New triazole derivatives with nematicidal activity

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The increasing frequency of parasitic diseases caused by nematodes and the increasing drug resistance of parasites to the available drugs induce the need to search for new, effective nematicidal drugs. Parasitic diseases constitute a serious health problem and may pose a threat to human health and life. According to data presented by the World Health Organization, 14 million people die each year from parasitic diseases, and over the past 10 years, more than 4.5 billion people have become infected with various species of parasites. Currently, a very narrow group of nematicidal drugs is available on the market: benzimidazole derivatives – mebendazole and albendazole (bind to nematode β-tubulin, inhibiting the formation of microtubules, blocking the absorption of glucose inside the parasite cells), cyanines and cyclic amidines, i.e. pyrantel (leads to paralysis of parasites by depolarizing the motor muscle-nerve plate), avermectin derivatives – ivermectin (stimulates the release of γ-aminobutyric acid (GABA), causing disturbances in nerve conduction in nematodes). The compounds tested by us are newly synthesized triazole derivatives with proven in research – carried out on the basis of a proprietary, patent-protected procedure, using nematodes of the genus *Rhabditis* sp., – nematicidal activity. The synthesis process and the nematicidal activity are protected by patents.