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► **COVER:** 'Planning for a rainy day' by Simon Bradbrook, inspired by this month's Focus on Therapeutic Antibodies.



LUCY BIRD



KIRSTY MINTON



OLIVE LEAVY



YVONNE BORDON

In this issue, we present a series of comprehensive Review, Perspective and Comment articles on the field of therapeutic antibodies, highlighting the recent advances and future challenges for their development and use in the treatment of cancer, autoimmunity and infectious diseases.

Georges Köhler and César Milstein first described the hybridoma technique for the production of monoclonal antibodies in 1975, a discovery that revolutionized science and medicine. Over the past 35 years, monoclonal antibodies have been exploited in almost every branch of biomedical research. Probably the most notable advancement in this field has been their adaptation for use in humans for the treatment of many immune-mediated diseases and cancer. Innovative work was required to bring these therapeutic agents to the clinic, overcoming problems of immunogenicity, optimizing their production, taking advantage of their high specificity and harnessing appropriate effector mechanisms. However, other challenges have to be faced in the next decade for the development of safer, more efficient and cheaper therapeutic antibodies. As our understanding of the architecture of IgG molecules and antigen recognition improves, paralleled with our increasing knowledge of the function of the immune system in health and disease, new antibody formats and scaffolds can be generated with improved functions to treat a wider range of diseases.

In addition to the specially commissioned articles in this Focus issue, we have compiled a Web Library of Research Highlights, News and Views, Commentaries, Reviews, Perspectives and Research Articles that have been recently published by Nature Publishing Group journals on the topic of therapeutic antibodies (www.nature.com/nri/focus/therapeuticabs/library).

Finally, we acknowledge support from MedImmune for this focus issue and the accompanying Web Library.

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