



March 13, 2013

Jason Paragas, PhD
Deputy Program Director for Bio-Security

Subject: *Support Letter for ESGF*

To Whom It May Concern:

The complexity of the life sciences is being unraveled through innovation brought by high throughput technologies, systems biology and more recently biocomputational approaches. As success in these areas grows, vast and disparate data silos are evolving that were derived from scared and rare resources. In fact, much of the research effort may be house in stand-alone computers, email correspondence, and paper notebooks. The extraordinary atomization of our collective research efforts in the life sciences dilutes the potential treasure. Effectively the majority of the work product from the life sciences is lost. The American Academy for the Advancement of Science reported that the Federal investment in research and development is approximately 147 billion in FY10¹. The life sciences investment is approximately a third of that number. A slim fraction of that investment is transformed into an inconvenient form that collectively advances the field. We, as a life sciences community, are in essence returning copper back to the ground. The greatest opportunity in the life sciences today is not in the frontiers of science but to transform our research effort into a computable resource.

This is not a lofty idea. In fact it has been accomplished, but in the climate sciences field. The efforts of the Earth Sciences Grid Federation have transformed the community from a series of disparate efforts into a dynamic field that expends efforts in scientific frontiers and not in data impedance mismatches. Yet preserving the ability for individual teams to openly compete ideas.

Porting the principles of the Earth Sciences Grid Federation to the life sciences community will disruptively transform and accelerate our efforts. Furthermore, a life sciences application of the Earth Sciences Grid Federation will enable the

¹ AAAS Report XXXIV Research and Development FY 2010

²http://www.whitehouse.gov/sites/default/files/microsites/ostp/ostp_public_access_me



vision from the recent Whitehouse directive to develop plans to increase access to the Federally funded research². Extending the principles of Earth Sciences Grid Federation into the life sciences will accelerate innovation, contain costs, and preserve the data derived from sacred research resources.

Sincerely,

A handwritten signature in black ink, appearing to be 'JP', written over a large, light-colored scribble or background mark.

Jason Paragas, PhD

²http://www.whitehouse.gov/sites/default/files/microsites/ostp/ostp_public_access_memo_2013.pdf