

(1-28)

1. Abbondanzieri, E. A., Greenleaf, W. J., Shaevitz, J. W., Landick, R. & Block, S. M. (2005) "Direct observation of base-pair stepping by RNA polymerase" *Nature* **438**, 460-5.
2. Altman, D., Sweeney, H. L. & Spudich, J. A. (2004) "The mechanism of myosin VI translocation and its load-induced anchoring" *Cell* **116**, 737-49.
3. Asbury, C. L., Fehr, A. N. & Block, S. M. (2003) "Kinesin moves by an asymmetric hand-over-hand mechanism" *Science* **302**, 2130-4.
4. Case, R. B., Chang, Y. P., Smith, S. B., Gore, J., Cozzarelli, N. R. & Bustamante, C. (2004) "The bacterial condensin MukBEF compacts DNA into a repetitive, stable structure" *Science* **305**, 222-7.
5. Choquet, D., Felsenfeld, D. P. & Sheetz, M. P. (1997) "Extracellular matrix rigidity causes strengthening of integrin-cytoskeleton linkages" *Cell* **88**, 39-48.
6. Dietz, H., Berkemeier, F., Bertz, M. & Rief, M. (2006) "Anisotropic deformation response of single protein molecules" *Proc Natl Acad Sci U S A* **103**, 12724-8.
7. Fernandez, J. M. & Li, H. (2004) "Force-clamp spectroscopy monitors the folding trajectory of a single protein" *Science* **303**, 1674-8.
8. Fisher, T. E., Marszalek, P. E. & Fernandez, J. M. (2000) "Stretching single molecules into novel conformations using the atomic force microscope" *Nat Struct Biol* **7**, 719-24.
9. Giardini, P. A., Fletcher, D. A. & Theriot, J. A. (2003) "Compression forces generated by actin comet tails on lipid vesicles" *Proc Natl Acad Sci U S A* **100**, 6493-8.
10. Gutschmann, T., Fantner, G. E., Venturoni, M., Ekani-Nkodo, A., Thompson, J. B., Kindt, J. H., Morse, D. E., Fygenson, D. K. & Hansma, P. K. (2003) "Evidence that collagen fibrils in tendons are inhomogeneously structured in a tubelike manner" *Biophys J* **84**, 2593-8.
11. Hua, W., Chung, J. & Gelles, J. (2002) "Distinguishing inchworm and hand-over-hand processive kinesin movement by neck rotation measurements" *Science* **295**, 844-8.
12. Hummer, G. & Szabo, A. (2001) "Free energy reconstruction from nonequilibrium single-molecule pulling experiments" *Proc Natl Acad Sci U S A* **98**, 3658-61.
13. Itoh, H., Takahashi, A., Adachi, K., Noji, H., Yasuda, R., Yoshida, M. & Kinosita, K. (2004) "Mechanically driven ATP synthesis by F1-ATPase" *Nature* **427**, 465-8.
14. Kawaguchi, K., Uemura, S. & Ishiwata, S. (2003) "Equilibrium and transition between single- and double-headed binding of kinesin as revealed by single-molecule mechanics" *Biophys J* **84**, 1103-13.
15. Kitamura, K., Tokunaga, M., Iwane, A. H. & Yanagida, T. (1999) "A single myosin head moves along an actin filament with regular steps of 5.3 nanometres" *Nature* **397**, 129-34.
16. Kitao, A., Yonekura, K., Maki-Yonekura, S., Samatey, F. A., Imada, K., Namba, K. & Go, N. (2006) "Switch interactions control energy frustration and multiple flagellar filament structures" *Proc Natl Acad Sci U S A* **103**, 4894-9.

17. Liphardt, J., Dumont, S., Smith, S. B., Tinoco, I., Jr. & Bustamante, C. (2002) "Equilibrium information from nonequilibrium measurements in an experimental test of Jarzynski's equality" *Science* **296**, 1832-5.
18. Mallik, R., Carter, B. C., Lex, S. A., King, S. J. & Gross, S. P. (2004) "Cytoplasmic dynein functions as a gear in response to load" *Nature* **427**, 649-52.
19. Mather, W. H. & Fox, R. F. (2006) "Kinesin's biased stepping mechanism: amplification of neck linker zippering" *Biophys J* **91**, 2416-26.
20. Pollard, T. D. & Borisy, G. G. (2003) "Cellular motility driven by assembly and disassembly of actin filaments" *Cell* **112**, 453-65.
21. Raucher, D. & Sheetz, M. P. (2000) "Cell spreading and lamellipodial extension rate is regulated by membrane tension" *J Cell Biol* **148**, 127-36.
22. Ryu, W. S., Berry, R. M. & Berg, H. C. (2000) "Torque-generating units of the flagellar motor of Escherichia coli have a high duty ratio" *Nature* **403**, 444-7.
23. Shin, J. H., Mahadevan, L., Waller, G. S., Langsetmo, K. & Matsudaira, P. (2003) "Stored elastic energy powers the 60-microm extension of the Limulus polyphemus sperm actin bundle" *J Cell Biol* **162**, 1183-8.
24. Smith, D. E., Tans, S. J., Smith, S. B., Grimes, S., Anderson, D. L. & Bustamante, C. (2001) "The bacteriophage straight phi29 portal motor can package DNA against a large internal force" *Nature* **413**, 748-52.
25. Soong, R. K., Bachand, G. D., Neves, H. P., Olkhovets, A. G., Craighead, H. G. & Montemagno, C. D. (2000) "Powering an inorganic nanodevice with a biomolecular motor" *Science* **290**, 1555-8.
26. Uemura, S., Kawaguchi, K., Yajima, J., Edamatsu, M., Toyoshima, Y. Y. & Ishiwata, S. (2002) "Kinesin-microtubule binding depends on both nucleotide state and loading direction" *Proc Natl Acad Sci U S A* **99**, 5977-81.
27. Willemsen, O. H., Snel, M. M., Cambi, A., Greve, J., De Groot, B. G. & Figdor, C. G. (2000) "Biomolecular interactions measured by atomic force microscopy" *Biophys J* **79**, 3267-81.
28. Yildiz, A., Tomishige, M., Vale, R. D. & Selvin, P. R. (2004) "Kinesin walks hand-over-hand" *Science* **303**, 676-8.