MICROBIOLOGY SECTION – MILWAUKEE HEALTH DEPARTMENT

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

March, 2008 Vol. 13, No. 3 **Ajaib Singh, D.V.M., Ph. D.**

MICROBIOLOGY REPORT: The March 2008 issue of Microbiology Monthly Report, Volume 13, presents the laboratory diagnosis of some of the infectious diseases, the reference microbiology work done in this laboratory during February 2008 and new cases of syphilis in Milwaukee during January 2008. Information on the laboratory diagnosed mycobacterial infections in Wisconsin during January is also included.

Syphilis (February 2008)

Test	Number Positive	Test	Number Positive
RPR	4	TP-PA	22
VDRL	35	DARKFIELD	0

New Cases of Syphilis (January 2008 and January 2007)

Stage	Number of Cases	
	January 2008	January 2007
Primary syphilis	1	0
Secondary syphilis	5	3
Early latent	7	6
Late latent	0	2
Total	13	11

Median age: 31 yr; Age range: 17-52 yr
Source: Wisconsin Division of Health

Gonorrhea (February 2008)

Number Tested	Decreased Susceptibility (DS) / Resistance (R) Antibiotics			
	Ciprofloxacin	Ceftriaxone	Spectinomycin	Azithromycin
49	3 R	0	0	0

Isolates Other Than *N. gonorrhoeae* (February 2008)

Organism	Site	Number Isolates	Organism	Site	Number Isolates
Ureaplasma urealyticum	Genital	3	*Mycoplasma hominis*	Genital	4

Enteric Parasites Identified (February 2008)

Age	Sex	Pathogen	Number Cases
23	M	*Blastocystis hominis*	

Mycology (February 2008)

Age	Sex	Pathogen	Number Cases
28	M	*Blastomyces dermatitidis*	1

Mycobacterial Infections (February 2008)

Age	Sex	Test Results			Identification
		Sputum Smear	Culture	DNA Probe	
31	M	-	+	+	*M. avium* complex
48	M	-	+	+	*M. avium* complex
47	M	-	+	+	*M. avium* complex
		-	+	ND	*M. abscessus*
53	F	+	+	ND	*M. abscessus*
26	M	-	+	ND	*M. abscessus*

Reference Cultures (February 2008)

Age	Sex	Source	Culture Identification
78	M	Sputum	*Actinomyces odontolyticus*
29	F	Stool	*Campylobacter jejuni*
81	M	Blood	*Clostridium* species
80	M	Sputum	*Corynebacterium pseudodiphtheriticum*
50	F	Stool	*Escherichia coli*
50	M	Urine	*Escherichia coli*
20	F	Vagina	*Neisseria gonorrhoeae*
21	M	Throat	*Neisseria gonorrhoeae*
43	M	Stool	*Salmonella braenderup*
63	F	Blood	*Salmonella derby*
27	M	Stool	*Salmonella enterica* subspecies IIIb (*diarizonae*)
62	M	Stool	*Salmonella enteritidis*
90	F	Urine	*Salmonella give*
15	M	Stool	*Salmonella give*
91	F	Stool	*Salmonella hadar*
33m	M	Stool	*Salmonella heidelberg*
17	M	Wound	*Salmonella montevideo*
40	F	Stool	*Salmonella mbandaka*
8	F	Blood	*Salmonella paratyphi A*
28	M	Stool	*Salmonella panama*
39	M	Stool	*Salmonella typhimurium*
11m	M	Stool	*Salmonella typhimurium*
11m	M	Stool	*Salmonella typhimurium*
20	F	Stool	*Shigella sonnei*
86	F	Stool	*Shigella sonnei*
37	F	Stool	*Shigella sonnei*
6	F	Stool	*Shigella sonnei*
33	F	Stool	*Shigella sonnei*
8	M	Rectum	*Shigella sonnei*
16	F	Stool	*Shigella sonnei*

Bacterial Enteric Pathogens (February 2008)

Age	Sex	Pathogen	Age	Sex	Pathogen
20	M	*Shigella sonnei*	27m	M	*Shigella sonnei*
13	M	*Shigella sonnei*	38	F	*Shigella sonnei*
8	F	*Shigella sonnei*	5	F	*Shigella sonnei*
4	M	*Shigella sonnei*	6	F	*Shigella sonnei*

Antimicrobial Susceptibility of *Shigella sonnei* Associated with 2007-08 Outbreak (February 2008)

Number Tested	Decreased Susceptibility (DS) / Resistance (R) Antibiotics		
	Ampicillin	Norfloxacin	Sulfamethoxazole-Trimethoprim (SXT)
15	11	0	13

Laboratory Diagnosed Mycobacterial Infections in Wisconsin during January 2008

***Mycobacterium* species**		**Brown**	**Dane**	**Eau Claire**	**Kenosha**	**La Crosse**	**Marathon**	**Milwaukee**	**Outagamie**	**Portage**	**Racine**	**Rock**	**Washington**	**Waukesha**	**Winnebago**	**Wood**	**TOTALS**
M. tuberculosis complex	Pulm											1					**1**
	Extra																**0**
Total *M. tuberculosis* complex		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**
***M. avium* complex**	Pulm	2	5	1				38	5			1	1	7	4	6	**70**
	Extra		4				1	5				1				1	**12**
M. gordonae	Pulm	2	6					8	1	1	1	1		1	3	1	**25**
	Extra							1									**1**
M. abscessus	Pulm							2								1	**3**
	Extra																**0**
M. chelonae	Pulm						1										**1**
	Extra								2								**2**
M. chelonae-abscessus	Pulm		1	1	1			4				1					**8**
	Extra					1		1									**2**
M. fortuitum group	Pulm		3		1		1	4									**9**
	Extra							1							1		**2**
M. kansasii	Pulm							1			1						**2**
	Extra																**0**
M. marinum	Pulm																**0**
	Extra		1			1		1									**3**
M. mucogenicum	Pulm							1									**1**
	Extra																**0**
M. xenopi	Pulm		1					4									**5**
	Extra		1														**1**
M. bovis BCG	Extra							1									**1**
M. interjectum	Pulm		1														**1**
M. scrofulaceum	Pulm									1							**1**
Totals		**4**	**23**	**2**	**2**	**2**	**3**	**72**	**8**	**2**	**2**	**4**	**1**	**8**	**8**	**9**	**150**

Extra-Pulmonary Sources of Isolation:

M. avium complex Extra-pulmonary:	1 facial, 1 neck mass, 1 finger, 1 knee, 1 neck, 2 pleural, 2 stool, 1 urine, 1 neck abscess, 1 blood
M. gordonae Extra-pulmonary:	1 urine
Other *Mycobacterium* species	*M. bovis* BCG: 1 urine; *M. chelonae:* 1 wound, 1 skin; *M. chelonae-abscessus*: 1 scalp, 1 blood; *M. fortuitum* group: 1 blood, 1 urine; *M. marinum*: 1 cyst fluid, 1 hand, 1 finger; *M. xenop*i: 1 pleural

M. tuberculosis complex First-Line Drug Susceptibility Testing*:

Drug Resistance	**Number of Isolates**
Susceptible to all first-line drugs	1
TOTAL	1

(*) Drugs tested: isoniazid=INH (0.2 ug/ml and 1.0 ug/ml), rifampin (1.0 ug/ml), ethambutol (5.0 ug/ml), and pyrazinamide=PZA (100 ug/ml).

Source: Mycobacteriology Laboratory Network Data Report, WI 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 **March 2008 ISSUE # 1227**

February 2008 Data

Agent	No. of Isolates	Age	Sex	Specimen	Symptoms
Influenza A (H1)	1	21	F	Throat	R/O influenza
Influenza A (H1)	1	21	F	Throat	Cough, sore throat, vomiting, fever, headache
Influenza A (H1)	1	49	M	NP	Flu A/B confirmation
Influenza A (H1)	1	51	M	NP	Flu A/B confirmation
Influenza A (H3)	1	19	F	Throat	Acute Respiratory Distress
Influenza A (H3)	1	19	F	Throat	Cough, sore throat, fever
Influenza A (H3)	1	22	F	Throat	URI, cough, sore throat, nausea, fever, headache
Influenza A (H3)	1	18	F	Throat	Cough, sore throat, fever, headache
Influenza A (H3)	1	18	M	Throat	Cough, fever, headache
Influenza A (H3)	1	28	M	Referred isolate	N/A*
Influenza A (H3)	1	30	F	NP	Flu A confirmation
Influenza A (H3)	1	36	M	NP	Flu A/B confirmation
Influenza A (H3)	2	7 wk	M	Lung and NP swabs	Autopsy
Influenza A (H3)	1	82	F	NP	Flu A confirmation
Influenza A (H3)	1	39	M	NP	Flu A confirmation
Influenza A (H3)	1	93	F	NP	Flu A confirmation
Influenza A (H3)	1	21	F	NP	Flu A confirmation
Influenza A (H3)	1	64	M	NP	Flu A/B confirmation
Influenza A (H3)	1	22	F	Throat	Cough, sore throat, fever, headache
Influenza A (H3)	1	19	F	Throat	Cough, sore throat, fever, headache
Influenza A (H3)	1	18	M	Throat	Cough, sore throat, nausea, fever
Influenza A (H3)	1	20	F	Throat	URI, sore throat, fever, lymphadenopathy
Influenza A (H3)	1	20	M	Throat	Sore throat, fever
Influenza A (H3)	1	20	F	Throat	Cough, fever
Influenza A (H3)	1	22	F	Throat	URI, cough, sore throat, vomiting, nausea, fever, headache
Influenza A (H3)	1	22	M	Throat	URI, cough, fever, headache
Influenza A (H3)	1	20	F	Throat	Cough, sore throat, fever
Influenza A (H3)	1	20	M	Throat	Cough, fever, headache
Influenza A (H3)	1	18	F	Throat	URI, fever
Influenza A (H3)	1	22	M	Throat	Acute respiratory distress
Influenza A (H3)	1	21	M	Throat	R/O influenza
Influenza A (H3)	1	24	M	Throat	R/O influenza
Influenza A (H3)	1	20	F	Throat	Sore throat, fever
Influenza A (H3)	1	19	F	Throat	Cough, fever, myalgias
Influenza A (H3)	1	22	F	Throat	Acute respiratory distress, sore throat, fever, headache
Influenza A (H3)	1	20	F	Throat	Cough, fever, headache

Influenza A (H3)	1	18	F	Throat	Acute respiratory distress
Influenza A (H3)	1	19	F	Throat	Cough, fever, headache
Influenza A (H3)	1	22	F	Throat	Cough, sore throat, fever, headache
Influenza A (H3)	1	21	F	Throat	Sore throat, myalgias, headache
Influenza A (H3)	1	22	M	Throat	Cough, fever, headache
Influenza A (H3)	1	19	F	Throat	Cough, sore throat, fever, headache
Influenza A (H3)	1	23	F	Throat	Cough, sore throat, diarrhea, fever, headache
Influenza A (H3)	1	20	F	Throat	Cough, sore throat, nausea, fever, headache
Influenza A (H3)	1	18	F	Throat	Cough, sore throat, fever, headache
Influenza A (H3)	1	20	F	Throat	Cough, sore throat, fever, headache
Influenza A (H3)	1	26	M	Throat	Cough, myalgias, fever
Influenza A (H3)	1	22	F	Throat	Cough, sore throat, fever, headache
Influenza A (H3)	1	22	F	Throat	Acute respiratory distress
Influenza B	1	20	F	Throat	Cough, fever
Influenza B	1	22	M	Throat	Cough, sore throat, fever
Influenza B	1	27	M	Throat	Cough, fever, headache
Influenza B Herpes simplex, type 1	2	27	M	Throat	Cough, fever, headache
Influenza B	1	27	F	Throat	Cough, fever, headache
Influenza B	1	22	M	Throat	Cough, fever, myalgias
Influenza B	1	59	M	Throat	Acute respiratory distress
Influenza B	1	44	M	Throat	Acute respiratory distress
Rhinovirus	1	20	M	Throat	URI, fever, headache
Enterovirus 71	1	4 mo	M	NP Referred isolate	N/A*
Parechovirus, type 1	1	4 mo	M	Small bowel	Autopsy
Varicella zoster virus	1	24	M	Throat	Cough, sore throat, fever, headache, rash
Varicella zoster virus	1	19	F	Right flank	R/O shingles
Varicella zoster virus	1	31	M	Torso	Torso lesion
Varicella zoster virus	1	19	M	Back	Back lesion
Varicella zoster virus	1	18	M	Forehead	Vesicular lesion
Herpes simplex, type 1	10				
Herpes simplex, type 2	7				

***N/A – Not Available**

Agent	Method	Tested	Positive	% Positive
Chlamydia trachomatis	ProbeTec	609	77	12.6%
Neisseria gonorrhoeae	ProbeTec/GenProbe	830	70	8.4%
Varicella zoster virus	Real-time PCR	3	1	66.7%
Parainfluenza viruses	Real-time RT-PCR	1	0	0.0%
Enterovirus	Real-time RT-PCR	1	0	0.0%
Influenza virus	Real-time RT-PCR	106	52	49.1%
Herpes simplex virus	Real-time PCR	3	3	100.0%

Influenza Laboratory Surveillance in Milwaukee:

The City lab reports 101 influenza cases for the 2007-2008 season (as of April 7, 2008): 68 A (H3), 6 A (H1) and 26 Flu B. For the week ending March 29, 22 specimens tested yielded 2 A (H3) and 5 Flu B cases.

The cases are identified by PCR within 24 hours and confirmed by culture.

Norovirus Outbreaks:

The Department and Laboratory continues to investigate Norovirus (formerly Norwalk virus) outbreaks in a variety of group/institutional settings. Eight (8) samples were tested in the month of March, of which 7 were confirmed positive for Norovirus Genogroup II by Real-time PCR assay.

Measles Outbreak:

4 cases of measles have been identified in the area: (1) in the City of Milwaukee. The State Lab of Hygiene, with CDC, is providing testing at this time for the outbreak. Additional information will follow as it develops.

Shigella Outbreak:

Shigella cases continue at a much lower rate but still above the baseline of cases prior to the beginning of the outbreak in February of 2007.

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