BAB 5
KESIMPULAN DAN SARAN

5.1 Kesimpulan

Berdasarkan penelitian yang ada, maka dapat disimpulkan bahwa

1. Delapan dari 14 senyawa terkandung dalam *Cinnamomi Cortex* terdiri dari (+)-Katekin, (+)-Epikatekin, (-)-Katekin, Proantosianidin A, ß-kariofilen, kumarin, benzil benzoat dan sinamil asetat berpotensi sebagai penghambat enzim *α*-amilase ditinjau dari afinitas ikatan yang optimal karena memiliki konstanta inhibisi (Ki) ≤ 250 μM dan afinitas ikatan (ΔG) ΔG ≤ -5 kcal/mol.
2. Residu asam amino yang berperan aktif dalam interaksi antara 8 senyawa potensial dengan target enzim *α*-amilase dengan ikatan hidrogen adalah LYS200, GLU233, dan ASP 300, ASP197, dan HIS299. Interaksi dengan ikatan hidrofobik, residu yang sering muncul selama pengikatan adalah LEU162, ILE235, ALA198, dan TYR62.
3. Atom-atom yang terlibat dalam interaksi dengan ikatan hidrogen pada lisin adalah hidrogen yang berikatan pada gugus amina, pada asam glutamat adalah (OD1-H) hidroksil pada gugus karboksil di rantai samping residu, pada asam aspartate adalah (OD1 dan OD2) oksigen pada rantai samping residu, histidine adalah (H) hidrogen di imdazol di rantai samping residu.

5.2. Saran

Dilakukan penelitian lebih lanjut dengan metode simulasi dinamika untuk mengetahui stabilitas dari kompleks ikatan antara senyawa potensial

yaitu senyawa (+)-katekin, (-)-katekin, (+)-epikatekin, ß-kariofilen, proantosianindin A, benzil benzoat, sinamil asetat dan kumarin dengan target α-amilase yang berpengaruh pada aktifitasnya menghambat enzim.

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