

SUMMARY OF CONFIRMED INFECTIONS

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The December 2008 issue presents the laboratory diagnosis of some of the infectious diseases and the reference microbiology work done in this laboratory during November 2008 and new cases of syphilis in Milwaukee during November 2008. Information on the laboratory diagnosed mycobacterial infections in Wisconsin during October is also included.

Syphilis

Test	Total	Test	Total
RPR Reactive	1	TPPA Reactive	23
VDRL Reactive	28	Darkfield Positive	0

New Cases of Syphilis (November 2008 and November 2007)

Stage	Number of Cases	
	November 2008	November 2007
Primary syphilis	0	1
Secondary syphilis	2	1
Early latent	1	4
Late latent	0	1
Total	3	7

Median age: 30 yr; Age range: 28 – 45 yr

 Source: Wisconsin Division of Health

Isolates Other Than *N. gonorrhoeae*

Organism	Site	Number Isolates	Organism	Site	Number Isolates
<i>Ureaplasma urealyticum</i>	Genital	1	<i>Mycoplasma hominis</i>	Genital	1

Enteric Parasites Identified

Age	Sex	Parasite
24	M	<i>Blastocystis hominis</i>
30	F	<i>Blastocystis hominis</i>
5	M	<i>Blastocystis hominis</i>
7	F	<i>Blastocystis hominis</i>

47	M	<i>Entamoeba coli</i>
27	M	<i>Entamoeba coli</i> <i>Blastocystis hominis</i>
5	M	<i>Entamoeba coli</i> <i>Blastocystis hominis</i>
10m	F	<i>Entamoeba coli</i> <i>Blastocystis hominis</i> <i>Giardia lamblia</i>
19	M	<i>Entamoeba histolytica/Entamoeba dispar</i>
4	F	<i>Giardia lamblia</i> <i>Blastocystis hominis</i>
31m	F	<i>Giardia lamblia</i>

Mycobacterial Infections

Age	Sex	Test Results			Identification
		Sputum Smear	Culture	DNA Probe	
78	F	-	+	+	<i>M. avium</i> complex
24	F	-	+	+	<i>M. avium</i> complex
48	M	-	+	+	<i>M. avium</i> complex
38	F	-	+	+	<i>M. avium</i> complex
67	M	-	+	+	<i>M. avium</i> complex
45	M	-	+	+	<i>M. avium</i> complex
32	M	-	+	+	<i>M. avium</i> complex
73	M	-	+	+	<i>M. avium</i> complex
		-	+	+	<i>M. tuberculosis</i>
39	F	-	+	+	<i>M. avium</i> complex
		-	+	+	<i>M. tuberculosis</i>
63	M	-	+	NA	<i>M. xenopi</i>
61	M	-	+	+	<i>M. avium</i> complex
		-	+	NA	<i>M. fortuitum</i> group
32	M	-	+	+	<i>M. tuberculosis</i>

Reference Cultures

Age	Sex	Source	Identification
40	F	Knee, right	<i>Alcaligenes xylosoxidans</i>
37	F	CSF	<i>Bacillus megaterium</i>
55	F	CSF	<i>Bacillus licheniformis</i>
25	F	Urine	<i>Escherichia coli</i>
11m	F	Stool	<i>Salmonella</i> Adelaide
79	F	Stool	<i>Salmonella</i> Berta

6m	F	Stool	<i>Salmonella enterica</i> subspecies IV (<i>houtenae</i>)
40	M	Stool	<i>Salmonella</i> Enteritidis
37	M	Stool	<i>Salmonella</i> Havana
4	F	Stool	<i>Salmonella</i> Heidelberg
11	M	Stool	<i>Salmonella</i> I 4,[5],12:i:- (monophasic)
40	F	Stool	<i>Salmonella</i> I 4,[5],12:i:- (monophasic)
65	M	Stool	<i>Salmonella</i> Oranienburg
72	F	Urine	<i>Salmonella</i> Schwarzengrund
72	F	Stool	<i>Salmonella</i> Schwarzengrund
79	F	Stool	<i>Salmonella</i> Thompson
5	F	Stool	<i>Salmonella</i> Typhimurium
32	M	Stool	<i>Shigella flexneri</i> type 2
4	M	Stool	<i>Shigella sonnei</i>
23m	M	Stool	<i>Shigella sonnei</i>
5	F	Rectum	<i>Shigella sonnei</i>
29m	M	Stool	<i>Shigella sonnei</i>
15	M	Stool	<i>Shigella sonnei</i>
8	F	Stool	<i>Shigella sonnei</i>
4	F	Urine	<i>Shigella sonnei</i>
5	F	Stool	<i>Shigella sonnei</i>
7	F	Stool	<i>Shigella sonnei</i>
25	F	Stool	<i>Shigella sonnei</i>
5	M	Stool	<i>Shigella sonnei</i>

Clinical Enteric Pathogens

Age	Sex	Pathogen
9	M	<i>Shigella sonnei</i>
6	M	<i>Shigella sonnei</i>
7	M	<i>Shigella sonnei</i>
8	M	<i>Shigella sonnei</i>

Laboratory Diagnosed Mycobacterial Infections in Wisconsin during the month of October, 2008

<i>Mycobacterium</i> species		Brown	Dane	Eau Claire	Fond du Lac	Kenosha	La Crosse	Marathon	Milwaukee	Outagamie	Racine	Rock	Washburn	Waukesha	Winnebago	Wood	TOTALS
<i>M. tuberculosis</i> complex	Pulm	1	1						3								5
	Extra		1														1
Total <i>M. tuberculosis</i> complex		1	2	0	0	0	0	0	3	0	0	0	0	0	0	0	6
<i>M. avium</i> complex	Pulm	1	5					1	35	2	2		1	2	2	1	52
	Extra		2						3								5
<i>M. gordonae</i>	Pulm		2	2		2			10						1		17
	Extra																0
<i>M. chelonae-abscessus</i>	Pulm		3	1	1				5					1			11
	Extra								1							1	2
<i>M. fortuitum</i> group	Pulm		1						2			1				1	5
	Extra		2						2								4
<i>M. kansasii</i>	Pulm																0
	Extra																0
<i>M. marinum</i>	Pulm																0
	Extra																0
<i>M. mucogenicum</i>	Pulm								1								1
	Extra								3								3
<i>M. xenopi</i>	Pulm								5								5
	Extra																0
<i>M. bovis</i> BCG	Extra								1								1
<i>M. phlei</i>	Extra						1										1
<i>M. terrae</i> complex	Pulm							1									1
TOTALS		1	15	3	1	2	1	2	68	2	2	1	1	3	3	3	108

Extra-Pulmonary Sources of Isolation:

<i>M. tuberculosis</i> Extra-pulmonary	1 pleural
<i>M. avium</i> complex Extra-pulmonary	1 mandible, 2 neck mass, 1 pericardial, 1 urine
Other <i>Mycobacterium</i> species	<i>M. bovis</i> BCG: 1 urine; <i>M. chelonae/abscessus</i> : 1 finger, 1 abdomen <i>M. fortuitum</i> group: 1 foot, 1 thigh, 1 buttock, 1 stool; <i>M. mucogenicum</i> : 3 blood <i>M. phlei</i> : 1 thigh

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

Drug Resistance	Number of Isolates
Susceptible to all first-line drugs	4
Resistant to both INH concentrations	1
Out of State (susceptible to all first line drugs)	1
TOTAL	6

(*) 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.

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 Chief Molecular Scientist

Herpes Simplex Virus Isolations

Agent	Number of Isolates
Herpes Simplex type 1	3
Herpes Simplex type 2	7

Molecular Amplification and PCR

Agent	Method	Tested	Positive	% Positive
<i>Chlamydia trachomatis</i>	ProbeTec	551	80	14.5%
<i>Neisseria gonorrhoeae</i>	ProbeTec / GenProbe	694	73	10.5%
Influenza A/B	Real-time RT-PCR	5	0	0.0%
Mumps Virus	Real-time RT-PCR	2	0	0.0%
Norovirus	Real-time RT-PCR	2	0	0.0%

The MHD laboratory is currently performing DNA sequence-based microbial identification for selective reference bacteria and fungal isolates. This rapid, high throughput molecular assay targets 16S rRNA and the D2 region of the 26S rRNA genes for the detection of bacteria and fungal species. Please call the laboratory at (414) 286-3526 for further detail.

DNA Sequencing

Reference Microbe	Target gene	Final Identification
Bacteria	16S rRNA	<i>Achromobacter</i> species
Bacteria	16S rRNA	<i>Acinetobacter lwoffii</i>
Bacteria	16S rRNA	<i>Bacillus licheniformis</i>
Bacteria	16S rRNA	<i>Bacillus megaterium</i>
Bacteria	16S rRNA	<i>Massilia</i> species