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Subject:	IMMUNOLOGY ANALYTIC PROTOCOLS				
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IMMUNOLOGY ANALYTIC PROTOCOLS

AUTOIMMUNE DISEASES

The AtheNA Multi-Lyte system detects IgG class antibodies in human sera to ten separate analytes (SS-A, SS-B, Sm, RNP, Scl-70, Jo-a, Centromere B, Histone, dsDNA and qualitative ANA) by a multiplexed bead suspension. The test system is intended to be used as an aid in the diagnosis of various autoimmune disorders.

1. FANA Profile – ANA screen and ANA Titer if screen is positive.
2. Connective Tissue Disease Panel – ANA screen and ANA titer are positive, an anti-dsDNA and an ENA screen are then reflexed. If the ENA screen is positive, eight antibodies (SS-A, SS-B, Sm, RNP, Scl-70, Jo-a, Centromere B, and Histone) are reflexed for analysis.
3. Antibodies to Extractable Nuclear Antigen Panel - If screen is positive, eight antibodies (listed above) are reflexed for analysis.
4. All antibodies may be ordered separately.
5. Vasculitis panel – detects IgG class antibody to 3 separate antigens in human serum: glomerular basement membrane, myeloperoxidase, and proteinase 3.

ELECTROPHORESIS

The Spife 3000 is used for automatic sample application, electrophoresis, staining, and fixing for better resolution and pattern separation for serum and urine proteins, CSF IgG IEF, hemoglobin (normal/abnormal) and immunofixation.

1. Immunoglobulin Quantitation – IgG, IgA, IgM, and protein electrophoresis.
2. Immunofixation (serum and urine) – Protein electrophoresis and immunofixation electrophoresis.
3. Hemoglobin Electrophoresis – Alkaline Hemoglobin electrophoresis is used as a screening method for normal to abnormal hemoglobin patterns. Acid hemoglobin electrophoresis is also used for abnormal hemoglobins.
4. Protein Electrophoresis (serum, urine, and CSF) – Protein electrophoresis helps differentiate glomerular, tubular, mixed proteinuria patterns, and monoclonal proteins in urine.
5. L/S Ratio – The determination of lecithin and sphingomyelin levels in amniotic fluid are performed by thin layer chromatography for estimating fetal lung maturity.

6. Oligoclonal profile – aids in diagnosis of inflammatory disease of the CNS by agarose gel isoelectric focusing and immunoblotting CSF and serum.

SHIGATOXIN

EHEC is an immunochromatographic rapid test for the qualitative detection of Shiga toxins 1 and 2 (also called Verotoxins) produced by *E. coli*. This is used in conjunction with the patient's clinical symptoms and other laboratory tests to aid in the diagnosis of diseases caused by enterohemorrhagic *E. coli* (EHEC) infections.

CLOSTRIDIUM DIFFICILE TOXIN A and B

C. Difficile Toxin A and B assay is an automated enzyme-linked fluorescent assay used to identify the major etiologic agent of antibiotic-associated pseudomembranous colitis (PMC).

HELICOBACTER PYLORI

Helicobacter pylori assay is an automated enzyme-linked fluorescent immunoassay for the detection of IgG antibodies to Helicobacter pylori. This assay is intended as an aid in the diagnosis of *H. pylori* infection in an adult symptomatic population.

ROTAVIRUS

The Rapid Immunocard Rotavirus Assay detects the presence of rotavirus antigen in stool. Rotavirus is a major cause of nonbacterial gastroenteritis especially in the very young and the elderly. Detecting the presence of the virus will facilitate proper patient isolation and eliminate possible unnecessary antibiotic treatment. Co-infection with bacterial pathogens are possible.

FEBRILE AGGLUTININS

Febrile antigens are used in a panel of agglutination tests for the diagnosis of certain febrile diseases such as Salmonellosis, Brucellosis, and Rickettsial diseases.

1. Typhoid H
2. Typhoid O
3. Para A and Para B for Salmonella
4. Rickettsial – Proteus OX19, OXK, and OX2
5. Pasteurella Tularensis
6. Brucella Abortus

LYME SEROLOGY

An automated qualitative enzyme linked fluorescent immunoassay is used for the detection of total antibodies (IgG/IgM) to *Borrelia burgdorferi* in patients with history, signs, or symptoms suggestive of infection.

HEPARIN ASSOCIATED ANTIBODY

An enzyme linked assay screening test is used in the confirmation of HIT (Heparin Induced Thrombocytopenia) which are antibodies directed against heparin complexes and platelet factor 4. Platelet factor 4 antibodies are present in most patients with HIT.

FUNGAL SEROLOGY

Ouchterlony Double Diffusion is used in determining in vitro precipitating antibodies to four systemic fungal pathogens.

1. Histoplasma capsulatum
2. Blastomyces dermatitidis
3. Coccidioides immitis
4. Aspergillus fumigatus

HEPATITIS PROFILE

Hepatitis test may be ordered individually or as a profile that consists of the listed below. Antibodies to Hepatitis B (Anti-HBs) may be ordered separately.

1. Hepatitis B Surface Antigen (HBsAg)
2. Hepatitis B Core IgM Antibody (HBcIgM)
3. Hepatitis C Antibody (HCV)
4. Hepatitis A IgM Antibody (HAVM)

HIV – HIV 1 / 2

A screening test for HIV. If positive, a Western blot will be mailed off. Analysis performed daily.

INFECTIOUS DISEASE

EBV G

EBV M } AtheNA

EBNA

CMVG

CMVM

Measles (Rubeola)

Mumps

Varicella zoster

SWEAT TEST

Performed on the Iotophoresis.

Outpatients are only performed on Tuesdays and must schedule an appointment with Medical Center Laboratory. Inpatients are performed as needed.