Questionnaire

Your name: [redacted]

Your email address: [redacted]

Your institution: MRC Protein Phosphorylation and Ubiquitylation Unit, University of Dundee

Your position:

Undergraduate student	[ ]
PhD student	[ ]
Technician	[ ]
Postdoc	[ ]
Senior Postdoc	[X]
Faculty member	[ ]

Question 1: In a scale from 1 - 10, how important do you think it is to have quick access to the following type of information about each gene or protein?

a. Protein-protein interactions [1-10]:5

b. General function of the gene/protein [1-10]:8

c. Diseases a gene/protein is involved in [1-10]:9

d. Biochemical pathways a gene/protein is part of [1-10]:9

e. Cell types/tissues where your gene/protein is expressed [1-10]:9

f. Your protein's 3D structure (PDB) [1-10]:5

g. Popularity of the gene/protein in **social networks (Twitter, Facebook)** [1-10]:2

h. Knowing the **average impact factor** of the journals where a particular gene/protein is normally published [1-10]:2

i. The **relative scientific weight (e.g. by h-index)** of the scientists that work on your gene/protein [1-10]:3

j. How popular your gene/protein is in recently awarded grants (this is public information once a grant is awarded) [1-10]:2

k. What other genes/proteins are discussed in the context of your protein [1-10]:7

l. How your gene/protein is regulated at the transcriptional level [1-10]:10

m. How your gene/protein is regulated post-translationally (phosphorylation, ubiquitination) [1-10]:7

n. What is the **most popular type of experiment** other scientists typically do on your gene/protein [1-10]:2

o. What **biochemical kits** are available for doing these experiments [1-10]:2

p. Other (explain what type of information) [1-10]:

Fields to which the gene/protein has been previously linked to (eg. Oncology, embryology…): 9
Biological processes in which it is involved:7

Question 2: What websites do you visit the most when analysing your list of genes/proteins?
What type of information do you expect to get from each of these websites?

Some examples of websites include:

- Ensembl (www.ensembl.org)
- NCBI's Entrez (https://www.ncbi.nlm.nih.gov/Class/MLACourse/Original8Hour/Entrez/)
- NCBI Databases (https://www.ncbi.nlm.nih.gov/search/)
- EuPathDB.org (Eukaryotic Pathogens Database)
- Galaxy (https://usegalaxy.org/)
- PubMed (https://www.ncbi.nlm.nih.gov/pubmed/)
- UniProt (http://www.uniprot.org/)
- KEGG Pathway Database (https://www.genome.jp/kegg/pathway.html)
- Any other resource you use routinely.

Website	**Type of information sought**	**Priority in your analytical pipeline**
Example: PubMed	Find out what's been published about my gene or protein	1
Gene Set enrichment analysis		
GeneCards		
Google		
UniProt		
Entrez NCBI		
(expand the table as needed)		

Question 3: How often do you perform these exploratory analyses on your genes or proteins:

[a] Daily [ ]

[b] Weekly [ ]

[c] Monthly [X]

[d] Several times a year [ ]

[e] Other (explain) [ ]

Question 4: If you could obtain the same type of information that you seek by doing these analyses **in 5 minutes only**, how often would you now perform these analyses?

[a] Daily [ ]

[b] Weekly [ ]

[c] Monthly [X]

[d] Several times a year [ ]

[e] Other (explain) [ ]

Question 5: When you get **a list of genes/proteins** from a proteomics or a differential expression experiment, what **steps and tools** do you follow for the analysis?

1. Run through Enrichr/AmiGO/GSEA

2. Check Pubmed/Google for results

3.

4.

5.

Question 6: Now and related to the previous question, instead of telling me what steps you follow in your analysis, if I asked you **what type of information you would like to know** about each one of your genes or proteins, what would you be interested in knowing?

Here you can include some information you would love to have **but do not know** how to obtain it.

1. The general field of interest for specific genes
2. Mapping the genes and proteins to signalling pathways

Question 7: If you have a long list of genes/proteins from a high-throughput experiment you ran in the lab, **what are the most useful factors in determining the next follow-up experiment?**

E.g. how easy the potential experiment is, how relevant the cell type, how much money this would cost, etc.

3. I would probably filter by popularity in my field

2. Or a type of experiment I can easily do in collaboration with another lab even if it is a different field

3.

4.

5.

Question 8: What do you think is the **most competitive advantage against other competing laboratories** when trying to decide what the next follow-up experiment would be?

1. Learning as much as possible about each gene or protein with minimum effort and maximum experimental impact

2.

3.

4.

5.

__END OF QUESTIONNAIRE__

Please return this questionnaire to d.mirandasaavedra@gmail.com