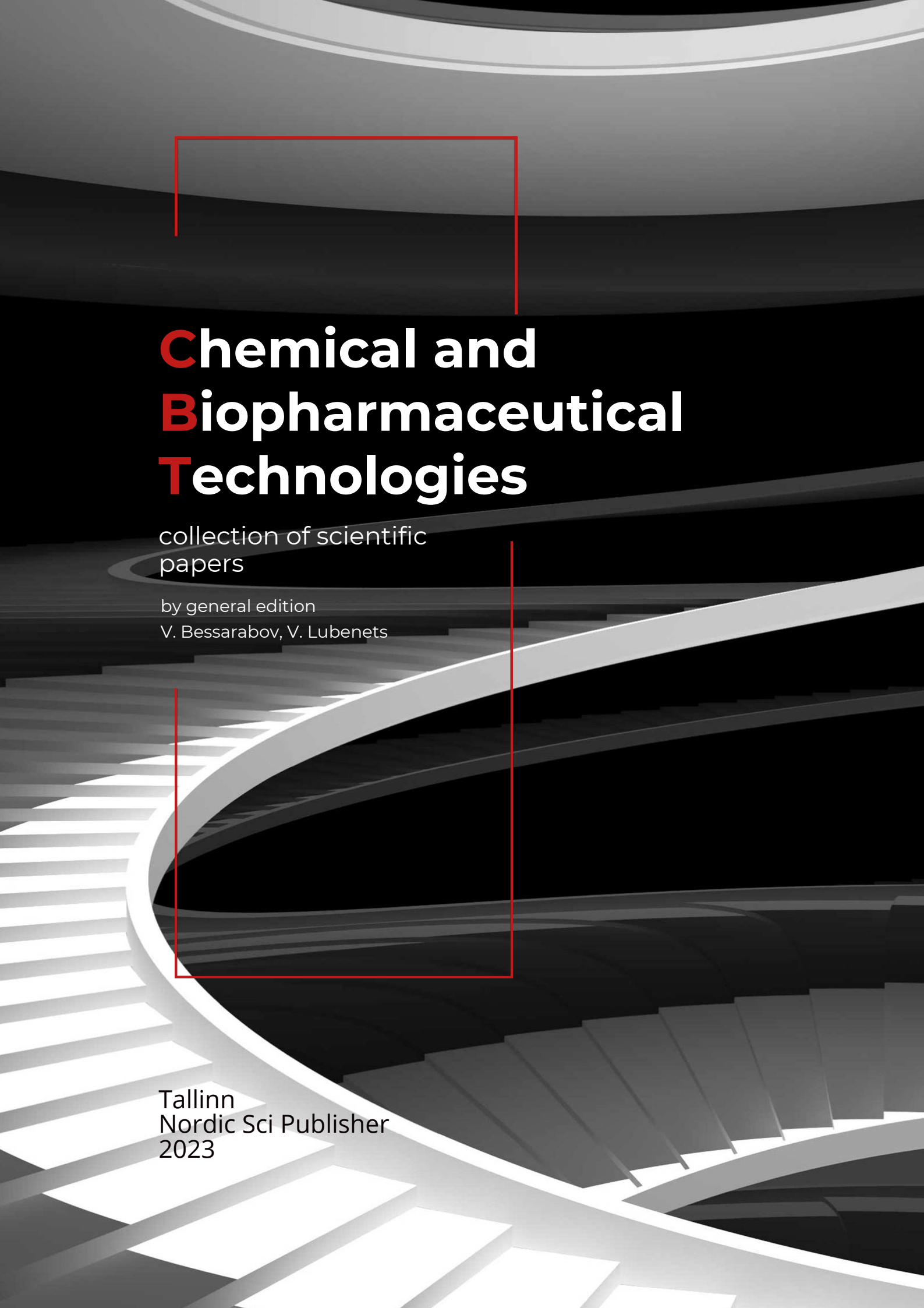




Chemical and **B**iopharmaceutical **T**echnologies

collection of scientific
papers

by general edition
V. Bessarabov, V. Lubenets

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2023

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АНТИМІКРОБНА АКТИВНІСТЬ ХАЛЬКОГЕНОФУНКЦІОНАЛІЗОВАНИХ ТІАЗОЛОХІАЗОЛІНІВ

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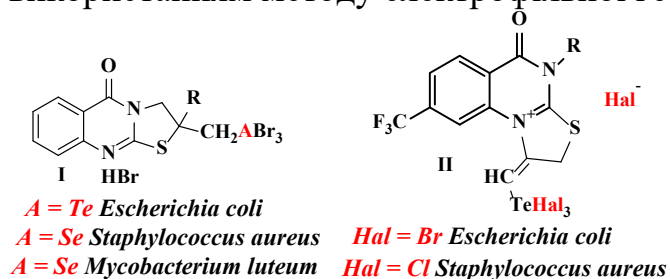
Поліконденсовані хіназоліни широко використовуються в якості біологічно активних сполук. Найбільш універсальним методом синтезу поліядерних хіназолінів є метод електрофільної внутрішньомолекулярної циклізації його алкенільних(алкінільних) похідних під дією галогено- та халькогеновмісних електрофільних реагентів. Використання таких електрофільних реагентів дозволяє приєднувати до хіназоліну тіазольний, тіазиновий чи тіазепіновий цикл з галогенометильною або халькогеногалогенометильною групою, які підсилюють протимікробні властивості поліядерних хіназолінів.

Мета дослідження: синтез галогенідів тіазоло(тіазино)хіназолінів та дослідження їх бактерицидних та фунгіцидних властивостей.

Матеріали і методи дослідження. ЯМР ¹H, ЯМР ¹³C, елементний аналіз, методу дифузії речовин в агар, метод серійних розведень.

Результати дослідження.

Нами одержано цілий ряд галогено- та халькогеновмісних конденсованих хіназолінів **I-II** з використанням методу електрофільної гетероциклізації.



При аналізі отриманих експериментальних даних по антимікробній активності, встановлено, що у випадку лінійних халькогенофункціоналізованих хіназолінів **I** наявність атома телуру в молекулі збільшує активність останніх щодо грам-негативної бактерії *Escherichia coli*. Натомість, у випадку селенових аналогів антимікробна дія зростає до грам-позитивної культури *Staphylococcus aureus*. Для ангулярних конденсованих хіназолінів **II** різниця в чутливості *Escherichia coli* збільшується при наявності фенільного замісника в положенні 3 хіназоліну. Наявність атома хлору в структурах **II** сприяє підвищенню чутливості досліджуваних хіназолінів до грам-позитивної культури бактерій *Staphylococcus aureus* в порівнянні до броманалогів.

Висновки.

Таким чином, встановлено високу антимікробну активність галогенохалькогенофункціоналізованих конденсованих хіназолінів.

Scientific publication

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