Richard Henderson is a structural biologist with a background in physics. After a Ph.D. at MRC-LMB working on enzyme mechanisms, he developed an interest in membrane proteins and worked on voltage-gated sodium channels as a postdoc at Yale. Back at MRC-LMB, he used electron crystallography to determine the structure of bacteriorhodopsin in two-dimensional crystals, first at low resolution and later at atomic resolution. For the last 20 years, he has been working to improve the methodology of single particle electron cryomicroscopy (cryoEM), which has recently reached the stage where it is possible to obtain atomic structures of a wide variety of macromolecular complexes routinely without crystals.