Retinal prosthesis

Nirenberg S & Pandarinath C, Retinal prosthetic strategy with the capacity to restore normal vision, *PNAS,* in press.

http://www.pnas.org/content/early/2012/08/08/1207035109

1. What are retinal prostheses and why is it important to develop them? Explain the distinction between the encoder and the transducer in a retinal prosthesis.
2. Describe how optogenetics works and how it is used by the authors for the transducer.
3. Summarize how the authors' encoder works.
4. Explain how the authors tested their design for a retinal prosthesis.
5. What do you think should be the next step? Should the authors go ahead and try this in human patients? Or should they take some other steps first, and if so, what additional steps should they take?