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Prospecting interspecific pathogenic and growth characteristics on some isolates of *Ralstonia solanacearum*

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The bacterium *Ralstonia solanacearum*, is pathogenic to several plant species, including more than 54 botanic families. In tomato, the resistance to bacterial wilt is strictly quantitative, with few resistant cultivar options, as many of them are derived from lineage Hawaii 7996. From these, thermal amplitude of growth, bacteriocins production and the capacity to cause disease was studied, with emphasis on the isolate CNPH-RS 488, which overcame the bacterial wilt resistance of Hawaii 7996. This isolate was compared to eight other isolates from the same species and biovar, all coded as CNPH-RS, 429, 498, 506, 534, 564, 618 and two additional isolates representing other species/biovars, K60 (biovar 1) and GMI1000 (biovar 3 – *Ralstonia pseusolanacearum*). The growth of all isolates was evaluated in four temperatures: 18°C, 25°C, 33°C and 40°C. Bacteriocin production of all isolates was assessed *in vitro* by visualization of growth inhibition in culture media after pipetting of filtrate solution of each isolate. Evaluation of virulence was assessed by inoculating each isolate on plants of the resistant lineage Hawaii 7996 and on the susceptible lineage L390. CNPH-RS 488 presented typical colonies between 25°C and 33°C. Other isolates presented growth between 18°C to 40°C, although, with this last temperature, colonies were phenotypically distinct. For the bacteriocin production and sensitivity, isolate 488 was inhibited by three other isolates, 498, 534 and 618, while only inhibiting isolate 618. Isolate 498 stood out, presenting a highly competitive capacity, inhibiting four isolates, including 488, while not being inhibited by other isolate's bacteriocins. For virulence response, both isolates, 488 and 564 induced wilt on the resistant lineage Hawaii 7996, whereas all isolates wilted the susceptible L390 plants. The isolate 488, was inhibited by the bacteriocins of several isolates and could not grow on all tested temperatures, suggesting its eventual low adaptability and environmental spread and survival.