Description Notes: Alvin L. Young filed this item under "Vietnam Veterans Twin Study." Provides proposed screening tests of hepatic function and references.
PROPOSED SCREENING TESTS OF HEPATIC FUNCTION (modified from 3)

<table>
<thead>
<tr>
<th>TEST</th>
<th>DETECTS HEPATIC ABNORMALITY</th>
<th>SENSITIVITY</th>
<th>SPECIFICITY</th>
<th>RATIONALE FOR UTILIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilirubin</td>
<td>Biliary obstruction</td>
<td>No</td>
<td>No</td>
<td>Standard test for biliary obstruction, specificity increased through use of other tests</td>
</tr>
<tr>
<td>Alkaline Phosphatase</td>
<td>Biliary obstruction</td>
<td>Yes</td>
<td>No</td>
<td>Very sensitive test, specificity increased through use of other tests</td>
</tr>
<tr>
<td></td>
<td>Infiltrative disease</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SGOT</td>
<td>Hepatocellular necrosis</td>
<td>Yes</td>
<td>No</td>
<td>Sensitive test, specificity increased through use of other tests</td>
</tr>
<tr>
<td>SGPT</td>
<td>Hepatocellular necrosis</td>
<td>Yes</td>
<td>Yes</td>
<td>Test is both sensitive and specific</td>
</tr>
<tr>
<td>GTTP</td>
<td>Biliary obstruction</td>
<td>Yes</td>
<td>No</td>
<td>Helps distinguish hepatic from non-hepatic origin of alkaline phosphatase;</td>
</tr>
<tr>
<td></td>
<td>Hepatocellular necrosis</td>
<td></td>
<td></td>
<td>one of the most sensitive indicators of chronic alcohol ingestion</td>
</tr>
<tr>
<td></td>
<td>Ethanol ingestion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serum Albumin &amp; Globulin</td>
<td>Cirrhosis</td>
<td>No</td>
<td>No</td>
<td>Helpful in detecting more severe degrees of hepatic damage</td>
</tr>
<tr>
<td></td>
<td>Hepatocellular necrosis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis Associated Antigens &amp; Antibodies</td>
<td>Viral hepatitis</td>
<td>Yes</td>
<td>Yes</td>
<td>Excellent tests for understanding hepatitis infection history</td>
</tr>
<tr>
<td>Aminopyrine Breath Test</td>
<td>Microsome induction</td>
<td>No</td>
<td>No</td>
<td>Quantitates microsomal function</td>
</tr>
<tr>
<td>Serum Bile Acids</td>
<td>Biliary obstruction</td>
<td>Yes</td>
<td>Yes</td>
<td>Sensitive and specific test</td>
</tr>
<tr>
<td></td>
<td>Hepatocellular necrosis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Porphyris</td>
<td>Porphyuria</td>
<td>Yes</td>
<td>Yes</td>
<td>Sensitive and specific test</td>
</tr>
</tbody>
</table>

6/17/83

FOR OFFICIAL USE ONLY
VIII. REFERENCES


Bogen, G. Symptoms in Vietnam veterans exposed to Agent Orange. JAMA; 1979; 242: 2391.


PROPOSAL - PROTOCOL II


Culliton, B.J. CDC finds no excess illness at Love Canal. *Science*; 1983; 220; 1254.


PROPOSAL - PROTOCOL II


Hepner, G. W., Vesell, E.S. Quantitative assessment of hepatic function by breath analysis after oral administration of (14C) aminopyrine. Annals of Internal Medicine. 1975; 83; 632-638.


Ibid. Table derived from data in Table 9.12, page 96.


Monteleone, P. Personal Communication, 1983. One chromosomal aberration per 10 cells is the standard for the cytogenetic laboratory at St. Louis University School of Medicine.


Reggiani, G. Medical survey techniques in the Seveso TCDD exposure.


Rowe, V.K., Hymans, T.A. Summary of toxicological information of 2,4-D and 2,4,5-T type herbicides and an evaluation of the hazards to livestock associated with their use. American J Vet Res; 1954; 15: 622-629.


PROPOSAL - PROTOCOL II


Walsh ref 5
Walsh ref 6
Walsh ref 7
Walsh ref 8
Walsh ref 9
Walsh ref 24
Walsh ref 25
Walsh ref 26
Walsh ref 22
Walsh ref 1
Walsh ref 2
Walsh ref 10
Walsh ref 11
Walsh ref 12
Walsh ref 13
Walsh ref 15
Walsh ref 14
Walsh ref 18
Walsh ref 19

Webb, W.B., Campbell, S.S. Hereditary aspects of sleep structure and length: twin correlations. Sleep Research; 1982; ?:102-?.

West, K.M. Diabetes; 1975; 24: 461- .

PROPOSAL - PROTOCOL II

Wolff, S. Problems and prospects in the utilization of cytogenetics to estimate exposure at toxic chemical waste dumps. *Environmental Health Perspectives*; 1983; 48; 25-27.

Zapato-Gayon, C., Zapato-Gayon, N., Gonzalez-Angulo, A. Clastogenic chromosomal aberrations in 26 individuals accidently exposed to ortho dichlorobenzene vapors in the National Medical Center in Mexico City. *Archives of Environment Health*; 1982; 37; 231-235.