

Serological Investigations of Non-Human Primates (NHP) Major Infections in Captive colonies

Ricci Ida¹, Barlozzari Giulia¹, Rosone Francesca¹, Pacchiarotti Giulia¹, Eleni Claudia¹, Galieta Valentina¹, Marafini Giovanni¹, Friedrich Klaus Gunther², Di Cerbo Pilar², Aloisi Marco³, Scarpulla Manuela¹ and Scicluna Maria Teresa¹.

¹ Istituto Zooprofilattico Sperimentale del Lazio e della Toscana "M. Aleandri", Via Appia Nuova 1411, 00178 Rome, Italy; ida.ricci@izslt.it

² Fondazione Bioparco, Viale del Giardino Zoologico 20, 00197 Roma, Italy

³ Animanatura Wild Sanctuary, Strada Provinciale 155 Fibbonello, 58055 – Semproniano (GR), Italy



Introduction

As part of a study conducted by our Institute, serological tests were employed to analyse blood samples of some of the non-human primate (NHP) housed in Italian animal centres.

Aim of the project

Development of a diagnostic panel to monitor the presence of major NHP viral, bacterial and parasitic infections.

Materials and methods

40 sera were collected from live NHPs to verify their health status by serological analysis, using in house and commercial kits (XpressBio Life Science Products) for the following pathogens [1, 2, 3]:

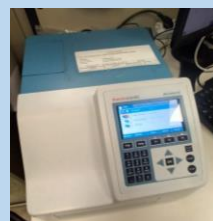
- Hepatitis B Virus (HBV)
- Herpes B virus (BV)
- *Leishmania infantum*
- Lymphocytic choriomeningitis virus (LCMV)
- Simian Foamy virus (SFV)
- Simian Immunodeficiency virus (SIV)
- Simian T-cell leukemia virus (STLV)
- Simian retrovirus type D (SRV)
- *Toxoplasma gondii*

Microscopic agglutination test was employed for the serological analysis of Leptospirosis.

Some sera were not sufficient for all of the above analyses.

Discussion and conclusion

The setup of diagnostic panels can support the development of sanitary monitoring protocols for NHP centres provides a valuable tool for the health management of animals to verify the circulation of infectious agents, especially those with zoonotic potential, so as to also protect the safety of operators in contact with these animals.



Results

A high positivity (70%) was detected for SFV (Tab. 1). This virus which can affect all NHP species and is very widespread in primate colonies, causing subclinical infections. Other positive results were obtained for SRV (3/40, 7.5%) and for STLV (7/33, 21.2%). A serum that was serologically positive for BV was also examined by PCR for which it gave a negative result.

Co-infection of SFV, respectively with STLV (7) and SRV (3) was detected [4]. Serological positivity for the other agents was not detected.

Simian Foamy virus (SFV)			
Species	Negative	Positive	Total n°
<i>Cercocebus atys lunulatus</i>	2	0	2
<i>Cercocebus sp.</i>	1	1	2
<i>Eulemur macaco</i>	3	0	3
<i>Lemur catta</i>	3	0	3
<i>Macaca fascicularis</i>	0	7	7
<i>Macaca fuscata</i>	0	12	12
<i>Macaca sp.</i>	0	4	4
<i>Mandrillus sphinx</i>	0	4	4
<i>Pongo pygmaeus</i>	1	0	1
<i>Varecia sp.</i>	2	0	2
Total n°	12	28	40

Tab. 1. Distribution of SFV Elisa test results among the species examined.

REFERENCES

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