Efek ekstrak bunga rosella (Hibiscus sabdariffa Linn.) terhadap kadar Sirtuin 1 pada darah tikus model Accelerated Aging = Effects of ethanol extract of rosella flower (Hibiscus sabdariffa Linn.) on Sirtuin 1 levels in the blood of accelerated aging rat model

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Abstrak

Latar Belakang
Penuaan merupakan suatu proses yang tidak dapat dihindari. Namun, pencegahan penyakit terkait usia yang seringkali menyertainya dapat dilakukan dengan memodifikasi faktor risiko utamanya, termasuk inflamasi. Salah satu pendekatan yang dapat digunakan adalah dengan memanfaatkan tanaman yang kaya antioksidan. Rosella (Hibiscus sabdariffa Linn.), terbukti memiliki aktivitas antioksidan yang tinggi. Namun, saat ini belum ada penelitian spesifik yang menilai dampaknya terhadap biomarker khusus penuaan seperti Sirtuin 1.
Metode
Penelitian eksperimental in vivo ini dilakukan pada 18 tikus Sprague Dawley jantan yang dibagi secara acak kedalam 3 kelompok: kontrol (K) yang merupakan tikus muda normal yang diberi pakan standar; Accelerated Aging (AA) yang diberi pakan tinggi lemak dan D-galaktosa; dan Hibiscus sabdariffa Linn. (HSL) yang diberi pakan tinggi lemak, D-galaktosa, dan ekstrak etanol bunga H. sabdariffa dengan dosis 400 mg/KgBB. Perlakuan dilakukan selama 6 minggu. Pada akhir penelitian, kadar SIRT1 diukur menggunakan kit ELISA standar.
Hasil
Perbedaan rerata kadar SIRT1 yang diperoleh antar kelompok tidak signifikan secara statistik.
Kesimpulan
Ekstrak HSL belum mampu meningkatkan kadar SIRT1.
.....Introduction
Aging is an inevitable process. However, prevention of age-related diseases that often follows can be done by modifying its main risk factors, including inflammation. One approach that can be used is to utilize plants that are rich in antioxidants. Rosella (Hibiscus sabdariffa Linn.), has been shown to have high antioxidant activity. However, there is currently no specific study that assesses its impact on a specific aging biomarker like Sirtuin 1.
Method:
This in vivo experimental study was conducted on 18 male Sprague Dawley rats that were randomly divided into 3 groups: control (K) which were normal young rats that are fed with standard feed; Accelerated Aging (AA) which were fed high fat feed and D-galactose; and Hibiscus sabdariffa Linn. (HSL) which were fed high fat feed, D-galactose, and the ethanol extract of H. sabdariffa flowers at a dose of 400 mg/KgBW. The treatment was carried out for 6 weeks. At the end of the study, SIRT1 levels were measured using a standard ELISA kit.
Results:
The difference in mean SIRT1 levels obtained between groups was not statistically significant.
Conclusion:

HSL extract has not yet been able to increase SIRT1 levels.