FOLIA MEDICA INDONESIANA

Vol. 47 No. 4 October - December 2011

ISSN 0303 - 7932

ANTIBIOTIC RESISTANCE CONTROL PROGRAM (ARCP) IMPROVING ANTIBIOTIC USE IN PEDIATRIC HEMATOLOGY AND ONCOLOGY PATIENTS AT DR SOETOMO HOSPITAL IN 2006 AND 2008
(Mia Ratwita Andarsini, IDG Ugrasena)

SENSITIVITY AND SPECIFICITY OF CLINICAL FEATURES OF INFLUENZA LIKE ILLNESS AND LABORATORIAL FINDINGS FOR DIAGNOSED INFLUENZA A (H1N1) IN CHILDREN
(Retro Ash Setyoningrum, Herwina Brahmantya, Dwi Putri Lestari, Landia Setiawati)

RISK FACTORS FOR BIRTH ASPHYXIA
(Marton Tri Utomo)

LIVER INVOLVEMENT IN CHILDREN WITH DENGUE INFECTION
(Bagus Setyoobedi et al)

MECHANICAL VENTILATION VS NASAL CPAP DURATION AND THE RISK OF LATE ONSET SEPSIS IN PREMATURE BABIES WITH RESPIRATORY DISTRESS SYNDROME
(Hartojo, Martono Tri Utomo)

NUCLEIC ACID AMPLIFICATION OF THE RpoB REGION OF Mycobacterium tuberculosis IN PULMONARY TUBERCULOSIS DIAGNOSIS
(Yudita Wulandari, Nurul Wiyoyo, Ni Made Mertaniasih)

EFFECT OF ORAL-ESTROGEN CONJUGATE ON B-LYMPHOCYTE PROLIFERATION IN THE PEYER'S PATCHES OF ADULT FEMALE BALB/C MICE ILEUM
(Viskasari Pintoko Kalarjati, Joni Susanto, Tri Hartini Yulawati)

THE EFFECT OF EMOTIONAL QUALITY MANAGEMENT ON STRESS, AND OPTIMISM IN WOMEN WITH BREAST CANCER
(Padoli, Suhartono Taat Putra, Yusti Probawati Rahayu, Elyana Asnar Suhartono)

QUALITY AND EFFICIENCY IMPROVEMENT OF PROFESSIONAL MEDICAL DOCTOR EDUCATION IN PUBLIC HEALTH FIELD USING OBJECTIVE STRUCTURED PUBLIC HEALTH EXAMINATION (OSPE) APPROACH AT FACULTY OF MEDICINE AIRLANGGA UNIVERSITY
(Budi Utomo, Djohar Noeswantoro, Widati Fatmaningrum)

Review Article:
ROLE OF VE-CADHERIN IN VASCULAR PERMEABILITY REGULATION
(Ira Dharmawati)

DEPTH OF HUMAN HYPOPHYSIAL FOSSA DUE TO AGING PROCESS: A MORPHOLOGIC RESEARCH
(Ibrahim N(n)oto)

International Online Distribution by ProQuest™
www.proquest.com
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ANTIBIOTIC RESISTANCE CONTROL PROGRAM (ARCP) IMPROVING ANTIBIOTIC USE IN PEDIATRIC HEMATOLOGY AND ONCOLOGY PATIENTS AT DR SOETOMO HOSPITAL IN 2006 AND 2008</td>
<td>203 - 206</td>
</tr>
<tr>
<td>2</td>
<td>SENSITIVITY AND SPECIFICITY OF CLINICAL FEATURES OF INFLUENZA LIKE ILLNESS AND LABORATORICAL FINDINGS FOR DIAGNOSED INFLUENZA A (H1N1) IN CHILDREN</td>
<td>207 - 210</td>
</tr>
<tr>
<td>3</td>
<td>RISK FACTORS FOR BIRTH ASPHYXIA</td>
<td>211 - 214</td>
</tr>
<tr>
<td>4</td>
<td>LIVER INVOLVEMENT IN CHILDREN WITH DENGUE INFECTION</td>
<td>215 - 218</td>
</tr>
<tr>
<td>5</td>
<td>MECHANICAL VENTILATION VS NASAL CPAP DURATION AND THE RISK OF LATE ONSET SEPSIS IN PREMATURE BABIES WITH RESPIRATORY DISTRESS SYNDROME</td>
<td>219 - 223</td>
</tr>
<tr>
<td>6</td>
<td>NUCLEIC ACID AMPLIFICATION OF THE rpoB REGION OF Mycobacterium tuberculosis IN PULMONARY TUBERCULOSIS DIAGNOSIS</td>
<td>224 - 229</td>
</tr>
<tr>
<td>7</td>
<td>EFFECT OF ORAL-ESTROGEN CONJUGATE ON B-LYMPHOCYTE PROLIFERATION IN THE PEYERâ€™S PATCHES OF ADULT FEMALE BALB/C MICE ILEUM</td>
<td>230 - 233</td>
</tr>
<tr>
<td>8</td>
<td>THE EFFECT OF EMOTIONAL QUALITY MANAGEMENT ON STRESS, AND OPTIMISM IN WOMEN WITH BREAST CANCER</td>
<td>234 - 239</td>
</tr>
<tr>
<td>9</td>
<td>QUALITY AND EFFICIENCY IMPROVEMENT OF PROFESSIONAL MEDICAL DOCTOR EDUCATION IN PUBLIC HEALTH FIELD USING OBJECTIVE STRUCTURED PUBLIC HEALTH EXAMINATION (OSPHE) APPROACH AT FACULTY OF MEDICINE AIRLANGGA UNIVERSITY</td>
<td>240 - 247</td>
</tr>
<tr>
<td>10</td>
<td>Review Article: ROLE OF VE-CADHERIN IN VASCULAR PERMEABILITY REGULATION</td>
<td>248 - 251</td>
</tr>
<tr>
<td>11</td>
<td>DEPTH OF HUMAN HYPOPHYSIAL FOSSA DUE TO AGING PROCESS: A MORPHOLOGIC RESEARCH</td>
<td>252 - 259</td>
</tr>
</tbody>
</table>
NUCLEIC ACID AMPLIFICATION OF THE rpoB REGION OF Mycobacterium tuberculosis IN PULMONARY TUBERCULOSIS DIAGNOSIS

Abstract

Tuberculosis (TB) is one of the major public health concerns worldwide. The detection of the pathogen Mycobacterium tuberculosis complex (MTBC) as early as possible has a great impact on the effective control of the spread of the disease. It is difficult to diagnose Mycobacterium tuberculosis infection due to a lack of rapid, sensitive and specific test. Newer methods, which are easy and reliable, are required to diagnose TB. This research aim is to evaluate the accuracy polymerase chain reaction (PCR) technique, using primers the rpoB gene region compare to culture method in Lowenstein-Jensen medium as a gold standard for the detection of Mycobacterium tuberculosis in the sputum samples. Sputum samples from TB suspected patients are examined by culture and PCR, using rpoB target gene. Specimens are digested and decontaminated by the modified Petroff method (WHO). Approximately from 1.0 ml of resuspended sediment, each 100 ul is used to inoculate Lowenstein-Jensen slants in duplo and 100 ul resuspended sediment is processes for PCR. Mycobacterium tuberculosis is identified using a specific pair of primers designed to amplify 541 bp sequences of rpoB gene. Conclusion: PCR have the high accuracy, sensitivity 100% and specificity 100% for pulmonary TB diagnosis. The performance of a rpoB Mycobacterium tuberculosis PCR assay have value in the rapid diagnosis of pulmonary tuberculosis.

Keyword : rpoB, gene, Mycobacterium, tuberculosis, diagnosis,