Corrections and Editorial Expression of Concern

ENGINEERING

Correction for "Ultrahigh-throughput screening in drop-based microfluidics for directed evolution," by Jeremy J. Agresti, Eugene Antipov, Adam R. Abate, Keunho Ahn, Amy C. Rowat, Jean-Christophe Baret, Manuel Marquez, Alexander M. Klibanov, Andrew D. Griffiths, and David A. Weitz, which appeared in issue 9, March 2, 2010, of *Proc Natl Acad Sci USA* (107:4004–4009; first published February 8, 2010; 10.1073/pnas.0910781107).

The authors note that due to a printer's error, the panels in Fig. 2 were mislabeled. The corrected figure and its legend appear below.

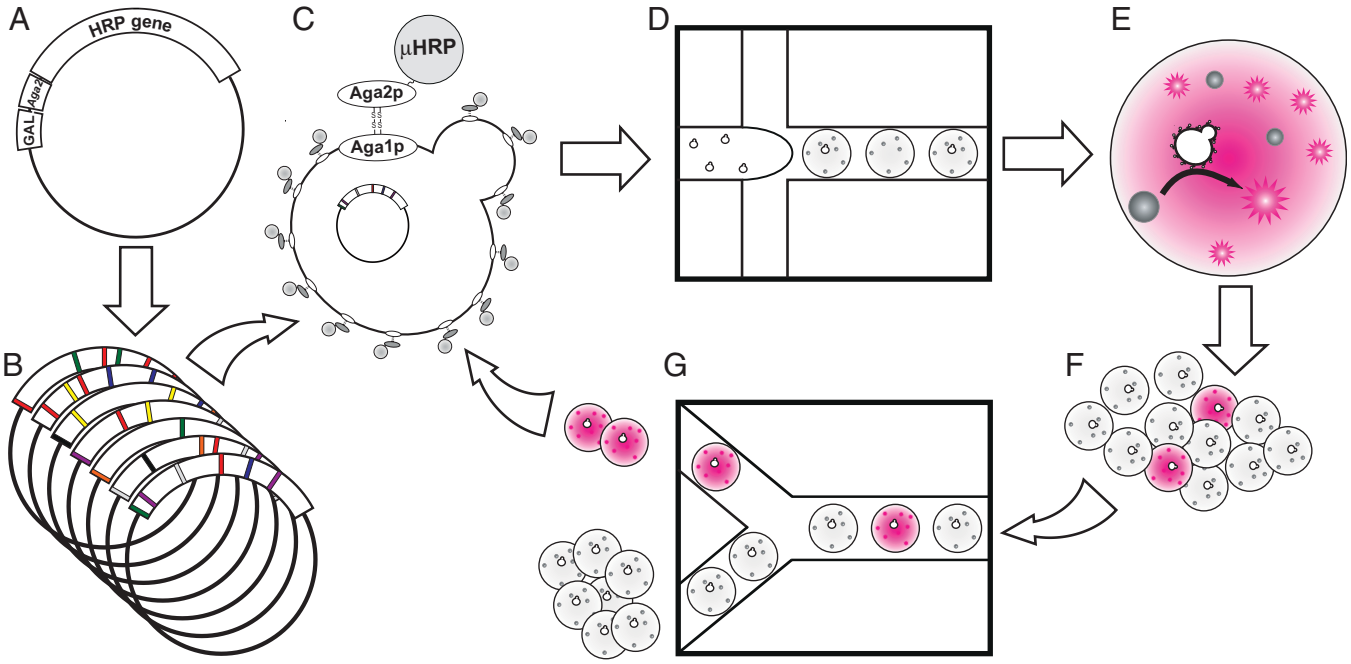

Fig. 2. Schematic of the directed evolution experiment. (*A*) The wild-type *HRP* gene is encoded on a plasmid as a C-terminal fusion to the *Aga2* gene to allow surface display, and expression is driven by an inducible GAL (10) promoter. (*B*) We create two libraries for each generation. Each library has ~10^7 variants. For the first generation, we use one error-prone PCR (epPCR), and one active-site-targeted saturation mutagenesis library. For the second generation, we make both a high- and a low-mutation-rate epPCR library after recombination of the fastest first-generation sequences (SI). (*C*) The libraries are transformed into yeast (strain EBY100). Upon induction with galactose, each cell displays on its surface ~10,000 copies of a single mutant HRP protein (μHRP). (*D*) The yeast and nonfluorescent substrate are coencapsulated into drops on the microfluidic platform (Fig. 1). In the first round of each generation, we maximize the number of mutants screened by using a higher loading, ~1 cell per drop. In subsequent rounds, to mininimize coencapsulation and ensure the highest enrichment possible, we load cells at 0.3 cells per drop (17). (*E*) Active mutants convert the AUR (gray) to its fluorescent oxidation product (pink) in an incubation line (*F*), and then flow into the sorter (*G*), where the brightest drops are sorted. We break the emulsion to release the cells from the drops, allow the cells to replicate, and then repeat the growth, induction, and sorting process.

www.pnas.org/cgi/doi/10.1073/pnas.1002891107

MEDICAL SCIENCES

Correction for "Genetic inactivation of AKT1, AKT2, and PDPK1 in human colorectal cancer cells clarifies their roles in tumor growth regulation," by Kajsa Ericson, Christine Gan, Ian Cheong, Carlo Rago, Yardena Samuels, Victor E. Velculescu, Kenneth W. Kinzler, David L. Huso, Bert Vogelstein, and Nickolas Papadopoulos, which appeared in issue 6, February 9, 2010, of *Proc Natl Acad Sci USA* (107:2598–2603; first published January 20, 2010; 10.1073/pnas.0914018107).

The authors note that all columns and error bars in their figures represent means and SDs.

www.pnas.org/cgi/doi/10.1073/pnas.1002415107

NEUROSCIENCE

Correction for "Subregional neuroanatomical change as a biomarker for Alzheimer's disease," by Dominic Holland, James B. Brewer, Donald J. Hagler, Christine Fenema-Notestine, Anders M. Dale, and the Alzheimer's Disease Neuroimaging Initiative, which appeared in issue 49, December 8, 2009, of *Proc Natl Acad Sci USA* (106:20954–20959; first published November 20, 2009; 10.1073/pnas.0906053106).

The authors note that the author name Christine Fenema-Notestine should have appeared as Christine Fennema-Notestine. The corrected author line appears below. The online version has been corrected.

Dominic Holland[a,1], James B. Brewer[a,b], Donald J. Hagler[b], Christine Fennema-Notestine[b,c], Anders M. Dale[a,b], and the Alzheimer's Disease Neuroimaging Initiative[2]

www.pnas.org/cgi/doi/10.1073/pnas.1001505107

EDITORIAL EXPRESSION OF CONCERN. PNAS is publishing an Editorial Expression of Concern regarding the following two articles:

(*i*) BIOPHYSICS. "Structure of vaccinia complement protein in complex with heparin and potential implications for complement regulation," by Vannakambadi K. Ganesh, Scott A. Smith, Girish J. Kotwal, and Krishna H. M. Murthy, which appeared in issue 24, June 15, 2004, of *Proc Natl Acad Sci USA* (101:8924-8929; first published June 3, 2004; 10.1073/pnas.0400744101).

(*ii*) BIOPHYSICS. "Crystal structure of human apolipoprotein A-I: Insights into its protective effect against cardiovascular disease," by A. Abdul Ajees, G. M. Anantharamaiah, Vinod K. Mishra, M. Mahmood Hussain, and H. M. Krishna Murthy, which appeared in issue 7, February 14, 2006, of *Proc Natl Acad Sci USA* (103: 2126-2131; first published February 1, 2006; 10.1073/pnas.0506877103).

The editors wish to note that we have received a report from the University of Alabama at Birmingham (UAB) that has investigated allegations of falsified or fabricated protein crystallographic structures including PDB codes 1RID and 2A01, which were published in the PNAS papers noted above. The UAB committee has forwarded their findings to the US Office of Research Integrity (ORI). We are awaiting the findings of ORI to determine the appropriate next steps.

Randy Schekman
Editor-in-Chief

www.pnas.org/cgi/doi/10.1073/pnas.1003210107