MICROBIOLOGY SECTION – MILWAUKEE HEALTH DEPARTMENT

M O N T H L Y R E P O R T

June 2007 Vol. 12, No. 6 **Ajaib Singh, D.V.M., Ph. D.**

MICROBIOLOGY REPORT: The June 2007 issue of Microbiology Monthly Report, Volume 12, presents the laboratory diagnosis of some of the infectious diseases, the reference microbiology work done in this laboratory during May 2007 and new cases of syphilis in Milwaukee during April 2007. Information on the laboratory diagnosed mycobacterial infections in Wisconsin during April is also included.

Legionnaires Disease (May 2007)

No positive case was detected.

Pertussis (Whooping cough) May 2007

No positive case was detected.

Syphilis (May 2007)

Test	Number Positive	Test	Number Positive
RPR	11	TP-PA	7
VDRL	20	DARKFIELD	3

New Cases of Syphilis

The Wisconsin Division of Health has reported 8 new cases (early stages) of syphilis during April 2007 in Milwaukee. The median age of early syphilis cases is 34.6 years (range: 20-44 years). Morbidity distributions of the disease reported in this and the corresponding month of the previous year are as follows:

New Cases of Syphilis (April 2007 and April 2006)

Stage	Number of Cases	
	April 2007	April 2006
Primary syphilis	1	0
Secondary syphilis	3	1
Early latent	4	1
Late latent	2	0
Total	10	2

Gonorrhea (May 2007)

Number Tested	Decreased Susceptibility (DS) / Resistance (R) Antibiotics			
	Ciprofloxacin	Ceftriaxone	Spectinomycin	Azithromycin
46	3 (R) ; 1(I)	0	0	2 (DS)

Gonorrhea from Other Sources (Aurora Consolidated Labs) May 2007

Number Tested	Decreased Susceptibility (DS) / Resistance (R) Antibiotics			
	Ciprofloxacin	Ceftriaxone	Spectinomycin	Azithromycin
6	0	0	0	0

Isolates Other Than *N. gonorrhoeae* (May 2007)

Organism	Site	Number Isolates	Organism	Site	Number Isolates
Ureaplasma urealyticum	Genital	0	*Mycoplasma hominis*	Genital	3

Parasitic Enteric Pathogens (May 2007)

Age	Sex	Pathogen	Number Cases
28	F	*Entamoeba coli*	1
10	F	*Giardia lamblia*	1
11	F	*Giardia lamblia*	1

Mycobacterial Infections (May 2007)

Age	Sex	Test Results			Identification
		Sputum Smear	Culture	DNA Probe	
31	F	-	+	Not done	*M. xenopi*
28*	F*	-	+	Not done	*M. xenopi*
		-	+	Not done	*M. fortuitum group*
27	M	+	+	+	*M. avium complex*
87	F	-	+	+	*M. avium complex*

*** Same patient**

Reference Cultures (May 2007)

Age	Sex	Site/Specimen Source	Culture Identification
44	F	Nail	*Bacillus sp* NOT *anthracis*
54	F	Urine	*Corynebacterium afermentans* subsp *afermentans*
7	F	Urine	*Escherichia coli*
67	M	Pleural fluid	*Corynebacterium pseudotuberculosis*

Bacterial Enteric Pathogens (May 2007)

Age	Sex	Pathogen	Age	Sex	Pathogen
3	F	*Shigella sonnei*	17	M	*Salmonella bovismorbificans*
11	F	*Shigella sonnei*	26	M	*Salmonella montevideo*
54	F	*Shigella sonnei*	57	F	*Salmonella thompson*
24 mo	F	*Shigella sonnei*	68	F	*Salmonella typhimurium*
12	M	*Shigella sonnei*	46	M	*Salmonella typhimurium*
4	F	*Shigella sonnei*	14	F	*Salmonella typhimurium*
30 mo	F	*Shigella sonnei*	13 mo	F	*Salmonella typhimurium*
22	F	*Shigella sonnei*	43	M	*Salmonella muenchen*
30 mo	F	*Shigella sonnei*	47	M	*Salmonella muenchen*
8	F	*Shigella sonnei*	40	F	*Salmonella muenchen*
3	F	*Shigella sonnei*	30	M	*Salmonella muenster*
26	M	*Shigella sonnei*	48	M	*Salmonella enteritidis*
31	F	*Shigella sonnei*	23	M	*Salmonella enteritidis*
34	F	*Shigella sonnei*	61	M	*Salmonella enteritidis*
6 mo	F	*Shigella sonnei*	33 mo	M	*Salmonella enteritidis*
19	F	*Shigella sonnei*	5	M	*Salmonella enteritidis*
5	F	*Shigella sonnei*	50	M	*Salmonella B monophasic i*
7	M	*Shigella sonnei*	34 mo	M	*Salmonella oranienburg*
4	F	*Shigella sonnei*			
5	F	*Shigella sonnei*			
4	M	*Shigella sonnei*			
3	F	*Shigella sonnei*			
4	F	*Shigella sonnei*			
30	M	*Shigella sonnei*			

Laboratory Diagnosed Mycobacterial Infections in Wisconsin during April 2007

Mycobacterium spp		Brown	Dane	Eau Claire	Kenosha	La Crosse	Marathon	Milwaukee	Outagamie	Racine	Rock	Trempealeu	Washington	Waukesha	Winnebago	Wood	TOTALS
M. tuberculosis complex	Pulm																**0**
	Extra							1						1		1	**3**
Total *M. tuberculosis* complex		**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**3**
***M. avium* complex**	Pulm	1	6		2	3		40	3						4	1	**60**
	Extra	1															**1**
M. gordonae	Pulm		10	1				12	1	1			1	1	1		**28**
	Extra		2														**2**
M. abscessus	Pulm		2		1			3									**6**
	Extra																**0**
M. chelonae	Pulm			1				2								1	**4**
	Extra		2					1							1		**4**
M. fortuitum group	Pulm		2					5				1					**8**
	Extra																**0**
M. kansasii	Pulm			1						1							**2**
	Extra																**0**
M. marinum	Pulm																**0**
	Extra																**0**
M. mucogenicum	Pulm							2									**2**
	Extra		1					2									**3**
M. xenopi	Pulm							3									**3**
	Extra																**0**
Pigmented *Mycobacterium*	Pulm							1									**1**
M. scrofulaceum	Pulm										1						**1**
TOTALS		**10**	**25**	**3**	**3**	**3**	**0**	**71**	**4**	**2**	**1**	**1**	**1**	**1**	**6**	**2**	**125**

Extra-Pulmonary Sources of Isolation:

M. tuberculosis Extra-pulmonary:	1 lymph node, 1 intercostal tissue, 1 pleural
M. avium complex Extra-pulmonary:	1 bone marrow
M. gordonae Extra-pulmonary:	1 stool, 1 pancreas
Other *Mycobacterium* species	*M. chelonae*: 1 breast, 1 scalp, 1 sore on neck, 1 thigh; *M. mucogenicum*: 3 blood,

Antibiotic Susceptibilities: TB First-Line Drugs tested: isoniazid = INH (0.2 μ/ml and 1.0 μ/ml) rifampin (1.0 μ/ml) ethambutol (5.0 μ/ml) pyrazinamide = PZA (100 μ/ml)

In April, all three new *M. tuberculosis* isolates are sensitive to first line drugs tested.

Source: Mycobacteriology Laboratory Network Data Report, Wisconsin State Laboratory of Hygiene, Madison, WI.

SUMMARY OF CONFIRMED INFECTIONS

Virology & Molecular Diagnostic Section
City of Milwaukee Health Department Laboratory
(414) 286-3526

WEBSITE: www.milwaukee.gov/healthlab June 2007 ISSUE # 1218

May 2007 Data

Agent	No. of Isolates	Age	Sex	Specimen	Symptoms
Adenovirus	1	6	M	NP Referred isolate	NA
Influenza A (H3)	1	19	M	Throat	ARD, cough, fever, headache
Parainfluenza 3	1	20	F	Throat	Cough, sore throat, fever, headache
Parainfluenza 3	1	19	F	Throat	Cough, sore throat, fever
Rhinovirus	1	8 wk	F	NP	Autopsy
Rhinovirus	2	15 mo	F	Lung swab and NP	Autopsy
Rhinovirus	1	3 mo	F	NP	Autopsy
Rhinovirus	1	29	M	Throat	Cough, sore throat, fever, headache
Rhinovirus	1	22	M	Throat	ARD, URI, cough, sore throat, fever, lymphadenopathy
Rhinovirus	1	5	M	NP Referred isolate	NA
Rhinovirus	1	4 mo	F	NP Referred isolate	NA
Rhinovirus	1	9 mo	M	BAL Referred isolate	NA
Rhinovirus	2	10 mo	M	NP wash and NP Referred isolate	NA
Rhinovirus	1	4 mo	M	NP Referred isolate	NA
Rhinovirus	1	9 mo	M	NP Referred isolate	NA
Varicella zoster	1	19	F	Back lesion	R/O Zoster
Varicella zoster	1	21	M	R neck lesion	Vesicular rash, lymphadenopahty
Trichomonads	1	24	F	Cervix	STD - for Herpes
Herpes simplex, type 1	5				
Herpes simplex, type 2	20				

***N/A – Not Available**

Agent	Method	Tested	Positive	% Positive
Chlamydia trachomatis	ProbeTec	593	74	12.5%
Neisseria gonorrhoeae	ProbeTec/GenProbe	774	83	10.7%
Mumps virus	EIA	37	0	0%
Enterovirus	Real-time RT-PCR	11	0	0%
Influenza virus	Real-time RT-PCR	19	1	5%
Norovirus	Real-time RT-PCR	2	0	0%
Mumps	Real-time RT-PCR	4	0	0%
Adenovirus	Real-time PCR	2	0	0%
Herpes Simplex Virus	Real-time PCR	1	1	100%

Important News

*** NEW ***

Discontinuation of Tests:

As of July 10, 2007, the City Lab will no longer offer Legionella IFA serology.

Sanjib Bhattacharyya, Ph.D.
Chief Molecular Scientist

Milwaukee *Shigella* Outbreak Update through June 2007

The City of Milwaukee Health Department has been investigating an increase in Shigellosis dating back to March 2007. Year to date in 2007, 210 cases of *Shigella sonnei* have been reported in Milwaukee County, with 196 of those cases in the City of Milwaukee. Nearly half of all cases (94) were reported in the month of June, representing a five fold increase from the previous year. The City Lab has confirmed 159 cases through the end of June, many submitted by area clinical microbiology laboratories. Of the 105 samples for which the City Lab has run PFGE analysis, 88 form a cluster with two main patterns which differ by a single band. Over 95% of the outbreak-related isolates are rhamnose negative. Milwaukee's earliest sporadic cases matching this pattern date back to January of 2007. The City lab has posted this data to CDC's PulseNet web-board and has noted similar scenarios and PFGE patterns in other states.

To date, a high percentage of cases are linked to child care settings. While a number of large household clusters have been identified, we have yet to see a link emerge to any single source of recreational water usage. In addition, we have observed a high rate of antibiotic resistance, among 48 recent isolates. 79% were resistant to ampicillin, 71% were resistant to trimethoprim-sulamethoxazole (TMP/SMX) and 63% were resistant to both ampicillin and TMP/SMX.

We encourage laboratories to continue to submit *Shigella* isolates for confirmation and PFGE analysis.

Steve Gradus, Ph.D., ABMM
Laboratory Director