



## MONTHLY MORBIDITY REPORT

PUBLIC HEALTH STATISTICS and  
DIVISION OF DISEASE CONTROL

DEPARTMENT OF HEALTH AND HUMAN RESOURCES  
OFFICE OF PREVENTIVE AND PUBLIC HEALTH SERVICES  
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### Antibodies to a Retrovirus Etiologically Associated with Acquired Immunodeficiency Syndrome (AIDS) in Populations with Increased Incidences of the Syndrome

Evidence implicates a retrovirus as the etiologic agent of acquired immunodeficiency syndrome (AIDS). Two prototype isolates have been described. One was isolated from the lymph node cells of a homosexual man with unexplained generalized lymphadenopathy, a syndrome associated with AIDS, and was termed lymphadenopathy-associated virus (LAV) (1). A morphologically similar T-lymphotropic retrovirus (HTLV-III) was isolated from lymphocytes of 26 (36%) of 72 patients with AIDS and from 18 (86%) of 21 patients with conditions thought to be related to AIDS (2). The isolation of retroviruses antigenically identical to LAV from a blood donor-recipient pair, each of whom developed AIDS, provides further evidence that this virus is the etiologic agent of AIDS and may be transmitted through blood transfusion (3).

Although direct comparative results have not been published, HTLV-III and LAV are likely to be the same virus because: they have the same appearance by electron microscopy; they are both lymphotropic and cytopathic for OKT-4 cells; isolates from American AIDS patients, when compared, were immunologically indistinguishable from LAV (3); serologic tests of a large number of specimens from patients with AIDS or related conditions show similar results when either of the prototype viruses is used as antigen (4); and preliminary results suggest that LAV and HTLV-III are at least highly related based on competitive radioimmunoassay of their core proteins (5).

Three basic serologic procedures are currently described for detection of antibody to HTLV-III/LAV: an enzyme-linked immunosorbent assay (ELISA) to whole disrupted virus (6-8); a radioimmunoprecipitation assay (RIPA) to the presumed major core protein (called p25) of LAV (9); and assay of antibody to major viral antigens by the Western blot technique (10, 11). Sera from several high-risk populations are being tested by these techniques by the National Cancer Institute, the Institut Pasteur, and CDC, with the support of numerous collaborators. The objectives of these investigations are to determine the frequency of exposure to HTLV-III/LAV and to correlate seropositivity with current infection, clinical signs and symptoms, and prognosis.

Preliminary data suggest that serologic evidence of exposure to HTLV-III/LAV may be common in certain populations at increased risk for AIDS. Antibody to HTLV-III was detected by ELISA in sera from six (35%) of 17 American homosexual men without symptoms of AIDS (6). Sera from eight (18%) of 44 homosexual men without lymphadenopathy attending a venereal disease clinic in Paris had antibody detected by ELISA to LAV (7). Antibody prevalence to LAV (RIPA) has increased from 1% (1/100) in 1978 to 25% (12/48) in 1980 and 65% (140/215) in 1984 among samples of sera from homosexual men attending a sexually transmitted diseases clinic in San Francisco (12). Antibody prevalence among the above men tested in 1984 who had no symptoms or clinical signs of AIDS or related conditions was 55% (69/126) (12). In New York City, where the AIDS cases among intravenous (IV) drug users are concentrated, 87% (75/86) of recent heavy IV drug users without AIDS had antibody to LAV by ELISA, while over 58% (50/86) of the same group had antibody to LAV detected by RIPA (13). In contrast, fewer than 10% of 35 methadone patients from New York City had antibody to LAV detected by RIPA. All of these latter patients had been in treatment at least 3

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*AIDS – Continued*

years with greatly reduced IV drug usage (14). Seventy-two percent (18/25) of asymptomatic persons with hemophilia A in a home-care treatment program demonstrated antibody to LAV antigens utilizing the Western blot technique (11). All had used factor VIII concentrates from 1980 to 1982.

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**Editorial Note:** The high prevalence of antibody to HTLV-III/LAV among these groups and the increasing prevalence among homosexual men in San Francisco add further support to HTLV-III/LAV being the etiologic agent of AIDS. They further demonstrate that exposure to the virus is much more common than AIDS itself among populations with increased incidences of the disease. If AIDS follows the pattern of many other infectious diseases, host response to infection would be expected to range from subclinical to severe. Milder disease states for AIDS have been suspected, since the reported frequency of lymphadenopathy and immunologic abnormalities, conditions associated with AIDS, has also been high in these groups. These data, based on limited samples of high-risk groups, suggest the spectrum of response to infection with HTLV-III/LAV may be wide.

These serologic tests are sufficiently sensitive and specific to be of value in estimating the frequency of infection with HTLV-III/LAV in certain populations and for providing important information about the natural history of the disease in such groups. Less clear are the implications of a positive test result for an individual. For some, the result may be a false positive caused by infection with an antigenically related virus or nonspecific test factors. The determination of the frequency and cause of falsely positive tests is essential for proper interpretation of test results, but remains to be established, particularly in populations, such as blood donors who belong to no known AIDS risk groups, where the prevalence of true infection with HTLV-III/LAV is expected to be very low.

A positive test for most individuals in populations at greater risk of acquiring AIDS will probably mean that the individual has been infected at some time with HTLV-III/LAV. Whether the person is currently infected or immune is not known, based on the serologic test alone—HTLV-III/LAV has been isolated in both the presence and absence of antibody—but the frequency of virus in antibody-positive persons is yet to be determined. For seropositive individuals with mild or no signs of disease, including those in whom the virus can be demonstrated, the prognosis remains uncertain. The incubation period for the life-threatening manifestations of AIDS may range from 1 year to more than 4 years (15).

Carefully planned and executed studies will be required to resolve these issues, and to clarify remaining questions about the natural history of AIDS and risk factors for transmission of the virus.

Until the usefulness of positive and negative serologic tests is fully established, all individuals in populations with increased incidences of AIDS, as well as those outside such groups with positive tests, should comply with the March 1983 Public Health Service recommendations for the prevention of AIDS to minimize the transmission of the syndrome (16). Abstinence from IV drug usage and reduction of needle-sharing and other use of contaminated needles by IV drug users should also be effective in preventing transmission of the virus and of AIDS. There remains no evidence of transmission of AIDS through casual contact. Prevention measures should stress that transmission has been only through intimate sexual contact, sharing of contaminated needles, or, less frequently, through transfusion of blood or blood products.

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### *AIDS – Continued*

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## **WORLD'S FAIR SURVEILLANCE**

The Disease Control Division has been conducting active surveillance for possible Fair-related (FR) illnesses and injuries since the Exposition opened on May 12. The system is based in 15 New Orleans metropolitan area hospital Emergency Departments (ED), which account for 92% of all ED visits in the area. The objectives of this system are 1) rapid identification and investigation of suspected common-source outbreaks and 2) to quantify the impact of this event on emergency health care delivery in the city.

During the first 18 weeks of the Fair, through September 14, a total of 347 illnesses have been identified, an average of 19.3 per week. The majority of reported FR illnesses continue to be trauma, accounting for 170 (49%) of cases. A wide variety of injuries have

been seen, including 25 fractures, 18 lacerations, 21 sprains, 15 contusions, 2 burns and 89 miscellaneous injuries and injuries of unspecified type.

The second largest category is "others". One hundred nine (31%) cases in this category have been reported including 21 cardiac, 24 dermatologic, 18 neurologic (mostly seizures and headaches), 12 musculoskeletal, 4 allergic reactions and 30 miscellaneous or unknown cases.

Fourty-four cases of gastroenteritis have been identified. Twenty-three (52%) of these have been investigated. Two small clusters (3 persons each) of illness occurred in early June; investigation of the suspect food vendors by onsite sanitarians did not reveal improper food-handling

World Fair Surveillance (continued from page 3)

practices. No other common sources of gastroenteritis have been found.

The impact of Fair-related illness on the network Emergency Departments has been negligible. These cases have accounted for between 0.01% and 2.48% of all ED patients seen in the

same time period. The average ratio of total ED to FR cases in the 15 hospitals is 479:1.

Daily surveillance of these 15 hospitals will continue until the Fair closes in November.

## RABIES IN ANIMALS-JANUARY-AUGUST, 1984

The table below summarizes the current totals of Laboratory surveillance for rabies in animals as of August 31.

Since September 1, 4 additional positive animals have been identified: 3 skunks, 2 in Avoyelles and one in Rapides, and a bat in Pointe Coupee.

Since there is no question that rabies virus is circulating in wild animals - especially skunks - in the central and northwest parts of Louisiana, it is not necessary to test every animal that is

captured in these areas. Any wild carnivore or bat in these areas should be assumed to be rabid and handled accordingly. Animals should be submitted for testing only when there has been direct contact with a human or a domestic animal.

Efforts to reduce the wild animal population have not been shown to be of value in controlling rabies. The most effective strategy is 1) avoiding contact with any wild animal and 2) providing protection for dogs and cats through rabies vaccination.

RABIES IN ANIMALS  
JANUARY - AUGUST, 1984

ANIMAL	NUMBER TESTED	NUMBER POSITIVE	PERCENT POSITIVE	PARISH
Bat	150	9	6.0	Caddo (2) Rapides (5) Vernon (1) Webster (1)
Cat	409	3	0.7	Caddo (2) Bossier (1)
Dog	389	-	--	-
Raccoon	75	-	--	-
Rodent/ Lagomorph	152	-	--	-
Skunk	81	33	40.7	Bienville (2) Bossier (4) Caddo (8) Claiborne (2) DeSoto (1) Natchitoches (1) Rapides (13) Webster (2)
Other	69	-	--	-
Totals	1325	45	3.4	-

## **APIC MEETING IN NEW ORLEANS**

The Greater New Orleans and River Region chapters of the Association for Practitioners in Infection Control (APIC) will sponsor a two-day symposium in New Orleans on Thursday and Friday, October 25-26. The title of the course is "Expo-zing the World of Infections" and will be held at the Sheraton Inn, 2150 Veterans Boulevard in Kenner.

Topics to be covered on day 1 include an update of Infectious Diseases, cost containment in Infection Control, category and disease specific isolation techniques, and patient care practices in urology, pulmonary, critical care and IV therapy. Day 2 will include a seminar on infections and antibiotics and a problem-solving session.

Interested persons needing further information may call Sheila Kent at 504-347-5511, extension 1407. Registration fee is \$60.00, includes all handouts and breakfast and lunch both days, and may be paid at the door. The course begins at 8:00 A.M. both days.

## SELECTED REPORTABLE DISEASES (By Place of Residence)

STATE AND PARISH TOTALS  REPORTED MORBIDITY AUGUST, 1984	VACCINE PREVENTABLE DISEASES					ASEPTIC MENINGITIS	HEPATITIS A AND UNSPECIFIED**	HEPATITIS B	LEGIONELLOSIS	MALARIA ***	MENINGOCOCCAL INFECTIONS	SHIGELLOSIS	TUBERCULOSIS, PULMONARY	TYPHOID FEVER	OTHER SALMONELLOSIS	UNDERNUTRITION SEVERE	GONORRHEA	SYPHILIS, PRIMARY AND SECONDARY	RABIES IN ANIMALS (PARISH TOTALS CUMULATIVE, 1984 )
	MEASLES	RUBELLA*	MUMPS	PERTUSSIS	TETANUS														
TOTAL TO DATE 1983	25	9	0	5	4	78	534	227	4	5	39	41	267	3	163	17	15741	1140	21
TOTAL TO DATE 1984	8	0	0	4	1	40	255	236	1	7	50	57	196	1	116	12	17467	814	44
TOTAL THIS MONTH	8	0	0	0	0	17	53	35	0	2	1	26	31	0	32	5	2676	112	16
ACADIA						2		1							1		14		
ALLEN																		2	
ASCENSION																	13	2	
ASSUMPTION																			
AVOUELLES								1										3	
BEAUREGARD																		1	
BIENVILLE																		4	2
BOSSIER						1	2	1							1		13	2	6
CADDO	5					8	15	2				3			5		279	9	11
CALCASIEU							3	1					1		1		60	3	
CALDWELL																		1	
CAMERON																		3	
CATAHOULA																		3	
CLAIBORNE							2											2	
CONCORDIA													1			1		8	2
DESOTO																		1	1
EAST BATON ROUGE								4		1		8			5		146	17	
EAST CARROLL							1											9	1
EAST FELICIANA													1					2	
EVANGELINE																		1	
FRANKLIN													1					17	
GRANT								1										6	
IBERIA							2	4										8	2
IBERVILLE													1					9	
JACKSON							1												
JEFFERSON							7	3			1	3					158	3	
JEFFERSON DAVIS																		5	1
LAFAYETTE								2							2			99	
LAFOURCHE								1				1							
LASALLE													1						
LINCOLN							1											15	
LIVINGSTON																		1	1
MADISON							1						1					8	
MOREHOUSE																		24	
NATCHITOCHE							1	1										8	6
ORLEANS						1	4	9				6	10		6		1095	43	1
OUACHITA	3												4					172	3
PLAQUEMINES																		5	
POINTE COUPEE																		2	
RAPIDES								1							2			105	2
RED RIVER																		2	
RICHLAND													1					18	
SABINE																			
ST. BERNARD							1	1										3	
ST. CHARLES																		14	
ST. HELENA																			
ST. JAMES												2						14	1
ST. JOHN								1							1			6	1
ST. LANDRY																		65	2
ST. MARTIN						2		1							1			12	
ST. MARY						1	1					2			2			3	2
ST. TAMMANY								1		1		1			2			29	
TANGIPAHOA													1			4		7	5
TENSAS																		2	
TERREBONNE							1					1	1		3			1	
UNION																		8	
VERMILION							1					1						8	
VERNON																		78	2
WASHINGTON												3	1					14	1
WEBSTER						2	8											15	
WEST BATON ROUGE																		23	2
WEST CARROLL													1					3	
WEST FELICIANA																		42	
WINN																		4	
OUT OF STATE																		3	

\* Includes Rubella, Congenital Syndrome.

\*\* Includes 21 cases of Hepatitis Non A and Non B.

\*\*\* Acquired outside United States unless otherwise stated.

From January 1, 1984 - August 31, 1984, the following cases were also reported:

6-Amebiasis, 53-H-Flu Meningitis, 2-Rocky Mountain Spotted Fever, 7-Tularemia, 1-Poliomyelitis, Paralytic.

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