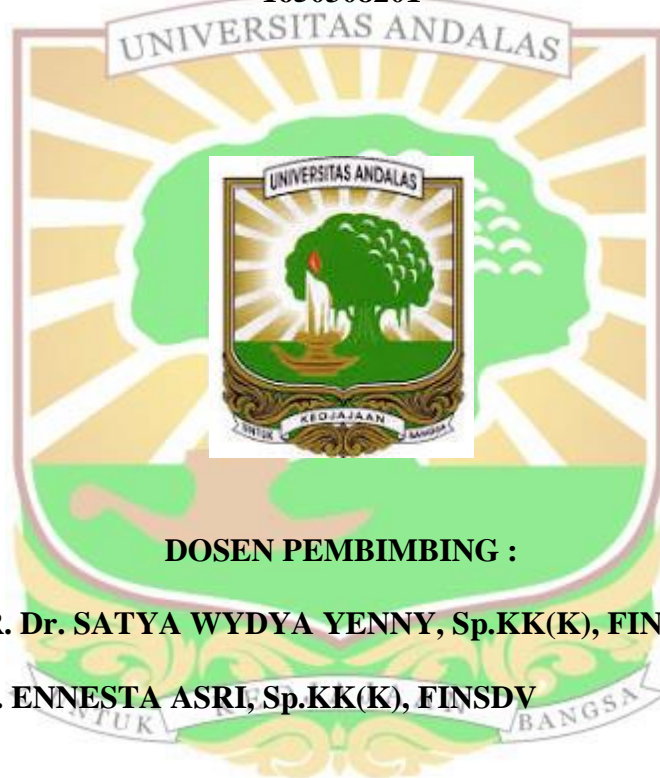


**HUBUNGAN PAPARAN PESTISIDA DENGAN DERAJAT KEPARAHAN  
MELASMA MELALUI KADAR GLUTATION SERUM**

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**PROGRAM STUDI DERMATOLOGI DAN VENEREOLOGI  
FAKULTAS KEDOKTERAN UNIVERSITAS ANDALAS/  
RSUP. DR. M. DJAMIL PADANG  
2020**

# HUBUNGAN PAPAN PESTISIDA DENGAN DERAJAT KEPARAHAN MELASMA MELALUI KADAR GLUTATION SERUM

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## Abstrak

### Latar belakang :

Paparan pestisida jangka panjang sering menimbulkan berbagai masalah kesehatan akibat stres oksidatif yang terjadi karena peningkatan radikal bebas dan perubahan mekanisme pertahanan enzim antioksidan. Saat ini, stres oksidatif merupakan salah satu faktor yang dapat memengaruhi terjadinya melasma. Glutation merupakan salah satu marker stres oksidatif dalam tubuh dan juga terlibat dalam patogenesis melasma

### Tujuan penelitian :

Mengetahui hubungan paparan pestisida dengan derajat keparahan melasma melalui kadar glutathion serum

### Subjek dan metode:

Tiga puluh dua petani perempuan dengan melasma dan terpapar pestisida yang berusia 30-50 tahun di Kenagarian Alahan Panjang. Subjek yang memenuhi kriteria inklusi diukur derajat keparahan melasma berdasarkan skor IMEM 2018 dan dilakukan pemeriksaan kolinesterase dan glutathion serum dengan metode ELISA.

### Hasil :

Rerata kadar kolinesterase serum pada petani perempuan dengan melasma dan terpapar pestisida yaitu  $138,35 \pm 4,24$  U/L. Rerata kadar glutathion serum pada petani perempuan dengan melasma dan terpapar pestisida yaitu  $2,28 \pm 0,65$   $\mu\text{mol/L}$ . Hubungan paparan pestisida dengan derajat keparahan melasma melalui glutathion serum menunjukkan korelasi positif namun tidak bermakna secara statistik.

### Diskusi :

Tidak terdapat hubungan paparan pestisida dengan derajat keparahan melasma melalui glutathion serum, namun terdapat kecenderungan korelasi positif yang tidak bermakna secara statistik. Diperlukan penelitian lebih lanjut dengan metode *cross sectional comparative*.

### Simpulan :

Tidak terdapat hubungan paparan pestisida dengan derajat keparahan melasma melalui kadar glutathion serum

**Kata kunci :** antioksidan, petani, hiperpigmentasi kulit

# THE CORRELATION BETWEEN EXPOSURE OF PESTICIDES WITH SEVERITY OF MELASMA BY MEANS GLUTATHIONE SERUM

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## Abstract

### Background :

Long-term exposure to pesticides has been associated with numerous adverse health effects through oxidative stress due to the generation of free radicals and/or alteration in antioxidant defense enzymes. Recently oxidative stress is one factor that play a role in the occurrence of melasma. Glutathione is a marker of oxidative stress in the body which also involved in the pathogenesis of melasma.

### Objective :

To asses the correlation between exposures of pesticide with severity of melasma by means glutathione serum.

### Subject and metode :

The total samples are 32 female farmers who suffer from melasma and were exposed to pesticides in Alahan Panjang District with range 30-50 years. Subjects who have inclusion criteria, measured the severity of melasma according to IMEM 2018 score and examined for serum cholinesterase and glutathione using the ELISA method.

### Result :

The mean serum cholinesterase level in female farmers who suffered from melasma and exposed to pesticides were  $138.35 \pm 4.24$  U/L. The mean serum glutathione level in female farmers who suffered from melasma and exposed to pesticides were  $2.28 \pm 0.65$   $\mu\text{mol/L}$ . The correlation between exposure to pesticides with severity of melasma by means glutathione levels showed positive correlation but nit significant statistically.

### Discussion:

There was no correlation between pesticide exposure with severity of melasma by means glutathione serum, but there is positive correlation trend that statistically not significant. Further study is needed cross sectional comparative method.

### Conclusion :

There was no correlation between pesticide exposure with severity of melasma by means glutathione serum.

**Key words :** antioxidants, farmers, skin hyperpigmentation