

# Supplementary Materials: Histopathological Changes in the Liver, Heart and Kidneys Following Malayan Pit Viper (*Calloselasma rhodostoma*) Envenoming and The Neutralising Effects of Hemato Polyvalent Snake Antivenom

Wipapan Khimmaktong, Nazmi Nuanyaem, Nissara Lorthong, Wayne C. Hodgson and Janeyuth Chaisakul

**Table S1.** Pathological characteristic and evaluation criteria for degree of morphological changes in liver [37].

| Tissue change             | Description                              | Score |
|---------------------------|--|-------|
| Congestion                | • No congestion                          | 0     |
|                           | • In few sinusoids and vessels           | +     |
|                           | • In about half of sinusoids and vessels | ++    |
|                           | • In almost all sinusoids and vessels    | +++   |
| Inflammatory infiltration | • No inflammatory infiltrate             | 0     |
|                           | • 1-3 inflammatory foci/ section         | +     |
|                           | • 4-6 inflammatory foci/ section         | ++    |
|                           | • >6 inflammatory foci/ section          | +++   |
| Necrosis                  | • No necrosis                            | 0     |
|                           | • Focal necrosis                         | +     |
|                           | • Zonal necrosis                         | ++    |
|                           | • Confluent necrosis                     | +++   |

**Table S2.** Pathological characteristic and evaluation criteria for degree of morphological changes in kidneys [37].

| Tissue change             | Description  | Score |
|---------------------------|--|-------|
| Congestion                | • No congestion  | 0     |
|                           | • Focal glomeruli and interstitial vessels                       | +     |
|                           | • Diffuse glomeruli and interstitial vessels                     | ++    |
|                           | • In almost all glomeruli and interstitial vessels or hemorrhage | +++   |
| Inflammatory infiltration | • No inflammatory infiltrate                                     | 0     |
|                           | • 1-3 inflammatory foci/ section                                 | +     |
|                           | • 4-6 inflammatory foci/ section                                 | ++    |
|                           | • >6 inflammatory foci/ section                                  | +++   |
| Tubular injury            | • No evidence of tubular injury                                  | 0     |
|                           | • Less than 50% loss of brush border                             | +     |
|                           | • More than 50% loss of brush border with cell sloughing off     | ++    |
|                           | • Tubular necrosis is found in most area                         | +++   |

**Table S3.** Pathological characteristic and evaluation criteria for degree of morphological changes in heart [36].

| <b>Tissue change</b> | <b>Description</b>   | <b>Score</b> |
|----------------------|--|--------------|
| Myocardial Damage    | • No lesions   | 0            |
|                      | • Slight derangement of muscle fibers, few inflammatory cells and vacuoles   | 0.5          |
|                      | • Focal lesions of the subendocardial portion of the apex and mid-ventricle, inflammatory cells, interstitial edema, vacuolization of myocytes     | 1            |
|                      | • Focal lesions of the subendocardium of the apical and mid ventricular region with right ventricular involvement                                  | 1.5          |
|                      | • Focal lesions extending over a wider area of both ventricles   | 2            |
|                      | • Focal lesions extending over a wider area of both ventricles, extensive inflammatory cell infiltration, interstitial edema, rupture of myofibers | 2.5          |
|                      | • Confluent lesions of the apex, mid-left ventricle and right ventricle, extensive inflammatory cell infiltration, profuse edema                   | 3            |
|                      | • Confluent lesions throughout the heart   | 4            |