of mycoviruses in <i>Rhizoctonia solani</i> infecting potato <u>Subha Das</u> , Richard E Falloon, & Andrew R Pitman
10:30-10:40 hrs	7	Whitefly genotypes infesting and gene expression profiles differences in yellow mosaic disease affected soybean” <u>Kanakala. S</u> , Malathi. V.G, Bapatla K Pavan Kumar, Archana. K, Jyothsna. P & Usha.R.

December: 20/12/13

Poster Session

(12:00- 13:30 hrs)

Poster

- 1- **Characterization of *Chilli veinal mottle virus* (ChiVMV) infecting chilli germplasm (*Capsicum* spp.) growing in mid-hill conditions of Meghalaya, India**
Amrita Banerjee, Somnath Roy, Susheel Kumar Sharma, SS Roy & SV Ngachan
- 2- **Whole genome sequencing of *Piper yellow mottle virus* (PYMoV) infecting black pepper, betelvine and Indian long pepper**
K. P. Deeshma & A. I. Bhat
- 3- **Sequence diversity of *Piper yellow mottle virus* infecting black pepper (*Piper nigrum*) and related species in India**
I. Bhat, Shina Sasi, K. A. Revathy, K. P. Deeshma & K. V. Saji
- 4- **Evaluation of okra varieties against Yellow Vein Mosaic of bhendi under natural field conditions**
S. P. Singh, L. P. Awasthi, A. N. Chaubey & Abhishek
- 5- **Molecular Characterization of *Begomovirus* on *Carica papaya* in North -Eastern Uttar Pradesh**
DK Dubey, N Pandey & PP Upadhyaya
- 6- **Occurrence of virus diseases of Bhut Jolokia (*Capsicum chinense*)**
Juri Talukdar & A. K. Saikia
- 7- **Survey and detection of Papaya ring spot virus disease in Assam**
Binita Talukdar & A. K. Saikia
- 8- **Effect of different climatic conditions on the development of potato viral diseases**
A. N. Chaubey, L. P. Awasthi, S. P. Singh & Abhishek
- 9- **Identification of *Cucumber mosaic virus* subgroup II in *Valeriana jatamansi* in sub-temperate Himalayas**
Shivangi Sharma, Reenu Kumari, Surender Kumar, Nageswar Singh, A.A Zaidi & Vipin Hallan
- 10- **Molecular characterization of a distinct begomovirus species and its associated satellite DNA isolated from *Synedrella nodiflora* in Andaman, India**
Shilpi Singh, Anirban Roy & Bikash Mandal
- 11- **Characterisation of Potato virus Y from India based on coat protein gene sequence**
Akshay Katiyar, Alok Kumar & Bikash Mandal
- 12- **Expression of foreign gene in plant using *Cucumber green mottle mosaic virus* genome with or without coat protein gene**
Abdul Kader Jailani. A., Alok Kumar, Anirban Roy & Bikash Mandal
- 13- **Efficacy of suppressor gene based artificial micro RNA constructs against *Potato virus Y* and *Potato virus X***
D. M. J. B. Senanayake, A. Katiyar & Bikash Mandal
- 14- **Molecular characterization of *Begomovirus* on *Ageratum conyzoides* in North - Eastern Terai of Uttar Pradesh**
Naveen Pandey, A.K.Tiwari & K.Shukla
- 15- **Efficacy of *Cotton leaf curl virus* promoter in gene expression**

- 16-Characterization of C-Terminal of Replication initiator protein of *Tomato leaf curl Gujarat virus***
Rajrani Ruhel, B. George & Supriya Chakraborty
- 17-Maintenance of the Old World *Cotton leaf curl Multan virus* by Papaya plant in India**
Vartika Sinha, Deepak Bhatnagar & Neera B. Sarin
- 18-Application of small RNA based strategy in the development of generic resistance to geminiviruses infecting tomato and cotton Plants**
Abhinav Kumar, Neera B. Sarin & Jawaid A. Khan
- 19- Biological assay to establish viral nature of *Clerodendrum inerme* in Agra region exhibiting mosaic symptoms and its effect on host physiology**
Sonal & Sharmita Gupta
- 20-Betasatellites mediated selective suppression of chlorophyll biosynthesis genes and downregulation of chloroplast proteins results in photosynthetic inhibition**
Dhriti Bhattacharyya, Nirbhay Kumar Kushwaha & SupriyaChakraborty
- 21- β C1 protein damages chloroplast ultrastructure and function in *Nicotianabenthamiana***
Dhriti Bhattacharyya, PrabuGnanasekaran, Veerendra Kumar Sharma, Reddy Kishore Kumar & SupriyaChakraborty
- 22-Identification of viral factor(s) governing synergistic interaction among tomato-infecting begomoviruses in India**
Saumik Basu, Divya Singh, Sanjeeb Sahu & Supriya Chakraborty
- 23-Interaction between AV2 and NtSGS3 / SlSGS3 is indispensable for pathogenesis of tomato-infecting begomoviruses**
Saumik Basu, V K Sharma, Divya Singh & S Chakraborty
- 24-Molecular Characterization and infectivity of *Begomovirus* in *Momordica charantia*, *Cyamopsis tetragonoloba* and in *Bemisia tabaci* in Tamil-Nadu**
S.U.Mohammed Riyaz, G. Dharanivasan S.Deepan & K.Kathiravan
- 25-Investigations on the leaf protein yield and quality of some pulse crops as influenced by mung bean severe mosaic virus infection**
Shiwangi, Raj Bahadur Singh & Abhishek
- 26-Influence of phosphorus nutrition on the host growth, nodulation and multiplication of mung bean severe mosaic virus**
Shiwangi, Raj Bahadur Singh & Abhishek
- 27-ASSVd exist as a heterogeneous population in the herbaceous hosts**
Yashika Walia, Sunny Dhir & Vipin Hallan
- 28-Molecular characterization of okra leaf curl virus in Mau, Eastern Uttar Pradesh**
Brijesh K. Yadav, Sangeeta, Bhavin S. Bhatt& Achuit K. Singh
- 29-Molecular diagnosis of Cardamom bushy dwarf virus associated affecting large cardamom- S.**
Vijayanandraj, Amrita Das, M. Yogita, Amalendu Ghosh & Bikash Mandal
- 30-Production of polyclonal antibodies against *Bean common mosaic virus* using bacterial expressed recombinant coat protein.**
Prachi Sharma, R. K Jain & P. N Sharma
- 31-First report of *Leek yellow stripe virus* in garlic from India**
Nitika Gupta, Prabha K, Sabina Islam & V. K. Baranwal

- 32-Molecular evidence for association of *Banana streak MY virus* with the leaf streak disease of banana in North Eastern India**
Susheel Kumar Sharma, A. Banerjee, S. S. Roy, P. Vignesh Kumar & V.K. Baranwal
- 33-Bioassay of viruses infecting apple by employing *Malus* species woody indicators**
Ajay Brakta, P. D. Thakur, Anil Handa & Manica Tomar
- 34-Cloning, expression and antibody production against recombinant coat protein of *Tobacco streak virus* infecting groundnut in *E.coli***
B.V.Bhaskara Reddy, Y. Sivaprasad, Sujitha. A, T. Giridhar Krishna & D.V.R. Sai Gopal
- 35- *In vitro* expression and purification of coat protein gene of *Grapevine leafroll-associated virus 3 (GLRaV-3)* from grapevine in India and development of immunodiagnosics for its detection**
Sandeep Kumar, Priyanka Singh, Richa Rai & V. K. Baranwal
- 36-Characterization of *Chilli vein mottle virus (ChiVMV)* infecting chilli germplasm (*Capsicum* spp.) growing in mid-hill conditions of Meghalaya, India**
Amrita Das, S. Vijayanandraj, M. Yogita, Amalendu Ghosh & Bikash Mandal
- 37-Searching miRNAs against Intergenic Region of Cotton leaf curl virus species**
M Sarwar Baig, Zainul A. Khan & Jawaid A. Khan
- 38-Sequencing, phylogenetic analysis and biolistic inoculation of Cassava begomoviruses from India**
Akhilesh Kumar Kushawaha, R. Rabindran & Indranil Dasgupta
- 39-Standardization of transformation protocol in soybean for transgenic resistance against *Mungbean yellow mosaic India virus***
Divya Rani, Isha Gautam, Prachi Sharma & V.G. Malathi
- 40- Present status of cotton leaf curl begomovirus disease in cotton growing regions of Northwest India**
K. K. Biswas, S. Godara, U. K. Bhattacharyya, S. M. Paul Khurana, J. Singh, B. Saha, V. K. Baranwal and R. K. Jain
- 41-Compatibility of *Boerhaavia diffusa* antiviral agent with pesticides for the management of viral diseases of tomato**
Abhishek, L.P. Awasthi, Samir Pratap Singh & A. N. Chaubey
- 42-Elimination of alexi, carla and potyviruses in garlic through apical meristem tip culture using solar heat and hot air treatment of clove**
D.Pramesh & V. K. Baranwal
- 43-Proteomic analysis of host pathogen interaction in banana bunchy top virus infected hill banana (aab)**
Anuradha C & Selvarajan R
- 44-Synergistic interaction of begomoviruses results in breakdown of natural resistance in chilli**
Ashish Kumar Singh, Nirbhay Kushwaha & Supriya Chakraborty
- 45-Genetic transformation of an elite Indian Genotype of cotton (*Gossypium hirsutum* L.) for CLCuD resistance**
Sameena Khatoon, Neera B. Sarin & Jawaid A. Khan
- 46- First report of simultaneous occurrence of a phytoplasma and a virus in papaya under natural field conditions from India**
R. Verma, S. Tripathi, P. Gaikwad, D. Mungekar, V. Datar & J. Singh

- 47- Identification of miRNAs targeting ribosomal genes of *Bemisiatabaci*, a vector of begomovirus transmission**
Gazal Wamiq, Jawaid A. Khan
- 48-PCR based detection of Begomovirus in a weed (*Ageratum*)**
 Subangi Agnihotri & Shraddha Pandit
- 49- Molecular detection and identification of viruses naturally occurring on *Canna* Spp.**
Aarti Kumari, C. Kaur, K. K. Gautam, S. Kumar & S. K. Raj
- 50- Identification of a distinct strain of *Hollyhock yellow vein mosaic virus* associated with yellow vein mosaic disease of hollyhock**
Ashish Srivastava, Meraj Jaidi, Susheel Kumar, Sunil Kumar Snehi & Shri Krishna Raj
- 51- Evaluation of chemo, electro and thermotherapies to eliminate potyvirus from gladiolus**
Charanjeet Kaur, Rashmi Raj, Susheel Kumar & S. K. Raj
- 52- Development of transgenic gerbera plants expressing coat protein of *Cucumber mosaic virus***
Karmveer Kumar Gautam, Rashmi Raj, Susheel Kumar & S. K. Raj
- 53- Agrobacterium mediated transformation of embryogenic cell suspension of Hill banana for developing transgenics to BBTV**
 Selvarajan, R., Prasanyaselvam, K., V. Balasubramanian & C. Anuradha
- 54- Production of polyclonal antiserum against recombinant viral associated protein of Banana streak Mysore virus (BSMYV) and its application in diagnosis**
 Selvarajan, R., Mary Sheeba, M., V. Balasubramanian & T. Gayathrie
- 55- Complete genome sequence of Indian strain NL-1n of *Bean common mosaic virus*.**
 Anuradha Sharma, Vivek Sharma & PN Sharma
- 56- Characterization of *Pepper Mild Mottle Virus* infecting bell pepper in Himachal Pradesh**
 Nidhi Rialch, Vivek Sharma, Kapil Patiyal, Anuradha Sharma & Prem N Sharma
- 57- Impact of *Clerodendrum Aculeatum* Leaf Extracts on Chilli Mosaic Virus.**
Amita Pandey & J. P. Tewari
- 58- Effect of sugar industry effluent on seed germination of Vegetable Crops-Chilli & Tomato (*Capsicum Annum L. and Lycopersicon esculentum Mill.*)**
Amita Pandey & J. P. Tewari
- 59- Prevalent viral diseases of important vegetables of Chhattisgarh**
 C. P. Khare, D. Sharma, M. P. Thakur, D.A. Sarnaik & B. Singh
- 60- Construction of ribozyme mediated transgenic tobacco plants tolerant against *Mungbean yellow mosaic India virus* (MYMIV) infection**
Rakesh Kumar, Nirupam Roy Choudhury & Sunil Kumar Mukherjee
- 61- Plant virus-derived vectors for the expression of heterologous genes and silencing of endogenous genes in plants**
 Nabanita Gogoi, Arunima Purkayastha, Ravi Kant and Indranil Dasgupta
- 62- Viruses infecting sweet pepper under protected cultivation in low and mid hills of Himachal Pradesh, India**
 Anand Singh, CL Chauhan, Akhilesh Singh* and N. Rishi

**63- *In silico* prediction of cotton (*Gossypium hirsutum*) encoded miRNAs targets in
Cotton leaf curl Rajasthan virus genome**

Shweta, Jawaid A. Khan*

**64-Sequence variability and phylogenetic analysis of *Tomato aspermy cucumovirus*
isolates infecting chrysanthemums from India**

Neeraj Verma* and Aijaz A. Zaidi**

**65-Long distance RT-PCR to amplify complete plant viral RNA genome sequences and
deriving infectious clones**

Sunny Dhir & Vipin Hallan*

**66-Molecular characterization of a new begomovirus species associated with Tomato
leaf curl disease from Gandhinagar**

Sangeeta, Bhavin S. Bhatt, Brijesh K. Yadav, Achuit K. Singh*

**67-Cloning, overexpression and purification of AV2 (Precoat protein) and AC1
(Replication initiator) of a monopartite begomovirus**

Mansi Bhardwaj, Nirbhay Kushwaha, Supriya Chakraborty*

**68-Molecular detection, Cloning and *in-silico* analysis of genomic components of *Tomato
Leaf Curl Virus* associated with leaf curl disease in Chilli (*Capsicum annum L.*)**

Aastha Singh, Jitender Singh* and Anchal Singh

**69-Exploring the mechanism of betasatellite mediated symptom development in
*Nicotiana benthamiana***

Dhriti Bhattacharyya , Prabu Gnanasekaran, Nirbhay Kumar Kushwaha, Veerendra
Kumar

70-Genetic Variability of Phytoplasma in Different Plants

Anukriti Mathur*, Aanishaa Jhaldiyal & Rachana Singh

**71-Whitefly mediated transmission and symptom development of *Tomato leaf curl New
Delhi virus* on tomato cultivars resistant to *Tomato leaf curl Bangalore virus***

Harvinder Kumar Singh*, Pushpanjali Wagh and Bikash Mandal¹