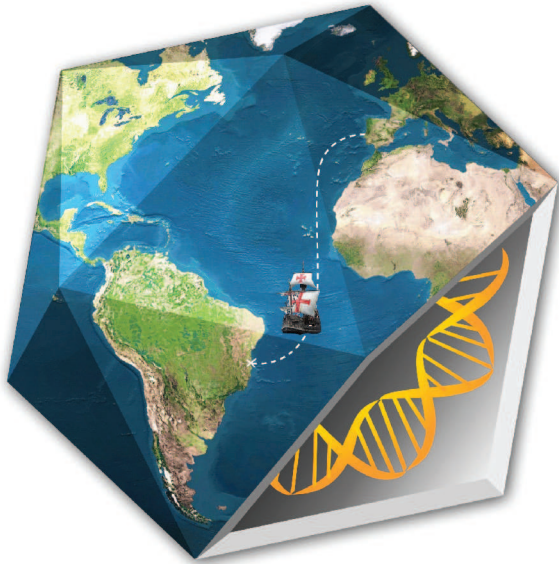


# VIRUS

ISSN 519 - 2563

Reviews and Research



**XXIV** Brazilian Congress  
of Virology

VIII Mercosur Meeting of Virology



September 01-04, 2013 | Porto Seguro, Bahia, Brazil

Volume 18 Supplement 1



JOURNAL OF THE BRAZILIAN SOCIETY FOR VIROLOGY

# Virus Reviews and Research

*Journal of the Brazilian Society for Virology*

Volume 18, September 2013, Supplement 1

Annals of XXIV Brazilian Congress of Virology & VIII Mercosur Meeting of Virology  
September, 01 - 04, 2013, Náutico Praia Hotel & Convention Center, Porto Seguro, Bahia, Brazil

## *Editors*

Fernando Rosado Spilki

Edson Elias da Silva

## **BRAZILIAN SOCIETY FOR VIROLOGY BOARD OF DIRECTORS (2013-2014)**

## *Officers*

President: Dr Eurico de Arruda Neto

Vice-President: Dr Bergmann Morais Ribeiro

First Secretary: Dr Mauricio Lacerda Nogueira

Second Secretary: Dra Luciana Jesus da Costa

First Treasurer: Dr Luis Lamberti Pinto da Silva

Second Treasurer: Dra Clarice Weis Arns

Executive Secretary: Dr Fabrício Souza Campos

Dra Paula Rahal, UNESP (2013 – 2014)

Dr Davis F. Ferreira, UFRJ (2013 – 2014)

### **Environmental Virology (EV)**

Dra Célia Regina Barardi, UFSC (2013 – 2014)

Dr Fernando Rosado Spilki, Feevale (2013 – 2014)

### **Human Virology (HV)**

Dr Luiz Tadeu Figueiredo, USP-RP (2013 – 2014)

Dra Nancy Bellei, UNIFESP (2013 – 2014)

### **Immunobiologicals in Virology (IV)**

Dra Sílvia Cavalcanti, UFF (2013 – 2013)

Dr Edson Elias da Silva, Fiocruz (2013 – 2014)

### **Plant and Invertebrate Virology (PIV)**

Dr Paulo Brioso, UFRJ (2013 – 2014)

Dr Tatsuya Nagata, UNB (2013 – 2014)

### **Veterinary Virology (VV)**

Dr Paulo Brandão, USP (2013 – 2014)

Dra Rita Cubel, UFF (2013 – 2014)

## *Councillors*

Dra Maria Luisa Barbosa

Dra Viviane Fongaro Botosso

Dra Maria Angela Orsi

## *Area Representatives*

### **Basic Virology (BV)**

## **Address**

Universidade Feevale, Instituto de Ciências da Saúde  
Estrada RS-239, 2755 - Prédio Vermelho, sala 205 - Laboratório de Microbiologia Molecular  
Bairro Vila Nova - 93352-000 - Novo Hamburgo, RS - Brasil  
Phone: (51) 3586-8800  
E-mail: F.R.Spilki - fernandors@feevale.br  
<http://www.sbv.org.br/vrr>

### ***Organizing Committee***

Bergmann Morais Ribeiro, UNB  
Célia R. M. Barardi, UFSC  
Clarice Weis Arns, UNICAMP  
Davis Fernandes Ferreira, UFRJ  
Edson Elias da Silva, Fiocruz  
Eurico de Arruda Neto, USP – Presidente da SBV e do XXIV CBV  
Fabrício Souza Campos, UFRGS  
Fernando Rosado Spilki, Universidade FEEVALE  
Francisco Murilo Zerbini, UFV  
Lauro Juliano Marin, UESC  
Luciana Jesus Costa, UFRJ  
Luis Lamberti Pinto da Silva, USP  
Luiz Tadeu Figueiredo, USP  
Maria Angela Orsi, LANAGRO  
Maria Luisa Barbosa, Instituto Adolfo Lutz  
Maurício Lacerda Nogueira, FAMERP  
Nancy Bellei, UNIFESP  
Paula Rahal, UNESP  
Paulo Sergio Torres Brioso, UFRRJ  
Paulo Eduardo Brandão, USP  
Rita de Cássia Nasser Cubel Garcia, UFF  
Sílvia Maria Baeta Cavalcanti, UFF  
Tatsuya Nagata, UNB  
Viviane Fongaro Botosso, Instituto Butantan

### ***Board of Examiners - Hélio Gelli Pereira Award***

Dr Mauricio Lacerda Nogueira (President)  
Dr Luis Lamberti Pinto da Silva  
Dr Paulo Eduardo Brandão

## Financial Support

### CAPES

Coordenação de Aperfeiçoamento de Pessoal de Nível Superior

### CNPQ

Conselho Nacional de Desenvolvimento Científico e Tecnológico

### FAPESB

Fundação de Amparo à Pesquisa do Estado da Bahia, Secretaria de Ciência, Tecnologia e Inovação

### MINISTÉRIO DA SAÚDE

### FAPESP

Fundação de Amparo à Pesquisa do Estado de São Paulo

## Exhibitors

### BIOSAFE

### INSTITUTO EVANDRO CHAGAS

### NOVA ANALÍTICA

### POLIMATE

### QIAGEN

### SARSTEDT

### SIGMA-ALDRICH

### SÍNTESE

### VECO

## Organizers

Office Marketing Eventos

## General Information

### Secretary Office Hours

September, 1<sup>st</sup> - 8am - 8pm

September, 2<sup>nd</sup> - 7am - 7:30pm

September, 3<sup>rd</sup> - 7am - 7:30pm

September, 4<sup>th</sup> - 7am - 5pm

### Name Badge

Name badges will be required for access in all activities, including lunch.

### Media Desk (for lecturers only)

The media desk will be open as scheduled for the secretary office of the meeting.

Data - files with presentations - must be delivered at the media desk at least 2 hours before the scheduled time for the presentation. Please note that the use of personal computers by presenters will not be allowed.

### Lounge area

A lounge area will be available for lecturers, invited persons and SBV staff.

### Certificates

The registration desk of presentation/participation will be available at the registration desk of the event on the last day of the meeting. Identification cards will be required.

### Travel Agency

INTERVIAGEM is the official tour operator of the XXIV Brazilian Congress of Virology.

We prepared special tours around Porto Seguro for your entertainment in your free time. Have fun!

\* YES TOURS is the official local tour agency.

### Booking and information:

contato@interviagem.com.br / (73) 3288.7335

RECIFE DE FORA (REEFS)	R\$ 120,00 reais per person
TOUR BY COROA ALTA AND RIVER	R\$ 84,00 reais per person
TRANCOSO	R\$ 60,00 reais per person
ECO PARQUE (WATER PARK)	R\$ 132,00 reais per person
ARRAIAL D'AJUDA BY NIGHT	R\$ 60,00 reais per person

### Poster Presentations

The posters must be fixed after 1pm and before 5pm of the day of presentation and must be removed after the session.

Local: Beat Beach Sea-side Bar

Sesison 1: September 2<sup>nd</sup>, 7-9 pm, posters numbered 01 to 336.

Session 2: September 3<sup>rd</sup>, 7-9 pm, posters numbered 337 to 650

Begomoviruses (family Geminiviridae) cause serious diseases in several economically important crops and are also associated with a wide range of weed plants. Weeds can act as reservoirs or sources of new species of begomoviruses which arise from recombination events or pseudo-recombination because of its frequent co-infection with more than one viral species. Here, we report the detection of novel species associated with the weeds *Hyptis* sp. (Lamiaceae) and *Physalis* sp. (Solanaceae). A sample of *Physalis* sp. and two samples of *Hyptis* sp. showing typical symptoms of viral infection were collected in Rio Largo, state of Alagoas. Total DNA was extracted from each sample and complete viral genomes were amplified using the DNA polymerase from phage phi29, cloned into plasmid vectors and completely sequenced. Six clones were obtained (5 DNA-A and 1 DNA-B). Pairwise sequence comparisons indicated the presence of three novel species whose proposed names are: *Hyptis rugose mosaic virus 1* (HyRMV1) and *Hyptis rugose mosaic virus 2* (HyRMV2), obtained from the same *Hyptis* sp. sample; while *Physalis yellow spot virus* (PhYSV), was found initially from *Physalis* sp. and subsequently detected on another *Hyptis* sp. sample. In a phylogenetic tree, the novel species clustered with other Brazilian begomoviruses, indicating their indigenous origin. Since HyRMV1 and HyRMV2 were found in co-infection, added to the fact of PhYSV infect both *Hyptis* sp. and *Physalis* sp., we tested the hypothesis of these species have arisen from recombination events. Strong evidence of recombination was found among HyRMV1 and HyRMV2, identifying HyRMV1 as probable parental. The Tomato rugose mosaic virus (ToRMV) was identified as possible parental to the HyRMV1 and PhYSV species. These results indicate that *Physalis* sp. and *Hyptis* sp. are reservoirs of begomoviruses and that recombination events have apparently contributed to the emergence of new species of virus in these hosts.

#### PIV369 - NATURAL INFECTION OF PAPAYA RINGSPOT VIRUS IN THE STATE OF AMAZONAS

Brioso, P.S.T., Souza, M.G., Pereira, J.C.R., Gasparotto, L.

1. Universidade Federal Rural do Rio de Janeiro, UFRRJ, Caixa Postal 74585, Seropédica, RJ, 23897-970

2. EMBRAPA Amazônia Ocidental, EMBRAPA, Rodovia AM-10, Km 29, Caixa Postal 319, Manaus, Amazonas

In crops of papaya (*Carica papaya* L.) cv. Sunrise Solo in the state of Amazonas, was observed that 10-20% of the plants presented symptoms of mosaic on leaves and soaked lesions on stalk, causing loss of the production. To identify the pathogen involved, leaves samples were collected from these plants and analyzed by mechanical inoculation (0.1 M phosphate buffer pH 7.5, containing 0.5 % of sodium sulfite and 0,1% of celite) on papaya

plants and by RT-PCR test with specific primers for Papaya ringspot virus (PRSV). These leaves extracts when inoculated mechanically in plants of papaya reproduced the symptom of similar mosaic to the observed one in papaya cv. Sunrise Solo. It was possible to amplified specific fragment for the PRSV. Infection for this virus was reported in the states of Bahia, Ceara, Espirito Santo, Minas Gerais, Parana, Pernambuco, Rio de Janeiro, Rio Grande do Sul, Roraima, Sao Paulo and Distrito Federal. This is apparently the first report of this virus on papaya in the Amazonas state. Control strategy should be developed to reduce the economic losses resulting from the action and dissemination of these pathogen in this plant of high value to agribusiness in the Amazonas state.

#### PIV370 - MOLECULAR CHARACTERIZATION OF BEGOMOVIRUS THAT INFECT THE WEED GAYA GUERKEANA

Tenorio, A.A.R., Vieira, M.C.B., Lima, J.S., Silva, S.J.C., Assunção, I.P., Lima, G.S.A.

Universidade Federal de Alagoas, UFAL, Campus Delza Gitaí, BR 104 Norte, Km 85, CEP: 57100-000, Rio Largo-AL

Begomoviruses (family Geminiviridae) have a circular, single-stranded DNA genome encapsidated in twinned icosahedral particles that are transmitted in nature by the whitefly *Bemisia tabaci*. During the last two decades the begomovirus have emerged as one of the major plant pathogens, mainly in tropical and subtropical regions worldwide, causing severe economic losses. In Brazil, the most severely affected crops are bean and tomato, although there are reports of begomovirus infection in others important crops such as soybean and pepper. In addition to the cultivated plants, many wild species and/or weeds have been reported as alternative hosts for begomoviruses, in several countries, including Brazil. The aim of this study was to realize the molecular characterization of Begomovirus that infect the weed species *Gaya guerkeana* in the northeast region of Brazil. Leaf samples of *G. guerkeana* showing typical symptoms of viral infection were collected in Caruaru, Pernambuco during 2012. Total DNA was extracted from each sample and complete viral genomes were amplified by rolling circle amplification (RCA), cloned into plasmid vectors and completely sequenced. The sequences were used for comparison with other begomovirus and to phylogenetic analysis. From the *G. guerkeana* samples was obtained a DNA-A clone, which was more related to *Sida mottle Alagoas virus* (SiMoAV JX871383), showing 85% of nucleotide identity, therefore, representing a new viral species with the suggested name *Gaya yellow mosaic virus* (GaYMV). This study is the first report of