

Ticks impact human and animal health worldwide and new control methods are needed to circumvent drawbacks of tick control by acaricide application including selection of drug resistant ticks and environmental pollution. Using RNA interference we silenced the expression of a single gene, subolesin, and produced ticks with diminished reproductive performance and prevented successful mating and production of viable offspring. We propose a sterile acarine technique (SAT) for reduction of tick populations by release of subolesin-silenced ticks. Conservation of subolesin among tick species suggests that SAT may be useful for control of many medically and economically important tick species.