## American Association of Zoo Veterinarians Infectious Disease Committee Manual 2013

### SIMIAN T-LYMPHOTROPIC VIRUSES

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<th>Animal Group(s) Affected</th>
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<td>Old World non-human primates.</td>
<td>Direct contact: bite wounds, sexual contact, sharps puncture (IV, or transdermal).</td>
<td>STLV-1 has been associated with lymphoma, leukemia and wasting disease in several non-human primates; non-Hodgkin’s lymphomas and lymphosarcomas</td>
<td>Can be fatal; affects a small percentage of the population</td>
<td>None reported</td>
<td>Test collection and determine risk to benefit of introductions to naïve animals.</td>
<td>Yes, it can infect humans</td>
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**Fact Sheet compiled by:** Sam Rivera; updated by Natalie Mylniczenko  
**Sheet completed on:** 1 June 2011; 10 September 2013  
**Fact Sheet Reviewed by:** William Switzer; Sam Rivera

**Susceptible animal groups:** Cercocebus sp., Cercocebus sp., Erthrocebus patas, Gorilla gorilla, macaques. Mandrillus sp., Pan troglodytes, Pan paniscus, Papio sp., Pongo pygmaeus, Symphalangus syndactylus, colobines, and others.

**Causative organism:** STLV-1 (most likely), STLV-2, and STLV-3 that are in genus *Deltaretrovirus*.

**Zoonotic potential:** STLV can infect humans and causes disease in up to 5% of infected persons. HTLV-1, HTLV-2, and HTLV-3 originated from STLV-1, STLV-2, and STLV-3, respectively.

**Distribution:** Africa and Asia naturally, and captive non-human primates worldwide.

**Incubation period:** Long incubation period has been reported of at least four years; however, it can be shorter in persons receiving blood transfusions from persons with HTLV-1-induced leukemia. Cases are generally spontaneous.

**Clinical signs:** Mostly reported in laboratory animals in isolated ‘outbreaks’ where the virus jumped species. Most immunocompetent infected animals are healthy. Disease occurs in a few percent of the positive carriers. Leukemia/lymphoma syndrome (enlarged lymph nodes, persistent lymphocytosis and abnormal T-cells, T-cell lymphomas and leukemia, lymphadenopathy, and splenomegaly, and non-Hodgkin’s lymphomas). Lymphoma without presence of virus is more common in NHPs and in humans disease includes leukemia, lymphoma, inflammatory disorders, and neurologic disease.

**Post mortem, gross, or histologic findings:** Generalized enlarged neoplastic lymph nodes are seen in affected animals. Malignant lymphomas sometimes metastasize, with pale foci or larger nodules found in various organs such as spleen, kidney, and liver. In some individuals, lymph nodes are depleted. Other findings are more variable.

**Diagnosis:** Serology (IFA and EIA and WB for confirmation) and PCR. Rarely, virus isolation is performed. Care must be taken in interpreting seropositive animals with associated disease manifestations. Lymph node and bone marrow PCR are used to determine disease presence. Dual STLV-1 and STLV-3 infections have been reported in naturally infected simians.

**Material required for laboratory analysis:** Whole blood, serum/plasma, lymph nodes, bone marrow, and urine.

**Relevant diagnostic laboratories:**  
Pathogen Detection Laboratory  
California National Primate Research Center
SIMIAN T-LYMPHOTROPIC VIRUSES

University of California
Road 98 & Hutchison,
Davis, California 95616
(530) 752-8242
Fax: (530) 752-4816
PDL@primate.ucdavis.edu

Virus Reference Laboratories, Inc.
7540 Louis Pasteur Road
San Antonio, Texas 78229
(210) 614-7350
(210) 614-7355

Zoologix Inc.
9811 Owensmouth Avenue, Suite 4
Chatsworth, California 91311-3800
818-717-8880
Fax: 818-717-8881
info@zoologix.com

**Treatment:** None

**Prevention and control:** Identify status of animals in collection. Determine risk to benefit of maintaining a closed population in the face of population needs.

**Suggested disinfectant for housing facilities:** 70% ethanol, formalin, 10% household bleach (sodium hypochlorite), Lysol, and most lipophylic detergents.

**Notification:** None

**Measures required under the Animal Disease Surveillance Plan:** None at this time.

**Measures required for introducing animals to infected animal:** Determine current status of both animal sets, determine risk to benefit of introducing negative individuals to positive individuals.

**Conditions for restoring disease-free status after an outbreak:** Life-long infection so disease-free status cannot be restored.

**Experts who may be consulted:**
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References: