

Bridging Cultures via Molecular Microbiology

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While the impact of the scientific enterprise is the subject of headlines and affects the lives of all citizens, the actual process and methodology of scientific investigation are not well known. Furthermore, specialization has resulted in jargon-filled technical dialects, which prove to be obstacles in communication. Hence, it is not surprising that most scientists have struggled to communicate their interests or discoveries to a general audience. Given the tradition of educating in the liberal arts at Swarthmore, and with the dynamic undercurrent of positive social interactions among our faculty, we engaged in a month-long summer project to begin to understand the difficulties in communication between scientists and non-scientists. The project included: (1) the isolation of diverse bacterial colonies from the environment; (2) describing the antibiotic-resistance profile of some isolates; (3) genetically engineering strains of *Escherichia coli* to measure stress response; (4) reading and discussing journal, news, and popular articles dealing with science and society. Results of this project will be presented. While distinct for each member, project outcomes had the commonalities of: increasing social bonds, greater appreciation of professional expertise, identification of gaps in communication, and familiarity with technical theory and practice. Such a preliminary exercise will lead to new ways of teaching, learning, and conducting research for each participant. We plan to communicate our experience to colleagues at similar institutions. Finally, it is hoped that, in teaching by example, students will be further encouraged to venture across disciplinary boundaries to enhance their own intellectual, technical, and social development.