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2-(Nitroaryl)benzothiazole and benzoxazole derivatives as fluorogenic substrates for the detection of nitroreductase activity in clinically important microorganisms

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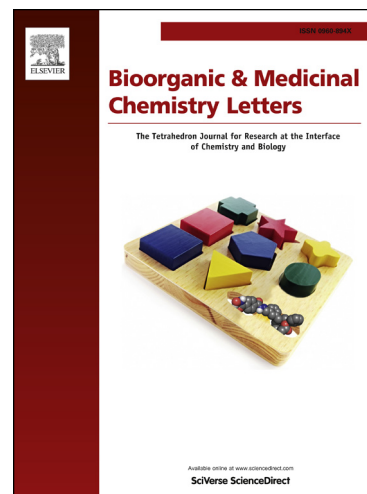
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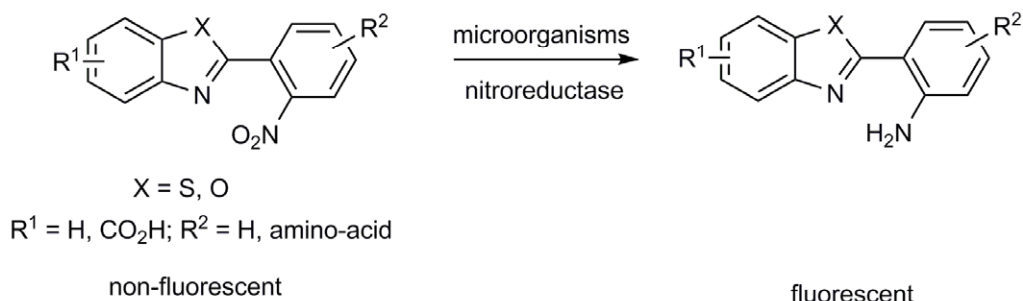
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2-(Nitroaryl)benzothiazole and benzoxazole derivatives as fluorogenic substrates for the detection of nitroreductase activity in microorganisms

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2-(Nitroaryl)benzothiazole and benzoxazole derivatives as fluorogenic substrates for the detection of nitroreductase activity in clinically important microorganisms

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### Abstract

A series of carboxy-substituted 2-(nitroaryl)benzothiazole derivatives and carboxy-substituted 2-(nitroaryl)benzoxazole derivatives were prepared and evaluated as potential nitroreductase substrates for the purpose of detecting clinically important microorganisms. Several of the substrates produced highly fluorescent colonies with the majority of a panel of 10 Gram-negative bacteria and also with two of a panel of 8 Gram-positive bacteria.

**Keywords** Nitroreductase, fluorescence, enzyme substrates, microorganism detection, bacterial detection

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