



# Abstracts (April - July 2001)

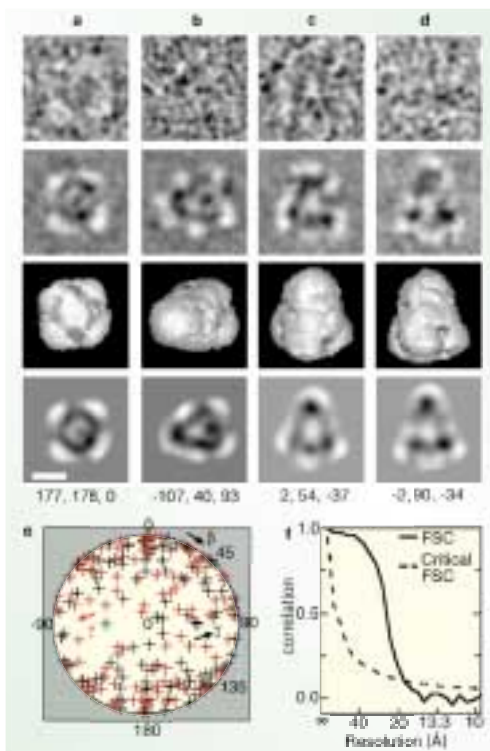
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## Life Science & Technology

### 3D Structure Map of the Voltage Sensitive Sodium Channel

The voltage gated sodium channel generates the action potential. This 300 kDa protein has four homologous regions. We isolated sodium channels from *Electrophorus electricus* electroplax by detergent solubilization and immunoaffinity chromatography and studied their structure by the combination of He-stage cryo-electron microscope and single particle analysis at 19 Å resolution. The channel had a bell shaped outer surface of 135 Å heights and 100 Å in side length at the square shaped bottom.

Cryo-electron Microscopy of sodium channel and the reconstructed sodium channel. a-d, raw images of molecules (row 1) are compared with the corresponding 2D averages (row 2), the surface view of the 3D reconstruction (row 3) and the projections of the 3D reconstruction (row 4) along the corresponding Euler direction. Scale bar 50 angstrom. e, Surface projection of the Euler angle distribution. f, Fourier shell correlation function calculated between two reconstructions. Figures was from Nature 409, 1047-1051 Sato et al. (2001) and shown for the details in the original paper.



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