Standards to promote data interchange in the life sciences

George M. Garrity, Microbiology and Molecular Genetics department, Michigan State University, East Lansing, MI and NamesforLife, LLC, East Lansing, MI

Although the principle role of culture collections and biological resource centers is to serve as repositories of biological materials, these organizations are also aggregators of a wide variety of information about the use and utility of the materials that they conserve. The potential value of this information has been the subject of considerable discussion within the research community, but relatively little progress has been made in developing data products that meet the needs of interested third parties. The barriers include the high cost of developing such data resources, the inability to join the highly variable and often incomplete information held in multiple collection databases, the inability to preserve data provenance, and a lack of infrastructure to make this information readily discoverable and available to potential end users (human and machine) at their point of need. The situation is not unique to culture collections, but part of a growing awareness of a need for biological data of all types to be readily available and usable for a variety of use cases. This discussion will focus on emerging data, metadata, publishing and web standards and explore how collections might adopt these standards as part of their strategy in developing and delivering interoperable information products to the market.