

# dr. Mutiara Indah Sari, M.Kes

Lecturer of Undergraduate Program in Medicine Study Program  
Faculty of Medicine  
Universitas Sumatera Utara

✉ [mutiara@usu.ac.id](mailto:mutiara@usu.ac.id)

🌐 [fk.usu.ac.id/en/lecturer/mutiara-indah-sari](http://fk.usu.ac.id/en/lecturer/mutiara-indah-sari)

---

## Publications

---

2025

Buku lainnya

### **PENERAPAN BIOTEKNOLOGI MODERN DALAM KEHIDUPAN**

MUTIARA INDAH SARI

2025

Buku lainnya

### **DASAR - DASAR PATOLOGI ANATOMI SUBSELULER DAN MOLEKULER**

MUTIARA INDAH SARI

2025

Buku lainnya

### **GENETIKA MODERN DI ERA GENOMIK**

MUTIARA INDAH SARI

2025

Buku lainnya

### **Imunopatologi**

MUTIARA INDAH SARI

2025

Buku lainnya

### **Sistem Saraf**

MUTIARA INDAH SARI

2025

Buku lainnya

### **Biokimia Medik**

MUTIARA INDAH SARI

2025

Buku lainnya

### **Bioteknologi Farmasi**

MUTIARA INDAH SARI

2025

Buku lainnya

### **Nutrigenomik dan Aplikasi Teknik Molekuler**

MUTIARA INDAH SARI

2023

Jurnal internasional bereputasi

### **Coleus Amboinicus Lour. Leaf Extract as an Antioxidant in Sepsis**

MUTIARA INDAH SARI

2023

Jurnal internasional bereputasi

### **Mesenchymal stem cell secretome therapy on inflammation: A systematic review**

2023

Jurnal internasional bereputasi

**Correction: The Expression Levels and Concentrations of PD-1 and PD-L1 Proteins in Septic Patients: A Systematic Review (Diagnostics, (2022), 12, 8, (2004), 10.3390/diagnostics12082004)**

MUTIARA INDAH SARI

2023

Makalah ilmiah

**Fecal Injection to Produce Murine Models with Low Mortality Rate**

MUTIARA INDAH SARI

2022

Jurnal internasional bereputasi

**The Expression Levels and Concentrations of PD-1 and PD-L1 Proteins in Septic Patients: A Systematic Review**

SYAFRUDDIN ILYAS , MUTIARA INDAH SARI

2022

Prosiding seminar nasional

**Pelatihan Adaptasi Kebiasaan Baru dalam Pengolahan Pangan Berbahan Mangrove di Desa Lubuk Kertang**

MOHAMMAD BASYUNI , MUTIARA INDAH SARI , ERA YUSRINI , BEJO SLAMET , APRI HERI ISWANTO , ERNI JUMILAWATY

2022

Jurnal internasional bereputasi

**The Serological Examination of Immunoglobulin A Anti-Early Antigen of Epstein-Barr Virus (Anti-EA EBV IgA) in the Nias Tribe Nasopharyngeal Cancer Patients**

MUTIARA INDAH SARI

2022

Jurnal internasional bereputasi

**The Serological Examination of Immunoglobulin A Anti-Early Antigen of Epstein-Barr Virus (Anti-EA EBV IgA) in the Nias Tribe Nasopharyngeal Cancer Patients**

MUTIARA INDAH SARI , FARHAT

2022

Jurnal internasional bereputasi

**The relationship of age, sex and prothrombin time related to the severity and mortality of COVID-19 patients with diabetes mellitus: a systematic review and meta analysis**

MUTIARA INDAH SARI

2022

Jurnal internasional bereputasi

**The Effect of Hypoxia Inducible Factor -1 Alpha and Vascular Endothelial Growth Factor Level in Type 2 Diabetes Microvascular Complications and Development**

MUTIARA INDAH SARI

2022

Jurnal internasional bereputasi

**Vitamin D Receptor Gene Polymorphism Affecting Vitamin D and Beta Carotene Deficiency in Tuberculosis Patients**

MUTIARA INDAH SARI

2022

Jurnal internasional bereputasi

**Factors Influence the Knowledge, Attitudes, and Behavior of Community about COVID-19 Vaccine in Medan City, Indonesia**

MUTIARA INDAH SARI

2022

Jurnal internasional bereputasi

## **The Association between TNF- $\alpha$ , IL-6, and Vitamin D Levels and COVID-19 Severity and Mortality: A Systematic Review and Meta-Analysis**

MUTIARA INDAH SARI

2022

Jurnal internasional bereputasi

## **The effect of chewing-betel habits on blood glucose levels in the Karo ethnic community, Karo district**

MUTIARA INDAH SARI

2021

Jurnal internasional bereputasi

## **Daily Soy-Catfish-Anchovy-Rice (SCAR) Porridge Increases 25(OH)D Serum Levels in Tuberculosis Patients with Vitamin D Receptor Gene Polymorphisms**

MUTIARA INDAH SARI

2021

Jurnal internasional bereputasi

## **CAT-21 A/T Gene Polymorphisms Associated with Breast Cancer Susceptibility**

MUTIARA INDAH SARI

2021

Jurnal nasional terakreditasi

## **Correlation of 25 Hydroxyvitamin D3 Levels with Blood Pressure and Lipid Profile, in Healthy Individuals**

MUTIARA INDAH SARI

2021

Prosiding seminar internasional

## **The association of GSTT1 polymorphism with total antioxidant status of nasopharyngeal carcinoma patients**

MUTIARA INDAH SARI

2021

Prosiding seminar internasional

## **The association of GSTT1 polymorphism with immunoglobulin a (IgA) of nasopharyngeal carcinoma patients**

MUTIARA INDAH SARI

2021

Jurnal internasional bereputasi

## **Knowledge and Attitude of Medical Students at the Universitas Sumatera Utara toward Lifestyle that Contributes to Type 2 Diabetes**

MUTIARA INDAH SARI

2021

Prosiding seminar internasional

## **The chemical changes in the total antioxidant status and biological activity of GSTP1 polymorphism on nasopharyngeal carcinoma patients**

MUTIARA INDAH SARI

2021

Prosiding seminar internasional

## **The genetic variant of GSTP1 and immune response of immunoglobulin A (IgA) on nasopharyngeal carcinoma patients**

MUTIARA INDAH SARI

2021

Jurnal internasional bereputasi

## **The Role of Apa-I Vitamin D Receptor Gene Polymorphism in Type 2 Diabetes Mellitus**

MUTIARA INDAH SARI

2021

Jurnal internasional bereputasi

## **Dietary intake and glutathione s-transferase (m1 and t1) variants in type 2 diabetes mellitus at USU hospital, Medan, Indonesia**

MUTIARA INDAH SARI

2021

Jurnal internasional bereputasi

## **The Relationship between Family History of Type 2 Diabetes Mellitus and Knowledge, Attitude, and Practice Regarding Type 2 Diabetes Mellitus among Medical Students**

MUTIARA INDAH SARI

2021

Jurnal internasional bereputasi

## **The Polymorphism in Interleukin-6-597 G/A Gene and their Levels on Type 2 Diabetic Patients**

MUTIARA INDAH SARI

2021

Prosiding seminar internasional

## **Association between Lifestyle and Dietary Habit with Hemoglobin Level**

MUTIARA INDAH SARI

2020

Jurnal internasional bereputasi

## **Role of MMP-9 in Diabetic Retinopathy**

MUTIARA INDAH SARI

2020

Jurnal internasional bereputasi

## **The Association of Cytokine Genes Polymorphisms (IL1 $\beta$ +3954 C/T, IL18-137 G/C, and IL18-607 C/A) in Type 2 Diabetes Mellitus-tuberculosis**

MUTIARA INDAH SARI

2020

Jurnal internasional bereputasi

## **Interleukin-4 –33 C/T Gene Polymorphisms are not Associated with Type 2 Diabetes Mellitus**

MUTIARA INDAH SARI

2020

Jurnal nasional terakreditasi

## **EFEK EKSTRAK DAUN GAMBIR ( UNCARIAGAMBIRROXB) TERHADAP TINGKAT STRESS OKSIDATIF DAN EKSPRESI BRAIN DERIVED NEUROTHROPIC FACTOR(BDNF) PADA HIPOKAMPUS MENCIT BETINA MODEL PENUAANYANG DIINDUKSI D-GALAKTOSA**

MUTIARA INDAH SARI

2020

Jurnal internasional bereputasi

## **The Association of Antioxidants Gene Polymorphisms (SOD2 Ala16Val, GPx1 Pro198Leu, GSTP1 Ile105Val, and Cat –21 A/T) and Risk of Type 2 Diabetes Mellitus**

MUTIARA INDAH SARI

2020

Jurnal nasional terakreditasi

## **The Correlation Between Body Mass Index And Acne Vulgaris**

MUTIARA INDAH SARI

2020

Prosiding seminar internasional

## **Vitamin D and Its Association with Tumor Necrosis Factor-alpha Level in Active Tuberculosis Patients in North Sumatera, Indonesia**

MUTIARA INDAH SARI

2020  
Prosiding seminar internasional

## **Interleukin-4 Gene Polymorphisms in Type 2 Diabetes Mellitus in Medan, Indonesia**

MUTIARA INDAH SARI

2020  
Prosiding seminar internasional

## **Manganese Superoxide Dismutase Gene Ala16Val Polymorphism in Pulmonary Tuberculosis Patients with Diabetes at Balai Pengobatan Lung Disease, Medan City**

MUTIARA INDAH SARI

2019  
Jurnal internasional bereputasi

## **The Gene Polymorphisms (-308G/A) and the Tumor Necrosis Factor-alpha Levels in Type 2 Diabetic Patients with and Without Tuberculosis Infection**

MUTIARA INDAH SARI

2019  
Jurnal internasional bereputasi

## **Superoxide Dismutase Levels and Polymorphism (Ala16val) In Tuberculosis Patients with Diabetes Mellitus in Medan City**

MUTIARA INDAH SARI

2019  
Jurnal internasional bereputasi

## **Association between glycated hemoglobin with the levels of serum proinflammatory cytokines and antioxidants in patients with type 2 diabetes mellitus in Universitas SumateraÂ ...**

MUTIARA INDAH SARI

2019  
Jurnal nasional terakreditasi

## **Polimorfisme Gen TaqIA Reseptor Dopamin D2 (DRD2) pada Pria Usia $\geq$ 40 Tahun dengan Sindrom Metabolik dan Non Sindrom Metabolik**

MUTIARA INDAH SARI

2018  
Prosiding seminar internasional

## **The behaviour University of Sumatera Utara football school students and the Sejati Pratama football school students on soil transmitted Helminth infection**

MUTIARA INDAH SARI

2018  
Prosiding seminar internasional

## **Self-efficacy in type 2 diabetes mellitus patients and the relationships with the quality of life in Medan city**

MUTIARA INDAH SARI

2018  
Jurnal internasional bereputasi

## **Histopathological liver tissues of alloxan-induced wistar rats that given Lawsoniainermis (Linn.) leaves' ethanolic extract**

MUTIARA INDAH SARI

2018  
Jurnal internasional bereputasi

## **Cigarette Smoking and Hyperglycaemia in Diabetic Patients**

MUTIARA INDAH SARI

2018  
Jurnal internasional bereputasi

## **Blood glucose levels and the microscopic structure of kidney wistar rat diabetes mellitus under the effect of Lawsoniainermis (Linn.) leaves ethanolic extract**

2018

Prosiding seminar internasional

**Correlation between iron deficiency anemia and intestinal parasitic infection in school-age children in Medan**

MUTIARA INDAH SARI

---

2018

Prosiding seminar internasional

**Effect of lawsonia innermis (linn) leaves ethanolic extract on blood glucose and malondialdehyde level in alloxan-induced diabetic rats**

MUTIARA INDAH SARI

---

2018

Prosiding seminar internasional

**Effect of Prunus Dulcis Extract against Total Cholesterol Level in Mice that Given Monosodium Glutamate**

MUTIARA INDAH SARI

---

2017

Jurnal nasional terakreditasi

**IbM Pemberdayaan Guru dan Santri Pondok Pesantren dalam Penanganan Awal Penderita Luka**

MUTIARA INDAH SARI

---

2017

Prosiding seminar internasional

**Nutrient Intake, Apolipoprotein A5 -1131T>C Polymorphism and Its Relationship with Obesity**

MUTIARA INDAH SARI

---

2017

Jurnal internasional bereputasi

**Relationship between calorie intake, physical activity, and dopamine D2 receptor Taq1A gene polymorphism in normal-weight, overweight, and obese students of the faculty of medicine of university of Sumatera Utara**

MUTIARA INDAH SARI

---

2016

Prosiding seminar internasional

**Association Vitamin D Receptor (TaqI) Gene Polymorphism with Anthropometric Parameters and Blood Pressure of College Students in Faculty of Medicine, University of Sumatera Utara**

MUTIARA INDAH SARI

---

2016

Prosiding seminar internasional

**Body Mass Index and Triglyceride Levels of The Students of Faculty of Medicine University of North Sumatra 2016**

MUTIARA INDAH SARI

---

2016

Prosiding seminar internasional

**Neck Circumference as Useful Marker of Obesity and Its Correlation with Triglyceride Levels**

MUTIARA INDAH SARI

---

2015

Jurnal internasional bereputasi

**Is Apolipoprotein A5 -1131t>C Polymorphshism A Contributing Factor For Tryglyceride Level In Metabolic Syndrome?**

MUTIARA INDAH SARI

---

2026

Jurnal internasional bereputasi

## **The relation of Haplotype ATP-binding cassette B1 and Glutathione S-transferase P1 A313G genes with hematological toxicity in Indonesian breast cancer patients receiving**

MUTIARA INDAH SARI

2026

Jurnal internasional bereputasi

## **Glutathione Peroxidase-1 Pro198Leu Variant in Tuberculosis-infected Type 2 Diabetes Mellitus Patients at Pulmonary Polyclinic Medan. Open Access Maced J Med Sci. 2021 Jun 27; 9**

MUTIARA INDAH SARI

2026

Jurnal nasional

## **Hubungan Kadar Adrenocorticotropine Hormone dan Enzim 11-Hydroxylase dengan Profil Lipid Serum pada Obesitas, Overweight dan Normal**

MUTIARA INDAH SARI

2026

Jurnal internasional bereputasi

## **Correction: Sari, MI; Ilyas, S. The Expression Levels and Concentrations of PD-1 and PD-L1 Proteins in Septic Patients: A Systematic Review. Diagnostics 2022, 12, 2004**

MUTIARA INDAH SARI

2026

Prosiding seminar nasional

## **Pelatihan Adaptasi Kebiasaan Baru dalam Pengolahan Pangan Berbahan Mangrove di Desa Lubuk Kertang**

MUTIARA INDAH SARI

2026

Jurnal internasional bereputasi

## **The effect of chewing-betel habits on blood glucose levels in the Karo ethnic community, Karo district**

MUTIARA INDAH SARI

2026

Jurnal nasional terakreditasi

## **Correlation Between Pregnant Women's Anxiety Level and Their Decision Towards COVID-19 Vaccine Acceptance**

MUTIARA INDAH SARI

## **Community Services**

2025

### **Pengabdian Masyarakat Akbar PEMA FK USU 2025**

DELYUZAR , MUTIARA INDAH SARI

2024

Ipteks Bagi Masyarakat

### **PENYULUHAN ANTI BULLYING DAN PERILAKU HIDUP BERSIH DAN SEHAT**

AYANG PRATAMA , YETI MELIANY LUBIS , NITA NILAN SRY REZKI PULUNGAN , DINDA ADISTYA NUGRAHA , SYARIFAH LISA ANDRIATI , MUTIARA INDAH SARI , MOHAMMAD GHUFFRAN , ANDI NOVA BUKIT

2024

### **Lembaga Kesehatan Nahdlatul Ulama**

DEWI INDAH SARI SIREGAR , MUTIARA INDAH SARI

2020

### **Kemandirian Desa Lubuk Kertang Dalam Pemanfaatan dan Perlindungan Sumberdaya Mangrove dan Pertanian di Desa Lubuk Kertang, Kecamatan**

## **Intellectual Property Rights**

---

2026

Hak cipta nasional

### **Imunopatologi**

MUTIARA INDAH SARI

---

2025

Hak cipta nasional

### **GENETIKA MODERN DI ERA GENOMIK**

MUTIARA INDAH SARI

---

2025

Hak cipta nasional

### **BIOTEKNOLOGI FARMASI**

MUTIARA INDAH SARI

---

2025

Hak cipta nasional

### **IMUNOBIOLOGI**

MUTIARA INDAH SARI

---

2019

Hak cipta nasional

### **Radikal Bebas dan Antioksidan**

MUTIARA INDAH SARI

---

2019

Hak cipta nasional

### **Enzyme Linked Immunosorbent Assay (ELISA)**

MUTIARA INDAH SARI

---

2018

Hak cipta nasional

### **Polimerase Chain Reaction (PCR)**

MUTIARA INDAH SARI

---

2018

Hak cipta nasional

### **Elektroforesis Gel Agarose**

MUTIARA INDAH SARI

---

2018

Hak cipta nasional

### **Isolasi DNA Spesimen Darah**

MUTIARA INDAH SARI

---

2026

Hasil penelitian/pemikiran yang tidak dipublikasikan

### **Hubungan Menstruasi dengan Konsentrasi Hemoglobin pada Siklus Menstruasi Mahasiswa Angkatan 2007 FK USU-ACMS dan Angkatan 2009 FK UKM-ACMS Tahun 2010**

MUTIARA INDAH SARI

---