Introduction
Treatment of viral infections can always be challenging, especially in reptiles, in which very little information is available on specific antiviral therapies. With an ever increasing body of knowledge available on viruses that infect reptiles and their association with disease, there is also an increasing need to develop strategies for treating reptiles with virus infections. However, there is a current lack of information available on what substances might be effective against specific reptilian viruses, as well as a lack of safety and pharmacokinetic studies in reptile species. There are, however, a few things that a veterinarian can do in these cases to help a patient and to prevent the spread of infection in a collection. Available tools include several antiviral agents, disinfectants, adjustment of environmental temperature, immune modulation, vaccination, treatment of secondary infection, and optimization of husbandry conditions. When treating reptiles against virus infections, it is important to remember that many viruses cause persistent infections in these animals, and treatment of clinical disease will not generally result in freedom from infection.

Antiviral agents
Very few antiviral agents have been used in reptile medicine. The most common antiviral agent cited is acyclovir, which has been used to treat chelonians with herpesvirus infections at suggested doses of 80 mg/kg p.o. There is some indication that this may not be sufficient as well as that acyclovir may have a short half-life in these animals. Acyclovir has also been used topically to treat herpesvirus-associated stomatitis in tortoises. The use of several related nucleoside analogues, such as valacyclovir, cidofovir, or famciclovir in reptiles has also been discussed. Their use against herpesviruses and other DNA viruses infecting reptiles, such as adenoviruses and iridoviruses, requires further study. The use of lysin and ribavirin against viruses infecting reptiles has also been suggested, but no scientific reports on their use in these animals are available.

Several disinfectants have been used to treat viral lesions in reptiles Chlorhexidine (0.5% solution) has been suggested for the treatment of herpesviral stomatitis and glossitis. The disinfectant F10, which contains a quarternary ammonium and a biguanide, has been used in aerosolized form to treat respiratory disease in a wide variety of exotic species including reptiles.

Temperature regulation
Since reptiles are ectothermic, the environmental temperature influences their internal temperature as well as their immune system. Replication of many of the viruses that can infect reptiles is also temperature sensitive, so that regulation of the environmental temperature can have an effect on both the host animal and virus replication. When developing a temperature regiment for virus infected reptiles, it is important to take the host species and its preferred optimal temperature zone into account. Use of this method to influence the course of an infection has been described in ranavirus infections in turtles. Sudden changes in temperature have been shown to have negative effects on animal health and the course of infection in several cases.

**Immune modulation**

Immune modulation in order to evoke a fast and stronger response to infection has been suggested as a strategy to prevent disease development or progression in virus infected reptiles, especially herpesvirus infected tortoises. An inactivated parapox ovis virus (Zylexis, Pfizer AG, Zurich, Switzerland) has been suggested for this purpose, although the efficacy has not been proven.

**Treating secondary infections**

Development of disease in virus infected reptiles may depend to a large degree on additional infectious agents, including bacteria, fungi, parasites, and other viruses. Detecting and treating these secondary pathogens can lead to a better clinical course of disease and should be combined with general supportive therapy and nursing as appropriate.

**Vaccination**

Vaccines are not commonly used in reptile medicine, and most preliminary attempts to use them to treat or protect pet reptiles from infection have been unsuccessful. Attempts have been made to vaccinate tortoises against a herpesvirus and snakes against a febravirus. In both cases, the serologic reaction to infection was inconsistent, although no challenge studies were carried out. Vaccination has, however, been use to protect crocodylians from infection with poxviruses and with West Nile Virus.