

## The editorial scope tightrope

*Nature Methods* is dedicated to publishing methodological developments for basic biological research. Yet many papers that we receive, and some that we publish, also have later-stage applications. Where do we draw the line of editorial scope?

Among the questions we at *Nature Methods* are often asked by researchers, perhaps the most common are those of scope: How does *Nature Methods* differ from other Nature research journals? Do we publish clinical methods? We also receive many submissions for which the main interest in the described method lies far from the basic research lab—a biomarker for a disease, say, or assay designs for drug screens. We write this Editorial to help clarify our scope.

To reiterate what is stated in our Guide to Authors, *Nature Methods* is focused on publishing methodological developments for basic biological research. Methods whose main expected application is in a diagnostic, therapeutic or drug discovery setting, and which the paper presents entirely in this light, are outside of our scope. Separately, papers describing more fundamental physical, chemical or engineering developments with the potential for biological applications, but where this is not yet developed or shown, are also generally out of scope.

Yet we acknowledge that there is a substantial gray zone. Especially as a field matures, advances in methods development diversify and begin to target applications also in the factory, field or clinic. Many of the manuscripts we receive on topics such as stem cell biology, gene targeting or gene delivery, genomic analysis, proteomics, chemical screening, RNA interference and synthetic biology, to name only the most obvious, describe methods that straddle the vague and winding basic-versus-applied-research divide. A quantitative proteomics method applied to human disease tissue, for instance, may have utility for biomarker studies but would also enable basic research on these interesting samples. How journal scope plays into the overall decision in such cases is more complex.

Our general rule of thumb for papers describing ‘cross-over’ methods is that their interest for basic research must be theoretically clear and experimentally demonstrated. If the focus of the manuscript is clinical, both in the way it is written and in the type of application used to assess its performance and potential for biological insight, there is a good chance that the paper will be declined as out of scope. This may happen even if we are aware that the method has basic research potential, as it is both the responsibility and the prerogative of the paper’s authors, not its editors, to choose the message they wish to convey and the audience they wish to reach. If this target

audience is largely in the clinical or pharmaceutical spheres, *Nature Methods* is not the best choice for that paper. The review process and editorial experience at a journal dedicated to clinical (or otherwise applied) methodology is also likely to be more in line with such a study and would make for a smoother but more appropriately rigorous overall process.

Also problematic in scope, in a different way, are papers that demonstrate the value of the method on a basic research question but in which the method is not widely needed in this setting, either because there are better alternative approaches or because the particular bottleneck being overcome isn’t an important one in the research laboratory.

Relevance outside the laboratory certainly does not rule out consideration of a manuscript at *Nature Methods*. On the contrary: if handled right, this can often make for a richer and potentially further-reaching paper. In this issue, for example, there are at least two papers describing methods with relevance in both basic and applied fields.

On page 436, Guy Sauvageau and colleagues describe culture methods to maintain the cancer-propagating activity of cells from primary human acute myeloid leukemia. The approach could well form the basis for future drug screens to identify molecules that impede the cells’ growth. Although this would be an exciting direction for the work, studies of the basic biology of these cells should also be enabled by these culture methods, irrespective of any future clinical development.

In another example, on page 417, Bodenmiller, Günther and colleagues apply imaging mass cytometry to study human breast cancer tissue. Again, the approach could in principle be applied clinically, for patient stratification or as part of quality control for diagnostic tests. But highly multiplexed imaging of tissues and cells, human or otherwise, will be useful for basic research too. Clearly, methods that push forward the fundamental study of cell types or processes relevant to human disease are welcomed at *Nature Methods*.

Defining the content of the journal is obviously an editorial prerogative, and scope is one of many aspects that affect the overall decision on a manuscript. We hope that by explaining how we think about our editorial scope, authors will be better able to evaluate the suitability of their work and the way it is presented for *Nature Methods* and therefore facilitate publication here or elsewhere.