

# *Trade Secrecy for Scientific Communities: The Case of AIRR*

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Trade secrets have long been seen as antithetical to scientific communities because they deprive scientific communities of new knowledge generated by their members. But recent developments in research technologies and scientific governance are beginning to challenge this paradigm. For some, and in contrast to earlier scholarly accounts of the practice, trade secrecy is viewed as a necessary if inconvenient feature of the governance and work of scientific communities, especially those that include commercial researchers who provide materials, technical assistance, and research input. This Article explores this contrast to the canonical account of secrets and science through the work of one such community: the Adaptive Immune Receptor Repertoire Community (“AIRR-C”), a loose confederation of researchers devoted to genetically sequencing cells of the immune system. The Article grounds its analysis in the scientific literature about genetic “big data,” open discussions on intellectual property held during the course of AIRR-C’s annual meetings, interviews of scientists working in the field, and the author’s own work as a member of one of AIRR-C’s working groups. The data generated by AIRR-C researchers presents an apt case study for this shift in attitudes concerning trade secrecy because the underlying data itself, and the way in which it is shared among AIRR-C researchers, makes it poorly protectable under current trade secrecy doctrine. At the same time, researchers recognize that some protectability is needed in order complete certain research programs and fulfill the ultimate human health goals of such projects. This suggests a modern account of scientific communities with more nuanced views of scientific integrity, proprietary versus open science, and community governance than the classic literature allows. Ultimately, this Article serves as a novel case study of the private legal governance of modern scientific communities and how trade secrecy law should respond.

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