



nature publishing group



► **COVER:** 'Mechanisms of disease', inspired by the review on p426.



ARIANNE HEINRICHS



RACHEL SMALLRIDGE



EKAT KRITIKOU

**A**s summer approaches, our thoughts often turn towards ways in which we can follow a healthier lifestyle. We are living longer than ever, and our pursuit of longevity can be fuelled by reports of advances in embryonic stem (ES)-cell research.

Recent studies have pointed towards the unique properties of chromatin and nuclear architecture as being crucial factors in the ability of ES cells to maintain their pluripotency, lineage specification and capacity for self-renewal. In an advance online publication (<http://www.nature.com/nrm/journal/vaop/ncurrent>) (17 May 2006, doi:10.1038/nrm1938), Eran Meshorer and Tom Misteli consider the relevant findings and discuss various models for the transcriptional landscapes during ES-cell differentiation. And in this issue, we highlight four break-through studies that show how the unique features of stem-cell chromatin contribute to the delicate balance that is required for stem cells to maintain their pluripotency (page 383).

This month, we introduce a new Article Series on Mechanisms of Disease (<http://www.nature.com/nrm/series/diseasemech>). In this Series, we will present articles that explore advances in our understanding of the molecular mechanisms that underlie some common human diseases, and how this knowledge can lead to new therapeutic targets and treatments.

First in the Series is a Review by William B. Guggino and Bruce A. Stanton (page 426). The authors examine how the large, dynamic macromolecular complexes that interact with the cystic fibrosis transmembrane conductance regulator (CFTR) modulate the activity and intracellular trafficking of CFTR. They also discuss insights into the aetiology of cystic fibrosis, and other related diseases, which can be gleaned from our understanding of these processes.

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The Macmillan Building, 4 Crinan Street,  
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Harpal Singh Gill  
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