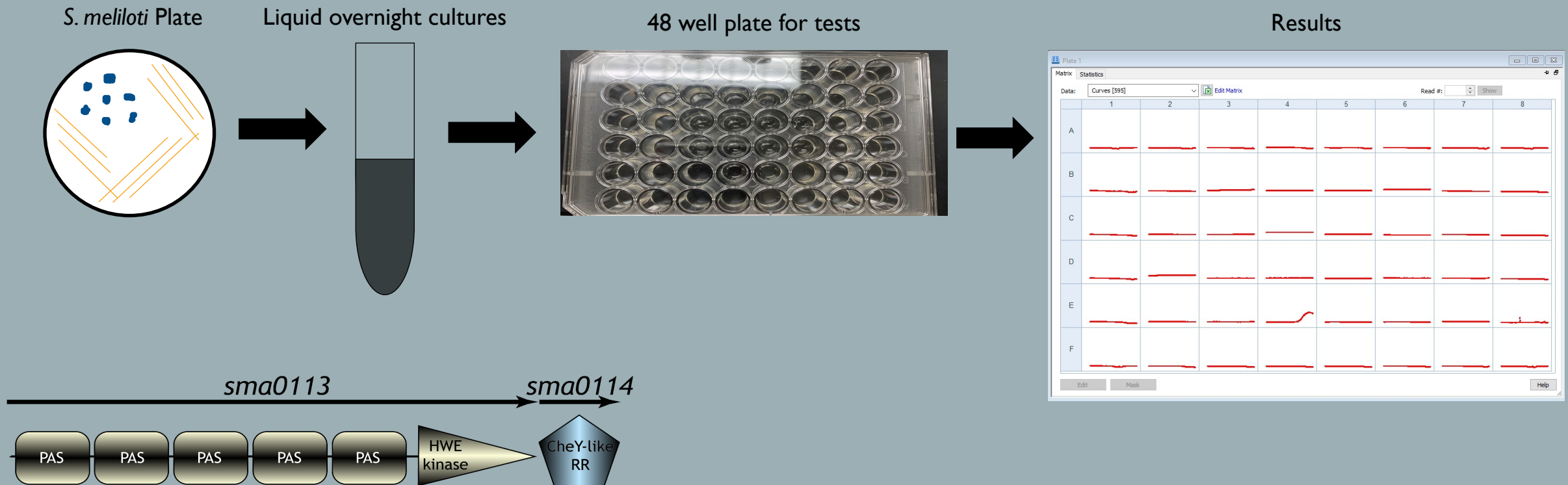


# Chemical Stress tests of *Sinorhizobium meliloti*

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## Graphical Abstract

This study is related to the two-component signal transduction system Sma0113/Sma0114 in *Sinorhizobium meliloti*, which consist of a sensor histidine kinase and response regulator. It is believed that these are responsible involved in controlling the central stress response of the bacteria. With this in mind, we are performing multiple stress tests to determine which chemicals inhibit bacterial growth. Strain **PG105** (WT) was initially used to test the chemicals. Plates were streaked with PG105 and grown before isolating an individual colony to be inoculated in liquid broth until stationary phase was reached. After growth, cells were diluted and added to a 48-well plate, each with one of seven chemical stressors, at three different concentration levels. The current chemicals tested were Tetracycline, Zinc sulfate heptahydrate, Neomycin, Gentamicin, Kanamycin, Nickel (II) chloride, and Spectinomycin. The three concentrations of the chemicals were a 1/2, 1/4, and 1/10 dilution of the stock concentration. The results of the first seven stress tests can be seen above.