

BME 311

Biomedical Instrumentation I



03 -Biopotential



Faculty of Engineering

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How Biological Electric Signals are Generated?



How Biological Electric Signals are Generated?



- The principles associated with the biological generation of electricity were described, by physiologists Hodgkin and Huxley, in four papers that they published in 1952.
- Hodgkin and Huxley received the Nobel Prize for Physiology or Medicine in 1963 for their discovery.

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Cell



- The fundamental unit of every animal or plant is cells.
- Combination of cells is called TISSUES.
- Every ORGAN in the body is made up of combination of many tissues.

Ion Movement



- Ions move because of:
 - Diffusional forces.
 - Electric field forces.
 - Pumps