POLYMORPHISM OF NATURAL-RESISTANCE-ASSOCIATED MACROPHAGE PROTEIN 1 (NRAMP1) DS43N GENE AND EXPRESSION OF NRAMP1 ON LUNG TUBERCULOSIS PATIENTS AND NURSES IN SURABAYA
(Rahayu Anggraini et al.)

45 kDa FIMBRIA PROTEIN OF PROTEUS MIRABILIS AS HEMAGGLUTININ AND ADHESION PROTEIN
(Diana Chusna Mufida et al)

DIAGNOSTIC VALUE OF WIDAL SLIDE ASSAY USING ONE PHAGE TYPE LOCAL ANTIGEN COMPARED WITH FOUR PHAGE TYPES LOCAL ANTIGEN IN TYPHOID FEVER PATIENTS IN SURABAYA
(Yetti Hemandingsih, Betty Agustina T, Ayadi)

DIFFERENCES OF TUMOR NECROSIS FACTOR ALPHA (TNF-α) PLASMA CONCENTRATION IN MALARIA PATIENTS WITH ANEMIA AND WITHOUT ANEMIA
(Hendri Retno Soetyowati, Endang Retnoiwati, Juli Boeniarsono)

DIFFERENCES ON EPIDERMAL GROWTH FACTOR (EGF) LEVELS BETWEEN UNPRESERVED AND PRESERVED AMNIOTIC MEMBRANE
(S. Gunawan Effendi, Gatut Suherindo, Indro Handoyo)

CYTOTOXICITY EFFECT OF CURCUMA AERUGINOSA EXTRACT ON FIBROBLAST WITH MTT ASSAY METHOD
(Th Hartini Yuliyawati, Eka Pramythta Hestianah)

CORRELATION BETWEEN BLOOD SEROTONIN LEVEL WITH CONSCIOUSNESS LEVEL AND DEPRESSION SYMPTOMS IN MODERATE BRAIN INJURY PATIENTS
(Andre Kusuma, M. Ariffin Parewendi, Margarita Maria Marimis)

BLOOD SEROTONIN LEVEL WITH THE DEPRESSION SITUATION AND NEUROCOGNITIVE AS A REFLECTION OF NEURON CONDITION SIX MONTHS AFTER MODERATE BRAIN INJURY
(Ila Tunisya, Margarita M. Marimis, Andre Kusuma)

ASSOCIATION BETWEEN HEART DISEASE IN PREGNANCY WITH CARDIAC EVENTS
(Suryono, Jatno Kanyono)

ENDOSCOPIC FINDING OF UPPER GASTROINTESTINAL BLEEDING AT DR SOETOMO HOSPITAL, SURABAYA
(Titong Sugiharto et al)

CORRELATION BETWEEN TNF-α, IL-1β, PGE2 AND sPLA2 LEVELS WITH SEVERITY OF DENGUE HEMORRHAGIC FEVER
(Purwati, Endang Retnoiwati K)

Case Report:
AUDITORY NEUROPATHY IN DR SOETOMO HOSPITAL
(Haris M Ekorini)
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>POLYMORPHISM OF NATURAL-RESISTANCE-ASSOCIATED MACROPHAGE PROTEIN 1 (NRAMP1) D543N GENE AND EXPRESSION OF NRAMP1 ON LUNG TUBERCULOSIS PATIENTS AND NURSES IN SURABAYA</td>
<td>78 - 87</td>
</tr>
<tr>
<td>2</td>
<td>45 kDa FIMBRIA PROTEIN OF Proteus mirabilis AS HEMAGGLUTININ AND ADHESION PROTEIN</td>
<td>88 - 94</td>
</tr>
<tr>
<td>3</td>
<td>DIAGNOSTIC VALUE OF WIDAL SLIDE ASSAY USING ONE PHAGE TYPE LOCAL ANTIGEN COMPARED WITH FOUR PHAGE TYPES LOCAL ANTIGEN IN TYPHOID FEVER PATIENTS IN SURABAYA</td>
<td>95 - 101</td>
</tr>
<tr>
<td>4</td>
<td>DIFFERENCES OF TUMOR NECROSIS FACTOR ALPHA (TNF-Î±) PLASMA CONCENTRATION IN MALARIA PATIENTS WITH ANEMIA AND WITHOUT ANEMIA</td>
<td>102 - 111</td>
</tr>
<tr>
<td>5</td>
<td>DIFFERENCES OF EPIDERMAL GROWTH FACTOR (EGF) CONCENTRATION BETWEEN UNPRESERVED AND PRESERVED AMNIOTIC MEMBRANE</td>
<td>112 - 119</td>
</tr>
<tr>
<td>6</td>
<td>CYTOTOXICITY EFFECT OF CURCUMA AERUGINOSA EXTRACT ON FIBROBLAST WITH MTT ASSAY METHOD</td>
<td>120 - 124</td>
</tr>
<tr>
<td>7</td>
<td>CORRELATION BETWEEN BLOOD SEROTONIN LEVEL WITH CONSCIOUSNESS LEVEL AND DEPRESSION SYMPTOMS IN MODERATE BRAIN INJURY PATIENTS</td>
<td>125 - 131</td>
</tr>
<tr>
<td>8</td>
<td>BLOOD SEROTONIN LEVEL WITH DEPRESSION SITUATION AND NEUROCOGNITIVE AS A REFLECTION OF NEURON CONDITION IN SIX MONTHS AFTER MODERATE BRAIN INJURY</td>
<td>132 - 138</td>
</tr>
<tr>
<td>9</td>
<td>ASSOCIATION BETWEEN HEART DISEASE IN PREGNANCY WITH CARDIAC EVENTS</td>
<td>139 - 145</td>
</tr>
<tr>
<td>10</td>
<td>ENDOSCOPIC FINDING OF UPPER GASTROINTESTINAL BLEEDING AT DR SOETOMO HOSPITAL, SURABAYA</td>
<td>146 - 149</td>
</tr>
<tr>
<td>11</td>
<td>CORRELATION BETWEEN TNF-Î±, IL-1Î², PGE2 AND sPLA2 LEVELS WITH SEVERITY OF DENGUE HEMORRHAGIC FEVER</td>
<td>150 - 154</td>
</tr>
<tr>
<td>12</td>
<td>Case Report: AUDITORY NEUROPATHY IN Dr. SOETOMO HOSPITAL</td>
<td>155 - 160</td>
</tr>
</tbody>
</table>
45 kDa FIMBRIA PROTEIN OF Proteus mirabilis AS HEMAGGLUTININ AND ADHESION PROTEIN

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Abstract

Proteus mirabilis is opportunistic and nosocomial pathogen that usually found in clinical specimen from patients with catheter. The pathogenic mechanism of the bacteria are not fully elucidated especially its potential activity of the protein as hemagglutinin and adhesion molecule. The aim of this study is to evaluate the role of 45 kDa fimbria protein from P. mirabilis. After identification, bacterial isolate of fimbria fraction 12.5 % SDS-PAGE were used to isolate fimbria protein followed by hemagglutinin test and in vitro adhesion test. The study showed that the 45 kDa fimbria protein of P mirabilis was a hemagglutinin protein that could agglutinate mice erythrocytes, rabbit erythrocytes, and human group O erythrocytes. Hemaglutination test were negative on erythrocytes human blood group A,B, and AB. The 45 kDa fimbriae protein was also adhesion protein showed by its activity to adherence to rabbit vesica urinaria epithel receptor. The increase dose of 45 kDa fimbriae protein will decrease the amount of P mirabilis bacteria to adherence to rabbit vesica urinaria epithel (p< 0.05 ).

Keyword : Proteus, mirabilis, fimbriae, hemagglutinin, protein, adhesion, protein,

Daftar Pustaka :