

NATURE
VOL. 405, NO. 6786; 1 JUNE 2000

OPINION	
Value of external physics survey	493
NEWS	
US government faces court case over threatened turtles/ Amphibian study launched	495
US helium reserves for sale at last/ Ageing UK lab facilities	496
Gene therapy institute backs out of clinical trials/ Harvard keeps conflict of interest rules	497
Brest to be centre of French maritime research/ Nuclear wast transmutation under fire	498
Germany hopes to bridge embryo research divide/ New island eru ts from ocean floor	499
French take laissez-faire attitude to publishing in English	500
National academies focus on self-sustainability	501
News in brief	502
News feature Requiem for the Compton Gamma- Ray Observatory Henry Bortman	504
CORRESPONDENCE	
Sustainability/ Impact of taxonomy/ Persian again/ Soccer rules/ Sesame	507
COMMENTARY	
Time for voices to be raised Derek Burke	509
BOOK REVIEWS	
A Passion for DNA: Genes, Genomes and Society, JD Watson, ed W Gratzner Reviewed by Sydney Brenner	511
The Mating Mind: How Sexual Choice Shaped the Evolution of Human Nature, G Miller Reviewed by Margaret A Boden	512
Statistics on the Table: The History of Statistical Concepts and Methods, S M Stigler Reviewed by Ian Hacking	513
Aventis Science Book Prize Shortlist Reviewed by Maxine Clarke and Catherine Irving	514
MILLENNIUM ESSAY	
A double-edged sword Diane Paul	515
FUTURES	
Catching crumbs from the table Ted Chiang	517
NEWS AND VIEWS	
Evolutionary ecology: Pax Argentina	519

David C Queller	
Gene regulation: Neutralizing noise in gene networks Timothy S Gardner James J Collins	520
Glass transition: Hard knock for thermodynamics Salvatore Torquato	521
Cognitive neuroscience: Learning how the brain learns Eilon Vaadia	523
Quantum decay: A watched pot boils quicker Peter W Milonni	525
Geomorphology: Case of the bends Tim Lincoln	525
Immunology: The footprint of a killer Klas Kärre and Gunter Schneider	527
Daedalus: Air currents	528
BRIEF COMMUNICATIONS	
Biodiversity: Pacific leatherback turtles face extinction J R Spotila, R D Reina, A C Steyermark, P T Plotkin and F V Paladino	
Palaeontology: Fossil record of mass moth migration J Rust	530
Neurobiology: Presenilin-1 mutations in Alzheimer's disease C Russo, G Schettini, T C Saido, C Hulette, C Lippa, L Lannfelt, B Ghetti, P Gambetti, M Tabaton and J K Teller	531
Astronomy: A massive cool dust torus around β Carinae? K Davidson & N Smith	532
HYPOTHESIS	
Inferring the statistical interpretation of quantum mechanics from the classical limit K Gottfried	533
ARTICLE	
Crystal structure of an NK cell immunoglobulin-like receptor in complex with its class I MHC ligand J C Boyington, S A Motyka, P Schuck, A G Brooks and PD Sun N and V Letters To Nature	537
Rossby waves on the Sun as revealed by solar 'hills' J R Kuhn, I D Armstrong, R I Bush and P Scherrer	544
Acceleration of quantum decay processed by frequent observations A G Kofman & G Kurizki and V	546
Absence of thermodynamic phase transition in a modal glass former L Santen and W Krauth N and V	550
Dynamics of the silicon (111) surface phase transition J B Hannon, H Hibino, N C Bartelt, B S Swartzentruber, T Ogino and G L Kellogg	552
Old radiocarbon ages in the southwest Pacific Ocean during the last glacial period and deglaciation E L Sikes, C R Samson, T P Guilderson and WR Howard	555

Multiple seismic discontinuities near the base of the transition zone in the Earth's mantle N A Simmons and H Gurrola	559
Are lemmings prey or predators? P Turchin, L Oksanen, P Ekerholm, T Oksanen and H Henttonen	562
Highly fecund mothers sacrifice offspring survival to maximize fitness S Einum & I A Fleming	565
Cortical ensemble activity increasingly predicts behaviour outcomes during learning of a motor task M Laubach, I Wessberg and M A L Nicolelis N and V	567
An electroneutral sodium/ bicarbonate cotransporter NBCn1 and associated sodium channel I Choi, C Aalkjaer, E L Boulpaep and W F Boron	571
Cyclin D control of growth rate in plants C E Cockcroft, B G W den Boer, J M S Healy and J A H Murray	575
Peptides accelerate their uptake by activating a ubiquitin-dependent proteolytic pathway G C Turner, F Du and A Varshavsky	579
Recombination signal sequences restrict chromosomal V(D)J recombination beyond the 12/23 rule C H Bossing, F WAlt, M M Hughes, M D'Auteuil, T D Wehrly, B B Woodiman, F Gärtner, J.M White, L Davidson and B P Sleckman	583
Intraprotein radical transfer during photoactivation of DNA photolyase C Aubert, M H Vos, P Mathis, A P M Eker and K.Brettel	586
Engineering stability in gene networks by autoregulation A Becskei and L Serrano N and V	590
NEW ON THE MARKET	
From genes to proteomics	595
CAREERS AND RECRUITMENT	
US Congress should lay out the welcome mat for skilled foreigners Diane Gershon	597
VOL. 405, NO. 6789; JUNE 22, 2000	
OPINION	
Time to think European on remarch/ Nature Immunology	869
NEWS	
Suspicious grow in German fraud case... as investigators become disillusioned	871
Hawaii outlines plans for Mauna Kéa/Gupta gets apology	872
A single European 'area for rescarch?/ UK urged to meet higher CO ₂ emissions targets	874
Brookhaver´ s heavy-ion collider strilces gold	874
Promise of draft genome boosts biotech stocks/ US accused of dumping` Gy food	875
news in brief	876
news feature Wellcome: A question oftrust Natasha Loder	878

CORRESPONDENCE	
Rescue the leatherback/ GM trials/ Hidden truths/Drugs database/ Sampling nerve gas Stem celis to Japan	881
BOOK REVIEWS	
On Tycho's Island: Tycho Brahe and His Assistants, 1570-1601, J R Christianson Reviewed by Kenneth J Howell	883
Memory Effects, R Hoffmann Reviewed by Lars-Håkan Svensson	884
The Ingenious Mr Fairchild: The Forgotten Father of the Flower Garden, M Leapman Reviewed by Sandra Knapp	885
Science in culture: Collisions and encounters Martin Kemp	896
MILLENNIUM ESSAY	
The weil-spring Lewis Wolpert	887
FUTURES	
In the days of the comet John M Ford	889
NEWS AND VIEWS	
Computational neuroscience: Neural circuits; In silicon Chris Diorio & Rajesh P N Rao	891
Neurobiology: Seif-repair in the brain Anders Björklund & Olle Lindvall	892
Chemistry: Chirality, magnetism and light Laurence D Barron	895
Ecology: Shrimp-eat-shrimp John Whitfield	895
Genetics: Reverse gear for Drosophia Barry J Dickson	896
Semiconductor physics: Electrons in artificial atoms Daniel Garnmon	899
Malaria: A mosquito transformed Craig J Coates	900
Oceanography: Given a twirl HeikeLangenberg	901
Daedalus: Solid explosion	901
Obituary: Kent R Wilson (1937-2000) Dudley Herschbach	902
BRIEF COMMUNICATIONS	
Animal behaviour: Whale songs lengthen in response to sonar P J O Miller N Biassoni, A Samuels & P L Tyack	903
Nutrition: Antioxidant activity of fresh apples M V Eberhardt, C Y Lee & R H Liu	903
Botany: Constraints to growth of boreal forests	904

P Jarvis & S Linder; Reply E A Vaganov & M K Hughes	
REVIEW ARTICLE	
The genetic legacy of the Quaternary ice ages G Hewitt	907
Crystal structure of the bacteria: membrane protein ToiC central to multidrug efflux and protein export V Koronakis, A Sharff, E Koronakis, B Luisi & C Hughes	914
LETTERS TO NATURE	
Optical detection of meteoroidal Impacts; on the Moon J L Ortiz P V Sada, L R Bellot Rubio, F J Aceituno, J Aceituno, P J Gutiérrez & U Thiele	921
Hidden symmetries in the energy levels of excitonic 'artificial atoms' M Bayer, O Stern, P Hawrylak, S Fafard & A Forchel	923
Optical emission from a charge-tunable quantum ring R J Warburton, C Schäfflein, D Haft, F Bickel A Lorke, K Karrai, J M Garcia, W Schoenfeld & P M Petroff N&V	926
Gigantic optical nonlinearity in one-dimensional Mott-Hubbard insulators H Kishida, H Matsuzak, H Okamoto, T Manabe, M Yamashita, Y Taguchi & Y Tokura	929
Enantioselective magnetochiral photochemistry G L J A Rikken & E Raupach N&V	932
Reduced North Atlantic Deep Water flux to the glacial Southern Ocean inferred from neodymium isotope ratios R L Rutberg, S R Hemming & S L Goldstein	935
Mapping the Hawaiian plume conduit with converted seismic waves X Li, R Kind, K Priestley, S V Sobolev, F Tilmaan, X Yuan & M Weber	938
A pug-nosed crocodyliform from the Late Cretaceous of Madagascar G A Buckley, C A Brochu, D W Krause & D Pol	941
Diversity and endemism of the benthic seamount fauna in the southwest Pacific B Richer de Forges, J A Koslow & G C B Poore	944
Digital selection and analogue amplification coexist in a cortex inspired silicon circuit R H R Hahnloser, R Sarpeshkar, M A Mahowald, R J Douglas & H S Seung N&V	947
Induction of neurogenesis in the neocortex of adult mice S S Magavi B R Leavitt & J D Macklis N&V	951
Regulation of distinct AMPA receptor phosphorylation sites during bidirectional synaptic plasticity H-K Lee, M Barbarosie, K Kameyama, M F Bear & R L Huganir	955
Stable germline transformation of the malaria mosquito <i>Anopheles stephensi</i> F Catteruccia, T Nolan, T G Loukeris, C Blass, C Savakis, F C Kafatos & A Crisanti N&V	959
A small-molecule nitroimidazopyran drug candidate for the treatment of tuberculosis	962

C K Stovei; P Warrener, D R VanDevanter, D R Sherman T M Arain ,M H Langhome,S W Anderson, J A Towell, Y Yuan, D N McMurray, B N Kreiswirth, C E Barry & WR Baker	
Embryonic lethality in mice homozygous for a processing-deficient allele of Notch1 S S Huppert, A Le, E H Schroeter, J S Mumm, M T Saxena, L A Milner & R Kopan	966
An extracellular activator of the Drosophila JAK/STAT pathway is a sex-determination signal element L Sefton, J R Timmer, Y Zhang F Béranger & T W Cline	970
Compromised HOXA5 function can limit p53 expression in human breast tumours V Raman, S A Martensen, D Reisman, E Evron W F Odenwald, E Jaffee, J Marks & S Sukumar	974
NEW ON THE MARKET	
Analytical instruments	979
VOL. 406, NO. 6791; 6 JULY 2000	
OPINION	
Los Alamos deserves better support/The politics of AIDS	1
NEWS	
AIDS declaration causes stir in South Africa	3
Royal Society warns of endocrine disruptor threats/ Japan goes for chimp sequence	4
NIH under pressure on tech transfer/ India's space planners set sights on the Moon	5
German government plans genome bonanza ... while Italian ethics proposal raises concern	6
US universities seek self-regulation of clinical trials/ Austria shrugs off boycott	7
Furore over genetic modification in New Zealand/ Suicide plunge backed for Galileo/Bid to save Kitt Peak telescope	8
NEWS IN BRIEF	9
news feature GM fish: Will souped up salmon sink or swim? Tony Reichhardt	10
CORRESPONDENCE	
New Zealand legislation 'too tough'/ Climate change/ Attitudes to AIDS	13
COMMENTARY	
HIV and AIDS: The Durban Declaration	15
BOOK REVIEWS	
Pandora's Poison: On Chlorine, Health, and New Environmental Strategy, J Thornton Reviewed by Terry Collins	17
Promiscuity: An Evolutionary History of Sperm Competition and Sexual Conflict, T. Birkhead Reviewed by A H Harcourt	18

Between Politics and Science: Assuring the Productivity and Integrity of Research, D H Guston Reviewed by Daniel S Greenberg	19
In Code: A Mathematical Journey, S Flannety and D Flannety Reviewed by John L Casti	20
MILLENNIUM ASSAY	
Epistemology engines Don Ihde	21
FUTURES	
The abdication of Pope Mary III Robert J. Sawyer	23
NEWS AND VIEWS	
Quatum mechanics: Schrödinger's cat is now fat Gianni Blatter	25
Signal transduction: A cellular rescue team Joel L Pomerantz and David Baltimore	26
Theoretical physics: Why trapped atoms are attractive James Anglin	29
Plant biology: An unbearable beating by light? Anne B Britt	30
Molecular nanostructures: Growth in the fast lane Vincent Dusastre	31
Aquatic ecology: Phosphorus, the staff of life David M Karl	31
Population biology: Parasites take control Richard D Gregory & Peter J Hudson	33
Daedalus: Green smelters	34
BRIEF COMMUNICATIONS	
Cancer screening: Detection of preinvasive cancer cells V Backman, M B Wallace, L T Perelman, J T Arendt, R Gurjar, M G MiZer, Q Zhang, G Zonios, E Kline, T McGillican, S Shapshay, T Valdez, K Badizadegan, J M Crawford, M Fitzmaurice, S Kabani, H S Levin, M Seiler, R R Dasari, I Itzkan, I Van Dam and M S Feld	35
Enzymology: Degradation of plant cell walls by a nematode H Popeijus, H Overmars, J Jones, V Blok, A Goverse, J Helder, A Schots, J Bakker and G Smant	36
Bacterial metabolism: Phosphite oxidation by sulphate reduction B Schink & M Friedrich	37
Inspiration for optimization from social insect behaviour E Bonabeau, M Dorigo and G Theraulaz	39
LETTERS	
Quantum superposition of distinct macroscopic states J R Friedman, V Patel, W Chen, S K Tolpygo and J E Lukens N and V	43
Generation and detection of phase-coherent current-driven magnons in magnetic multilayers M Tsoi, A G M Jansen, J Bass, W-C Chiang, V Tsoi and P Wyder	46

Self-directed growth of molecular nanostructures on silicon G P Lapinski, D D M Wayner and R A Wolkow N and V	48
Direct measurement of hole transport dynamics in DNA F D Lewis, X Liu, J Liu, S E Miller, R T Hayes and MR Wasielewski	51
Phosphate concentrations in lakes J J Hudson, WD Taylor and D W Schindler N and V	54
The sedimentary structure of linear sand dunes S Bristow, S D Bailey and N Lancaster	56
The formation of plagioclase chains during convective transfer in basaltic magma A R Philpotts and L D Dickson	59
Valuation of consumption and sale of forest goods from a Central American rain forest R Godoy, D Wilkie, H Overman, Cubas, G Cubas, J Demmer, and McSweeney and N Brokaw	62
Parallel evolution of virulence in pathogenic Escherichia coli S D Reid, C J Herbelin, A C Bumbaugh, R K Selander and T S Whittam	64
Negative genetic correlation between male sexual attractiveness and survival R Brooks	67
Identification of receptors for neuromedin U and its role in feeding A D Howard, R Wang, S-S Pong, T N Mellin, A Strack, X-M Guan, Z Zeng, D L Williams Jr, S D Feighner, C NNunes, B Murphy, J N Stair, H Yu, Q Jiang, M K Clements, C P Tan, K KMckee, D L Hreniuk, T P McDonald, K R Lynch, J F Evans, C P Austin, C T Caskey, L H T Van der Ploeg and Qliu	70
Initiation of neural induction by FGF signalling before gastrulation A Streit, A J Berliner, C Papanayotou, A Sirulnik and C D Stern	74
Point mutation in an AMPA receptor gene rescues lethality in mice deficient in the RNA-editing enzyme ADAR2 M Higuchi, S Maas, F N Single, J Hartner, A Rozov, NBurnashev. and Feldmeyer, R Sprengel and P H Seeburg	78
Therapeutic haemoglobin synthesis in α -thalassaemic mice expressing lentivirus-encoded human α -globin C May, S Rivella, J Callegari, G Heller, K M L Gaensler, L Luzzatto and M Sadelain	82
Requirement for glycogen synthase kinase-3 β in cell survival and NF- κ B activation K P Hoeflich, J Luo, E A Rubie, M-S Tsao, O Jin V J R Woodgett N and V	86
Two yeast forkhead genes regulate the cell cycle and pseudohyphal growth G Zhu, P T Spellman, T Volpe, P O Brown, D Botstein, T N Davis and B Futcher	90
Forkhead-like transcription factors recruit Ndd1 to the chromatin of G2/M-specific promoters	94

M Karanda, A Schleiffer, L Endler and G Ammerer	
Elevated UV-B radiation reduces genome stability in plants G Ries, W Heller, H Puchta, H Sandermann, H K Seidlitz and B Hohn N and V	98
Structure of the dimerized hormone-binding domain of a guanylyl-cyclase- coupled receptor F van den Akker, X Zhang, M Miyagi, X Huo, K S Misono and VC Yee	101
NEW ON THE MARKET	
Nucleic acid preparation	105
CAREERS AND RECRUITMENT	
Interdisciplinary research Diane Gershon	107
VOL. 406 NO. 6792; 13 JULY 2000	
OPINION	
How threatening are biological weapons?/ Brazil's genome success	109
NEWS	
German research bodies push for limits on gene patents/ Genomics dividend for German research budget	111
Publishers and scientists clash on Internet access/ Plea to NIH for lab equipment cash	112
Durban AIDS conference opens amid controversy/ More money for UK research students	113
Sweden goes for a single research council/ Scientific societies back GM crops for developing countries	115
News in brief	116
Newsfeature Chemistry meets computing Philip Ball	118
CORRESPONDENCE	
Estimating land-use change in China/ Sequencers have publication rights too/ Hidden frescoes	121
BOOK REVIEWS	
The Strange World of Quantum Mechanics, D F Styer Reviewed by Peter Holland	123
Alas Poor Darwin: Arguments against Evolutionary Psychology, eds H Rose & S P R Rose Reviewed by David L Hull	124
Inventing Ourselves Out of Jobs? Americas Debate over Technological Unemployment 1929--1981, A S Bix Reviewed by Howard P Segal	125
The Ecology of Freshwater Molluscs, R T Dillon Jr Reviewed by David L Strayer	126
MILLENNIUM ESSAY	
The structure of matter Harry J Lipkin	127
FUTURES	

The Oort crowd Ken MacLeod	129
NEWS AND VIEWS	
Computational biology: Segmentation in silico Peter Dearden & Michael Akam	131
Laser physics: The smallest random laser Diederik Wiersma	132
Apoptosis: The little devil of death Vincenzo De Laurenzi & Gerry Melino	135
Atmospheric chemistry Rock signature from the sky Robert N Clayton	136
Neurodegeneration: One-hit neuronal death Nathaniel Heintz	137
Pulsar astronomy: Older than they look John H Seiradakis	139
Plant pathology: The bugs from Brazil Michael Bevan	140
Developmental biology: Bringing two hearts together Wolfgang Driever	141
Atmospheric physics: Polar lights in the Caribbean Sarah Tomlin	141
Daedalus: Jet-age cleaning	142
BRIEF COMMUNICATIONS	
Medical engineering: A self-extending paediatric leg implant R I KoM R Windhager, M Dominkus, B Robioneck & H Midler-Daniels	143
Insect metabolism: Preventing cyanide release from leaves H S Engler, K C Spencer & L E Gilbert	144
Microbiology: A triclosan-resistant bacterial enzyme R J Heath & C O Rock	145
Materials science: Diffusion of a polymer 'pancake' S A Sukhishvili, Y Chen, J D Midler, E Grattan, K S Schweizer & S Granick	146
PROGRESS	
Transcranial magnetic stimulation and the human brain M Hallett	147
ARTICLE	
The genome sequence of the plant pathogen <i>Xylelia fastidiosa</i> The Xylefla fastidiosa Sequencing Consortium of the Organization for Nucleotide Sequencing and Analysis, São Paulo, Brazil N&V	151
LETTERS TO NATURE	
A large age for the pulsar B1757 - 24 from an upper limit on its proper motion B M Gaensler & D A Frail N&V	158
Realignment of the flux-line lattice by a change in the symmetry of superconductivity in UPT_3 A Huxley, P Rodière, D McK Paul, N van Dijk, R Cubitt & J Flouquet	160

Shaped-pulse optimization of coherent emission of high-harmonic soft X-rays R Bartels, S Backus, E Zeek, L Misoguti, G Vdovin, I P Christov, M M Murnane & H CKapteyn	164
Configurational entropy and diffusivity of supercooled water A Scala, F W Starr, E La Nave, F Sciortino & HE Stanley	166
Electronic connection to the interior of a mesoporous insulator with nanowires of crystalline RuO ₂ J V Ryan, A D Berry M L Anderson, J W Long, R M Stroud, V M Cepak, VM Browning, D R Rolison & C I Merzbacher	169
Determining the temperature of petroleum formation from the kinetic properties of petroleum asphaltenes R di Primio, B Horsfield & M A Guzman- Vega	173
Anomalous ¹⁷ O compositions in massive sulphate deposits on the Earth H Boo, M H Thiemens, J Farquhar, D A Campbell, C C- W Lee, K Heine & D B Loope N&V	176
Determining multiple length scales in rocks Y-Q Song, S Ryu & P N Sen	178
Cadmium toxicity among wildlife in the Colorado Rocky Mountains J R Larison, G E Likens, J W Fitzpatrick & J G Crack	181
Competition induces adaptive shifts in caste ratios of a polyembryonic wasp J A Harvey, L S Corley & MR Strand	183
Condition-dependent signalling of genetic variation in stalk-eyed flies P David, T Bjorksten, K Fowler & A Pomiankowski	186
The segment polarity network is a robust developmental module G von Dassow, E Meir, E M Munro & G M Odell N&V	188
A sphingosine-I -phosphate receptor regulates cell migration during vertebrate heart development E Kupperman, S Ant, N Osborne, S Waldron & D Y R Stainier M&V	192
A one-hit model of cell death in inherited neuronal degenerations G Clarke, R A Collins, B R Leavitt, D F Andrews, MR Hayden, C J Lumsden & R R McInnes N&V	195
Genetic ablation of parathyroid glands reveals another source of parathyroid hormone T Giinther, Z-F Chen, J Kim, M Priemel, J M Rueger, M Amling, JM Moseley, T J Martin, D J Anderson & G Karsenty	199
A cholesteryl ester transfer protein inhibitor attenuates atherosclerosis in rabbits H Okamoto, F Yonemori, K Wakitani, T Minowa, K Maeda & H Shinkai	203
PML regulates p53 acetylation and premature senescenceinduced by oncogenic Ras M Pearson, R Carbone, C Sebastiani, M Cloce, M Fagioli, S Saito, Y Higashimoto, E Appella, S Minucci, P P Pandolfi & P G Pelicci	207
Functional link of BRCA1 and ataxia telangiectasia gene product in DNA damage response	210

S Li, N S Y Ting, L Zheng, P-L Chen, Y Ziv, Y Shiloh, E Y-H P Lee & W-H Lee	
New On The Market	
Genomics	217
VOL. 406, NO. 6793; 20 JULY 2000	
OPINION	
Lessons to be learned from Durban/ More budget woes for US Department of Energy	219
NEWS	
Physics facilities may lose out in US budget /Jordan to get Middle East synchrotron	221
UK space effort criticized in parliament/ Cluster II satellites finally make it	222
Mandela calls for end to bickering over AIDS/ Free anti-HIV drug offer	223
Diabetes success used to support stem cells campaign/ MIT assesses carbon catching	224
Budget boost for UK science/ New role for European research centre/ Who faked coelacanth photo?	225
Anti-smoking campaigner gains support from US courts	226
Librarians'long-term problem with digital data	227
News In Brief	229
news feature	230
Systematics: Bones, molecules.. or both? Trisha Gura	
CORRESPONDENCE	
Objections to Italian minister/ San Andreas fault/ Rights and wrongs of DNA	234
BOOK REVIEWS	
Medicine Quest: In Search of Nature's Healing Secrets, M J Plotkin Reviewed by Walter Gratzer	235
Ion Channels and Disease, F M Ashcroft Reviewed by Thomas J Jentsch	236
Hotspots: Earth's Biologically Richest and Most Endangered Territories, R A Miffermeier, N Myers and C G Miftenneier Reviewed by Rory Howlett	235
MILLENNIUM ESSAY	
Jumbo Vaclav Smil	239
FUTURES	
All is not lost Scott Westerfeld	241
NEWS AND VIEWS	
Optics: Faster than a speeding photon Jon Marangos	243
Biophysics: Science in motion	244

Philip Ball	
Neurobiology: Parallel sensing Mathew E Diamond	245
Atmospheric physics: Enlightening water vapour Brian J Soden	247
Human behaviour. Fair game Ruth Mace	248
Structural biology: Adding to the antifreeze agenda Charles A Knight	249
Mathematics: Best packing in proteins and DNA Andrzej Stasiak and John H Maddocks	251
Cell biology: A protein accumulator Jennifer C Pinder and Anthony J Baines	253
Daedalus: Pulses of the mind	254
BRIEF COMMUNICATIONS	
Animal Behaviour: Spider manipulation by a wasp larva W G Eberhard	255
Phytochemistry: Heat-stable antifreeze protein from grass C Sidebottom, S Buckley, P Pudney, S Twigg, C Jarman, C Holt, J Telford, A McArthur, D Worrall, R Hubbard and P Lillford	256
Cell differentiation: Hepatocytes from non-hepatic adult stem cells MR Alison, R Poulson, R Jeffery, A P Dhillon, A Quaglia, J Jacob, M Novelli, G Prentice, J Williamson and NA Wright	257
ARTICLES	
Structure of the Fc fragment of human IgE bound to its highaffinity receptor Fc RI S C Garman, B A Wurzburg, S S Tarchevskaya, J-P Kinet and T S Jardetzky	259
The 3.2Å crystal structure of the human IgG1 Fc fragment-Fc RIII complex P Sondcrmann, R Huber, V Oosthuizen and U Jacob	267
LETTERS TO NATURE	
Determining the ages of comets from the fraction of crystalline dust J A Nuth III, H G M Hill and G Kletetschka	275
Gain-assisted superluminal light propagation L J Wang, A Kuzmich and A Dogariu N&V	277
Non-collinear states In magnetic sensors A Taga, L Nordström, P James, B Johansson and O Eriksson	280
Imaging the vortex-lattice melting process in the presence of disorder A Soibel, E Zeldov, M Rappaport, YMyasoedov, T Tamegai, S Ooi, M Konczykowski and V B Geshkenbein	282
Optimal shapes of compact strings A Maritan, C Micheletti, A Trovato and J R Banavar N and V	287
Evidence for a link between global lightning activity and upper tropospheric water vapour	290

C Price N and V	
Melting of the Earth's lithospheric mantle inferred from rotactinium-thorium-uranium isotopic data Y Asmerom, H Cheng, R Thomas, M Hirschmann and R L Edwards	293
Female bluethroats enhance offspring immunocompetence through extra-pair copulations A Johnsen, Vandersen, C Sunding and J T Lifjeld	296
Magnetite defines a vertebrate magnetoreceptor C E Diebel, R Proksch, C R Green, P Neilson and M M Walker	299
Transformation from temporal to rate coding in a somatosensory thalamocortical pathway E Ahissar, R Sosnik and S Haidarliu N and V	302
Presenilin is required for proper morphology and function of neurons in <i>C. elegans</i> N Wittenburg, S Eimer, B Lakowski, S Röhrig, C Rudolph and R Baumeister	306
A chemokine-driven positive feedback loop organizes lymphoid follicles K M Ansel, V N Ngo, P L Hyman, S A Luther, R Firster, J D Sedgwick, J L Browning, M Lipp and J G Cyster	309
A tertiary RNA interaction that links active-site domains to the 5' splice site of a group II intron M Boudvillain, A de Lencastre and A M Pyle	315
A ratchet-like inter-subunit reorganization of the ribosome during translocation J Frank and R K. Agrawal	318
Mimicry of ice structure by surface hydroxyls and water of a α -helix antifreeze protein Y-C Liou, A Tocijj, P L Davies and Z Jia N and V	322
α -Helix structure and icebinding properties of a hyperactive antifreeze protein from an insect S P Graether, M J Kuiper, S M Gangé, V K Walker, Z Jia, B D Sykes and P L Davies N and V	325
NEW ON THE MARKET	
Proteomics	329