Penapisan kapang laut penghasil senyawa sitotoksik dari beberapa perairan Di Indonesia

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Abstrak

Marine-derived fungi have proven to be a rich source of cytotoxic compounds for the development of new anti cancer drugs. The aims of this research were to: 1) screen cytotoxic activity of marine fungi from Indonesian waters, 2) indentify marine fungus that produced that
produced the most active cytotoxic compound and 3) investigate inhibition concentration 50 (IC50) value of cytotoxic compound. The fungi were isolated from marine organism collected from
Wakatobi Marine National Park-South East Sulawesi, Binuangeun Beach-Banten, Manado watersNorth Sulawesi and Kepulauan Seribu Marine National Park-Jakarta. Liquid cultures of the fungi
were carried out in Malt Extract Broth and Soluble Starch Soytone medium for 4 weeks at 27?28oC without shaking. Molecular identification of fungus was conducted through PCR amplificatin using
primers of ITS1 and ITS4 primer. Cytotoxic activity of the extract was tested by using MTT (3-(4.4-dimethylthiazol-2-yl)-2.5-diphenyl-tetrazolium bromide) method. The MTT test showed that MFW39 strain exhibited the strongest cytotoxic activity. Molecular identification revealed that MFW39 marine fungus was similar to Emericella nidulans with precent identity of 99%. Mycelium and broth extract of MFW39 fungus inhibited the growth of T47D cell with IC 50 values of 21.9 and 169.3 µg/mL, respectively. Further research will be focus on to the strain of MFW39 marine fungi.