Demographics show that populations are growing older, a situation that is putting a strain on the social and economic resources of countries around the world. The outlook for those gray populations as well as the biological and physiological causes of aging are explored in News stories (beginning on page 42), a Perspective (page 80), and Articles (beginning on page 54) in this special issue on aging. [Image taken from Gustav Klimt’s *Three Ages of Woman* (1905). Scala/Art Resource]

**ARTICLES**

Longevity, Genes, and Aging
S. M. Jazwinski

Oxidative Stress, Caloric Restriction, and Aging
R. S. Sohal and R. Weintraub

Replicative Senescence: Implications for In Vivo Aging and Tumor Suppression
J. R. Smith and O. M. Pereira-Smith

Menopause: The Aging of Multiple Pacemakers
P. M. Wise, K. M. Krajnak, M. L. Kashon

The Aging Immune System: Primer and Prospectus
R. A. Miller

Stoichiometric Pyrochlore $\text{Ti}_2\text{Mn}_3\text{O}_7$

Direct, Nondestructive Observation of a Bose Condensate

Homogeneous Linewidths in the Optical Spectrum of a Single Gallium Arsenide Quantum Dot
D. Gammon, E. S. Snow, B. V. Shanabrook, D. S. Katzer, D. Park

Two Calorimetrically Distinct States of Liquid Water Below 150 Kelvin
G. P. Johari, A. Hallbrucker, E. Mayer

Helium Isotopic Evidence for a Lower Mantle Component in Depleted Archean Komatiite
D. Richard, B. Marty, M. Chaussidon, N. Arndt

Transition Element–Like Chemistry for Potassium Under Pressure
L. J. Parker, T. Atou, J. V. Badding

Detrital Zircon Link Between Headwaters and Terminus of the Upper Triassic Chinle-Dockum Paleoriver System

Late Proterozoic and Paleozoic Tides,
Retreat of the Moon, and Rotation of the Earth
C. P. Sonett, E. P. Kvale, A. Zakharian, M. A. Chan, T. M. Demko

T Cell Activation Determined by T Cell Receptor Number and Tunable Thresholds
A. Viola and A. Lanzavecchia

Mapping of Catalytic Residues in the RNA Polymerase Active Center
E. Zaychikov, E. Martin, L. Denissova, M. Kozlov, V. Markovtsov, M. Kashlev, H. Heumann, V. Nikiforov, A. Goldfarb, A. Mustaev

Prevention of Islet Allograft Rejection with Engineered Myoblasts Expressing PasL in Mice

Evidence for Physical and Functional Association Between EMB-5 and LIN-12 in *Caenorhabditis elegans*
E. J. A. Hubbard, Q. Dong, I. Greenwald

Formation of a Transition-State Analog of the Ras GTPase Reaction by Ras-GDP, Tetrafluoroaluminate, and GTPase-Activating Proteins
R. Mittal, M. R. Ahadian, R. S. Goody, A. Wittinghofer

Centric Heterochromatin and the Efficiency of Achiasmate Disjunction in *Drosophila* Female Meiosis
G. H. Karpen, M.-H. Le, H. Le

**TECHNICAL COMMENTS**

Miocene Deposits in the Amazonian Foreland Basin
C. Hoom; C. G. M. Paxton, W. G. R. Crampton, P. Burgess; L. G. Marshall and J. G. Lundberg; M. E. Råsåsen and A. M. Linna

On the Web

Horizons in Aging
http://www.sciencemag.org/science/content/vol273/issue5271/41a.htm
Editor's Summary

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