



**INTERNATIONAL SEMINAR**  
Muhammadiyah International Conference on Health and  
Pharmaceutical Development (MICH-PHD) 2018  
Aug 08<sup>th</sup> - 10<sup>th</sup> 2018  
Faculty of Pharmacy and Science  
Universitas Muhammadiyah Prof. Dr. HAMKA  
**INDONESIA**

## PROGRAM BOOK

# “CURRENT INNOVATION IN CHRONIC DISEASE TREATMENT”



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### Welcome Message

Dear Fellows and Colleagues,

On behalf of the organizing committee, it is a great pleasure for me to welcome you to the Muhammadiyah International Conference on Health and Pharmaceutical Development (MICH-PhD) in Jakarta on 10-11 August 2018.

MICH-PhD is the first international conference held by Faculty of Pharmacy and Science - Universitas Muhammadiyah Prof. DR. HAMKA (UHAMKA) in collaboration with the Association of Muhammadiyah Pharmacy Higher Education (APTFM). The theme of this conference is "Current Innovation in Chronic Disease Treatment". To discuss the topic further, we invited leading experts from various countries, thus we will obtain more information about Pharmacogenetics, Pharmacoeconomics, Pharmaceutical Sciences, Clinical Pharmacy and Neuroscience fields from them.

Furthermore, these meetings are especially important for participants to present their researches, to share the developments and innovations in the field of health and various disciplines of pharmacy. Finally, the scientific committee is looking forward to hearing about your research from your presentations and we can engage our networking with colleagues at the venue.

Once again, I'm very thankful for your participation and support, and we are hoping that you will enjoy the conference.

Jakarta, August 2018

**Chairman of the Organizing Committee**  
Universitas Muhammadiyah Prof. DR. HAMKA

Nurhasnah, M.Farm, Apt.

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### Welcome Message

Dear Colleagues,

It is my privilege and great pleasure to warmly welcome you to the Muhammadiyah International Conference on Health and Pharmaceutical Development (MICH-PhD) that is taking place in the Jakarta, Indonesia. I trust that all of you have settled in and looking forward to the next few days attending the scientific sessions and exhibitions. I am optimistic that it will also be a great opportunity for all of participants to meet with friends and colleagues from many affiliations.

We all know that a successful conference involves input from many peoples and organizations. Therefore, I would like to express my gratitude to several supporters of this conference. First, let me convey my special thanks to the chairman of this conference, Nurhasnah, M. Farm, Apt, from the Faculty of Pharmacy and Science, UHAMKA for her hardwork and in managing the committee very well. Second, I highly appreciate for the great support and participation of Association of Muhammadiyah Pharmacy Higher Education (APTFM) during the preparation of this conference. Also, I would like to take this opportunity to thank for the sponsors and exhibitors, and particularly for Persatuan Ahli Farmasi Indonesia (PAFI) and Ikatan Apoteker Indonesia (IAI) that gave the best contribution for MICH-PhD.

Lastly, I dedicate special thanks and warmly welcome all of you, the delegates. I believe this conference will provides a unique environment to meet colleagues and friends in our fields, also to exchange experiences, and the most importantly, to create memories and be an alternative in changing the way we see and practice the Current Innovation in Chronic Disease Treatment.

Thank you for being here. Let us enjoy the warm of Indonesian welcome and hospitality.

Jakarta, August 2018

**Dean of Faculty of Pharmacy and Science**  
Universitas Muhammadiyah Prof. DR. HAMKA

Dr. Hadi Sunaryo, M.Si., Apt.

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**Welcome Message**

Dear Colleagues,

I am very excited to welcome you to Jakarta for attending Muhammadiyah International Conference on Health and Pharmaceutical Development (MICH-PhD). As you will notice, the program is a combination of educational and scientific symposia distributed among numerous plenary and parallel sessions. The scientific program will mainly talk about current innovation in chronic disease treatment that will be outlined by many international speakers. The topics range from Medical Science, Pharmaceutical Biology, Pharmaceutical Chemistry, Community and Clinical Pharmacy, and Pharmaceutical Technology.

The Muhammadiyah International Conference on Health and Pharmaceutical Development (MICH-PhD) committee in collaboration with Association of Muhammadiyah Pharmacy Higher Education (APTFM) have been put a great effort towards this event. They are also working with various stakeholders, including the PA/ and IAI members, to manifest the excellent scientific program where a number of invited speakers will speak on cutting edge science in Current Innovation in Chronic Disease Treatment. In addition, this conference will also be a platform for delegates to showcase their research in the form of oral and poster presentations.

I deliver a special gratitude to our sponsors and exhibitors, and last but not least to MICH-PhD committee for all their effort in making this event a successful conference.

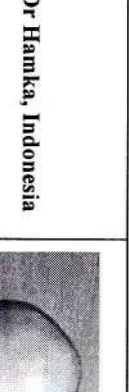
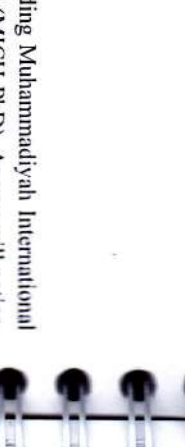
Thank you for accepting our invitation to join us in Jakarta. I am sure you will have a memorable and enjoyable conference and I look forward to meeting you. Please enjoy the casual atmosphere of Jakarta together with friends and colleagues.


Jakarta, August 2018


**Rector of Universitas Muhammadiyah Prof. DR. HAMKA**

Prof. Dr. H. Suyatno, M.Pd.

**SPEAKERS' BRIEF DESCRIPTION**

<p><b>dr. Rizki Edmi Edison</b> Neuroscience Centre <b>Universitas Muhammadiyah Prof. Dr Hamka, Indonesia</b></p> <p><b>Expertise</b> Neuroscience</p> <p>Rizki Edmi Edison studied Medicine at Faculty of Medicine, Universitas Andalas and in 2014 he earned his Doctoral degree of Neurosurgery from Jichi Medical University. He took position as Head of Neuroscience Laboratory at CTECH Labs Edwar Technology in 2014 and has been promoted as Director of Neuroscience Centre, University of Muhammadiyah Prof DR HAMKA in 2015. His team and researchers from other centre developed novel electric-field-based neuroimaging, named 4D (dimension) Brain ECVT (electrical capacitance volume tomography). He has published several papers and has been invited to give lectures and short courses in many universities.</p>	
<p><b>Dr. Arthorn Riewpaihoon</b> Social and Administrative Pharmacy, Department of Pharmacy, Faculty of Pharmacy, <b>Mahidol University, Thailand</b></p> <p><b>Expertise</b> Health Economics, Pharmacoeconomics Hospital cost analysis, Cost of illness analysis, Economic evaluation</p> <p>Dr. Arthorn Riewpaihoon received his Bachelor degree from Mahidol University, Thailand. His master degree was from Chulalongkorn University, Thailand and he graduated as PhD in Pharmacoeconomics from Curtin University of Technology, Western Australia. He is an associate professor and director of master and PhD programs in Social, Economics and Administrative Pharmacy. He wrote a chapter of Measuring Cost in the Thai</p>	

<p>National Health Technology Assessment Guidelines. He developed the standard cost lists for health technology assessment. Other than teaching, he has gained experiences as an international consultant for the International Vaccine Institute and WHO working in 10 countries in Asia and Africa.</p> <p>Currently he has worked for Division of Social and Administrative Pharmacy, Department of Pharmacy, Faculty of Pharmacy, Mahidol University, Thailand.</p> <p>Dr Arthorn Riewpaiboon is author of around 65 scientific publications, 6 book/teaching materials and was supervisor of 23 PhD and MSc graduates.</p> <p>Arthorn presents and lectures on cost analysis of pharmacy education or health system at many scientific (international) conferences and presentations.</p>	
<p><b>Prof. Dr. B. (Bob) Wilffert</b></p> <p>Department Pharmacotherapy, Pharmacology and PharmacoEconomics</p> <p><b>University of Groningen, Netherland</b></p> <p><b>Expertise</b> Pharmacogenetics, Drugs and pregnancy</p> <p>Berend Wilffert graduated in pharmacy with subsidiary subject: Pharmacology (ganglionic muscarinic receptors) and got KNMP award (Royal Dutch Society for the Advancement of Pharmacy) in 1978. Subsequently he took for a PhD in 1984. He got qualification for teaching Pharmacology at the Johann Wolfgang Goethe University in Frankfurt am Main, Germany in 1993 and changed to the Rheinische Friedrich-Wilhelms-Universität Bonn in 1999. He was recognition by the CCMO as clinical pharmacologist as meant by the Wet Medisch-Wetenschappelijk Onderzoek met Mensen (WMO). Bob became as clinical pharmacologist in the Netherlands. Beside as Head of Department Pharmacotherapy, Epidemiology and Economics in University of Groningen, Bob has many other position such as Deputy Chairman of the METC and chairman/clinical pharmacologist of Committee A of the Foundation BEBO</p>	

<p>(Assen), Deputy clinical pharmacologist of the Regionale Toetsingscommissie Patiëntgebonden Onderzoek in Leeuwarden, and Chairman of the Editorial Board of the NPO (Netherlands Platform voor Farmaceutisch Onderzoek). His main interest are pharmacogenetics, drugs and pregnancy. Recently, he developed a gastrointestinal simulation system (GISS), investigated dissolution characteristics of solid oral medications, and assessed the pharmaceutical availability of metoprolol from immediate-release (IR) and controlled-release (CR) tablets.</p>	
<p><b>Dr. Nining Sugihartini, M.Si., Apt</b></p> <p>Faculty of Pharmacy</p> <p><b>Universitas Ahmad Dahlan, Indonesia</b></p> <p><b>Expertise</b> Pharmaceutical Sciences</p> <p>Dr. Nining Sugihartini, M.Si., Apt who was born in Kulon Progo on 28 June 1975 is one of the teaching staff at the Faculty of Pharmacy, Ahmad Dahlan University which entered in 1999 and currently serves as vice dean of FF UAD. Obtained a degree in Faculty of Pharmacy Gadjah Mada University at field of Pharmaceutical Technology. The main field of interest is development especially formulations of natural ingredients developed into drug preparations as well cosmetics. One of the results of research on green tea extract cream formulation has been registered to obtain a Patent with no P00201201087. Other than that some publications in several journals such as <i>Indonesia Journal of Cancer Chemoprevention</i>, <i>Jurnal Bahan Alam Indonesia</i> and <i>Pharmacia</i>. Currently doing research about the development of green tea extract cream formulation by using Competitive Grant Fund Scheme from Dikti.</p>	

**Prof. Patrick A. Ball**

School of Pharmacy, Faculty of Science and Engineering

**Universitas of Wolverhampton, UK**

**Expertise**  
Pharmacy, Clinical Pharmacy, Medication Adherence, Medications in life stages: Paediatrics, Geriatrics, Palliative Care, Clinical Nutrition, Parenteral Nutrition, Medications in Parenteral Fluid Systems

**Patrick Ball (University of Wolverhampton, UK)** is graduated in Pharmacy from the University of Aston in Birmingham, UK in 1975 and became a hospital clinical pharmacist. At this time, parenteral nutrition was a rapidly developing technique and Patrick became involved virtually from the outset. In 1979 he joined a multidisciplinary nutrition support team at the Children's Hospital in Birmingham, and over the next 14 years was involved in a number of innovations including computer applications, clinical trials, development of the team approach, control of line sepsis and occlusion and improving equipment and services for home parenteral nutrition patients. During this time, he gained his Master of Science (Birmingham 1986) for a research thesis on computer applications in nutrition support. As a manager he was involved in the wider aspects of hospital pharmacy and worked to increase scholarly practice and practice research in the profession. In 1994 he had his first academic appointment at the University of Otago in Dunedin NZ. At the time he was working on a PhD thesis looking at the effects of dissolved oxygen in parenteral nutrition admixtures (Wales, 1997). He has been involved in under and postgraduate pharmacy education and curriculum development and research for 19 years. In 2001 he moved to the University of Auckland where he developed a new and novel pharmacotherapy program. He likes to characterise his research experience in NZ as 'the art of the possible.' In 2005 he was recruited to Charles Sturt University in Wagga Wagga NSW to become Australia's Foundation Professor of Rural and Remote Pharmacy which quickly brought him into contact with rural health matters, the 'top end' of Australia and Indigenous health issues. This was further developed



when he moved in 2013 to Charles Darwin University in Darwin NT. He is interested in both clinical and laboratory research. His clinical research is mainly looking at medication use in chronic disease management particularly in a rural context. His laboratory work is concerned with the behaviour of medications in parenteral fluid systems.

**Dr. Hana Morrissey**

School of Pharmacy, Faculty of Science and Engineering

**Universitas of Wolverhampton, UK**

**Expertise**  
Pharmacy, Chronic Disease Management, Clinical Pharmacy, Medication Adherence, Primary Care, Therapeutic, Community Pharmacy

**Dr. Morrissey (University of Wolverhampton, UK)** is a reader in pharmacy. She is a registered clinical pharmacist by the Australian Pharmacy Board, accredited by the Australian Association of Consultant Pharmacists and a fellow of the Australian College of Pharmacy Practice. She has extensive military and civilian management experience and has been registered as a pharmacist in Australia since 1982. Hana completed Bachelor of Pharmacy at Tanta University, Egypt, and completed a PhD in 2014 at Charles Darwin University. Hana has seven post graduate diplomas, thirteen practice certificates in clinical pharmacy, management and teaching from Australian universities. She is accredited for home medication management review and is a mental health instructor for adults and youth.

Prior to her employment at Wolverhampton, Hana was a senior lecturer at Charles Sturt University then Charles Darwin University. After 20 years in the Australian Regular Army she moved to the Australian Reserve. She also was the chief pharmacist in Justice Health NSW, chief pharmacist in 1st Field Hospital NSW, officer commanding and contract manager in Defence National Storage and Distribution Centre - Medical and Dental NSW, staff officer for Health Logistics in Headquarters Joint Operation Command NSW Australia. She worked as a pharmacist in Campbelltown Hospital NSW, Royal Adelaide Hospital, SA and Royal



**RUNDOWN OF MICH-PhD  
"Muhammadiyah International Conference on Health Pharmaceutical  
Development"**

Friday, August 10<sup>th</sup> 2018

TIME	PROGRAM
07.30 – 08.00	Registration & poster display
08.01 – 08.45	<b>Opening ceremony</b> a. Reciting Holy Qur'an: Anindya Imanina Aini Firdausa b. Singing National Anthem "Indonesia Raya" and Mars Muhammadiyah c. Speech : 1. Nurhasnah M.Farm., Apt (Chairman of The Committee) 2. Dr. Agus Siswanto, M.Si., Apt (Head of Association of Muhammadiyah Pharmacy Higher Education) 4. Prof. Dr. H. Suyatno, M.Pd. (Rector of UHAMKA, Indonesia)
08.46 – 09.00	<b>Keynote Speaker Presentation</b> Minister of Health, Indonesia
09.01 – 09.30	<b>Photo session and Coffee Break</b> <b>Plenary Session I</b> Chair Person : Dr. Priyo Wahyudi, M.Si., Apt (UHAMKA, Indonesia)
09.31 – 10.00	1. Implementation of Pharmacogenetics in Pharmacotherapy of Chronic Diseases Prof. Bob Wilffert (University of Groningen, Netherland)
10.01 – 10.30	2. Cost of Illness Study for Cost Effective Health Services: A Case of Diabetes Mellitus Dr. Arthorn Riewpaiboon/Assoc Prof (Mahidol University, Thailand)
10.31 – 11.00	3. The Development of Chronic Inflammatory Drug Dosage Forms Dr. Nining Sughartini, M.Si., Apt (Universitas Ahmad Dahlan, Indonesia)
11.01 – 11.45	Discussion
11.45 – 13.30	Lunchbreak, Prayer, and Poster Presentation I
13.30 – 14.45	Oral presentation Day I-Session I
14.45 – 15.00	Coffee Break
15.00 – 16.15	Oral presentation Day I-Session II

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Saturday, August 11<sup>th</sup> 2018

TIME	PROGRAM
07.00 - 08.00	Registration
08.00 – 08.30	Coffee Break
08.31 – 10.55	<b>Plenary Session II</b> Chair Person : Dra. Rina Mutiara, M.Pharm., Apt. (Cipto Mangunkusumo Hospital, Indonesia) 1. Progress in Aged Care, Understanding the Pharmacist's Role in Frailty and Delirium Prof. Patrick A. Ball (University of Wolverhampton, United Kingdom)
08.31 – 09.00	2. Models of Health and Illness: in the Context of Clinical Pharmacy Services Dr. Hana Morrissey (University of Wolverhampton, United Kingdom)
09.01 – 09.30	3. Application of Neuroimaging to Determine Epileptic Focus for Presurgical Evaluation Dr. Rizki Edmi E, Ph.D (Universitas Muhammadiyah Prof. DR. HAMKA, Indonesia)
09.31 – 10.00	Discussion
10.01-10.55	Discussion
11.00 – 12.30	Lunchbreak, Prayer, and Poster Presentation II
13.00 – 15.30	Oral presentation Day 2
15.30 – 15.45	Coffee break
15.45 – 17.00	<b>Closing Ceremony</b> - Photo Session - Announcement of The Best Oral and Poster Presenter Awards - Certificate handover

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<p>[ABS-046]</p> <p>The Association of Corticosteroid Use with the Incidence of Infection in Nephrotic Syndrome Patients</p> <p><b>Nurhasnah</b>, Diana Lestari, Ridha Elvina</p> <p>Faculty of Pharmacy and Science, Universitas Muhammadiyah Prof. DR. HAMKA</p>	<p>[ABS-037]</p> <p>Repellent Activity Of Nutmeg Essential Oil On Aedes Aegypti</p> <p><b>Lina Widiyastuti</b>, Azis Ikhsanudin</p> <p>Universitas Ahmad Dahlan Yogyakarta Indonesia</p>
<p>[ABS-048]</p> <p>Study Effect of Belimbing Wuluh Leaves (<i>Averrhoa bilimbi</i> L.) Extraction Method on In Vitro Activity Mucolytic</p> <p><b>Sri Wardatun</b>, Moerfiah, Desma Parayu, Febricola Dewi Setyawati</p> <p>Pakuan University</p>	<p>[ABS-041]</p> <p>Esterification of p-Hydroxy Benzoic Acid with Glucose using Heterogen Catalyst Alumina <math>\gamma</math>-Al<sub>2</sub>O<sub>3</sub>/SO<sub>4</sub></p> <p><b>Elfa Siska Yasa Putri</b>, Widajanti Wibowo, Sholet Kosela</p> <p>Faculty of Pharmacy and Science, Universitas Muhammadiyah Prof. DR. HAMKA</p>
<p>[ABS-050]</p> <p>The Influence of Extraction Methods and Solvent Types Against Eugenol Levels of Salam Leaves (<i>Syzygium polyanthum</i> (Wight) Walp.)</p> <p><b>Lusi Indriani</b>, Sri Wardatun<sup>1</sup>, Nana Yurisa<sup>1</sup>, Tia Sri Anesa</p> <p>Department of Pharmacy, Faculty of Mathematical and Natural Science, Pakuan University, Bogor, Indonesia</p>	<p>[ABS-043]</p> <p>Molecular Docking Study Of Lemon (<i>Citrus limon</i> (Linn) Burm.f) Flavonoid Derivatives Compound In Receptor Cyclooxygenase-1 (COX-1) As Antiplatelet In Ischemic Stroke Disease</p> <p><b>Rizky Arcintha Rachmania</b>, Hariyanti, Nurul Rochmah</p> <p>Faculty of Pharmacy and Science, Universitas Muhammadiyah Prof. DR. HAMKA</p>

<p>[ABS-058]</p> <p>Steamed Watermelon (<i>Citrullus lanatus</i> Thunb.) Juice Improves Spasial Memory In Dementia Rats Model</p> <p><b>Maifrianti</b>, Hadi Sunaryo, Dedi Suryadi</p> <p>Faculty of Pharmacy and Science, Universitas Muhammadiyah Prof. DR. HAMKA</p>	<p>[ABS-047]</p> <p>Optimization Of Concentration Src (Semi Refined Carrageenan) And Glucmannan As Gelling Agent To The Physical Stability Sunscreen Gel Of Dry Corn Cob Extract (<i>Zea mays</i> L.)</p> <p><b>Kori Yati</b>, Yudi Srifana, Asri Indah Lestari</p> <p>Faculty of Pharmacy and Science, Universitas Muhammadiyah Prof. DR. HAMKA</p>
<p>[ABS-060]</p> <p>Effect Of Increasing The Concentration Hydroxy Propyl Methyl Cellulose ( Hpmc) As Gelling Agent Stability Of Physical Emulgel Gotu Kola Herb Stew (<i>Cenella asiatica</i> L.)</p> <p><b>Zainul Islam</b>, <b>Fahjar Pristika</b></p> <p>Faculty of Pharmacy and Science, Universitas Muhammadiyah Prof. DR. HAMKA</p>	<p>[ABS-049]</p> <p>Analysis Of Lead, Cadmium And Mercury In Cosmetics Body Lotion Whiting Import In The Ciracas Market Of East Jakarta</p> <p><b>Yusnidar Yusuf</b>, Situmorang Melliyanti</p> <p>Faculty of Pharmacy and Science, Universitas Muhammadiyah Prof. DR. HAMKA</p>
<p>[ABS-074]</p> <p>Synthesis of Curcumin Derivative Assisted by Microwave Irradiation</p> <p><b>Sabanti Harimurti</b>, Winny Nugroho, Ardi Pramono, Rizky Hidayaturrahmah</p>	<p>[ABS-051]</p> <p>Antioxidant Activity and SPF Value of Carica papaya Extract on Various Types of Solvent</p> <p><b>Nining Sugihartini<sup>1</sup></b>, <b>Sapto Yuliani<sup>2</sup></b>, <b>Yeni Khomarisa<sup>3</sup></b>, <b>Chintiana Nindya Putri<sup>3</sup></b></p>



**Activity of Anti Bacteria and Immunomodulator of Solid Dispersion Nanoparticle Thymoquinone-Chitosan Suspension**

Muhammad Riki Shindi Praristiya, Tedjo Yuwono, Kintoko  
Universitas Ahmad Dahlan

**Abstract**

**Introduction & Aims:** The resistance to pathogenic bacteria is a global problem, and need international support to solve it. Thymoquinon reportedly has extensive pharmacological effects, one of which is the effect of immunomodulator and antibacterial. From latest research, data shows that the form of nano material has the better effectiveness. **Method(s):** This research using Mycobacterium tuberculosis for anti bacterial research by solid dilution method, and macrophage of male swiss mice for immunomodulator reserach. Immunomodulant test was performed by observing macrophage activity with, chitosan nanoparticle thymoquinone suspension group (TQKS), solid dispersion thymoquinon chitosan nanoparticle suspension group (TQDP), the thymoquinone suspension in 96% ethanol treatment group (TQ). **Result(s):** Only the TQ group has good activity as antibacterial at doses of 20,40, and 80 µg / ml, characterized by the absence of bacterial showed by (0 ±) colony observed that grown over 6 weeks, and as Immunomodulator at dose 80 µg / ml with mean of phagocytosis index (2.049 ±). **Nanoparticle formula TQKS and TQDP** at the same dose did not provide immunomodulator activity. **Conclusion(s):** This result is thought to be due to the chitosan on nanoparticle compound which makes the release of nanoparticle encapsulation imperfect as the covalent bonds are too strong.

**Keyword :** Thymoquinon, chitosan, nanoparticle, antibacterial, immunomodulator, mycobacterium

**Effect Of Increasing The Concentration Hydroxy Propyl Methyl Cellulose ( HPMC) As Gelling Agent Stability Of Physical Emulgel Gotu Kola Herb Stew (Centella asiatica L.)**

Zainul Islam, Fahjar Prisiska  
UHAMKA

**Abstract**

Herb gotu kola (*Centella asiatica* L.) is a natural material that has efficacy as an anti-aging or anti-aging is natural. Herb gotu kola containing compounds and glycoside madecassoside asiaticosida useful as an anti-aging or anti-aging. In this research, gotu kola herb extracts prepared emulgel that has a good spread on the skin, easily washed with water and softer texture using Hydroxy Propyl Methyl Cellulose (HPMC) as a gelling agent. HPMC is a cellulose derivative polymer gel that can produce that meets the requirements of Pharmaceutical. Research is underway to increase the concentration of HPMC mengetahui influence on the physical properties emulgel. Emulgel herb gotu kola extract made in the formula 4 with a concentration of HPMC is different: 3.5%, 4.0%, 4.5% and 5.0%. Each formula was evaluated for 6 weeks include organoleptic test, pH test, homogeneity, viscosity, the storage at two temperatures (freeze thaw). The results of Kolmogorov-Smirnov statistical analysis of the data is the viscosity of the normal followed by a one-way test ANAVA obtained  $p = 0.000$  ( $p < 0.05$ ), there is a significant difference in viscosity, followed by Tukey-HSD test produced there are significant differences in each formula. Therefore we can conclude that the increase in HPMC may increase the physical stability emulgel gotu kola

**Keyword :** Emulgel, HPMC, Physical Stability