

## MICROBIOLOGY SECTION – MILWAUKEE HEALTH DEPARTMENT

# MONTHLY REPORT

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**MICROBIOLOGY REPORT:** The February 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 January 2007 and new cases of syphilis in Milwaukee during December 2006. Information on the laboratory diagnosed mycobacterial infections in Wisconsin during December is also included.

### Legionnaires Disease (January 2007)

No positive case detected.

### Pertussis (Whooping cough) January 2007

No positive case detected.

### Syphilis (January 2007)

| Test | Number Positive | Test      | Number Positive |
|------|-----------------|-----------|-----------------|
| RPR  | 1               | TP-PA     | 9               |
| VDRL | 22              | DARKFIELD | 0               |

### New Cases of Syphilis

The Wisconsin Division of Health has reported 9 new cases (early stages) of syphilis during December, 2006 in Milwaukee. The median age of early syphilis cases is 34.0 years (range: 17-59 years). Morbidity distributions of the disease reported in this and the corresponding month of the previous year are as follows:

### New Cases of Syphilis (December 2006 and December 2005)

| Stage              | Number of Cases |               |
|--------------------|-----------------|---------------|
|                    | December 2006   | December 2005 |
| Primary syphilis   | 2               | 1             |
| Secondary syphilis | 2               | 2             |
| Early latent       | 5               | 0             |
| Late latent        | 0               | 0             |
| Total              | 9               | 3             |

### Gonorrhea (January 2007)

| Number Tested | Decreased Susceptibility (DS) / Resistance (R) Antibiotics |             |               |              |
|---------------|------------------------------------------------------------|-------------|---------------|--------------|
|               | Ciprofloxacin                                              | Ceftriaxone | Spectinomycin | Azithromycin |
| 60            | 7 (R)                                                      | 0           | 0             | 0            |

### Gonorrhea from Other Sources (Aurora Consolidated Labs) January 2007

| Number Tested | Decreased Susceptibility (DS) / Resistance (R) Antibiotics |             |               |              |
|---------------|------------------------------------------------------------|-------------|---------------|--------------|
|               | Ciprofloxacin                                              | Ceftriaxone | Spectinomycin | Azithromycin |
| 5             | 3 (R)                                                      | 0           | 0             | 0            |

### Isolates Other Than *N. gonorrhoeae* (January 2007)

| Organism                      | Site    | Number Isolates | Organism                  | Site    | Number Isolates |
|-------------------------------|---------|-----------------|---------------------------|---------|-----------------|
| <i>Ureaplasma urealyticum</i> | Genital | 14              | <i>Mycoplasma hominis</i> | Genital | 6               |

### Parasitic Enteric Pathogens (January 2007)

| Age   | Sex | Pathogen | Number Cases |
|-------|-----|----------|--------------|
| 65 yr | M   | Annalid  | 1            |

### Mycobacterial infections (January 2007)

| Age    | Sex | Test Results |         |           | Identification          |
|--------|-----|--------------|---------|-----------|-------------------------|
|        |     | Sputum Smear | Culture | DNA Probe |                         |
| 56 yr  | M   | -            | +       | -         | <i>M. avium complex</i> |
| 61 yr* | M   | +            | +       | +         | <i>M. tuberculosis</i>  |
|        |     | +            | +       | +         | <i>M. avium complex</i> |
| 18 yr  | M   | -            | +       | +         | <i>M. tuberculosis</i>  |
| 28 yr  | F   | -            | +       | +         | <i>M. tuberculosis</i>  |
| 86 yr  | F   | -            | +       | -         | <i>M. fortuitum</i>     |
| 62 yr  | F   | -            | +       | -         | <i>M. conspicuum</i>    |

\* Same patient

### Reference Cultures (January 2007)

| Age    | Sex | Source          | Culture Identification                 |
|--------|-----|-----------------|----------------------------------------|
| 52 yr  | F   | BAL             | <i>Arcanobacterium haemolyticum</i>    |
| 57 yr  | F   | Left knee fluid | <i>Haemophilus aphrophilus</i>         |
| 44 yr  | F   | Eye             | <i>Chrysobacterium meningosepticum</i> |
| 63 yr  | M   | Blood           | <i>Streptococcus mutans</i>            |
| 61 yr  | M   | Sputum          | <i>Mycobacterium chelonae</i>          |
| 77 yr  | M   | Stool           | <i>Escherichia coli</i>                |
| 63 yr  | F   | Bone marrow     | <i>Streptococcus mitis sp/gp</i>       |
| 82 yr  | M   | Blood           | <i>Gardnerella vaginalis</i>           |
| 102 yr | M   | Blood           | <i>Bacillus circulans</i>              |
| 57 yr  | M   | Sputum          | <i>Acinetobacter sp</i>                |
| 60 yr  | M   | Blood           | <i>Staphylococcus epidermidis</i>      |
| 41 yr  | F   | Wound           | <i>Neisseria cinerea</i>               |
| 15 mo  | M   | Ear             | <i>Branhamella catarrhalis</i>         |
| 73 yr  | M   | Blood           | <i>Sphingomonas paucimobilis</i>       |

### Bacterial Enteric Pathogens (January 2007)

| Age   | Sex | Pathogen                        | Age   | Sex | Pathogen                                                      |
|-------|-----|---------------------------------|-------|-----|---------------------------------------------------------------|
| 29 mo | M   | <i>Shigella sonnei</i>          | 11 mo | M   | <i>Salmonella</i> subsp IV<br>( <i>houtenae</i> ) 50:Z4,Z23;- |
| 5 yr  | M   | <i>Shigella sonnei</i>          | 84 yr | F   | <i>Salmonella mbandaka</i>                                    |
| 5 yr  | M   | <i>Shigella flexneri</i> type 2 | 54 yr | M   | <i>Salmonella enterica</i> I                                  |
| 5 mo  | F   | <i>Shigella sonnei</i>          | 17 yr | M   | <i>Salmonella enteritidis</i>                                 |
| 8 yr  | F   | <i>Shigella sonnei</i>          | 50 yr | F   | <i>Salmonella manhattan</i>                                   |
|       |     |                                 | 91 yr | M   | <i>Salmonella enteritidis</i>                                 |
|       |     |                                 | 30 mo | M   | <i>Salmonella oranienburg</i>                                 |
|       |     |                                 | 9 mo  | M   | <i>Salmonella oranienburg</i>                                 |
|       |     |                                 | 7 yr  | M   | <i>Salmonella enteritidis</i>                                 |

**Laboratory Diagnosed Mycobacterial Infections in Wisconsin during December 2006:**

| <i>Mycobacterium</i> species                |       | Brown    | Dane     | Eau Claire | Fond du Lac | Kenosha  | La Crosse | Marathon | Milwaukee | Outagamie | Racine   | Rock     | Sawyer   | Waukesha | Winnebago | Wood     | TOTALS     |
|---------------------------------------------|-------|----------|----------|------------|-------------|----------|-----------|----------|-----------|-----------|----------|----------|----------|----------|-----------|----------|------------|
| <i>M. tuberculosis</i> complex              | Pulm  | 1        | 1        |            |             |          |           |          | 3         |           |          | 1        |          |          |           |          | 6          |
|                                             | Extra |          |          |            |             |          |           |          | 1         |           |          |          |          |          |           |          | 1          |
| <b>Total <i>M. tuberculosis</i> complex</b> |       | <b>1</b> | <b>1</b> | <b>0</b>   | <b>0</b>    | <b>0</b> | <b>0</b>  | <b>0</b> | <b>4</b>  | <b>0</b>  | <b>0</b> | <b>1</b> | <b>0</b> | <b>0</b> | <b>0</b>  | <b>0</b> | <b>7</b>   |
| <i>M. avium</i> complex                     | Pulm  | 3        | 1        |            |             | 3        | 1         |          | 50        | 1         | 1        |          |          | 1        | 2         | 1        | 64         |
|                                             | Extra |          |          |            |             |          | 1         |          | 3         |           |          |          |          |          |           |          | 4          |
| <i>M. gordonae</i>                          | Pulm  | 2        | 2        | 1          |             |          | 1         |          | 6         |           |          |          | 1        |          |           |          | 13         |
|                                             | Extra |          |          |            |             |          |           |          |           |           |          |          |          |          |           |          | 0          |
| <i>M. abscessus</i>                         | Pulm  |          |          |            |             |          |           |          | 1         |           |          |          |          |          |           | 1        | 2          |
|                                             | Extra |          | 1        |            |             |          |           |          |           |           |          |          |          |          |           |          | 1          |
| <i>M. chelonae</i>                          | Pulm  | 1        |          |            |             |          |           | 1        | 2         |           |          |          |          |          |           |          | 4          |
|                                             | Extra |          | 1        |            | 1           |          |           |          | 3         |           |          |          |          |          |           |          | 5          |
| <i>M. fortuitum</i> group                   | Pulm  |          |          |            |             |          |           | 1        | 2         |           |          | 1        |          |          |           |          | 4          |
|                                             | Extra | 1        |          | 1          |             |          |           |          | 1         |           |          |          |          |          | 1         |          | 4          |
| <i>M. kansasii</i>                          | Pulm  |          |          |            |             |          |           |          | 1         |           |          |          |          |          |           |          | 1          |
|                                             | Extra |          |          |            |             |          |           |          |           |           |          |          |          |          |           |          | 0          |
| <i>M. marinum</i>                           | Pulm  |          |          |            |             |          |           |          |           |           |          |          |          |          |           |          | 0          |
|                                             | Extra |          |          |            |             |          |           |          | 1         | 1         |          |          |          |          |           |          | 2          |
| <i>M. mucogenicum</i>                       | Pulm  |          | 1        |            |             |          |           |          | 4         |           |          |          |          |          |           |          | 5          |
|                                             | Extra |          |          |            |             |          |           |          | 1         |           |          |          |          |          |           |          | 1          |
| <i>M. xenopi</i>                            | Pulm  |          |          |            |             |          |           |          | 3         |           |          |          |          |          |           | 1        | 4          |
|                                             | Extra |          |          |            |             |          |           |          |           |           |          |          |          |          |           |          | 0          |
| <i>M. bovis</i> BCG                         | Extra |          | 1        |            |             |          |           |          |           |           |          |          |          |          |           |          | 1          |
| <i>M. malmoense</i>                         | Pulm  |          | 1        |            |             |          |           |          |           |           |          |          |          |          |           |          | 1          |
| <i>M. parafortuitum</i> complex             | Extra |          |          |            |             |          |           |          | 1         |           |          |          |          |          |           |          | 1          |
| <i>M. terrae</i> complex                    | Pulm  |          |          |            |             |          |           |          | 1         |           |          |          |          |          |           |          | 1          |
| <b>TOTALS</b>                               |       | <b>7</b> | <b>8</b> | <b>2</b>   | <b>1</b>    | <b>3</b> | <b>3</b>  | <b>2</b> | <b>80</b> | <b>2</b>  | <b>1</b> | <b>1</b> | <b>1</b> | <b>1</b> | <b>3</b>  | <b>3</b> | <b>118</b> |

| <i>Mycobacterium</i> species       | Extra-pulmonary Site of Isolation                                                                                                                                                                                                                                |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>M. tuberculosis</i> complex     | 1 lower back tissue, 1 aortic (BCG)                                                                                                                                                                                                                              |
| <i>M. avium</i> complex            | 1 lymph node, 2 urine, 1 stool                                                                                                                                                                                                                                   |
| Other <i>Mycobacterium</i> species | <i>abscessus</i> : 1 sinus; <i>chelonae</i> : 1 leg, 1 foot, 1 nasal, 1 finger, 1 scalp; <i>fortuitum</i> group: 1 wrist, 1 pleural, 1 duodenal, 1 thigh; <i>marinum</i> : 1 hand, 1 tissue; <i>mucogenicum</i> : 1 blood; <i>parafortuitum</i> complex: 1 urine |

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

| Drug Resistance                         | Number of Isolates |
|-----------------------------------------|--------------------|
| Susceptible to all first-line drugs     | 5                  |
| Multi-drug resistant (INH and Rifampin) | 1                  |
| Out-of-state patient                    | 1                  |
| susceptibility testing pending          | 1                  |
| <b>TOTAL</b>                            | <b>8</b>           |

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](http://www.milwaukee.gov/healthlab) February 2007 ISSUE # 1214

### January 2007 Data

| Agent                       | No. of Isolates | Age   | Sex | Specimen                  | Symptoms                                 |
|-----------------------------|-----------------|-------|-----|---------------------------|------------------------------------------|
| Adenovirus                  | 3               | 5 mo  | M   | NP, colon swab, lung swab | Autopsy                                  |
| Influenza A (H1)            | 1               | 13 yr | M   | NP Referred isolate       | N/A                                      |
| Influenza A (H3)            | 1               | 19 yr | F   | Throat                    | URI, cough, fever, sore throat, headache |
| Influenza A (H3)            | 1               | 22 yr | F   | Throat                    | URI, cough, fever, sore throat, headache |
| Influenza A (H1)            | 1               | 38 yr | F   | NP Referred isolate       | N/A                                      |
| Influenza A (H1)            | 1               | 50 yr | F   | NP Referred isolate       | N/A                                      |
| Respiratory Syncytial Virus | 1               | 1 mo  | M   | NP Referred isolate       | N/A                                      |
| Rhinovirus                  | 1               | 15 yr | F   | Sputum Referred isolate   | N/A                                      |
| Rhinovirus                  | 1               | 10 mo | M   | NP Referred isolate       | N/A                                      |
| Varicella Zoster Virus      | 1               | 20 yr | F   | R lower quadrant          | Lymphadenopathy, vesicular rash          |
| Herpes Simplex, type 1      | 7               |       |     |                           |                                          |
| Herpes Simplex, type 2      | 17              |       |     |                           |                                          |

\*N/A – Not Available

| Agent                        | Method            | Tested | Positive | % Positive |
|------------------------------|-------------------|--------|----------|------------|
| <i>Chlamydia trachomatis</i> | ProbeTec          | 525    | 69       | 13.1%      |
| <i>Neisseria gonorrhoeae</i> | ProbeTec/GenProbe | 691    | 90       | 13.0%      |
| Mumps                        | EIA               | 40     | 0        | 0.0%       |
| Influenza virus              | Real-time RT-PCR  | 24     | 8        | 33.0%      |
| Norovirus                    | Real-time RT-PCR  | 6      | 0        | 0.0%       |
| HSV                          | Real-time PCR     | 5      | 5        | 100.0%     |

### Important News

**The following new Real-time PCR-based tests are now being offered by the City laboratory:**

- 1) Norovirus (Geno-groups GI & GII: Single/Duplex assay) – Please call the Lab prior to submission
- 2) Influenza (Subtypes A – H1, H3, H5) and B (Single, Duplex and/or Multiplex assay)
- 3) Mumps Virus (Duplex assay)
- 4) Herpes Simplex Virus (HSV Type 1 & 2: Multiplex assay)
- 5) Enterovirus (Duplex assay)

**Test Method Change:** The City lab has changed confirmatory Syphilis testing from FTA-ABS test to TPPA as of August 1, 2006.

**Discontinuation of Tests:** As of Nov 1, 2006, the City Lab had discontinued the complement fixation test.



Steve Gradus, Ph.D., ABMM, Laboratory Director

