LETTERS TO NATURE

loop at the end of the helix. On the basis of comparison of existing structures, it may be very difficult, if not impossible, to differentiate between insertions that occurred in loops, as opposed to insertions that originally occurred in helices but were propagated into neighbouring loops.

- Received 13 July: accepted 30 November 1992
- 1. Pascarella, S. & Argos, P. J. molec. Biol. 224, 461-471 (1992)
- Barany, F. Proc. natn. Acad. Sci. U.S.A. 82, 4202-4206 (1985).
- Sondek, J. & Shortle, D. Proteins: Struct. Funct. Genet. 7, 299–305 (1990).
 Sondek, J. & Shortle, D. Proteins: Struct. Funct. Genet. 13, 132–140 (1992).
- Freimuth, P. I., Taylor, J. W. & Kaiser, E. T. J. biol. Chem. 265, 896-901 (1990). 6. Marti, T., Otto, H., Rösselet, S. J., Heyn, M. P. & Khorana, H. G. Proc. natn. Acad. Sci. U.S.A. 89, 1219-1223 (1992).
- Starzyk, R. M., Burbaum, J. J. & Schimmel, P. Biochemistry 28, 8479-8484 (1989).
- Ladant, D., Glaser, P. & Ullmann, A. J. biol. Chem. 267, 2244–2250 (1992).
 Heinz, D. W., Baase, W. A. & Matthews, B. W. Proc. natn. Acad. Sci. U.S.A. 89, 3751–3755 (1992).
- 10. Eriksson, A. E. et al. Science 255, 178-183 (1992).
- 11. Gray, T. M. & Matthews, B. W. J. molec. Biol. 175, 75-81 (1984). 12. Milner-White, E. J. & Poet, R. Trends biochem. Sci. 12, 189–192 (1987).
- 13. McIntosh, L. P., Wand, A. J., Lowry, D. F., Redfield, A. G. & Dahlquist, F. W. Biochemistry 29, 6341-6362 (1990).
- 14. Lee, B. & Richards, F. M. J. molec. Biol. 55, 379-400 (1971).
- 15. Connolly, M. Science 221, 709-713 (1983).
- 16. Lesk, A. M. & Chothia, C. J. molec. Biol. 136, 225-270 (1980).
- 17. Presta, L. G. & Rose, G. D. Science 240, 1632-1641 (1988)
- Bashford, D., Chothia, C. & Lesk, A. M. J. molec. Biol. 196, 199–216 (1987).
 Dao-pin, S., Baase, W. A. & Matthews, B.W. Proteins: Struct. Funct Genet. 7, 198–204 (1990).
- 20. Zhang, X.-J., Baase, W. A. & Matthews, B. W. Biochemistry 30, 2012-2017 (1991).
- 21. Becktel, W. J. & Schellman, J. A. *Biopolymers* **26**, 1859–1877 (1987) 22. Matsumura, M. & Matthews, B. W. *Science* **243**, 792–794 (1989).
- Kunkel, T. A., Roberts, J. D. & Zakour, R. A. Meth. Enzym. 154, 367-382 (1987). 23.
- 24. Poteete, A. R., Dao-pin, S., Nicholson, H. & Matthews, B. W. Biochemistry 30, 1425-1432 (1991). 25. Streisinger, G., Mukai, F., Drever, W. J., Miller, B. & Horiuchi, S. Cold Spring Harb. Symp. quant.
- Biol. XXVI, 25-30 (1961).
- 26. Weaver, L. H. & Matthews, B. W. J. molec. Biol. 193, 189-199 (1987)
- Jancarik, J. & Kim, S.-H. J. appl. Crystallogr. 24, 409-411 (1991). 27 Alber, T., Dao-pin, S., Nye, J. A., Muchmore, D. C. & Matthews, B. W. Biochemistry 26, 3754-3758 28
- (1987)

ACKNOWLEDGEMENTS. We thank S. Pepiot, J. Lindstrom and B. Simon for technical assistance and X.-J. Zhang, R. DuBose, E. P. Baldwin and M. Blaber for discussion. D.W.H. acknowledges the support the Deutsche Forschungsgemeinschaft. This work was also supported in part by grants from the NIH (to B.W.M.), NSF (to F.W.D.) and the Lucille P. Markey Charitable Trust.

GUIDE TO AUTHORS

PLEASE follow these guidelines so that your manuscript may be ocditiously

PLEASE: follow these gouldelines so that your manuscript may be handled expeditionally. Notice is an international journal covering all the sciences. Con-tributors should therefore base in mod those reades who work in other fields and those for whom English is a second language, and write clearly and simply, avoiding uncreassry technical terminology. Space in the journal is imited, making competition for publication science. Brevity a highly valued One printed page of Nature, without contain the source of the science of the science of the source science in the journal is a mining on the science of the language of the science of

data in the databases that exist for this purpose, and to mention availability of these data. Once a manuscript is accepted for publication, contributors will receive proofs in about 4 weeks. Nature's staff will defin manuscripts with a view to brevity and charity, so contributors should check proofs carefully. Manuscripts are generally published 2-3 weeks after receipt of corrected proofs. Nature does not exact page charges. Contributors processed after the manuscript is published and payment received.

Categories of pape

Review articles survey recent developments in a field. Most are com-missioned but suggestions are welcome in the form of a one-page synopsis addressed to the Reviews Coordinator. Length is negotiable

synchronic hadrespeet to the reviews. Coordination: Length a negotiate Artifestian are research reports whose conclusions are or general interest and which are sufficiently rounded to be a substantial advance in understanding. They should not have more than 3,000 works of itest not including figure legends) or more than six display items and should not occupy more than five pages of Nature. Articles stars with a heading of 50–80 words written to advertise their context in general terrs, to which editors will pay pairculait attention. The heading does not susally contain numbers, abbrevi-ations or mesurements. The introduction to the attock such as bottely in the first two or three paragraphs of the article, which also bieldy references and have contain a few which address wheth also bieldy of references and when contain a few wheth addressions or rescupances.

summarize its results and implications. Arrides have (ever than 50 references and may contain a (eve whort subbaddings). Letters are short reports of outstanding novel findings whose implica-tions are general and important enough to be to interest to those outside the field. Letters should have (J000 or fewer works of text and four or fewer display items). The first paragraph describes, in not more than 150 words and without the use of abbreviations, the background, artionale and their conclusions of the study for the particular benefit of non-specialist readers. Letters do not have subbadings and should contain fewer than 10 references. Commarize y articles deal with issues in, or arising from, research that are short interest to readers outside research. Some are commissioned

community with the ceal with its uses in or a fining from, repeared on are also of interest to readers outside research. Some are commissioned but suggestions can be made to the Commentary Editor in the form of a one-page synopsis

News and Views articles inform non-specialist readers about new scientific advances, sometismes in the form of a conference report. Most are commissioned but proposals can be made in advance to the News and Views Eddor. Scientific Correspondence is for discussion of topical scientific matters, including those published in Nature, and for mixeellaneous contribu-tion. Priority is given to letter or lever than 300 words.

Preparation of manuscripts

tions: Pioriay is given to letters of fewer than 300 words. **Deparation Contaminus** The manuscripts should be typed, double spaced, on one nde of the spare oilty. An original and four copies are required, for the drawings, one set of originals and four spoots the special should be double should be double should be double should be no separate should be double should be marked in dividually and clearly with the subirs' have and, when known, the manuscript number cloasty related, with respective should be marked in dividually and clearly with the subirs' hould be larger than 28 by 22 cm. Figures with several parts are to be avoided in the single-iter code for amino acids. One fourtes with we double should be doubled be governed in acids. One column subirs' for the should be doubled be should be doubled. Subjections of a clearly number is an experimental by an ingerally undicated originals. One column subit, of Narwar can accomendate 20 amino acids. One fourtes with we should be recreated by clearly color figures inde a sole acid and the single-iter code for amino acids. One fourtes with a sole acided and the should be acceed acide ac

costs will not prevent publication of essential colour figures (i the cretomaines are explained. Poors of colour arrows may be senti-contributors under separate cover from their galley proofs. Figure legends bould not exceed 300 words and ideality should be shorter. The figure is described first, then, hordly, the method. Refe-ence to an thole published elsewhere is preferable to a full description. Methods are not described in the text. **Fortences 1**: a numbered sequentially as they appear in the text, followed by thase in tables and finally by those in figure legends. Only papers published elsewhere is preferable to a full description. Text is not included in reference lass. References are abbreviated according to the World Lint of Scientific Fondardis (Butterworths, London, 1903-65). The first and lass page numbers are included in first interview and the publisher, place and date. **Absectification**, symbolis, minis and greek. Interse handle be identified the first time by are used. Accornous, hould be availed whenever photometary. Information is material releaves to a tritles or Letters which caronic, for lack of page. In publisher, place and date. **Supprenentity information** is material releaves to Articles or Letters which caronic, for lack of page. In publisher, place and date screene to Nature on request. **Supprenentity information** is material releaves to Articles or Letters which caronic, for lack of page. In publisher, place area date screene to Nature on request. **Supprenentity information** is material releaves to Articles or Letters which caronic, 20045, USA. Manuscripts or proofs sent ba ari-courier to London should be dealered as 'manuscripts' and value S2 to prevent the imposition of import dury and value-added tax.

ERRATUM

Evolution and environment in the Hominoidea

Peter Andrews

Nature 360, 641-646 (1992)

IN this Review Article, in the figure in Box 4 on page 644, the labels 'Orang' and 'Human' in the diagram labelled "Classification at family, subfamily and tribe level of the Hominoidea" were inadvertently transposed.

CORRECTIONS

Molecular and genetic damage in humans from environmental pollution in Poland

Frederica P. Perera, Kari Hemminki, Ewa Gryzbowska, Grazyna Motykiewicz, Jadwiga Michalska, Regina M. Santella, Tie-Lan Young, Christopher Dickey, Paul Brandt-Rauf, Immaculata DeVivo, William Blaner, Wei-Yann Tsai & Mieczyslaw Chorazy

Nature 360, 256-258 (1992)

IN Table 1 on page 257, the P values for the comparisons of PAH-DNA adducts between the 'Exposed winter' (EW) to 'Control summer' (CS) and 'Exposed summer' (ES) to CS are reversed. The correct P value for the comparison of EW to CS is 0.012 and that for the comparison of ES to CS is 0.078, as expected from the means in the table. The correct P values further strengthen the finding of an effect of air pollution on DNA adducts.

Cloning and characterization of a gene that regulates cell adhesion

W. E. Pullman & W. F. Bodmer

Nature 356, 529-532 (1992)

SHOWN below is a revision of the nucleotide sequence and inferred amino acid sequence for a cellular adhesion regulatory molecule, the gene for which is now known as CMAR (CAR in this letter). The authors acknowledge helpful information received from Drs Alejandro Aruffo and Po-Ying Chan of Bristol-Myers Squibb, Pharmaceutical Research Institute, Seattle, USA, and H. Durbin (ICRF) in making this correction.

CMAR

GC	CATO	GAA GCC	CAC	CTTO	GAG	STTO	CCC7	AGG	GTT7 CAT1	TAC	SACA	AGTO CCZ	GT:	CCC CAGA	CAG:	CTG	G F	51 102
TO	ATC	CCC	ACC	GCTI	GCA	ACGZ	CCC	SCCC	CAC	STTC	CTO	TGG	CTC	CCT	"CGC	AATO	3	153
																M	-	1
CI	AAG	GGG	ATC	CGGA	CAT	GAA	AGG	ACC	сто	STGI	AGCO	GAT	TGT	CCI	TATO	TCC	A	204
L	R	G	S	D	М	К	G	Ρ	С	Ε	P	I	V	L	S	Р		18
GC	GGC	сст	GTC	ATC	CAG	CTC	ACI	CAJ	CAP	ATGO	GGGC	CAG	TCA	GGG	CCF	AGGC	A	255
A	A	L	S	S	S	S	L	I	Ν	G.	<u>A</u>	S	Q.	A	-0	A		35
-			0.00					maa		:					0.00			200
C1	666	CIC	CGG	AGG	ACI	CAC	CAU	JGC	CCC	CTG	CTG	CCA	1.61	GGA	icit(GIG	-	306
Г	G	2			بر 		T	A	Р	C	C	н	V	D	W	C		51
AAGTTGAGGACTTCTTGCTGGTCTAGTCACGCATGCAGTGTTGGGGATGCC												2	357					
K	L	R	Т	S	С	W	S	S	Н	A	С	S	V	G	D	A		68
ŤΤ	GGT	ттт	тас	TGC	тст	GAG	AAT	TGT	TGA	GAT	ACT	TTA	СТА	ATA	AAC	TGT		408
L	V	F	T	A	L	R	I	V	E	I	L	Ŷ					2	81
TA	GTT	GGA	AAA	AAA	AAA	AAA	A											429
	_	_			m	vrist	ovla	tion	ci	te								

tyrosine phosphorylation site