Natural product extract library PT800

Potential for discovery of novel compounds

The *Phytotitre* library contains many plants which have been very little studied, and therefore has potential for the discovery of new compounds.

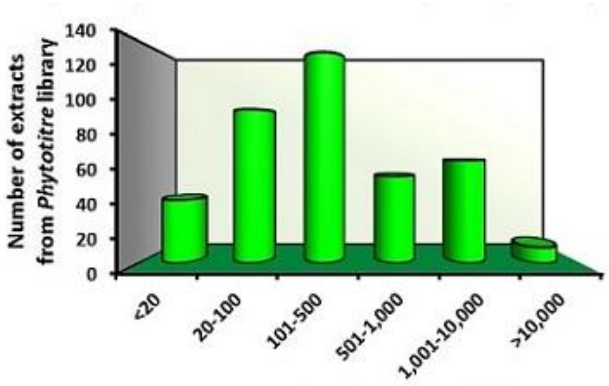
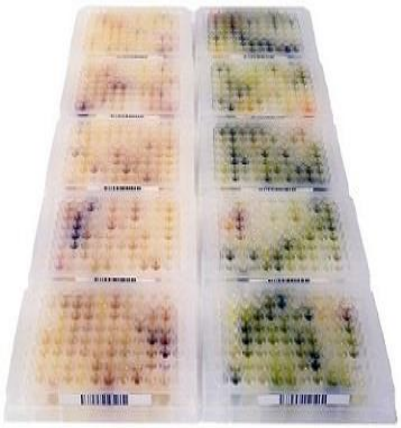


Figure 1: Number of Pubmed citations for plant species included in the Phytotitre library

The above chart shows that many of the plants included in the library have been rarely cited in PubMed, and some have received no citations at all.

However, it should be noted that although many of the hits from this library may turn out to be established compounds, derivatives of these compounds or their scaffolds offer excellent opportunities for IP generation, especially if a means of synthesis can be described. This model has yielded some of the most profitable drugs of all time (e.g. the statins, with global sales of >$130 Bn), and continues to be a fruitful source of IP (>50% of new drugs from 1981-2010 were nature-inspired).

In terms of novelty, however, it should be remembered that the new target and assay are of far greater value. To date, only about 400 pharmacological targets have been screened and successfully drugged. By contrast, tens of thousands of potential protein targets and their partner interactions have never been screened for modulation by small molecules before.



These targets, and particularly the bioassays developed to explore or quantify their function, offer vast potential for new drug discovery. The novelty of any new screening programme therefore depends primarily on the new potential target that may be linked to disease or another relevant phenotype, and the establishment of a bioassay to measure the function of that target. In other words, the key value and novelty are to be found in your new target and assay. *Phytotitre* aims to bring accessible high-quality screening to these new targets and assays.

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