**Platelet Disorders by Electron Microscopy**

Platelet electron microscopy may be performed in cases in which patients present with apparent defects in primary hemostasis or abnormal platelet aggregometry results. The most common indication for the test is a suspected storage pool deficiency (SPD) secondary to a hereditary or acquired decrease in specific platelet organelles called granules. Deficiencies in the substances that alpha granules and/or dense (delta) granules contain may lead to bleeding disorders characterized by easy bruising, epistaxis, and prolonged bleeding times. Primary SPD is seen in several conditions including: Hermansky-Pudlak, Wiskott-Aldrich, Grey Platelet, and Chediak-Higashi Syndromes. In addition, other diseases such as Paris-Trousseau/Jacobsen and MYH9-related disorders are associated with other ultrastructural platelet abnormalities.

At UNMC, platelets are examined both by whole mount electron microscopy to assess the number of dense granules (normally more than 2 per platelet) and conventional transmission electron microscopy to evaluate platelet morphology.

**Specimen Requirements**

Blood: 9 ml whole blood in ACD (acid citrate dextrose) /yellow-top tubes, solution A or B. Minimum submission: 5 ml of whole blood.

**Storage/Transport**: Ambient temperatures (Do NOT refrigerate, place on dry or wet ice, or freeze)

Send specimens directly to the Electron Microscopy Laboratory via FedEx Overnight/First Out.

Address: Pathology Electron Microscopy Laboratory, Nebraska Medicine, 986495 Nebraska Medical Center, Wittson Hall Room 4028, Omaha, Nebraska 68198, Attn: Karen Sayre

If possible, notify the UNMC EM Lab/Karen Sayre via telephone as to when to expect a specimen or with any questions: 402-559-7729