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**ESTABLISH AND OPTIMIZATION NESTED PCR REACTION DETERMINE  
*Cryptococcus neoformans* IN CEREBROSPINAL FLUID**

**Tran Thi Quynh Lien<sup>1</sup>, Cao Truong Sinh<sup>1</sup>,  
Nguyen Thi Huong Binh<sup>2</sup>, Do Ngoc Anh<sup>3</sup>**

<sup>1</sup>Vinh Medical University,

<sup>2</sup>National Institute of Malariology, Parasitology and Entomology

<sup>3</sup>Army Medical University

**Abstract**

*Nested-PCR reaction has been established and standardized to identify Cryptococcus neoformans in cerebrospinal fluid based on 8 standard samples: an ACCT sample and 7 samples collected and isolated in Vietnam, which have been tested by molecular method. 2 two primer pairs for PCR1 and PCR2 are selected as ITS1 & ITS4; CN4 & CN5. Establish PCR reaction processes 1 and 2 with a total volume of 25 µl; MgCl<sub>2</sub> concentration is 2.0 mM; annealing primer temperature of PCR1 and PCR2 reactions is 56°C and 57°C, respectively. The characteristic band size of Cryptococcus neoformans after PCR2 is 135 bp. The detection threshold of the reaction is 10pg/µl.*

**Keyword:** *C. neoformans; Cerebrospinal fluid; nested-PCR, Primer, MgCl<sub>2</sub>*

**Reviewer:**

Assoc. Prof. Nguyen Thu Huong PhD

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**EVALUATION SENSITIVITY, SPECIFICITY AND STABLE OF NESTED-PCR KIT  
DETECT *Cryptococcus neoformans* IN CEREBROSPINAL FLUID**

**Tran Thi Quynh Lien<sup>1</sup>, Cao Truong Sinh<sup>1</sup>,  
Nguyen Thi Huong Binh<sup>2</sup>, Nguyen Khac Luc<sup>3</sup>**

<sup>1</sup>*Vinh Medical University,*

<sup>2</sup>*National Institute of Malariology, Parasitology and Entomology*

<sup>3</sup>*Army Medical University*

**Abstract**

*Evaluation of Nested-PCR kit identified *Cryptococcus neoformans* on positive standard strains, 20 samples of presumptive cerebrospinal fluid and 20 negative samples (10 physiological saline samples and 10 samples CSF without *C. neoformans*); 51 strains cultured positive from clinical samples. On the positive standard strain and 51 strains of *C. neoformans* cultured from clinical samples collected in Vietnam, the sensitivity and specificity of the kit are all 100%. With 20 cerebrospinal fluid assumed from  $10^2$ CFU / ml to  $10^5$ CFU / ml sensitivity is 92.5%; Specificity is 100%.*

**Keyword:** Sensitivity, specificity, *C. neoformans*, CSF.

**Reviewer:**

Assoc. Prof. Nguyen Thu Huong PhD

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**THE ENVIRONMENT, SOCIO-ECONOMIC AND HELMINTHIASES  
INFECTION IN THE MEKONG DELTA REGION.**

**Le Thanh Dong, Doan Binh Minh, Phung Thi Thanh Thuy, Vo Thi Hoai, Hoang Anh,  
Nguyen Ba Nam, Nguyen Thanh Hoang, Tran Thi Nhat Quynh, Nguyen Duc Thang,  
Tran Thi Xuyen.**

*Institute of Malariology - Parasitology - Entomology in Ho Chi Minh City*

**Abstract**

*The study was conducted at 6 sites of 3 provinces in the Mekong Delta region from June 2017 - December 2017 by collecting samples, surveying K.A.P and laboratory tests. The objective of the study was: Determine the prevalence of helminths in the environment, human and socio-economic factors related to helminth infections in the study region.*

*A total of 1,402 fecal samples and 2,002 human blood samples ( $\leq 2$  years old); 126 soil samples, 120 water samples, 61 vegetable samples; 600 K.A.P were collected, investigated and tested. The results showed that: The prevalence of helminths in fecal samples was 5.71% (80 / 2.402) and 80.27% (1,607 / 2002) blood samples had antibodies against helminth antigen; the prevalence of helminths in soil samples was 3.17% (4/126), vegetable samples 24.59% (15/61), water samples 0.00% (0/120); determined some socio-economic factors related to helminth infections of human in the Mekong Delta region.*

**Key words:** helminths infection, environment, socio-economic, Mekong delta.

**Reviewer:**

Assoc. Prof. Le Xuan Hung PhD

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**EVALUATING THE RESULTS OF COMMUNITY-BASED HELMINTH PREVENTION MODELS IN THE SOUTHERN REGION - LAM DONG PROVINCE**

**Le Thanh Dong, Phung Thi Thanh Thuy, Doan Binh Minh, Vo Thi Hoai, Hoang Anh, Tran Thi Xuyen, Nguyen Duc Thang, Ngo Thi Tuyet Thanh, Vu Xuan Bach.**

*Institute of Malariology - Parasitology - Entomology in Ho Chi Minh City*

**Abstract**

*The study was conducted to evaluating the effectiveness of community-based helminth prevention models in 6 commune of 3 provinces in the Southern region - Lam Dong province from June 2017 to December 2018 by cross-sectional study, community interventions (Helminth deworming and community communication, environmental sanitation) and human fecal testing. The results of human fecal testing by Kato - Katz method, showed that: Before interventions, the prevalence of soil-transmitted helminths was 24.46% (171/699), flukes 0.00% (0/699), tapeworms 0.00% (0/699). After intervention, In 3 communes, where applied model of community-based helminth deworming by Mebendazole 500mg after 6 months and 12 months, the prevalence of soil-transmitted helminth was 1.71% (12/700) and 2.00% (14/700). In 3 communes, where applied model of community communication and environmental sanitation after 6 months and 12 months, the prevalence of soil-transmitted helminthes was 5.29% (37/700) and 4.86% (34/700).*

**Keywords:** Neglected tropical diseases, helminth deworming, community communication, southern of Vietnam.

**Reviewer:**

Assoc. Prof. Le Xuan Hung PhD

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**DETERMINING PATHOGENS ON TICKS IN THE  
SOUTHWESTERN OF VIETNAM**

**Doan Binh Minh, Le Thanh Dong, Phung Thi Thanh Thuy**

*Institute of Malariology - Parasitology - Entomology in Ho Chi Minh City*

**Abstract**

*Tick-borne diseases are an emerging medical and veterinary problem. Ticks are implicated in the transmission of different pathogens such as viruses, bacteria, protozoa and filarial nematodes. However, up to now researchs on these pathogens in Vietnam which has been limited, especially in the Southwestern of Vietnam.*

*We have collected 4,763 tick individuals of 7 species, 5 genus, 2 families (*Argas sp.*, *Aponomma crassipes*, *Aponomma gervaisi*, *Rhipicephalus (Rhipicephalus) haemaphysaloides*, *Rhipicephalus (Rh.) sanguineus*, *Boophilus microplus*, *Ixodes (Ixodes) granulatus*) at 8 sites in the Southwestern region on the rainy season and dry season from 2015 to 2016 which determine the presence of pathogens (*Rickettsia spp.* and *Orientia tsutsugamushi*) on ticks. A total of 1,457 tick individuals which were subdivided into 299 samples, that determine the presence of *Rickettsia spp.* and *Oriental tsutsugamushi*. Initial results, we have determined the presence of pathogen on ticks.*

**Key works:** Ticks, *Rickettsia spp.*, *Orientia tsutsugamushi*.

**Reviewer:**

Assoc. Prof. Le Xuan Hung PhD

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**THE REPELLENT EFFICACY OF CINTRONELLA OIL OF  
*Cymbopogon citratus* AGAINST *Ae. Aegypti* and *An. Epiroticus***

**Le Trung Kien<sup>1</sup>, Tran Thanh Duong<sup>1</sup>,  
Nguyen Thi Lien Huong<sup>2</sup>, Phan Thi Huong<sup>3</sup>**

<sup>1</sup> *National Institute of Malariology, Parasitology and Entomology*

<sup>2</sup> *Vietnam Health and Environmental Management, Ministry of Health*

<sup>3</sup> *General Department of Preventive Medicine, Ministry of Health*

**Abstract**

Cintronella oils extracted by steam distillation from *Cymbopogon citratus* were evaluated in mosquito cages for their repellency effects against 2 mosquito vectors of *Aedes aegypti* and *Anopheles epiroticus*. Then separated solutions with 5%, 10%, 15% and 20% concentrations of Cintronella oils of plants in 70 % ethanol with the addition of 5% vanillin were prepared. WHO guidelines for efficacy testing of mosquito repellents for human skin were used on different concentrations of Cintronella oils of plants, commercial repellents (DEET) as positive control, and ethanol 70% as negative controls. The oils from citronella with 15% and 20% concentration had repelled to 2 mosquito vectors as *Aedes aegypti*, *Anopheles epiroticus* under cage conditions for up to 4 hours with repellent rate more than 90%. With regard to the standard repellent, DEET alone provided protection for at least 5 hours against 2 mosquito vectors. The product are useful for developing eco-friendly, efficient and secure mosquito repellent.

**Keywords:** *Cymbopogon citratus*, *Cintronella* oils, repellent, *Aedes aegypti*, *An.epiroticus*

**Reviewer:**

Assoc. Prof. Ho Dinh Trung PhD

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**THERMAL FOGGING AND ULTRA-LOW VOLUME APPLICATIONS TO  
AGAINST *Ae. Aegypti* POPULATION IN DIEN KHANH DISTRICT,  
KHANH HOA PROVINCE**

**Le Trung Kien<sup>1</sup>, Tran Thanh Duong<sup>1</sup>,  
Nguyen Thi Lien Huong<sup>2</sup>, Phan Thi Huong<sup>3</sup>**

<sup>1</sup> *National Institute of Malariology, Parasitology and Entomology*

<sup>2</sup> *Vietnam Health and Environmental Management, Ministry of Health*

<sup>3</sup> *General Department of Preventive Medicine, Ministry of Health*

**Abstract**

*This study was evaluated the bio-efficacy of Aqua Resigen 10.4EW by Thermal fogging and ULV applications to control for Aedes aegypti population in Dien Khanh district, Khanh Hoa province.*

*The susceptibility test result for some insecticides of pyrethroid group were under 80% mortality rate have showed pyrethroid resistant situation of Aedes aegypti in Dien Khanh district. Efficacies of a handheld thermal fogger (Igeba-35) and a backpack ULV sprayer (Fontan S) with Aqua Resigen 10.4EW were field-tested and compared for their impact on reducing indoor Aedes aegypti populations in field. The effectiveness of the indoor space sprays was evaluated.*

**Keywords:** *Aedes aegypti, ULV, Thermal fogging*

**Reviewer:**

Assoc. Prof. Ho Dinh Trung PhD

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**EPIDEMIOLOGICAL AND CLINICAL CHARACTERISTICS OF MYCOPLASMA  
PNEUMONIA AND TREATMENT OUTCOMES AT  
SAINT PAUL GENERAL HOSPITAL**

**Luong Van Chuong<sup>1</sup>, Pham Van Hoa<sup>1</sup>, Que Anh Tram<sup>2</sup> Tran Thi Kieu Anh<sup>2</sup>**

*<sup>1</sup>Saint Paul General Hospital*

*<sup>2</sup>Nghe An Vietnam - Poland Friendship General Hospital*

**Abstract**

*A descriptive study was conducted at the Pediatric Department of Saint Paul General Hospital from July 2017 to August 2018 to evaluate clinical and subclinical characteristics of pediatric Mycoplasma pneumonia. A total of 119 patients aged from 2 months to 15 years old were included. Results showed that although the disease is more common in babies, the patients of more than 5 years old still accounted for the high rate of 39.49%. The disease mainly occurred in summer and less seen in autumn and winter. Nearly a half of the patients (47.06%) were delayed to be hospitalized from 1 to 2 weeks. Clinical manifestations of M.pneumonia included dry cough (39.51%) and high fever of 39°C or over. Laboratory indices revealed that the inflammation of the lungs was not significantly elevated. X-ray images showed lobar lesions mainly in the children over 5 years old and lesions spread on the two sides of the lungs in younger children ( $p < 0.05$ ). The treatment results indicated that M.pneumonia remained susceptible to Macrolide alone but at a low rate of 17.65%. Macrolide and quinolone combinations produced better outcomes.*

**Key words:** *Mycoplasma pneumonia; children*

**Reviewer:**

Assoc. Prof. Cao ba Loi PhD

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**EVALUATION OF THE RESULTS OF CERVICAL DISC HERNIATION  
TREATED BY GALVANOPUNCTURE METHOD, COMBINATION OF  
THERMOMAGNETIC, MASSAGE AND STRETCHING THE SPINE**

**Le Thi Hoai Anh, Pham Ba Tuyen, Truong Thi Huyen**  
*Traditional Medicine Hospital, Ministry of Public Security*

**Abstract**

To evaluate the treatment results of cervical disc herniation by galvanopuncture method, massage combined with thermomagnetic and stretching the spine. Randomized clinical trial with proof. Over 60 patients was divided into two groups: test group and proof group. The results of the test group showed that: Pain relief with a mean VAS decrease of  $1.63 \pm 0.63$  (point). All floding, stretch, tilt, rotation of cervical spine with an average reduction of  $5.70 \pm 1.53$  (points). Functional improvement with an average NPQ decrease of  $9.68 \pm 1.93$  (points). Results after 30 days of treatment: 56.7% good, 33.3% fair, 10.0% medium. All of these indexes significantly improved, that compared to the proof group, the difference is statistically significant ( $p < 0,05$ ).

**Keywords:** disc herniation, galvanopuncture, massage, physical therapy

**Reviewer:**

Assoc. Prof. Le Xuan Hung PhD

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**STUDY EFFECTS OF GT1 FILM-COATED TABLETS  
ON LIVER - KIDNEY FUNCTION IN EXPERIMENTAL RATS**

**Truong Thi Huyen<sup>1</sup>, Pham Ba Tuyen<sup>1</sup>,  
Pham Xuan Phong<sup>2</sup>, Nguyen Trong Thong<sup>3</sup>**

*<sup>1</sup>Traditional Medicine Hospital Ministry of Public Security*

*<sup>2</sup>Military Institute of Traditional Medicine, <sup>3</sup>Hanoi Medical University*

**Abstract**

*To evaluate the effect of oral GT1 film-coated tablets on experimental rat's renal and liver function. White rats were given GT1 continuously at a dose of 11.16 g and 33.48 g / kg / day for 60 days. Before taking the drug, after 30 days and 60 days taking medicine, rats were evaluated for liver function and kidney function. The liver and kidney surgery was evaluated at the end of the study after 60 days of taking the medicine. The study results showed that tablets containing GT1 film with dose of 11.16 g and 33.48 g / kg / day for continuous oral administration for 60 days did not affect the concentration of bilirubin and albumin; degree of liver cell destruction; Kidney function and histopathology of liver and kidney. However, the total cholesterol concentration in rat's blood GT1 oral dose of 11.16 g/kg tended to decrease compared to the control group, the difference was not statistically significant. GT1 with a dose of 33.48g/kg reduced total cholesterol levels statistically significantly compared to controls and compared between time points before and after administration.*

**Keywords:** *GT1 film coated tablets, liver function, kidney function, rats.*

**Reviewer:**

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## SUBMISSION GUIDELINES FOR THE JOURNAL OF MALARIOLOGY, PARASITOLOGY AND ENTOMOLOGY

**The Journal of Malaria and Parasitic Disease Control** is the official journal of the National Institute of Malariology, Parasitology and Entomology under License No. 510 / GP-BVHTT dated September 29, 2015 issued by the Ministry of Information and Communication; with the International Standard Serial Number (ISSN) of 0868 - 3735. The journal publishes articles on the prevention of malaria, parasitic diseases, insect vectors and other infectious diseases. The results of scientific research in parasitology in Vietnam and in the world are also introduced in this journal.

### I. GENERAL REQUIREMENTS

- The article must be typed in Unicode font, Times New Roman, 12 pt font size, except for the title, of which the font size is 14 pt and keywords, of which the font size is 11 pt.
- Each article must not exceed 4,000 words (about 7-8 pages of A4 size) including tables, illustrations and references.
- The article should be on A4 paper with margins of 2.5 cm (top and bottom), 2.2 cm (left), and 1.8 cm (right); first line indent of 1 cm; single line spacing; paragraph spacing of 3 pt (above and below).
- The manuscript must be paginated in the middle at the bottom of the page.
- Names of drugs and chemicals should be kept unchanged in Latin (except for the names of antimalarials which have already been localized in the book "Guidelines for Malaria Diagnosis and Treatment" by Ministry of Health).
- Latin names of insects, parasites, animals, plants, microorganisms ... should be written as prescribed by the International Nomenclature.
- Terms should be consistent with the Vietnamese encyclopedia. Vietnamese nouns if translated from a foreign language must be accompanied by the original writing. Abbreviations must have captions.
- Tables, charts, graphs (format: .jpeg, .pdf, ...) should be positioned properly in the manuscript; and the original files should also be sent separately to the editorial board. A descriptive title should be placed above each table, and the caption is placed directly below each image, picture, and graph.
- The title should be followed by no punctuation.

### II. ORDER AND PRESENTATION OF CONTENT ITEMS IN THE ARTICLE

The article is presented in 18 major items, of which only 5 items are numbered. The order of items in the article is as follows:

**TITLE** (14pt font size, uppercase, bold, except for species names which are not capitalized; central alignment).

**Author et al.** (Authors' names are listed in order according to their contribution to the work, bold text, left alignment).

*Address, email* (work address, italic text, left alignment).

**Abstract** (250 words or less, presenting all the basic results and conclusions of the study, italic, justified).

*Key words:*(including 3-6 words or phrases, expressing the main problem of the study, 11 pt font size, italic, justified)

**1. INTRODUCTION** (This is an introduction to research objectives in relation to other studies of the same field that have been done before, no more than 01 A4 page).

**2. MATERIALS AND METHODS** (This is a brief and informative description about the study subject and method. The new first-implemented procedures should be described in details with specific citations and approval from the Institutional Review Board (IRB). The paper can be divided into the following sections:

**2.1. Study site and timeframe** (compulsory)

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**2.3. Methods** (compulsory)

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**3. STUDY RESULTS**

(Figures and Tables are included. They should be numbered, clearly and concisely presented with full captions. The results which cannot be shown in the table can be expressed by text. Each article contains no more than 8 Tables and Figures. Brief and concise *comments* should go after each Table and Figure).

**4. DISCUSSIONS**

(The discussion should not exceed 2 pages, discussing and explaining issues related to the obtained results and comparing them with some similar results from other studies).

**5. CONCLUSIONS**

(Each conclusion should be numbered in sequence in relation to the study results. It should be kept neat and highlight specific data of the research results).

**RECOMMENDATIONS** (if any)

**Acknowledgement:** (if any)

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**1. General Requirements**

- *Citation:* The reference number is placed in square brackets [ ] in order from smallest to largest. Example: [1] [6] [15] [125].

- *Arrangement:* References are classified separately according to language (Vietnamese, English, French, German, Russian ...). Foreign language materials must be kept unchanged without transliteration and translation.

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1. Bộ Y tế (2007), *Xác định cỡ mẫu trong các nghiên cứu y tế*, Nhà xuất bản Y học Hà Nội, tr. 23- 26.
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### \* *English:*

1. Borkakati R.R., Vinmanni S. S. (1997), "Genetics of thermosensitive genic male sterility in Rice", *Euphytica*, 88(1), pp.1-7.
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4. Institute of Economic (1988), *Analysis of Expenditure Pattern of Urban Households in Vietnam*, Department of Economics, Economics Research Report, Hanoi.

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