

Renaissance

The Renaissance was a time marked by renewed appreciation of the achievements that came before and the re-ignited desire to uncover new insights into the order of the natural world, a description that is equally apt for the microbiology field of today.

Since you are reading this Editorial, it is probably safe to assume that you have an interest in microbiology. We do not, therefore, need to explain to you how fundamental microorganisms are to the functioning of this planet and everything on it. We do not need to tell you that whether bacterial, viral, archaeal or eukaryotic in nature, microorganisms impact the dynamics and function of every niche in which they dwell, host-associated or environmental. You already understand that the ubiquity of microorganisms, combined with their diverse metabolic repertoire, means that their activities are critical to processes across a vast scale range: from driving global elemental biogeochemical cycles to modulating the function of a single cell. To explain all of this would be preaching to the converted. Or would it?

Despite the renaissance currently being enjoyed by the field, microbiology as a whole remains fragmented into groupings that are in large part blind to each other. Divisions can be defined by organism (bacteria, virus, archaea, eukaryote), habitat (marine, soil, organismal), phenotype (pathogen, symbiont), methodology (cell biology, physiology, genomics), and many more. As editors, who handle manuscripts and travel to meetings across many disciplines, we see the limitations that these often arbitrary divisions place on the field. This, then, is one of the primary aims of *Nature Microbiology*: to provide a forum for the exchange of ideas and approaches across the entire field, breaking down barriers between sub-disciplines. We will consider work focused on all types of microorganisms, whether in isolation or as part of a community, whether in a Petri dish, a host, an environmental niche, a theoretical model or a database. We will seek to publish work of outstanding novelty, interest, importance or usefulness and ensure that it is visible to researchers working on closely related topics as well as those from more distant parts of the field.

Another symptom of the rejuvenation in the field are the growing number of journals dedicated to microbiology research, and the increasing presence of microbiology papers in general science

journals; our field is rapidly catching up with other parts of the life science community. All journals, new and established, will tell you that they aim for rapid decisions and quick peer review, and we of course are no different. We will not, however, sacrifice the need for rigorous peer review in a pursuit of speed above all else. Our team of dedicated professional editors have a broad range of microbiological expertise and editorial experience. If a manuscript is not going to be sent for peer review, we will detail the reasons why in our decision letter. Where a manuscript is selected for review, we will play an active role in assessing any concerns raised by the referees and communicating to authors which points will need to be addressed. If referees ask for experiments and analysis that are not fundamental to the story, we will overrule. In this way, we will work together with the research community to bring exciting advances in microbiology to the widest possible audience.

In addition to publishing research of the highest quality, issues of *Nature Microbiology* will also include Editorial, Comment, Feature, Books and Arts, Interview and News and Views pieces. Through these content types we will explore with you the important topical issues facing the community, airing opinion, hosting discussion and taking a look at the more light-hearted aspects of microbiology today. We have also created a community space (<https://naturemicrobiologycommunity.nature.com/>) that all readers of *Nature Microbiology* can use to communicate with each other, and with editors. We hope that this space will further enable microbiologists to engage in an exchange of ideas and share content, whether that refers to research itself, to policy, society or just the day-to-day experiences of a life microbiological.

The rebirth of microbiology has, to some extent, been technologically driven. Combined advances made in sequencing, imaging, structural analysis and mass spectrometry (to name but a few) have benefited microbiology more so than most other life science research areas. Microbiome research has been one of

the standard bearers, capturing wide attention. However, we remain in the foothills when it comes to climbing the mountain towards a true understanding of this planet's microbiomes and harnessing their potential. Recent calls for national (A. P. Alivisatos *et al.*, *Science* **350**, 507–508; 2015) and international (N. Dubilier *et al.*, *Nature* **526**, 631–634; 2015) initiatives to coordinate microbiome research, identify many of the current needs for developing and integrating new technologies in order to causally link function with diversity, to share and wrangle the data generated and enable meaningful comparison between studies. As with all large coordinated research programmes, these two initiatives are not without their critics (R. Becker, *Nature* **527**, 137; 2015), but there are a couple of points worth noting. First, both groups should be congratulated in making sure that the widest possible definition of what constitutes a microbiome has been applied; to have focused on host-associated microbial communities would have been a mistake and reinforced divisions in the field that need to be overcome. Furthermore, while ambitious in scope, neither proposal laid down strict ground rules about how these initiatives might work, but rather are calls for microbiome researchers around the world to join a discussion about how the tremendous promises awaiting the field can be best attained. As ever, money will be key and the level of funding that can and will be directed into such coordinated microbiome research initiatives remains to be seen. Certainly, the US federal government already supports a wide portfolio of microbiome research, as outlined in a Consensus Statement by Stulberg *et al.* in this issue (article number 15015). It is to be hoped that by maintaining existing funding commitments and bringing new money into the microbiome research field, a balance can be found between reaping the benefits of a large coordinated programme without stifling the creativity of individual research groups.

Microbiologists live in interesting times, we are honoured to be joining you in helping the field continue to develop and grow in the coming years. □