

**EXOGENOUS SIMIAN TYPE D RETROVIRUSES (SRV-1 and 2)**

<b>ANIMAL GROUP AFFECTED</b>	<b>TRANSMISSION</b>	<b>CLINICAL SIGNS</b>	<b>FATAL DISEASE ?</b>	<b>TREATMENT</b>	<b>PREVENTION &amp; CONTROL</b>
Macaques	Contact (diaplacentally?)	Generalised lymphadenopathy, wasting, anaemia, lymphopenia, diarrhoea, malignant lymphomas	Yes		<i>In houses</i>  <i>in zoos</i>

<b>Fact sheet compiled by</b> Manfred Brack, formerly German Primate Center, Göttingen / Germany.	<b>Last update</b> March 2002
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<b>Susceptible animal groups</b> Macaques.	
<b>Causative organism</b> Simian retroviruses (SRV) 1 and 2 (Type D-retroviruses).	
<b>Zoonotic potential</b> None.	
<b>Distribution</b> Naturally: Asia; in captivity World-wide.	
<b>Transmission</b> Contact, possibly diaplacentally.	
<b>Incubation period</b>	
<b>Clinical symptoms</b> Generalised lymphadenopathy, neutro-and lymphopenia, wasting, anaemia, diarrhoea. In SRV 1 malignant lymphomas, in SRV 2 abdominal fibromatosis, subcutaneous fibrosarcomas and noma reported.	
<b>Post mortem findings</b> SRV 1: hyperplastic lymphoid follicles in early phases, later changing to follicular atrophy in final stages, occasionally fibrosarcomas, polymyositis. SRV 2: retroperitoneal fibromatosis, subcutaneous fibrosarcomas, nonsuppurative enteritis, sialoadenitis, myositis	
<b>Diagnosis</b> Virology: PCR, immunohistochemistry.	
<b>Material required for laboratory analysis</b>	
<b>Relevant diagnostic laboratories</b> Virus Reference Laboratories, Inc. 7540 Louis Pasteur Road SAN ANTONIO, Tx. 78229 /USA Phone: (210) 614 – 7350 Fax: (210) 614 – 7355  German Primate Center, Kellnerweg 4 D 37077 Göttingen/Germany Phone: 49 (0)551 38510 Fax: 49 (0)551 3851 227	



<b>Treatment</b>
<b>Prevention and control in zoos</b>
<b>Suggested disinfectant for housing facilities</b>
<b>Notification</b>
<b>Guarantees required under EU Legislation</b>
<b>Guarantees required by EAZA Zoos</b>
<b>Measures required under the Animal Disease Surveillance Plan</b>
<b>Measures required for introducing animals from non-approved sources</b>
<b>Measures to be taken in case of disease outbreak or positive laboratory findings</b>
<b>Conditions for restoring disease-free status after an outbreak</b>
<b>Experts who may be consulted</b> Prof.Dr.G.Hunsmann, German Primate Center, Göttingen/Germany
<b>References</b> <ol style="list-style-type: none"><li>1. Brack, M. 1989. Affen – Aids: Übersicht. J. Vet. Med. B 36: 721 – 745.</li><li>2. Dalakas, M. C., M. G. Gravell, W. T. London, C. Cunningham, and J. L. Sever. 1987. Morphological changes of an inflammatory myopathy in rhesus monkeys with simian acquired immunodeficiency syndrome. Proc. Soc. Exp. Biol. Med. 185: 368 – 376.</li><li>3. Desrosiers, R. C. 1997. The value of specific pathogen – free rhesus monkey breeding colonies for AIDS research. AIDS Res. Hum. Retrovir. 13: 5 – 6.</li><li>4. Lackner, A. A., P. F. Moore, P. A. Marx, R. J. Munn, M. B. Gardner, and L. J. Lowenstine. 1990. Immunohistochemical localization of type D retrovirus serotype 1 in the digestive tract of rhesus monkeys with simian AIDS. J. Med. Primatol. 19: 339 – 349.</li><li>5. Lerche, N. W., R. F. Cotterman, and M. D. Dobson, J. L. Yee, A. N. Rosenthal, and W. M. Heneine. 1997. Screening for simian type – D retrovirus infection in macaques using nested polymerase chain reaction. Lab. Anim. Sci. 47: 263 – 268.</li><li>6. Malley, A., N. Pangares, S. K. Mayo, M. Zeleny – Pooley, J. V. Torres, E. Benjamin, and M. K. Axthelm. 1993. Type D SRV-2 specific CD8+ and CD4-CD8- cells that regulate virus induced T cell proliferation in Celebes macaques. J. Med. Primatol. 22: 80 – 85.</li><li>7. Moazed, T. C., and M. E. Thouless. 1993. Viral persistence of simian type D retrovirus (SRV-2 / W) in naturally infected pigtailed macaques (<i>Macaca nemestrina</i>). J. Med. Primatol. 22: 382 – 389.</li><li>8. Pilcher, K. Y., N. Avery, S. M. Shiigi, N. Pangares, A. Malley, M. K. Axthelm, and C. A. Machida. 1994. Polymerase chain reaction detection of type D simian retrovirus proviral DNA from infected macaques. J. Virol. Methods 50: 75 – 86.</li><li>9. Tsai, C. C., K. E. Follis, K. Snyder, S. Windsor, M. E. Thouless, L. Kuller, and W. R. Morton. 1990. Maternal transmission of type D simian retrovirus (SRV-2) in pigtailed macaques. J. Med. Primatol. 19: 203 – 216.</li><li>10. Wang, Y., and M. E. Thouless. 1996. Use of polymerase chain reaction for diagnosis of type D simian retrovirus infection in macaque blood. Lab. Anim. Sci. 46: 187 – 192.</li></ol>