Constantly on the Move

The overwhelming complexity of cell function requires mobility at a molecular level. In the last few decades, several proteins have been shown to deserve the attribute of motor since they are able to transform the chemical energy of ATP hydrolysis into mechanical work. Kinesin is at the moment one of the biggest and most extensively studied families of motor proteins.

The need for exchange of information and establishment of an international scientific community devoted to the intriguing questions posed by kinesin research has led to the development of the Kinesin Home Page (Figure 1). This site was created by Liz Greene and Steve Henikoff in July 1996 as a prototype for the ProWeb Project. Since then, it has been enriched with contributions by several researchers in the field. Personally, I have benefited from the kinesin home page since 1999 and have constantly witnessed progress in its organization and in the quality of information provided.

The home page provides the interested reader with links to several aspects of the research in the field, but the information is not reserved just to a group of specialists: A group of top specialists provides essential information to interested newcomers. In my opinion, this is exactly what a web site should provide: information at different levels of precision in a hierarchical and concise organization. That way, the nonspecialist is not suddenly immersed, for example, in complicated biochemical information at first sight, but one can easily obtain it if the need occurs. This means that the site is open to researchers in different fields as required by the interdisciplinary nature of the field. And, of course, anybody is invited to give his/her own feedback to the authors.

The specialist can easily find updates on the recent literature; by a simple click on the Latest Findings section. Since these are not timely updated, I strongly recommend to visit the provided link to the PubMed list of recent papers, before assuming that Latest Findings are really the cutting edge of research on kinesin.

All the effective, fascinating, and controversial movies are provided on a separate page, with several links to them. Some of the movies include real-time experiments, while others are animations based on the interpretation of experiments. Movies will start only if explicitly clicked on and there is no need to wait for them to be downloaded when one is only interested in the scientific descriptions. This makes the connection to the page always fast and easily reachable even through a poor connection. Some of the interesting results about kinesin structure are visualized only through the freely available Chime plug-in. The only disadvantage is that it works only on Windows or Macintosh platforms, thus being unreachable by Linux users.

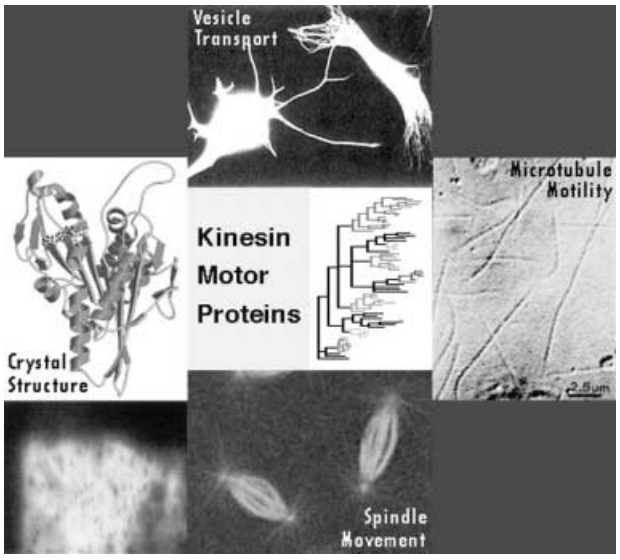

Figure 1. This montage on the kinesin home page shows the introductory sections of the site.

Another extremely important issue is the presence of links to "Kinesin People", an almost comprehensive list of labs and researchers scattered all over the world. Some of the links are dead, though, since the "Kinesin People" keep moving just like the subject of their studies. There are also links to the most relevant books in the field, concerning both theory and experiment, which provide a useful starting point for any newcomer in the kinesin community. I was intrigued by the medical implications of research on kinesin: It plays a major role in neurological disorders, neoplasia, and several syndromes of clinical importance. As a physicist, I was able to learn a lot on things I had never studied before and even get more motivation for my studies. Therefore, I strongly recommend this site to everybody interested in this protein and (why not?) as a template for future protein-dedicated web pages.

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Suggest a web site or submit a review:
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For further information visit:
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