Pengaruh acalypha indica dan centella asiatica terhadap konsentrasi karbonil otak tikus sprague dawley tua = Effect of acalypha indica and centella asiatica on brain carbonyl concentrations of old sprague dawley rats

Siregar, Astrid Mariam Khairani, author

Abstrak

Pendahuluan: Setiap manusia pasti mengalami proses penuaan, dimana proses penuaan itu sendiri erat kaitannya dengan kerusakan akibat radikal bebas. Kerusakan ini dapat terjadi pada protein dan akan memicu proses karbonilasi yang menghasilkan komponen toksik yaitu karbonil. Berbagai kerusakan dan penurunan fungsi tubuh yang terkait dengan proses penuaan menyebabkan minat masyarakat terhadap suplemen anti penuaan, termasuk tanaman Acalypha indica dan Centella asiatica yang berpotensi untuk mengurangi radikal bebas. Penelitian ini bertujuan untuk mengkaji kemampuan Acalypha indica dan Centella asiatica dalam menurunkan kadar karbonil akibat kerusakan protein pada proses penuaan. Metode: Penelitian dilakukan secara eksperimental di Laboratorium Departemen Biokimia dan Biologi Molekuler FKUI dengan menggunakan homogenat otak tikus Sprague dawley yang dikelompokkan sesuai perlakuannya masing-masing. Hasil: Kadar karbonil otak tikus tua yang diberi Centella asiatica menunjukkan angka yang jauh lebih rendah dibandingkan dengan kelompok tikus tua tanpa perlakuan, sedangkan kelompok yang diberi Acalypha indica tidak berbeda nyata dengan kelompok tua. tikus. Kesimpulan: Pegagan mampu menurunkan kadar karbonil akibat kerusakan protein pada proses penuaan.

Introduction: Every human being must experience the aging process, where the aging process itself is closely related to damage caused by free radicals. This damage can occur in proteins and will trigger the carbonylation process which produces a toxic component, namely carbonyl. Various damages and declines in body functions associated with the aging process have led to public interest in anti-aging supplements, including Acalypha indica and Centella asiatica plants which have the potential to reduce free radicals. This study aims to examine the ability of Acalypha indica and Centella asiatica to reduce carbonyl levels due to protein damage in the aging process. Methods: The study was conducted experimentally at the Laboratory of the Department of Biochemistry and Molecular Biology, Faculty of Medicine, using a brain homogenate of Sprague dawley rats which were grouped according to their respective treatments. Results: The brain carbonyl levels of old rats that were given Centella asiatica showed a much lower number than the group of old rats without treatment, while the group that was given Acalypha indica was not significantly different from the old group. rat. Conclusion: Gotu kola is able to reduce carbonyl levels due to protein damage in the aging process.