

Abstract Submitted
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The Effect of Magnetic Fields on the Quorum Sensing-Regulated Luminescence of *Vibrio fischeri*¹ ADDIE BARRON, STEVE HAGEN, MINJUN SON, None — Quorum sensing (QS) is a mechanism by which bacteria communicate through the secretion and detection of extracellular signaling molecules known as autoinducers. This research focuses on the quorum sensing regulated bioluminescence of *Vibrio fischeri*, a marine bacterium that lives in symbiosis with certain fish and squid species. Previous studies of *V. harveyi*, a close relative of *V. fischeri*, indicate that a strong magnetic field has a positive effect on *V.harveyi* bioluminescence. However the effect of magnetic fields on quorum sensing-regulated luminescence is in general poorly understood. We grew *V. fischeri* in solid and liquid growth media, subject to strong static magnetic fields, and imaged the bioluminescence over a period of forty-eight hours. Luminescence patterns were analyzed in both the spatial and time dimensions. We find no indication that a magnetic field influences *Vibrio fischeri* luminescence either positively or negatively.

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Addie Barron
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