

INTISARI

MASLINA R N., 2020 “LITERATUR REVIEW KADAR MALONDIALDEHIDA, HISTOPATOLOGI SILIA, DAN UPAYA EKSTRAK DAUN BAYAM MERAH (*family Amaranthaceae*) MELINDUNGI SILIA DARI PAPARAN ASAP ROKOK.

Paparan asap rokok dapat menyebabkan peningkatan kadar MDA dan efek penurunan keberadaan silia di trakea. Asap rokok menjadi salah satu sumber radikal bebas yang dapat dihambat oleh adanya suatu antioksidan. Tumbuhan yang memiliki kandungan aktivitas antioksidan salah satunya adalah daun bayam merah (*family Amaranthaceae*). Penelitian ini bertujuan untuk mengetahui hasil dari literatur review efek paparan asap rokok pada kadar MDA dan keberadaan silia di trakea.

Penelitian ini merupakan suatu bentuk penelitian gabungan. Unit laboratorium didapatkan hasil perhitungan rendemen, pembuatan ekstrak etanol 96% daun bayam merah hingga identifikasi senyawa daun bayam merah. Pada literatur review mendapatkan data sumber pencarian jurnal nasional maupun internasional. Jurnal-jurnal tersebut didapatkan dari mesin pencarian jurnal seperti Google Scholar, Portal Garuda, PubMed, Elsevier, dan NCBI.

Hasil dari pembahasan literatur review didapat bahwa pada kelompok yang diberi ekstrak daun *P. cordifolia* kadar MDA signifikan lebih rendah dibandingkan kelompok negative hasil ini menunjukkan ekstrak daun *P. cordifolia* menurunkan kadar MDA. Histopatologi kultur sel yang terpapar asap rokok menunjukkan pemendekan silia, pengurangan silia, akhirnya hilang semua silia, sedangkan kultur sel dengan filter arang sedikit mengalami perubahan dalam panjang silia. Nilai IC₅₀ ekstrak daun bayam merah (*family Amaranthaceae*) sebagai antioksidan dapat mengurangi radikal bebas sehingga memiliki efek pengurangan kerusakan jaringan.

Kata kunci : Daun bayam merah , antioksidan , radikal bebas , asap rokok,

ABSTRACT

MASLINA R N., 2020 "LITERATUR REVIEW OF MALONDIALDEHIDA LEVELS, SILIA HISTOPATOLOGY, THE EFFICACY OF RED SPINACH LEAVES EXTRACTS (family *Amaranthaceae*) PROTECTING SILIA FROM CIGARETTE SMOKE.

Immediate exposure can increase MDA levels and the effect of decreasing cilia levels in the cigarette smoke exposure can lead to increased MDA levels and a decreased effect on the presence of cilia in the trachea. Cigarette smoke is a source of free radicals that can be inhibited by the presence of an antioxidant. One of the plants that contain antioxidant activity is red spinach leaves (*family Amaranthaceae*). This study aims to determine the results of the literature reviewing the effects of cigarette smoke exposure on MDA levels and the presence of cilia in the trachea.

This research is a form of joint research. The laboratory unit obtained results of yield calculations, making 96% ethanol extract of red spinach leaves to identification of red spinach leaf compounds. In the literature review, we obtain data on national and international journal search sources. These journals are obtained from journal search engines such as Google Scholar, Portal Garuda, PubMed, Elsevier, and NCBI.

The results of the discussion of the literature review found that in the group given *P. cordifolia* leaf extract, MDA levels were significantly lower than in the negative group. This result indicated that *P. cordifolia* leaf extract decreased MDA levels. The histopathology of cell culture exposed to cigarette smoke showed shortening of cilia, reduction of cilia, and eventually all cilia were lost, whereas cell culture with charcoal filter had little change in cilia length. The IC₅₀ value of red spinach leaf extract (*Amaranthaceae family*) as an antioxidant can reduce free radicals so that it has the effect of reducing tissue damage.

Keywords Red spinach leaves, antioxidants, free radicals, cigarette smoke