IDENTIFICATION OF HELODERMATID ADENOVIRUS 2 IN A CAPTIVE CENTRAL BEARDED DRAGON (Pogona vitticeps) IN THE UNITED STATES

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ABSTRACT

Adenoviruses are medium sized DNA viruses with very high host fidelity. The phylogenetic relationships of the adenoviruses strongly resembles that of their hosts, consistent with evolutionary codivergence. The genus Atadenovirus appears to have evolved in squamate hosts. However, the best known of the squamate adenoviruses is Agamid adenovirus 1 (AgAdV1), found in Central Bearded Dragons (Pogona vitticeps), where it is a prevalent cause of hepatitis/enteritis, especially in young animals. All previous reports of adenoviruses in bearded dragons have found AgAdV1. Helodermatid adenovirus 1 (HeAdV1) has been identified in Gila monsters (Heloderma suspectum), and the closely related Helodermatid adenovirus 2 (HeAdV2) was first seen in Mexican beaded lizards (H. horridus); it was considered unsurprising to find closely related but distinct adenoviruses in related host species. However, in 2011, a virus sharing 99% nucleotide homology with HeAdV2 was reported from a western bearded dragon (Pogona minor) in Australia. We herein report a virus identical to HeAdV2 in a captive Central bearded dragon in Florida. All helodermatid adenoviruses studied to date are from captive animals. This calls into question the provenance of HeAdV2. Further studies of atadenoviral host range, diversity of adenoviruses in captive animals, and characterization of adenoviruses from wild squamates are indicated.

LITERATURE CITED