

## Nanotechnology in Natural Medicine Development

### Background

Natural remedies have been used throughout the world for many years for the purpose of treating health problems in humans. However, there are many challenges faced in developing natural medicines. Nanotechnology has shown great success in the delivery of medicinal active substances, including natural bioactive compounds. The scope of this workshop covers the topic of developing immunostimulants from natural bioactive compounds, biosensor, effective drugs delivery, the use of Dynamic Light Scattering (DLS) and Static Light Scattering (SLS) techniques for the evaluation of nanoparticles, as well as the practice of making nanoparticle from biodegradable and biocompatible polymers.

### Time Schedule

#### Day 1. (Friday, 10 June 2022)

Time	Activities	Venue	Media
08.00-08.15	Registration	Meeting Room 1 <sup>st</sup> floor	Offline
08.16-09.00	Coffee Break		
09.01-09.15	<b>Session 1:</b> <i>Welcome speech and introduction of UII-Nanopharmacy Research Centre from Head of Research Centre.</i>		
09.16-10.00	<b>Session 3:</b> <i>New Technology on Nanoparticle Characterization and Centrifugal Particle Analyzer.</i>		
10.01-10.40	<b>Session 2:</b> <i>Development of Nano-herbal from Natural Bioactive</i>		
10.41-11.20	<b>Session 3:</b> <i>Molecular Pharmaceutics: Nano Technology and Targeted Drug Delivery Systems</i>		
11.21-12.50	Lunch Break and Praying	UII-Nanopharmacy laboratory	Offline
12.51-13.00	Preparation Hand on Workshop		
13.00-14.00	<b>Session 4:</b>		Hybrid

## WORKSHOP-ICPRP 2022

	<i>Nano-Biosensor for Detection of Infectious Disease</i>		(Live From Japan)
14.01-15.30	<b>Session 5:</b> <i>Biodegradable and Biocompatible Polymeric Nanoparticle: Design for Effective Delivery and Control Release</i> <ol style="list-style-type: none"> <li>1. <i>Hand on Formulation of Polymeric nanoparticle double emulsion method</i></li> </ol>		Offline
15.30-15.45	Coffee Break		
15.46-17.15	<b>Session 6:</b> <i>Biodegradable and Biocompatible Polymeric Nanoparticle: Design for Effective Delivery and Control Release</i> <ol style="list-style-type: none"> <li>2. <i>Hand on Formulation of Polymeric nanoparticle aero gelation method</i></li> <li>3. <i>Purification polymeric nanoparticle</i></li> <li>4. <i>Lyophilization polymeric nanoparticle</i></li> </ol>		
17.16-17.30	Closing and Preparation for Day 2		

### Day 2. (Saturday, 11 June 2022)

Time	Activities	Venue	Media
08.15-08.45	Registration and Coffee Break		
08.45-09.00	Preparation Hand on Workshop		
09.01-12.00	<b>Session 7:</b> <i>Biodegradable and Biocompatible Polymeric Nanoparticle: Design for Effective Delivery and Control Release</i> <ol style="list-style-type: none"> <li>5. <i>Design of stealth and targeted nanoparticle formulation</i></li> <li>6. <i>Characterization of Nanoparticles</i></li> <li>7. <i>Nanoparticle on Pharmaceutical Semisolid Dosage form formulation</i></li> <li>8. <i>Nanoparticle in Solid Dosage Form formulation</i></li> <li>9. <i>Result and Discussions</i></li> </ol>	UII- Nanopharmacy laboratory	Offline
12.01-13.00	Closing, Lunch Break and Praying		

**Speaker and Committee:**

1. Prof. Dr. apt. Yandi Syukri, M.Si (UII)
2. apt. Siti Zahliyatul Munawiroh, Ph.D (UII)
3. Dr. apt. Lutfi Chabib, M.Sc (UII)
4. apt. Oktavia Indrati, M.Sc (UII)
5. apt. Bambang Hernawan Nugroho, M.Sc (UII)
6. Pemateri dari PT Horiba Indonesia

**SPEAKER PROFILE:**

**Prof apt. YANDI SYUKRI, M.Si.**

Institution : UII-Nanopharmacy

Topic : “Development of Nanoherbal from Natural Bioactive ”

Position: Head of Pharmacy Dept and UII Nanopharmacy



**apt. SITI ZAHLIYATUL M, Ph.D**

Institution : UII-Nanopharmacy

Topic : “Molecular Pharmaceutics: Nano Technology and Targeted Drug Delivery Systems”

Position : Head Pharmaceutical Technology Laboratory and UII-Nanopharmacy Researcher



**SJAIKHURRIZAL EL MUTTAQIEN, Ph.D**

Institution : (Badan Riset dan Inovasi Nasional)  
BRIN

Topic: "Nano-Biosensor for Detection of  
Infectious Disease"

Position : Appointed Assistant Professor:  
Laboratory of Biotechnology, Shizuoka  
University Japan (Post Doc Program)



**RESTIANNY HANINDYA , M.Eng**

Instituion: Horiba Indonesia

Topic : "New Technology on Nanoparticle  
Characterization: Nanoparticle Tracking  
Analyzer and Centrifugal Particle Analyzer"

Position : Technical Specialist-Scientific



**Moderator**

**Dr.apr.LUTFI CHABIB, M.Sc.**

Institution: Magister of Pharmacy and UII-  
Nanopharmacy Researcher



### Hand on Workshop Assistant.

Topic: "Biodegradable and Biocompatible Polymeric Nanoparticle: Design for Effective Delivery and Control Release"

**apt.BAMBANG HERNAWAN NUGROHO,M.Sc**

Institution: Dept of Pharmacy and UII-  
Nanopharmacy

### Workshop Syllabus

1. *Hand on Formulation of Polymeric nanoparticle double emulsion method*
2. *Hand on Formulation of Polymeric nanoparticle aero gelation method*
3. *Purification polymeric nanoparticle*
4. *Lyophilization polymeric nanoparticle*
5. *Design of stealth and targeted nanoparticle formulation*
6. *Characterization of Nanoparticles*
7. *Nanoparticle on Pharmaceutical Semisolid Dosage form formulation*
8. *Nanoparticle in Solid Dosage Form formulation*



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