

# Nitroimidazoles, Part 3. Synthesis and *anti*-HIV Activity of New *N*-Alkyl-4-nitroimidazoles Bearing Benzothiazole and Benzoxazole Backbones

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A series of 4-nitroimidazole derivatives bearing substituted piperazines (**5**, **8**, **9**, **12**, **14**, **16**, **17**, and **19** – **21**) were synthesized with the aim to develop new non-nucleoside reverse transcriptase inhibitors (NNRTIs). The newly synthesized compounds were assayed against HIV-1 and HIV-2 in MT-4 cells. All compounds are inactive, except compound **21** which showed inhibition of HIV-1 with EC<sub>50</sub> 0.20 µg/mL, and therapeutic indexes (SI) of 12.

*Key words:* *anti*-HIV Activity, Benzothiazoles, Benzoxazoles, 4-Nitroimidazoles, NNRTIs