NEW SYNTHETIC APPROACH TO ANTIVIRAL AGENT B-220 DERIVATIVES

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Compounds with indolo[2,3-*b*]quinoxaline-based scaffolds are shown to exhibit a wide variety of biological activities. Among these indolo[2,3-*b*]quinoxaline derivatives, there are potential antibacterial, anticancer, antiviral [1] and even multifunctional anti-Alzheimer agents [2]. For example, B-220 is well known as an anti-herpes virus agent.

Previously, the convenient procedure to indolo[2,3-*b*]quinoxaline scaffolds through Buchwald-Hartwig amination, followed by S_NH -reaction was developed in our laboratory. However, that protocol was limited by aryl amine and not compatible for the introducing of primary alkyl amine moieties [1].

Hereby, we report the modified protocol as a new synthetic approach to B-220 derivatives. Not only did the optimized conditions allow employing primary alkyl amines, but also it dramatically reduced the reaction time. The intermediates were obtained in high yields (72-77%), while the overall reaction yields were good (65-77%). Currently, the obtained indolo[2,3-*b*]quinoxalines are undergoing screening for biological activities.

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References

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