- 25 Kooperberg, C. et al. (2002) Improved Background Correction for Spotted DNA Microarrays. J. Comput. Biol. 9, 55-66
- 26 Wang, Z. et al. (2004) Image quality assessment: From error visibility to structural similarity. IEEE Trans. Image Process. 13, 600-612
- 27 Jornsten, R. et al. (2002) Microarray image compression: SLOCO and the effects of information loss, Signal Processing Journal (Special Issue on Genomic Signal Processing).
- 28 Jornsten, R. and Yu, B. (2000) Comprestimation: Microarray images in abundance. In Proceedings of Conference on Information Science and Systems, Princeton.
- 29 Hua, J. et al. (2002) Fast Segmentation and Lossy-To-Lossless Compression of DNA Microarray Images. In Proceedings of Workshop on Genomic Signal Processing and Statistics (GENSIPS), Raleigh, NC, USA
- 30 Jornsten, R. et al. (2002) On the bitplane compression of microarray images. In Statistical data analysis based on the L_1 norm and related methods. Springer-Verlag
- 31 Lonardi, S. and Luo, Y. (2004) Gridding and Compression of Microarray Images. 2004 IEEE Computational Systems Bioinformatics Conference, pp.122-130, Stanford, CA, USA
- 32 Faramarzpour, N. et al. (2003) Lossless DNA Microarray Image Compression. IEEE Asilomar Conference on Signals, Systems and Computers, pp.1501-1504 Vol.2, Pacific Grove, CA, USA.
- 33 Zhang, Y. et al. (2005) Lossless Compression of DNA Microarray Images. Poster abstract of IEEE Computational Systems Bioinformatics Conference, pp.128-132, Stanford, CA, USA
- 34 Ahmed, A.A. et al. (2004) Microarray

- segmentation methods significantly influence data precision. Nucleic Acids Res. 32, e50
- 35 Hua, J. et al. (2003) Microarray BASICA: Background adjustment, segmentation, image compression and analysis of Microarray Images. In Proceedings IEEE International Conference on Image Processing, pp. I585-588 (vol.1) Barcelona, Spain
- 36 Cleary, J. and Teahan, W. (1997) Unbounded length contexts for PPM. The Computer Journal 40, 67-75
- 37 Faramarzpour, N. et al. (2004) Lossy Compression of DNA Microarray Images. Proceedings of CCECE / CCGEI 2004, Ontario, Canada
- 38 Burrows, M. and David, J. Wheeler. (1994) A block-sorting lossless data compression algorithm. Technical Report, Hewlett Packard Laboratories, Number SRC-RR-124
- 39 Said, A. and Pearlman, W.A. (1996) A new fast and efficient image codec based on set partitioning in hierarchical trees. IEEE Trans. Circuits and Systems for Video Technology 6, 243-250
- 40 Weinberger, S.M. and Seroussi, G. (2000) The LOCO-I lossless image compression algorithm: Principles and standardization into JPEG-LS. IEEE Trans. Image Process. 9, 1309-1324
- 41 Samavi, S. et al. (2003) DNA Microarray Image Compression by Pipeline Architecture. IEEE Asilomar Conference on Signals, Systems and Computers, pp. 2176-2179 Vol.2, Pacific Grove, CA, USA
- 42 Carstensen, J.M. (1996) An active lattice model in a Bayesian framework. Comput. Vis. Image Underst. 63, 380-387
- 43 Katzer, M. et al. (2003) A Markov random field

- model of microarray gridding. In Proceedings of the ACM Symposium on Applied Computing, pp.72-77, Melbourne, FL
- 44 Ho, J. et al. Gridding Spot Centers of Smoothly Distorted Microarray Images. IEEE Trans. Image Process. (in press)
- 45 Li, Q. et al. (2005) Donuts, scratches and blanks: robust model-based segmentation of microarray images. Bioinformatics 21, 2875-2882
- 46 Wang, X.H. et al. (2003) Application of wavelet modulus maxima in microarray spots recognition. IEEE Trans Nanobioscience 2, 190-192
- 47 Katzer, M. et al. (2003) Methods for automatic microarray image segmentation. IEEE Trans Nanobioscience 2, 202-214
- 48 Demirkaya, O. et al. (2005) Segmentation of Microarray cDNA Spots Using Markov Random Field Modeling. *Bioinformatics* 21, 2994–3000
- 49 Bergemann, T.L. (2004) A statistically driven approach for image segmentation and signal extraction in cDNA microarrays. J. Comput. Biol. 11, 695-713
- 50 Brandle, N. et al. (2003) Robust DNA microarray image analysis. Mach. Vis. Appl. 15, 11-28
- 51 Glasbey, C.A. and Ghazal, P. (2003) Combinatorial image analysis of DNA microarray features. Bioinformatics 19, 194-203
- 52 Liew, A.W.C. et al. (2003) Robust adaptive spot segmentation of DNA microarray images. Pattern Recognit. 36, 1251-1254
- 53 Steinfath, M. et al. (2001) Automated image analysis for array hybridization experiments. Bioinformatics 17, 634-641
- 54 Galinsky, V.L. (2003) Automatic registration of microarray images. I. Rectangular grid. Bioinformatics 19, 1824-1831

Erratum

In the September 1 issue of Drug Discovery Today (Vol. 10, No. 17), in the review entitled Interdisciplinary education at the biology-engineering-computer science interface: a perspective, there were a number of errors, including the following:

- · We only listed Dr Bruce Tidor as the corresponding author. Dr Brigitta Tadmor is also a corresponding author for this article and can be contacted at tadmor@mit.edu
- · At the end of the first paragraph in the 'Interdisciplinary graduate education', we should have inserted the following: 'In a related effort, MIT is launching a new undergraduate major in Biological Engineering."
- All figures should have included the copyright line: 'CSBi@MIT'
- Figure 4(b) is courtesy of Michael D. Altman
- The correct acknowledgements for the article are below:

Acknowledgements

The Computational and Systems Biology PhD program at MIT is partially supported by a training grant from the National Institutes of Health (DK070114/DK071503). The ideas and illustrations presented here grew out of an intensely fruitful, collective discussion with a large number of people actively working together to build a learning community in systems biology at MIT, including Bob Brown, Chris Burge, Drew Endy, Alice Gast, David Gifford, Alan Grossman, John Guttag, Susan Hockfield, Richard Hynes, Chris Kaiser, Amy Keating, Doug Lauffenburger, Don Lessard, Tomás Lozano-Pérez, Tom Magnanti, Scott Manalis, Paul Matsudaira, Darlene Ray, Rafael Reif, Leona Samson, Ram Sasisekharan, Bob Sauer, Dick Schmalensee, Bob Silbey, Peter Sorger, Charles Vest, Joel Voldman, Forest White, Jacob White and Mike Yaffe.

The editorial team sincerely apologize to our readers and to the authors for any confusion this might have caused. A full corrected version of this article will be published in the online version of this issue (Vol. 10, Nos 23 and 24).

PII: S1359644605036846