4.5.1 Metalloprotease

The literature reports that blister formation, hemorrhages, necrosis, itching (pruritus) and skin damage are due to metalloprotease enzyme. It is also responsible for vasodilatation by degrading the extracellular matrix, preventing blood clot formation (Gutierrez and Rucavado 2000), sturdy myotoxicity (Hamza et al. 2010) and hyperalgesic, oedematogenic activities (Malta et al. 2008). Therefore, it appears to be in the dominant form of proteases in centipede venom and serine proteases too play a role in toxin processing (Knapp et al. 2010; Siezen et al. 1997). In addition, to metalloproetase, there is serine protease (S1 and S8) found in Scolopendrid venom (Malta et al. 2008). They are involved in smooth muscle contraction, anticoagulation and immunosuppression (Fry et al. 2009; Low et al. 2013; Ma et al. 2012; Weston et al. 2013). The structure of metalloprotease resembles astacin metalloendoprotease (MEROPS family M12, subfamily A) (Undheim et al. 2014).

4.5.2 γ-Glutamyl Transpeptidases (GGTs)

GGTs are found abundantly in Scolopendridae than other centipedes (Undheim et al. 2014). They induce aggregation of platelets and haemolysis (Liu et al. 2012) and oxidative stress (Courtay et al. 1992).

4.5.3 Glycoside Hydrolases

Glycoside hydrolase enzymes (namely chitinase, lysozyme and hyaluronidase) hydrolyse the glycosidic bonds of carbohydrates. They are found in Scolopendridae (Gonzalez-Morales et al. 2014; Malta et al. 2008; Undheim et al. 2014).

4.5.4 Hyaluronidases

Among the three glycoside hydrolase enzymes, hyaluronidases are considered to be spreading factors that increase the pathological impact of venom components, such as hemorrhagins and neurotoxins (Girish et al. 2004; Kuhn-Nentwig et al. 2003; Long-Rowe and Burnett 1994). They also degrades the hyaluronic acid, which induces inflammation and tumor formation.

4.5.5 Phospholipase A2 (PLA2)

Enzyme PLA2 is found only in Scolopendrid venom (Gonzàlez-Morales et al. 2009; Liu et al. 2012; Malta et al. 2008; Undheim et al. 2014). PLA2 hydrolyse glycerophospholipids at the sn-2 position release lysophospholipids and fatty acids, such as arachidonic acids, thereby inducing skin diseases and prostrate cancer (Eividin et al. 2011). However, neofunctionalisation of snake venom PLA2 often removes the ability to catalyse the reaction (Fry et al. 2009; Low et al. 2013) and this may also be the case for PLA2 in scolopendrid venom. Local necrosis, hemorrhages and respiratory arrest or paralysis are due to PLA_2 (an anticoagulant enzyme which inhibits the