ANTIVIRAL ACTIVITY OF TYPE I AND TYPE III INTERFERONS AGAINST APEU VIRUS (BUNYAVIRIDAE)

Oliveira, D.B[1] ; Almeida, G.M.F[1] ; Bonjardim, C.A[1] ; Ferreira, P.C.P[1] ; Kroon, E.G[1].

[1]Laboratório de Vírus, Dep. Microbiologia, Instituto de Ciências Biológicas, UFMG, Belo Horizonte, MG.-CEP 31270-901 CX.Postal 486.

E-mail:danilobretas@yahoo.com.br

Type I interferons (IFNs) are cytokines with important immunomodulatory activity in vertebrates, especially against viral infections. The binding of the IFNs to their cellular receptor activates signal transduction pathways that regulates the transcription of interferon stimulated genes, mediators of IFN actions. Type III IFNs were described recently, and although they bind to a distinct receptor complex their biological activity is similar to the activity of type I IFNs. In this work we evaluated the antiviral activity of type III IFNs against a RNA virus (APEU, Bunyaviridae). This virus was first isolated in the Brazilian Amazon forest and causes high fever, myalgia and photophobia in humans. VERO cells were treated with type I and type III IFNs and infected with APEU virus 18 hours later. The cells were collected 6, 18, 24, 48 hours after infection and the viral load in each sample was titrated. We were able to see that all IFNs used were able to inhibit viral multiplication, showing another redundant biological activity between type I and type III IFNs.

Key words: Interferon, Bunyaviridae, APEU virus
Financial support: CNPQ, CAPES, FAPEMIG