

not compromise transmembrane protein degradation through the canonical MVB-pathway, suggesting that Nef uses an alternative mechanism, mediated by Alix, to deliver cargo to MBVs. Together our results show that Nef interacts with Alix to facilitate delivery of CD4 to the MVB pathway, thus promoting sustained depletion of this surface receptor in infected cells.

EV90 - PATHOGENS INACTIVATION BY UNIONIZED AMMONIA FOR THE PRODUCTION OF SAFE BIOFERTILIZER FROM SWINE EFFLUENT AND SLUDGE

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The biomass derived from swine manure has good potential to be used as biofertilizer due to its high nutrient concentration. However, the land application of manure should be based on safety parameters. This work used ammonia for hygienization as an additional method to produce a safe biofertilizer from swine effluent and sludge after treatment in anaerobic bioreactor. The microorganisms used as models were: somatic coliphage ϕ X-174, Human Adenovirus (HAdV-2) and *Salmonella typhimurium*. The enumerations of the HAdV, ϕ X-174 and *S. typhimurium* were respectively performed by integrated cell culture assay-preceded by reverse transcription (ICC-RT-qPCR), double layer agar method and by ISO 6579 (2002). The following final concentrations of urea were used: 186 mM (T1), 379 mM (T2) and 754 mM (T3) reaching pH 9.8 at 23°C, providing, in this condition, unionized ammonia (NH₃), as inactivating agent. All experiments were performed in triplicate and with negative controls. The results revealed that i) *S. typhimurium* either in swine effluent or in sludge, had a 4 logs₁₀ reduction in up to 3 days for all treatments; ii) HAdV had a 4 logs₁₀ reduction in swine effluent at 27, 20 and 15 days with the respective treatments T1, T2 and T3, and in swine sludge the inactivation occurred at 15, 9 and 3 days with the respective treatments T1, T2 and T3; iii) ϕ X-174 had

3 logs₁₀ reduction in swine effluent at 80 and 45 days of treatments (T2 and T3, respectively). T1 was able to reduce 2 logs₁₀ of ϕ X-174 after 80 days of treatment. Considering the relative time of treatment to inactivate 99.9% (3log₁₀) of all the studied pathogens, considering the amount of urea added and efficiency of inactivation, the T2 treatment was the most promising for swine effluent and T3 treatment was more indicated for sludge. Hygienization by NH₃ provides new possibilities for alternative treatments of different types of waste, liquid as well as solid, at both small and large scale, being a viable method for reuse of agricultural waste as biofertilizer, considering the animal and human health quality. FINANCIAL SUPPORT: CNPQ 472804/2013-8. FINANCIAL SUPPORT: CNPQ 472804/2013-8.

EV140 - ANALYSIS OF MARINE VIRAL FAMILIES ASSOCIATED WITH *SIDERASTREA STELLATA* FESTIVAL IN ARRAIAL DO CABO AND BÚZIOS, RJ, BRAZIL

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The reef ecosystem is considered as one of the oldest, stable and biodiverse on the planet. A complex network of interactions and interrelationships due to the high diversity of organisms in this environment is sustained by primary productivity, which is characterized as one of the largest oceans. Studies have shown that viruses are highly dynamic components in the aquatic ecosystem, because they have a fundamental role in the chain to be significant microbial agents in controlling the abundance and diversity of bacteria and phytoplankton, which are symbionts of corals and are important in controlling availability of nutrients. In this study we performed the molecular and morphological analysis for identification of viral groups in a scleractinian coral reef that didn't have been described yet, being the first work in Brazil studying the presence of viruses associated with marine organisms. For this we used TEM and PCR for determination of marine virus families as widely tools applied in marine virology studies. The samples were collected in two areas (Arraial do Cabo and Búzios) with the aid of chisel and hammer, kept on ice until the time of processing. After processed were