**Requirements for publishing in Nature**

*Breath of interest*: novel conclusions of interest and/or direct relevance to scientists in other fields.

What are the novel conclusions of interest?

The main point of the paper is that a lot of questions in plant functional ecology and physiology which were formerly only answerable using estimates or proxies can now be answered directly by using absolute quantitative proteomics.

Light harvesting is the most labile component of the photosynthetic machinery in terms of protein allocation. Abundance of proteins involved in the Calvin cycle vary widely both within and among species, and respond only weakly to environmental conditions.

*A striking conceptual advance*: novel conclusions that change our understanding of the field.

We describe plant ecological strategies in terms of protein allocation to specific functions within leaves. This is achievable at scales of organisation spanning from individual protein isoforms to broad functional categories.

It is now possible to quantify leaf protein allocation to specific functions across continental-scale environmental gradients, and in relation to commonly measured functional traits and physiological parameters.

The main advance here is a way of thinking about proteomics: we show the value of absolute protein quantification in answering questions across a diversity of fields in plant sciences.

Key questions to ask before writing:

* Why is the topic interesting?

Protein amounts are direct indicators of leaves’ capacity to perform certain functions. Being able to quantify them rapidly and absolutely opens up a whole new field of plant ecology and physiology. This paper shows how data on protein abundances can be used to test longstanding predictions about protein allocation to different components of the photosynthetic machinery along gradients of environmental conditions.

* What is the broader context and impact of your work?

This work is of interest to a diverse group of researchers in plant ecology, physiology, crop science and biosphere modelling.

* Do your data compellingly support your conclusions?

We get some pretty high R2’s

The data is robust and has been thoroughly calibrated and validated

We show conclusively that we can test longstanding predictions in functional ecology using this new type of data

* What’s been done before? Does your work change the current thinking in the field?

Mostly relative quantification of proteins. Unlike relative quant, absolute quant allows for typical ecological experimental approaches, produces data which can be compared between experiments.

* Does your research deal with a big problem or issue in the field?

Which field? Modelling people have been trying to estimate protein allocation to the different components of the photosynthetic apparatus for some time now with limited success. We now have numbers.

What exactly are the issues with relative quant?