From the Editor

Selling the Science

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We seem to be entering an era where more and more large-scale, collaborative initiatives in life science research are being started, driven by the desire to explore biology as a whole rather than in pieces. The size of these projects often requires the involvement of researchers spanning different disciplines of biology and chemistry, as well as the use of the latest methods and technology.

Genome 10K and the Human Proteome Project (HPP) are two such projects slowly rolling out. Now that new instrumentation and methods have been developed to realize these once-seemingly impossible efforts, the organizers of these projects are moving from the planning phase toward the data-generation phase. But whether either will ultimately deliver on their aims could be less a matter of technical feasibility and more a matter of obtaining the necessary funding.

At the Human Proteome Organisation (HUPO)'s recent meeting in the fall, discussions on the best way to complete a map of the human proteome centered around three pillars: antibody generation, mass spectrometry analysis of proteins, and development of bioinformatics tools to understand it all. The scope of the project is clear and the technology appears to be largely in place, but it is still uncertain whether a single country or several countries will band together to provide the financial resources. And though the groundwork can continue on each pillar of the project, the timeframe needed to complete a map of the human proteome is unknown, and questionable funding makes foretelling the endpoint difficult.

In the case of the Genome 10K project, organizers have identified the candidate vertebrate genomes to be sequenced, and are collaborating with BGI in China to produce initial genome assemblies for 101 vertebrate species. Many investigators are starting to get onboard with this effort, but securing funding to sequence all 10,000 specimens—thereby greatly expanding our understanding of the tree of life—has proven to be a challenge.

In the current economic climate, funding in the life sciences is difficult. Funding rates continue to be at low levels, with many investigators still scrambling to find the financial resources to fuel their own research. As Jeffrey Perkel explores in this month's Tech News feature, initiatives such as the HPP—with million- or potentially billion-dollar price tags—need a strong rationale and

clearly defined purpose in order to attract collaborators and earmarked funds. Especially in the case of long-term, broad-reaching collaborations, tracking down contributors and instating cutting-edge technology is not enough to ensure that such initiatives will be seen through to completion. For leaders of these projects, it comes down to promoting their goals to both funding agencies as well the general public.

Both Genome 10K and HPP are approaching a critical juncture in which educating the scientific community on the benefits of their respective projects will be essential. Leadership for both efforts needs to come forth with a clear vision and a common message that articulates how the data generated will impact not just the proteomics or evolutionary biology community, but science as a whole. This message needs to be impassioned, and delivered frequently. It behooves us to take a page from the for-profit sector's assortment of successful PR firms and venture start-ups: simply put, large projects within the scientific community need to be convincing in their "sell." Although there are plenty of standalone reasons why projects like Genome10K and HPP make sense to pursue, figureheads would be well-served to speak more enterprisingly about these ambitious undertakings: highlighting their critical, relevant components, as well as their immediate worth and applicability, will make current and future large-scale projects something everyone can get excited about.

Letting the science speak for itself has long been a cornerstone of quality research, but in a world of limited attention spans and even more limited grant dollars, the onus is on these leaders to not only be organizers, but strong spokespersons. I for one would like to see these two projects reach their end goals, but without clear justification and conviction, large-scale funding will most likely elude these noble initiatives. It would do us all good to practice not merely how to speak about our ideas, but how to speak on their behalf. As always, post your thoughts and comments at our Molecular Biology Forum under "To The Editor" (<http://molecular-biology.forums.biotechniques.com>) or send an email directly to the editors (bioeditor@biotechniques.com).

BioTechniques 50:139 (March 2011)
doi 10.2144/000113619

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