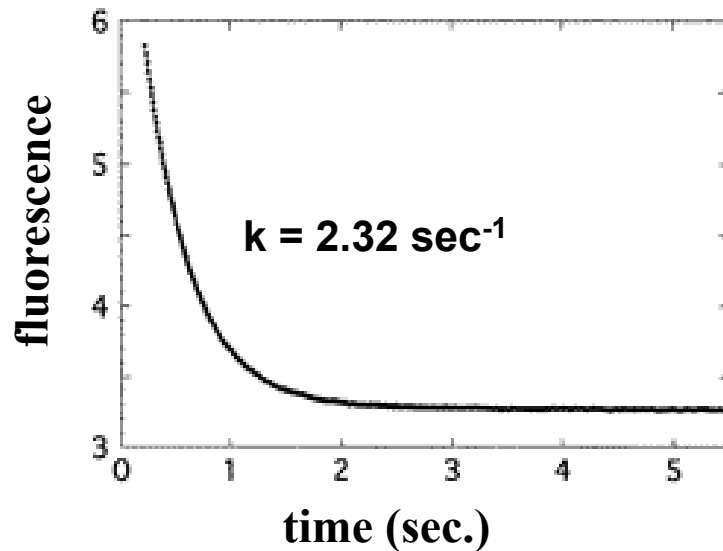


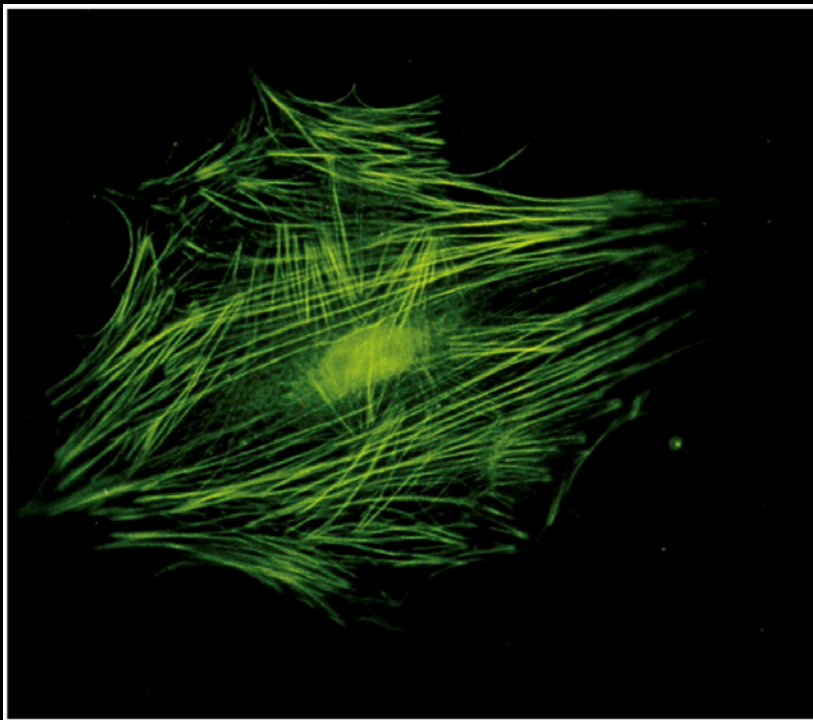
434 Cro protein contains a single Trp residue whose emission maximum, ~348 nm in the native protein, shifts to ~353 nm upon urea denaturation, with a ~50% drop in fluorescence intensity. This provides a sensitive optical probe for stopped-flow fluorescence measurements of folding kinetics. Laurents *et al.*, Folding kinetics of phage 434 Cro protein, *Biochemistry* 39:13963-13973, 2000.



fluorescence-detected stopped-flow kinetic trace: 434 Cro protein unfolding in 8.5 M urea

□ fluorescence microscopy

actin filaments, visualized with fl.-labelled Ab to actin



Stryer Fig. 4.37

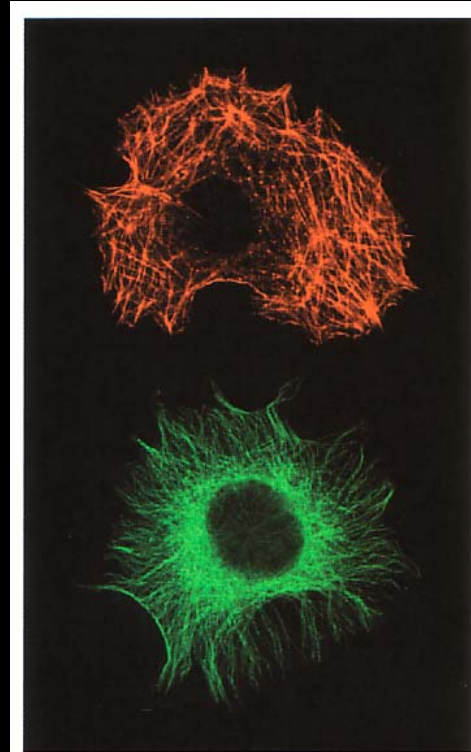
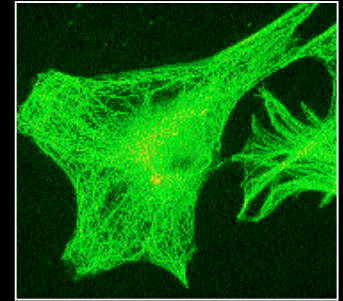
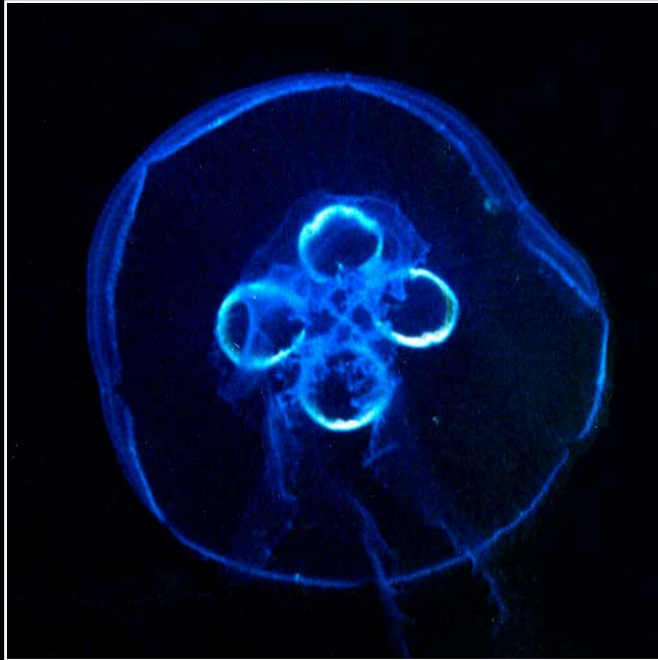


Figure 1.16 ▲
Micrographs of fluorescently labeled actin filaments and microtubules in mammalian cells. **(Top)** Actin filaments in rat muscle cells. **(Bottom)** Microtubules in human endothelial cells.

Horton Fig. 1.16



Green fluorescent protein (GFP)

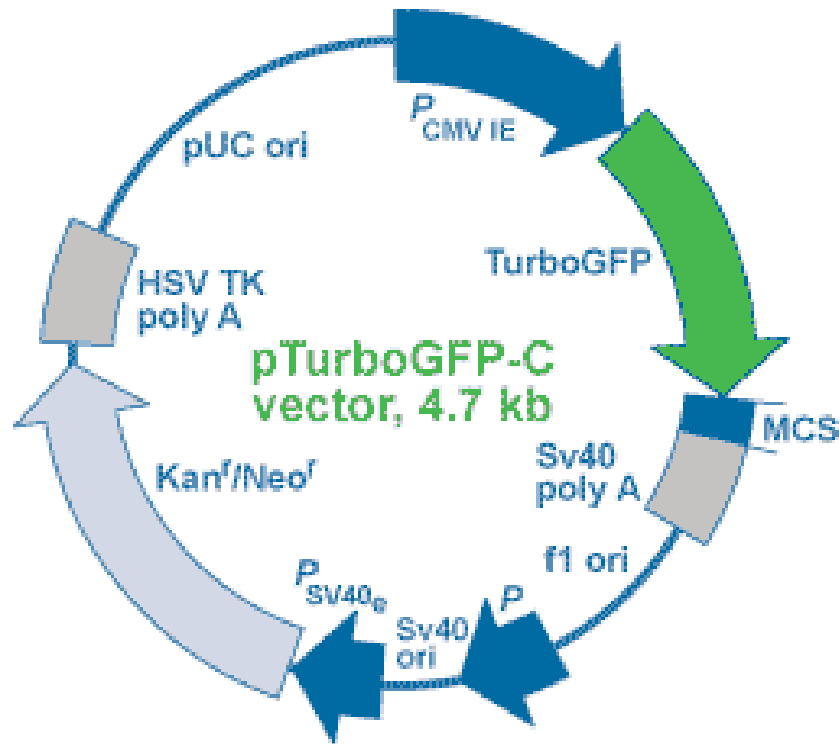


**Pacific jellyfish,
*Aequoria victoria***



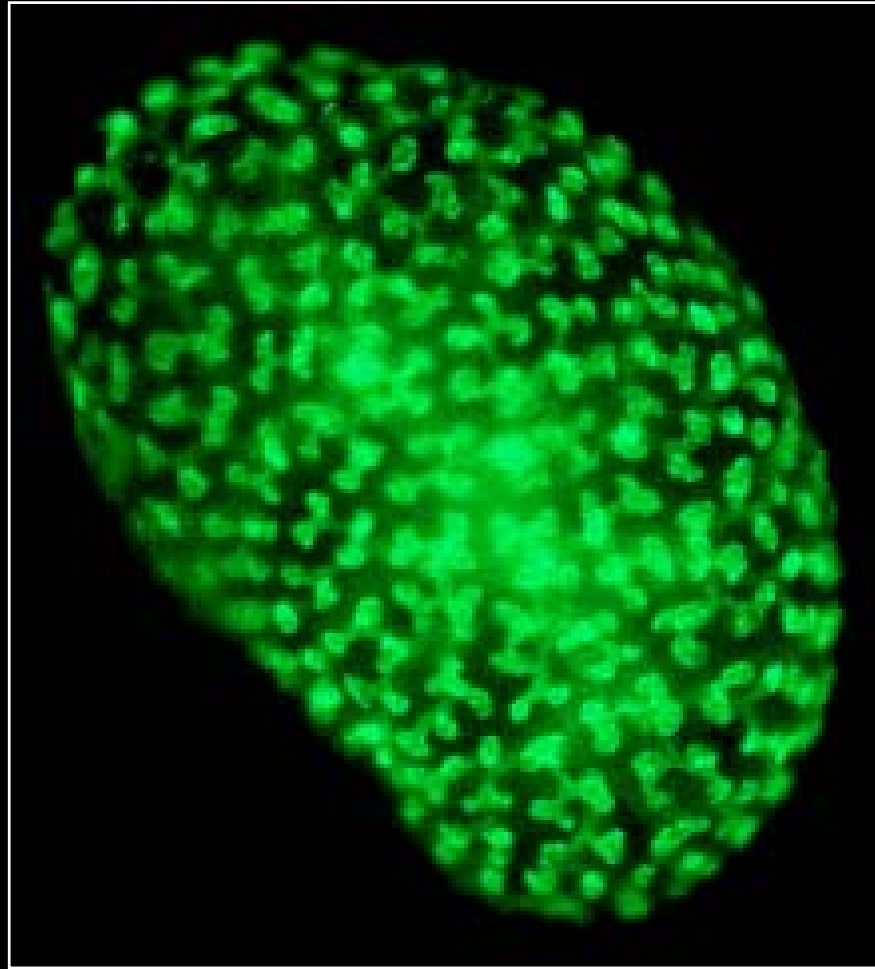
Crystals of GFP

recombinant GFP fusion proteins

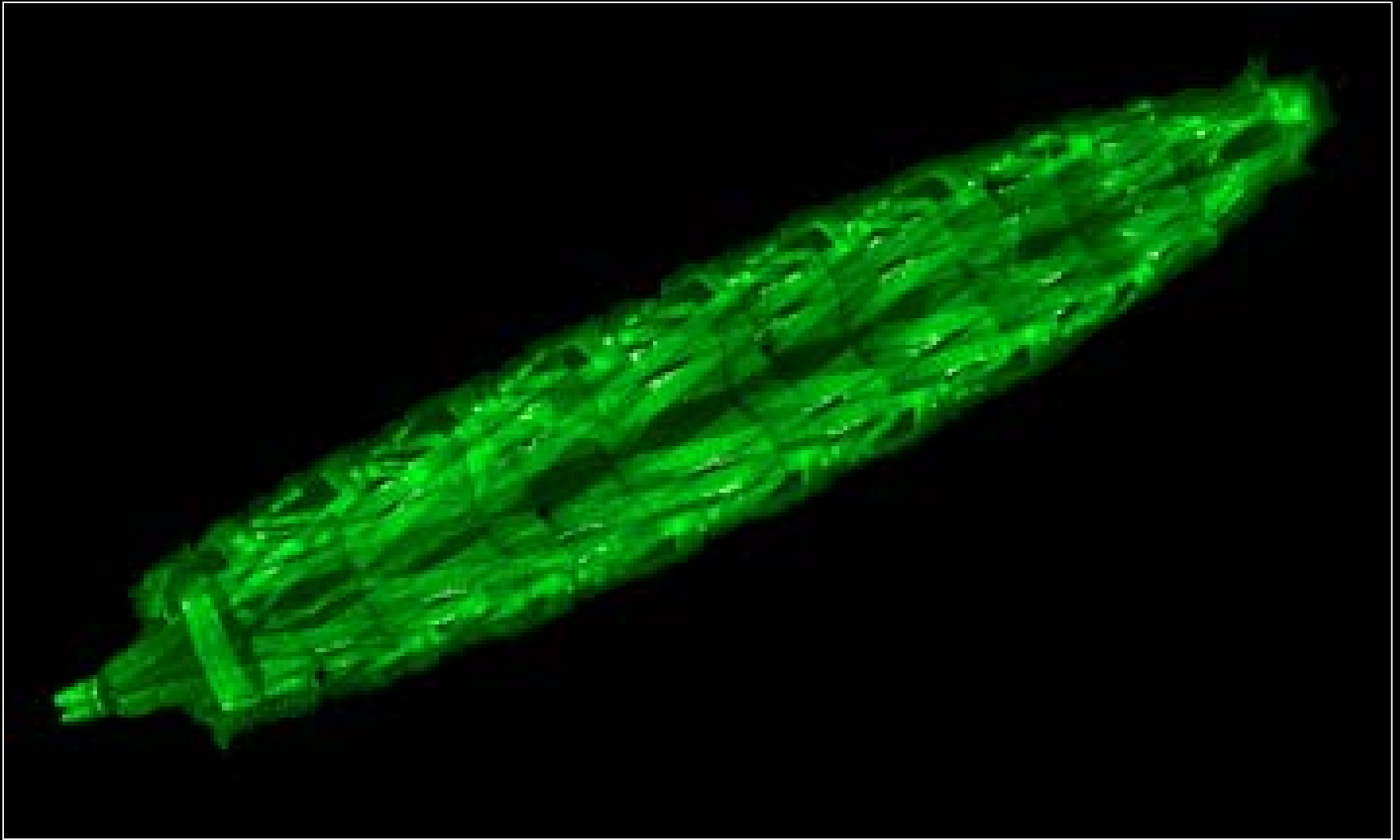


P. plumata

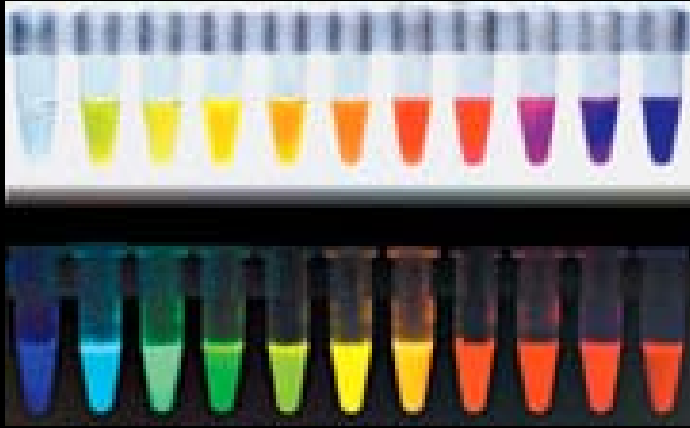
... a mammalian expression vector encoding GFP cloned from copepoda *Pontellina plumata* ... designed to generate fusions to GFP C-terminus for expression, localization, and cellular dynamics studies ...



**Hoxb7-GFP transgenic mouse kidney;
embryonic day 15**



Confocal micrograph of a transgenic CD8-GFP-Shaker *Drosophila* third instar larvae viewed from the exterior through the cuticle.



**visible fluorescent
proteins shown
under normal (top)
and UV illumination**

Roger Y. Tsien, a biochemist at Univ. of California, San Diego ... designs new visible fluorescent proteins ... Tsien's lab has engineered VFPs with better photostability and a shift in their fluorescence wavelength ...

VFPs are full-length proteins with molecular weights of about 27 kDa.

Chem. & Eng. News, Oct. 25, 2004