

CHAPTER 3

CONCEPTUAL FRAMEWORK AND HYPOTHESIS

3.1 Conceptual Framework

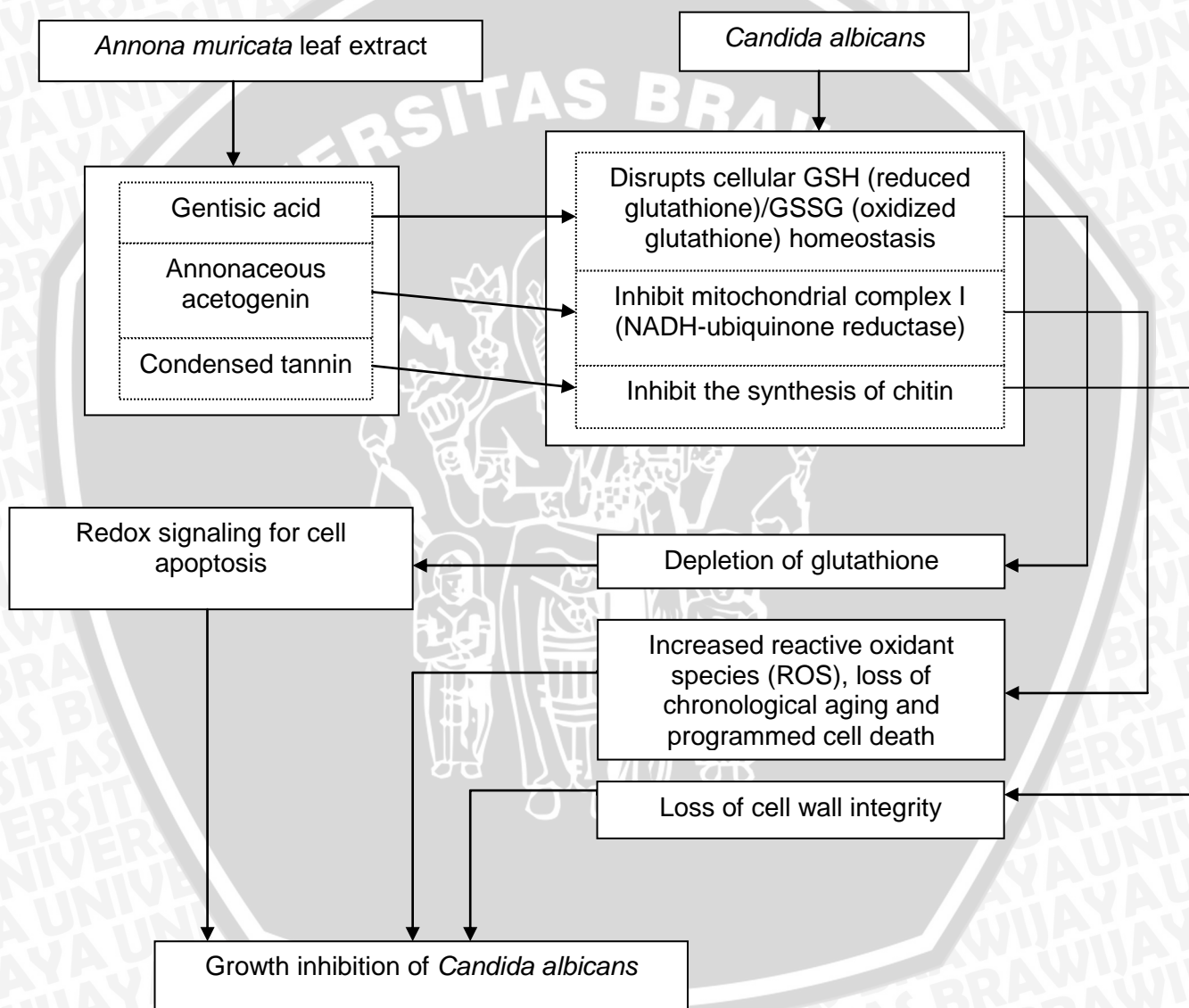


Figure 6 Conceptual framework



3.2 Narration of Conceptual Framework

Annonaceous acetogenins inhibit NADH-ubiquinone reductase (Complex I) activity of *Candida albicans* mitochondria and induce a state similar to enzyme dysfunction leading to increased reactive oxidant species (ROS), loss of chronological aging and programmed cell death (PCD).

Gentisic acid disrupts the cellular redox homeostasis of cellular glutathione resulting in cellular GSH (reduced glutathione)/GSSG (oxidized glutathione) homeostasis and cause depletion of glutathione which activates the redox signalling of the cells to undergo apoptosis.

Condensed tannins inhibit the synthesis of chitin which is an important component of fungal cell wall causing loss of cell wall integrity.

3.3 Hypotheses

- *Annona muricata* leaf extract has antifungal effect towards *Candida albicans* in vitro.
- The growth of *Candida albicans* decreases as the concentration of *Annona muricata* leaf extract increases.