

NATURE REVIEW

REVIEWS AND COMMENT FROM THE NATURE PUBLISHING GROUP



▲ Born in a watery commune Whitfield, J. *Nature* 19 February (2004)

Recent years have seen an upsurge in interest in the nature of the last universal common ancestor — the theoretical life form from which all organisms are descended. This News Feature reviews current research in this field.



▲ A topological view of the replicon

Schwartzman, J. B. & Stasiak, A.

EMBO Reports March (2004)

For circular DNA to be replicated, topological changes are required for duplication and for the separation of the resulting molecules. This review discusses this complex process, which requires a range of enzymes and involves the formation of several three-dimensional structures.

● Replication trimmed back

Goff, S. P.
Nature 26 February (2004)

The HIV-1 resistance of some non-human primates has implications for developing treatments to combat this virus. This News and Views article discusses the identification of TRIM5 α , the protein responsible for HIV-1 resistance in rhesus macaques.

● HIV escape: there and back again

Altman, J. D. & Feinberg, M. B.
Nature Medicine March (2004)

● Cutting the cost of drug development?

Rawlins, M. D.
Nature Reviews Drug Discovery April (2004)

● Influenza and asthma: adding to the respiratory burden

Riese, R. J., Finn, P. W. & Shapiro, S. D.
Nature Immunology March (2004)

According to the hygiene hypothesis, the T-helper type 1 (T_H1) immune response caused by viral exposure should provide protection against asthma by antagonizing the T_H2 response that triggers inflammation.

However, respiratory viruses are known to contribute to the development of asthma. This News and Views article describes recent research that sheds some light on this discrepancy, showing that T_H1 responses triggered by influenza infection positively regulate T_H2 responses in a mouse model of asthma.

● A changed climate in Africa?

Thomas, C.
Nature 19 February (2004)

This News and Views article discusses the results of a recent investigation into the link between climate change and malaria incidence in Africa, which suggests that other factors — such as the spread of drug-resistant parasites and declining health services — have a much more significant impact.

▼ Reconstructing the wild types

DeLong, E. F.
Nature 4 March (2004)

The emerging field of environmental microbial genomics aims towards understanding the adaptation of naturally occurring microorganisms to their environments by genome sequencing. This News and Views article describes how a whole-genome ‘shotgun’ sequencing method was applied to a complex mixture of microorganisms from an environmental sample.

