Effective January 15, 2008, the MLabs Immunology Laboratory began performing an alternative method for antinuclear antibody testing utilizing multiplexed fluorescent immunoassay on a BioPlex 2200 analyzer (Bio-Rad Laboratories). The ANA screen test detects autoantibodies to 11 clinically relevant antibodies (dsDNA, SS-A, SS-B, Sm, RNP, SmRNP, Scl-70, Jo-1, Centromere B, Ribosomal P, and Chromatin). A negative result means that the patient’s serum shows no reactivity for these common antibodies associated with connective tissue diseases. The BioPlex 2200 will also be utilized for specific ENA testing.

MLabs will continue to offer the traditional ANA by indirect immunofluorescence (order code NAB). Because ANA–IFA detects many more potential antibodies, it will have a slightly better sensitivity for detecting patients with SLE than will the multiplex immunoassay. However, this is countered by the fact that the multiplex immunoassay will have a lower positive rate in patients without connective tissue diseases, and that it eliminates some of the very weak positives (titer 1:80) often seen by IFA that have no detectable specific antibodies. ANA testing is most useful as an aid for the diagnosis of SLE and Scleroderma (Table 1). It is only marginally useful for Sjogren’s syndrome and Polymyositis.

A positive ANA test, regardless of whether it is determined by traditional IFA or newer immunoassay methods, indicates that some nuclear antigen is reacting with antibodies in the patient serum. Additional useful diagnostic and prognostic information can be gained in ANA positive patients by knowing the specificity of the autoantibody.

Table 1: Percent of patients positive by ANA

<table>
<thead>
<tr>
<th>Disease</th>
<th>% ANA Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLE</td>
<td>93 - 97</td>
</tr>
<tr>
<td>Scleroderma</td>
<td>60 - 80</td>
</tr>
<tr>
<td>Sjogren's Syndrome</td>
<td>40 - 70</td>
</tr>
<tr>
<td>Polymyositis, Dermatomyositis</td>
<td>30 - 80</td>
</tr>
<tr>
<td>Rheumatoid arthritis</td>
<td>30 - 50</td>
</tr>
<tr>
<td>Normal individuals 1:80 titer</td>
<td>10</td>
</tr>
<tr>
<td>Normal individuals 1:160 titer</td>
<td>5</td>
</tr>
</tbody>
</table>

From Kavanaugh A et al, Arch Pathol Lab Med 2000; 124:71-81
ies that are detected. Clearly defined relationships exist between antibody specificity and type of collagen vascular disease. Table 2 lists the most useful relationships between disease type and antibody specificity. The value of any one antibody for diagnosis may be reduced significantly if the patient serum displays multiple antibodies.

The BioPlex 2200 system, used both to screen for a positive ANA and to measure specific extractable nuclear antibodies, utilizes antigens obtained from a variety of sources. The types of antigens utilized and their clinical utility are discussed in this section.

**SMITH (SM) AND NUCLEAR RIBONUCLEOPROTEIN (RNP)**

Antibodies to the Sm antigen represent a highly specific marker for SLE, but only occur in 25 – 35% of patients with the disease. Antibodies to RNP occur in 30 – 40% of patients with SLE, but are not specific for SLE. Antibodies to RNP are present in nearly all patients with Mixed Connective Tissue Disease (MCTD), and are specific for this disorder when all other antibodies are negative. The Sm and RNP antibodies are closely associated, part of a protein and small nuclear RNA complex. The Bioplex 2200 ANA screen test system has beads coated with affinity purified Sm, with recombinant antigens RNP-68 and RNP-A, and a separate bead coated with Sm/RNP combined purified antigen.

**SS-A (RO) AND SS-B (LA)**

These antibodies have a strong association with Sjogren’s syndrome and can be used to support the clinical diagnosis. SS-A is present in 70 – 75% and SS-B in 60 – 65% of patients with Sjogren’s syndrome. However, both SS-A and SS-B antibodies are present in SLE and other connective tissue disorders, so their presence must be interpreted in the clinical context. The Bioplex 2200 test system uses an affinity purified SSA 60 antigen, a second SSA 52 recombinant antigen, and an affinity purified SS-B antigen.

**SCL-70**

Antibodies to Scl-70, or DNA topoisomerase, are associated with scleroderma (positive in 20 – 60% of cases), but they may also rarely occur in other connective tissue diseases. The presence of anti-Scl-70 is associated with the more diffuse form of the disease, which carries a worse prognosis. The BioPlex assay uses a recombinant Scl-70 protein.

**JO-1**

Antibodies to JO-1, or histidyl-RNA-synthetase, are associated with a subgroup of connective tissue diseases that include polymyositis, dermatomyositis, or myositis associated with other rheumatic diseases. It is present in 20 – 40% of patients with myositis, and most JO-1 positive patients show evidence of interstitial lung involvement. The BioPlex assay uses a recombinant JO-1 antigen.

**CENTROMERE B**

There is an association between the Centromere pattern on IFA and CREST Syndrome, the milder form of scleroderma. The Bioplex assay uses a recombinant Cent B antigen and immunoassay results have been shown to correlate very well with the IFA centromere pattern.

**DOUBLE STRANDED DNA AND CHROMATIN**

Antibodies to both dsDNA and chromatin occur very commonly in patients with SLE, and help support the diagnosis. Anti-dsDNA can also be used to monitor disease activity over time and assess prognosis. The Bioplex screen uses dsDNA synthesized by PCR as the antigen coated on beads. It also uses purified DNA-histone complex as the antigen for the chromatin portion of the test. This allows the screen to detect antibodies that recognize only dsDNA, only dsDNA-histone complexes, or both.

**RIBOSOMAL P**

This antibody occurs in about 20% of patients with SLE and is sometimes not detected by IFA. This antibody may indicate the presence of CNS involvement and neuropsychiatric symptoms. The BioPlex uses an affinity purified ribosomal P antigen.
Ideally, collagen vascular disease diagnosis is based on a combination of clinical symptoms and laboratory testing. It is not cost effective to follow up every positive ANA with assays for all 11 possible detectable antibody specificities. MLabs promotes a more cost effective strategy of following positive ANA tests with a quantitative anti-dsDNA assay (order code ADNA) and at initial screening an ENA 5 Antibody Panel (includes SS-A, SS-B, Sm, RNP, and SmRNP) (order code ENA5). This will account for the vast majority of positives. Other ENA antigens such as Scl-70, Centromere B, Jo-1, and Ribosomal P should not be routinely screened for, but ordered as individual tests as the differential diagnosis dictates. Specimens will be saved for 2 weeks to allow additional add-on testing on the original specimen to be requested when indicated.

In summary, the following individual tests and panels will be available:

- Antinuclear Antibody (ANA) Screen (ANA)
- Antinuclear Antibody (ANA) by IFA (NAB)
- SS-A (Ro) and SS-B (La) Panel (SSASSB)
- ENA 3 Antibody Panel (SMRN): includes Smith, SmRNP, and RNP
- ENA 5 Antibody Panel (ENA5): includes SS-A, SS-B, Smith, SmRNP, and RNP
- ENA 7 Antibody Panel (ENA7): includes SS-A, SS-B, Smith, SmRNP, RNP, Jo-1, and Scl-70
- ENA 11 Antibody Panel (ENA11): includes SS-A, SS-B, Smith, SmRNP, RNP, Jo-1, Scl-70, Centromere B, ds-DNA, and Ribosomal P

Screening Algorithm for Connective Tissue Disorders

```
Anti-CCP (CCP)
   Positive
     Supports the diagnosis of rheumatoid arthritis.
   Negative
     No further testing necessary.

Antinuclear antibodies (ANA)
   Positive
     Common antibodies to extractable nuclear antigens (ENAs).
     ENAs: SS-A, SS-B, SMITH, SMRNP, RNP or SMRN for SLE or MCTD or SSASSB for Sjogren’s
   Negative
     Supports diagnosis of SLE. Useful in monitoring disease activity.

Anti-dsDNA (ADNA)
   Positive
     SCL-70 for Scleroderma or JO-1 for Myositis or CENT B for CREST or RIBO P for SLE
   Negative
     No further testing necessary.

If patient symptoms are compelling for SLE, request ANA-IFA (order code NAB).
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Spotlight on Arul Chinnaiyan, M.D., Ph.D.

Arul M. Chinnaiyan, M.D., Ph.D. has been named one of 15 of the nation’s top physician-scientists who have been selected for a position as an investigator of the Howard Hughes Medical Institute (HHMI) in an initiative that underscores HHMI’s commitment to ensuring that basic research discoveries are translated into improved treatments for patients.

Dr. Chinnaiyan’s team has published groundbreaking research on the discovery that pieces of two chromosomes can trade places with each other and cause two genes to fuse together. The fused genes then override the “off” switch that keeps cells from growing uncontrollably, causing prostate cancer to develop. Chinnaiyan and his team have shown the fusions actually cause prostate cancer to develop.

The gene fusion research is the centerpiece project of Chinnaiyan’s new center, the Michigan Center for Translational Pathology. The center is founded around the idea of translating laboratory research findings into a test or treatment that will impact patients. The center brings together experts in genomics, proteomics and bioinformatics to look at common patterns and potential targets in cancer and other diseases.

Chinnaiyan’s research focuses on examining the genes, proteins and other markers on cells to develop new diagnostic tests or screening tools as well as targeted treatments for cancer and other diseases, with the key being to translate these laboratory discoveries into clinical applications.

Arul Chinnaiyan is professor of pathology and urology at the U-M Medical School. He received his bachelor’s, doctorate and medical degrees all from the University of Michigan. He is a recipient of the Burroughs Wellcome Fund Clinical Scientist Award in Translational Research and of the Ramzi Cotran Young Investigator Award from the United States and Canadian Academy of Pathology. He was recently elected a member of the American Society for Clinical Investigation. He was the leader of a group of scientists who recently received the inaugural American Association of Cancer Research “Team Science” Award for their discovery of gene fusions in prostate cancer.

Test Updates

New Tests

**ABL1 KINASE DOMAIN MUTATION**

Effective December 17, 2007, the MLabs Molecular Diagnostics Laboratory began performing ABL1 Kinase Domain Mutation Detection by reverse transcription followed by nested polymerase chain reaction (PCR). If a PCR product is detected, sequencing analysis will be performed to detect ABL1 kinase domain mutations if present.

Collection Instructions: Collect blood (5 – 7 mL) or bone marrow (minimum 1 mL) in a lavender top (EDTA) or yellow top (ACD) tube. Refrigerate and send intact specimen within 48 hours of collection.

Chronic myelogeneous leukemia (CML) is characterized by the presence of the Philadelphia chromosome, the product of the t(9;22)(q34;q11) translocation. This translocation results in the BCR-ABL fusion protein with constitutive ABL tyrosine kinase activity. The kinase inhibitor imatinib (STI571, Gleevec) inhibits ABL kinase activity and is now the standard of care for early phase CML. Prolonged treatment with imatinib can lead to drug resistance, especially in patients with advanced disease. A large portion of resistant patients have acquired point mutations in the ABL kinase domain that renders the kinase resistant to the drug. This test detects greater than 85% of the reported ABL mutations (amino acid residues 235 through 368) that lead to imatinib resistance. The test may detect mutations prior to relapse.

**AMINO ACIDS, QUANTITATIVE, URINE**

Effective November 19, 2007, the MLabs Biochemical Genetics Laboratory began performing Amino Acid, Quantitative, Urine testing. This test is used for diagnosis of suspected amino acid and urea cycle disorders. An interpretive report is provided.

Collection Instructions: Collect 10 mL (minimum 5 mL) random urine specimen and freeze. Freeze each specimen immediately after collection if multiple collections are needed to reach the minimum volume. Include the patient’s family history, clinical condition (asymptomatic or acute), diet, and a list of current medications with the test requisition.

**KIT (D816V) MUTATION DETECTION**

The MLabs Molecular Diagnostics Laboratory began testing for KIT (D816V) Mutation Detection by Allele-Specific PCR effective November 12, 2007.

This test is used for qualitative detection of the KIT c.2447A>T (D816V) mutation found in most adults (>80%) with systemic mastocytosis. Detection of the KIT D816V mutation can aid in
diagnosis of systemic mastocytosis and guide choice of therapy since it is associated with resistance to imatinib mesylate. The KIT D816V mutation also occurs in some cases of acute myelogenous leukemia and seminoma. This test is not intended to detect minimal residual disease.

Collection Instructions: Collect blood or bone marrow in a lavender top tube. Refrigerate and send intact blood or bone marrow specimen within 48 hours of collection. Fresh tissue specimens may be sent in saline or RPMI. Fresh tissues must be processed for DNA isolation within 24 hours to reduce the effect of nucleases. Alternatively, tissue specimens may be frozen within 1 hour of collection and sent frozen on dry ice. Frozen tissues can be stored indefinitely at -70°C before the analysis is performed. Paraffin-embedded tissues are also acceptable. Include any pertinent patient clinical history or diagnosis.

PLATELET FUNCTION TESTS

Effective September 4, 2007, the MLabs Coagulation Laboratory offers Aspirin and Plavix Platelet Function Tests. These tests aid in the detection of platelet inhibition due to aspirin or P2Y12 inhibitor (plavix) therapy.

Collection Instructions: Collect specimen in a 2.7 mL blue top (citrate 3.2%) tube using a 21 gauge or larger needle; do not use 1.8 mL tube. Mix by inversion. Do not centrifuge. Whole blood specimen should arrive at lab within 2 hours of collection; transport at room temperature. If specimen is drawn through an indwelling catheter, the line should be flushed with 5 mL of saline and the first 5 mL of blood or six times the deadspace volume of the catheter being used discarded. Specimens will be rejected if not properly filled, clotted, or grossly hemolyzed.

Reference Range, Aspirin Platelet Function: Test results are reported in Aspirin Reaction Units (ARU). 350-549 ARU: Therapeutic range for platelet inhibition (patient’s aspirin is working effectively); 550-700 ARU: Non-therapeutic range for platelet inhibition (patient is not responding to aspirin).

Reference Range, Plavix Platelet Function: Test results are reported as percent inhibition. Therapeutic: Higher % inhibition indicates greater anti-platelet effect; Presurgical: <20% inhibition.

RETT SYNDROME GENE SEQUENCING

Effective October 17, 2007, the MLabs Molecular Genetics Laboratory brought Rett Syndrome (MECP2) gene sequencing service in-house. This assay is used for confirmation of a diagnosis of Rett Syndrome, for carrier testing in families with a known MECP2 mutation, and for analysis for the presence of MECP2 mutations in X-linked mental retardation patients.

Collection Instructions: Collect 5-10 mL (minimum 3 mL) specimen in a lavender top tube. Send intact whole blood specimen within 24 hours if stored at room temperature or within 5 days if stored refrigerated. Include the patient’s family history, pedigree, and ethnicity on the test requisition. Obtaining informed consent from the patient prior to genetic testing is strongly recommended. If desired, a consent form can be obtained from the MMGL Molecular Genetics Laboratory by contacting the MLabs Client Services Center at 800-862-7284.

Test Methodology, Reference Range, and Specimen Handling Changes

CHROMOSOME BREAKAGE ANALYSIS

Please note that Rockefeller University Hospital no longer performs Chromosome Breakage Analysis for Fanconi Anemia. This testing is now sent to Dana Farber Cancer Institute. Test includes cytogenetic quantitation of chromosomal breakage in response to diepoxybutane (DEB) and mitomycin C (MMC).

Collection Instructions: Collect specimen in a green top tube (sodium heparin). Send 20 mL (minimum 3 mL) intact specimen at room temperature. Skin biopsy specimens are also acceptable. Specimens are accepted by MLabs Monday, Wednesday, and Thursday only (specimen must be received at MLabs by 6:00 pm).

HISTONE ANTIBODY

Effective January 15, 2008, Histone Antibody testing is sent to Mayo Medical Laboratories. This test is used for the evaluation of patients suspected of having drug induced lupus erythematosus.

Collection Instructions: Collect specimen in a red top tube. Centrifuge, aliquot 0.5 mL of serum into a plastic vial and refrigerate.

Reference Range: <1.0 Unit (negative).

LUPUS ANTICOAGULANT SCREEN

Effective February 4, 2008, the MLabs Coagulation Laboratory added Prothrombin Time and INR to the Lupus Anticoagulant Screen Panel. The new panel includes Tissue Thromboplastin Inhibition Test (TTI), Dilute Russell’s Viper Venom Test (DRVVT), Partial Thromboplastin Time (PTT), Prothrombin Time (PT), and INR.

MEPROBAMATE, SERUM

Mayo Medical Laboratories has discontinued their Meprobamate assay effective January 8, 2008; this test is now sent to MedTox Laboratories.

Collection Instructions: Collect specimen in a red top or green top tube. Centrifuge, aliquot 2 mL (minimum 0.3 mL) of serum or plasma into a plastic vial and refrigerate or freeze.

Reference Range: 5 – 20 µg/mL. Critical Value: 35 µg/mL.
**METHSUXIMIDE, SERUM**

Mayo Medical Laboratories has discontinued their Methsuximide assay effective January 8, 2008; this test is now sent to MedTox Laboratories.

Collection Instructions: Collect specimen in a red top or green top tube. Centrifuge, aliquot 2 mL (minimum 0.3 mL) of serum or plasma into a plastic vial and refrigerate or freeze.

Reference Range: 10 – 40 µg/mL. Critical Value: 55 µg/mL.

**NEURON SPECIFIC ENOLASE**

Effective November 20, 2007, Mayo Medical Laboratories implemented a new test methodology, Homogeneous Time Resolved Fluorescence (HTRF) for the Neuron Specific Enolase, Serum and CSF assays.

Reference Range: < or = 15 ng/mL.

**PARANEOPLASTIC AUTOANTIBODY**

Anti-glial/neuronal nuclear autoantibody-type 1 (AGNA-1) is recognized as a marker of a patient’s immune response to a cancer (usually a small-cell lung carcinoma, SCLC) that is usually limited in metastasis, but is manifest as an autoimmune neurological disorder.

Effective December 17, 2007, AGNA-1 will now be reported as a neuronal nuclear autoantibody within the current Paraneoplastic Evaluations (Serum and CSF).

**PORPHYRINS PROFILE, PLASMA**

Effective November 26, 2007, light protection is mandatory for the Porphyrins Profile, Plasma, assay. Specimens not protected from light will be rejected.

Collection Instructions: Collect specimen in a green top tube following an overnight (12-14 hour) fast. Patient should not consume alcohol for 24 hours prior to specimen collection. Centrifuge, aliquot 3 mL of plasma into a brown tinted plastic vial (available from MLabs) and freeze. Protect specimen from light. Include a list of the patient’s current medications with the test requisition.

**PROTEIN S ACTIVITY**

Mayo Medical Laboratories changed instrumentation for the Protein S Activity assay effective September 11, 2007, resulting in a change in the reference range:

Reference Range: ADULT: Male: 65 - 160%; Female aged <50 yrs: 50 - 160%; Female aged >=50 yrs: 65 - 160%. PEDIATRIC (<16 yrs): Newborn infants have normal or near normal free protein S antigen (≥ 50%), although total protein S antigen is usually below the adult reference range. There are insufficient data concerning protein S activity in neonates, infants, and children, but normal or near normal activity (≥ 50%) probably is present by age 5 to 6 months.

**PROTEIN S ANTIGEN, FREE**

Effective December 17, 2007, the reference range for Protein S Free Antigen changed to 60 - 140%.

**REFERENCE LABORATORY CHANGE**

Effective December 3, 2007 (unless otherwise noted), the following tests are sent to Mayo Medical Laboratories. Contact MLabs for a detailed description of associated collection, handling and reference range changes.

- 5’ Nucleotidase
- 68 kD (hsp-70) Antibody
- Bicarbonate, Urine
- Bordetella pertussis Antibody, IgG & IgM
- Calcitonin
- Carboxyhemoglobin, Blood
- Chromogranin-A
- Clonazepam
- Clozapine
- Collagen Type II Antibody
- Complement, Total Alternative Pathway (AH50) Function
- Cryptosporidium Antigen Detection
- Cystic Fibrosis Diagnosti
- Digitoxin (effective 9/1/07)
- Disopyramide (effective 9/26/07)
- Estriol, Unconjugated
- Estrogens, Fractionated
- Fasciola Antibody (effective 10/17/07)
- Felhamate (effective 9/26/07)
- Fragile X Syndrome Mutation Detection
- Hepatitis E Antibodies, IgG & IgM
- Huntington Disease Mutation (effective 9/1/07)
- Immunoglobulin D Quantitation
- Lactic Acid Dehydrogenase Isoenzymes
- Leptospira Antibody
- Mercaptopurine
- Myeloperoxidase Antibodies
- Oxycodone, Serum
- Parathyroid Related Peptide
- Pregnenolone (effective 9/1/07)
- Propafenone (Rhythmol), Serum or Plasma (effective 9/26/07)
- Prostatic Acid Phosphatase
- Proteinase-3 Autoantibodies
- Rabies Antibody
- Selenium, Serum
- Testosterone, Bioavailable
- Thyroperoxidase Antibodies, Serum
- Thyrotropin Receptor Antibody
- Topiramate
**REPTILASE TIME**

Effective December 3, 2007, the MLabs Coagulation Laboratory moved the Reptilase Time assay from a manual to an automated method, resulting in a change in the reference range to: <22 seconds.

**THROMBIN TIME**

Effective December 3, 2007, the MLabs Coagulation Laboratory moved the Thrombin Time assay from a manual to an automated method, resulting in a change in the reference range to: <21 seconds.

**VITAMIN C, PLASMA**

Effective November 26, 2007, light protection is mandatory for the Vitamin C (Ascorbic Acid), Plasma, assay. Specimens not protected from light will be rejected.

Collection Instructions: Collect specimen in a green top tube following an overnight (12-14 hour) fast. Patient should not consume vitamin supplements for 24 hours prior to specimen collection. Centrifuge, aliquot 1 mL of plasma into a brown tinted plastic vial (available from MLabs) and freeze immediately. Protect specimen from light.

**Discontinued Tests**

**B AND T CELL GENE REARRANGEMENT BY SOUTHERN ANALYSIS**

Effective January 14, 2008, the MLabs Molecular Diagnostics Laboratory no longer offers B and T Cell Gene Rearrangement by Southern Analysis. Testing for B Cell (IgH) Gene Rearrangement or T Cell (TCRgamma) Gene Rearrangement by PCR is available.

**COAGULATION PANELS**

Due to limited use, the following Coagulation Panels have been discontinued effective January 1, 2008:

- Bleeding Time, Prolonged
- Coagulation Factor Inhibitor Evaluation
- PT and PTT, Prolonged
- PTT, Prolonged

**RISTOCETIN-INDUCED PLATELET AGGLUTINATION**

Effective December 3, 2007, the MLabs Coagulation Laboratory will no longer offer the Ristocetin-Induced Platelet Agglutination test. MLabs will continue to offer the Platelet Aggregation and Secretion test, which includes Ristocetin Induced Platelet Aggregation. Note that patients must have specimens collected at the University of Michigan Comprehensive Cancer Center Blood Drawing Station for this testing.

**MLabs Q & A**

Question answered by Steven Mandell, M.D., Director of MLabs Program and Donald Giacherio, Ph.D., Director of MLabs Chemical Pathology Laboratories

**QUESTION:** What is the significance and importance of the demographic information MLabs collects for prenatal screening Quad tests?

Prenatal screening for open neural tube defects and Down syndrome in the laboratory is based on epidemiologic monitoring - collecting data on large populations of apparently healthy women in order to identify those that, when compared to the median of the population, may be at increased risk for problems with their developing baby. Maintaining the proper balance between detecting those at risk while maintaining an acceptably low false-positive rate requires ongoing monitoring of not only the test performance but also the population upon which comparisons are made. Factors such as gestational age, maternal weight, maternal race, and diabetic status may affect analyte levels and these factors need to be adjusted for when converting values into a risk assessment for developmental abnormalities. Accurate epidemiologic information is critical to ensure that patient results are being analyzed with respect to their proper population cohort. Accurate gestational age is important because AFP, hCG, and unconjugated estriol levels all change during pregnancy. If a pregnancy is really in the 15th week but the laboratory is told the pregnancy is in the 17th week, the measured maternal serum values will be evaluated against inappropriate population medians. Correction for maternal weight is necessary because maternal weight is inversely proportional to the serum concentrations of all four analytes in the Quad test. Maternal race is another important factor. Black women have alpha-fetoprotein levels that are 10-15% higher than for white women, yet have a lower incidence of neural tube defects (NTD). If results are not adjusted for this epidemiologic difference, black women would be subject to an increased false positive rate for NTD and the concomitant anxiety and follow-up evaluation cost that would ensue. Insulin dependent diabetic (but not gestational diabetic) mothers have an increased NTD incidence, but maternal serum AFP levels that are in the range of 20% lower than those of non-diabetic women. Correct information on gestational age, maternal weight, race, and insulin dependent diabetes must be reported to the laboratory for the most accurate assessment of prenatal risks.

The University of Michigan, having a relatively robust collection of epidemiologic information, hopes to offer as accurate a risk assessment as possible. At this point we are also collecting demographic information other labs may not in order to determine whether there may be more differences between populations than is currently known, and thus a more accurate risk assessment.


**MLabs Spectrum**
MLabs News

U-M PREMIER CARE

Effective January 1, 2008, Blue Care Network and M-CARE have merged and do business as BCN. M-CARE PPO coverage is no longer available, but PPO coverage has been offered to M-CARE PPO members by Blue Cross Blue Shield of Michigan.

Effective January 1, 2008, the University of Michigan introduced U-M Premier Care to University of Michigan employees, families, and retirees. U-M Premier Care is administered by BCN Service Company in partnership with Blue Care Network of Michigan and resembles the M-CARE HMO in benefit coverage and plan design. GradCare is offered to benefits-eligible graduate students and is also administered by BCN. GradCare members receive a U-M Premier Care member ID card.

U-M Premier Care features a two-tiered provider network: Network 1 provides HMO-like benefits with access to nearly all of the former M-CARE network and Network 2 allows expanded access to BCN’s remaining providers, but with greater out-of-pocket expense.

Clinical laboratory and anatomic pathology services should be directed to a Network 1 laboratory. MLabs is a Network 1 provider; the complete list is as follows:

Beaumont Reference Laboratory ................................................................. 800-551-0488
Botsford General Hospital ........................................................................ 248-888-2580
Crittenton Hospital / Rochester Pathology PC ........................................... 248-652-5260
DMC Huron Valley Sinai Hospital / University Physician Group ............ 800-456-2154
Garden City Hospital .................................................................................. 734-458-4451
Genesys Regional Medical Center / Pathology Consultants PC ............. 810-606-5520
Henry Ford Macomb (formerly St. Joseph Mercy Macomb) ................. 810-263-2455
Henry Ford Macomb Warren (Bi-County Hospital) ................................. 586-759-7550
Hospital Consolidated Laboratories / Providence Hospital ................. 800-365-0106
Hurley Medical Center / Pathology Associates Inc. ................................ 810-257-9130
Lapeer Regional Hospital ................................................................. 810-667-5688
McLaren Regional Medical Center / Flint Medical Laboratory .......... 810-342-2199
MLabs / University of Michigan Health System ..................................... 800-862-7284
Mount Clemens Regional Medical Center ........................................... 800-982-9831
North Oakland Medical Center / Clarkston Pathology ......................... 248-857-7294
Oakwood Laboratories / Mainwaring Pathology Group ...................... 800-245-3725
POH Medical Center ............................................................................... 248-338-5348
St. John Clinical Pathology Laboratories .............................................. 800-863-5959
St. Joseph Mercy – Oakland / Northwest Pathology Consultants ....... 248-858-3600
St. Mary Mercy Hospital, Livonia ......................................................... 734-455-2580

U-M DEPARTMENT OF PATHOLOGY NEWS

Jeffrey Jentzen, M.D., will join the faculty as the Director of Autopsy and Forensic Services effective March 1, 2008. Dr. Jentzen was previously Chief Medical Examiner in Milwaukee County and Professor of Pathology at the Medical College of Wisconsin. He currently serves as President of the National Association of Medical Examiners and also served for six years as Secretary for the American Board of Medicolegal Death Investigators. Jeff’s extensive experience in building programs uniquely qualifies him to lead our efforts to make the University of Michigan a center of excellence in academic forensic medicine.