Abstract: The purpose of this experiment is to see if Serratia marcescens could be utilized to move 10 micrometer (µm) beads and PDMS coated chips (Polydimethylsiloxane, PDMS) through a liquid medium. S. marcescens is a pathogenic, opportunistic flagellated gram-negative bacterium best known for producing a red pigment called prodigiosin. S. marcescens is readily available and easily swarms. If this swarming characteristic could be coordinated and directed it might be utilized as a bio-robot. It was hypothesized that the bacterial carpets would move the beads and chips faster than diffusion due to coordination of the S. marcescens flagella. A carpet of swarming S. marcescens were blotted onto 22 mm PDMS covered glass cover slips pre treated with Rain-X ®. The cover slips were inverted and placed on a tunnel slide. 10 µm polystyrene beads (Duke Scientific) were then pipetted into the tunnel slide to quantify movement. The bacterial carpet produced rapid linear movement of the 10 µm beads. The hypothesis was supported as the 10 µm beads next to the bacterial carpets moved at a significantly (p< 0.001) higher velocities than the control beads and the calculated diffusion rate. The bacteria were successful in moving a PDMS chip in a clockwise rotation at an average speed of 4 µm/s. This procedure indicates possible use of S. marcescens as a means to propel automobile chips which could contain biosensors.