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**XXIII Brazilian Congress of Virology &
VII Mercosur Meeting of Virology**

October, 2012 - Foz do Iguaçu, Paraná, Brazil

BRAZIL

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Indubitably, Earth's ocean represents the world's largest biosphere of marine phages. However, in a spite of the abundance little is yet known about this distribution and diversity in tropical aquatic ecosystems. Here, we evaluated for the first time marine phages and their relationship with host and environments variables in two coastal regions of Rio de Janeiro, Brazil. In this research was analyzed the presence of phages in surface seawater samples (27) collected from the eutrophic Guanabara Bay (GB) and the upwelling region of Arraial do Cabo (AC), during winter, spring and summer of 2011. A detailed study of physical chemical and nutrients parameters were done (T=18.7-28.1°C, S=30-35, pH=7.86-8.73, Conductivity=47.1-52.9 ms, DO=5.36-12.5 mgL-1, Chl-a =2.32-

22.58µg.L-1, NH4+=1.69-28.98µM.L-1, NO2-=0.14-4.15 µM.L-1, NO3-=0.12-8.15µM.L-1 and PO43-=0.06-3.29 µM.L-1). A strong positive correlation (PC) were observed for bacteria (BAC) and Chl-a (r= 0.84) in AC stations, showing the dominance of primary productivity in this region. Otherwise, in GB stations were verified a weak PC for BAC and Chl-a (r=0.36) and a high PC for BAC and PO43 (r=0.70) indicating a possible "Bottom-Up" control. It was observed in summer samples the highest bacterial abundances for AC (13.4 ±0.7 x107cells ml-1) and for GB (11.8 ±0.5x107cells ml-1). These data were strongly correlated with bacterial biomass production, as measured by 3H-thymidine incorporation for AC (18.7±0.2x10-5gCl-1h-1) and GB (23.4±0.4x10-5gCl-1h-1). The 20L of seawater samples were filtered based on virus concentration through the method of adsorption and elution in polarized membranes allowing molecular analyses. In this study, PCR primers CPS1/CPS2 were successful in yielding PCR products of approximately 165 bp from virus communities concentrates from both sites studied. Besides, marine phages were also examined by TEM and until now we observed only Podoviridae family. This is the first report of marine phage in seawater samples collected from coastal regions of Rio de Janeiro and a better characterization of tropical phages diversity is still needed.

EV878 - RELATIONSHIP BETWEEN MICROBIOLOGICAL AND PHYSICO-CHEMICAL PARAMETERS AND OCCURRENCE OF ROTAVIRUS GENOMES IN DRAINAGE BASIN OF JUIZ DE FORA, MG.

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Several enteric viruses are present in aquatic environments due to contamination by sewage effluents, even in the absence of fecal coliforms, which are the microbial indicators of water quality assessment. These viruses are frequently associated to waterborne viral gastroenteritis, including group A rotaviruses (GARV). Infection by GARV is a significant public health problem, especially in developing countries. The present study aimed to investigate the presence of GARV in surface waters of the Bacia Hidrográfica do Corrego de São Pedro (BHCSPP), in the city of Juiz de Fora, Minas Gerais state, correlating with microbiological and physico-chemical parameters for water quality. From July 2011 to May 2012, 2L of surface water were collected at 8 sites along the basin, in six campaigns, totalizing 48 samples. Putative present viral particles were concentrated by adsorption-elution in negatively charged membrane, followed by centrifugation. The viral RNA, extracted by the silica method,

was submitted to RT-PCR for detection of the virus genome. Fecal coliforms were quantified and physico-chemical parameters (conductivity, chlorine, pH, salinity, temperature and turbidity) were determined in each site in all campaigns. The presence of genetic material of GARV was detected in 25,0% (12/48) of the studied samples. Bacteriological analyses showed that 53,7% (27/48) of analyzed water samples exceeded the values established by the CONAMA N357/05 for class 1 and 2 waters. GARV were detected in 19,0% (4/21) of the water samples considered into the values acceptable of the microbiological quality. Statistical analyzes only showed significant correlation between GARV detection and turbidity ($p=0,000$). The data of this study confirm that the lack of coliforms does not necessarily exclude other pathogens, such GARV and point to the need the establishment of viral parameters to assess water quality. "Financial support": CNPq, CAPES, FAPEMIG, EMBRAPA and Propesq-UFJF.

EV925 - EVALUATION AND IDENTIFICATION OF VIRUS LIKE PARTICULES (VLP) IN THE SIDERASTREA STELLATA CORAL REEF IN BRAZILIAN STATE PARK COASTAL SEAS CONSERVATION UNIT (PECS)/RJ

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The reef systems include a reservoir of high genomic diversity, and therefore

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We hereby certify that the abstract entitled

RELATIONSHIP BETWEEN MICROBIOLOGICAL AND PHYSICO-CHEMICAL PARAMETERS AND OCCURRENCE OF ROTAVIRUS GENOMES IN DRAINAGE BASIN OF JUIZ DE FORA, MG.

authored by

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