

สารที่มีฤทธิ์ทางชีวภาพจากฟองน้ำของไทย *RENIERA* SP.

นายอนุชิต พลับรู้งการ



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BIOACTIVE CONSTITUENTS FROM A THAI SPONGE,
RENIERA SP.

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อนุชิต พลัฏฐการ : สารที่มีฤทธิ์ทางชีวภาพจากฟองน้ำของไทย *Reniera* sp.
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จากการแยกสกัดสารควบคู่ไปกับการทดสอบฤทธิ์ต้านจุลชีพของสิ่งสกัดในเมธานอล (90%) จากฟองน้ำของไทย *Reniera* sp. สามารถแยกสารชนิดใหม่ในกลุ่มไอโซควิโนลิโนนอินโดล 2 ชนิด คือ *N*-(1''*E*-buten-3''-onyl)-1,2-dihydrorenierone (47) และ renierine B (55) และสารกลุ่มเดียวกันที่มีการศึกษามาแล้วอีก 4 ชนิด คือ mimosamycin (16), renierone (17), *N*-formyl-1,2-dihydrorenierone (19) และ 1,6-dimethyl-7-methoxy-5,8-dihydroisoquinoline-5,8-dione (21) การพิสูจน์เอกลักษณ์และหาสูตรโครงสร้างทางเคมีของสารทั้ง 6 ชนิดนี้ ทำได้โดยการวิเคราะห์ข้อมูลจากสเปกตรัมของ uv, ir, ms, 1-D nmr และ 2-D nmr ร่วมกับการเปรียบเทียบข้อมูลของสารอื่นที่ทราบโครงสร้างแล้ว ในการทดสอบฤทธิ์ต้านจุลชีพของสารทั้ง 6 ชนิด พบว่า 16, 17, 19, 21 และ 47 มีฤทธิ์ต้านจุลชีพต่อเชื้อ *S. aureus* และ *B. subtilis* ในระดับตั้งจนถึงปานกลาง แต่ renierine B (55) ไม่มีฤทธิ์ดังกล่าวที่ความเข้มข้น 0.1 mg/disc และได้เฝ้าความสังกัษณ์เบื้องต้นระหว่างสูตรโครงสร้างและฤทธิ์ของ renierine B (55) ไว้ด้วย



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ภาควิชา.....เภสัชเวท.....
สาขาวิชา.....เภสัชเวท.....
ปีการศึกษา.....2536.....

ลายมือชื่อนิติ.....
ลายมือชื่ออาจารย์ที่ปรึกษา.....
ลายมือชื่ออาจารย์ที่ปรึกษาร่วม.....

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The antimicrobial assay-directed fractionation of the 90% methanolic extract from a Thai sponge, *Reniera* sp., led to the isolation of 2 new isoquinoline quinones, *N*-(1''*E*-buten-3''-onyl)-1,2-dihydrorenierone (47) and renierine B (55), and 4 known isoquinoline quinones, mimosamycin (16), renierone (17), *N*-formyl-1,2-dihydrorenierone (19), and 1,6-dimethyl-7-methoxy-5,8-dihydroisoquinoline-5,8-dione (21). The identification and structure elucidation of the isolated compounds were executed by the analyses of the uv, ir, ms, 1-D nmr, and 2-D nmr spectral data, as well as the comparison with other known compounds. The antimicrobial activity of the isolated compounds was determined to reveal the good to moderate activity against *S. aureus* and *B. subtilis* of compounds 16, 17, 19, 21 and 47. On the other hand, renierine B (55) is not active at the concentration of 0.1 mg/disc. The structure-activity relationship of renierine B (55) is suggested.



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ภาควิชา..... เกสัชเวช	ลายมือชื่อนิสิต..... <i>Orn</i>
สาขาวิชา..... เกสัชเวช	ลายมือชื่ออาจารย์ที่ปรึกษา..... <i>Khanit Suwanborirux</i>
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