



POTENTIALS ACROSS MEMBRANES

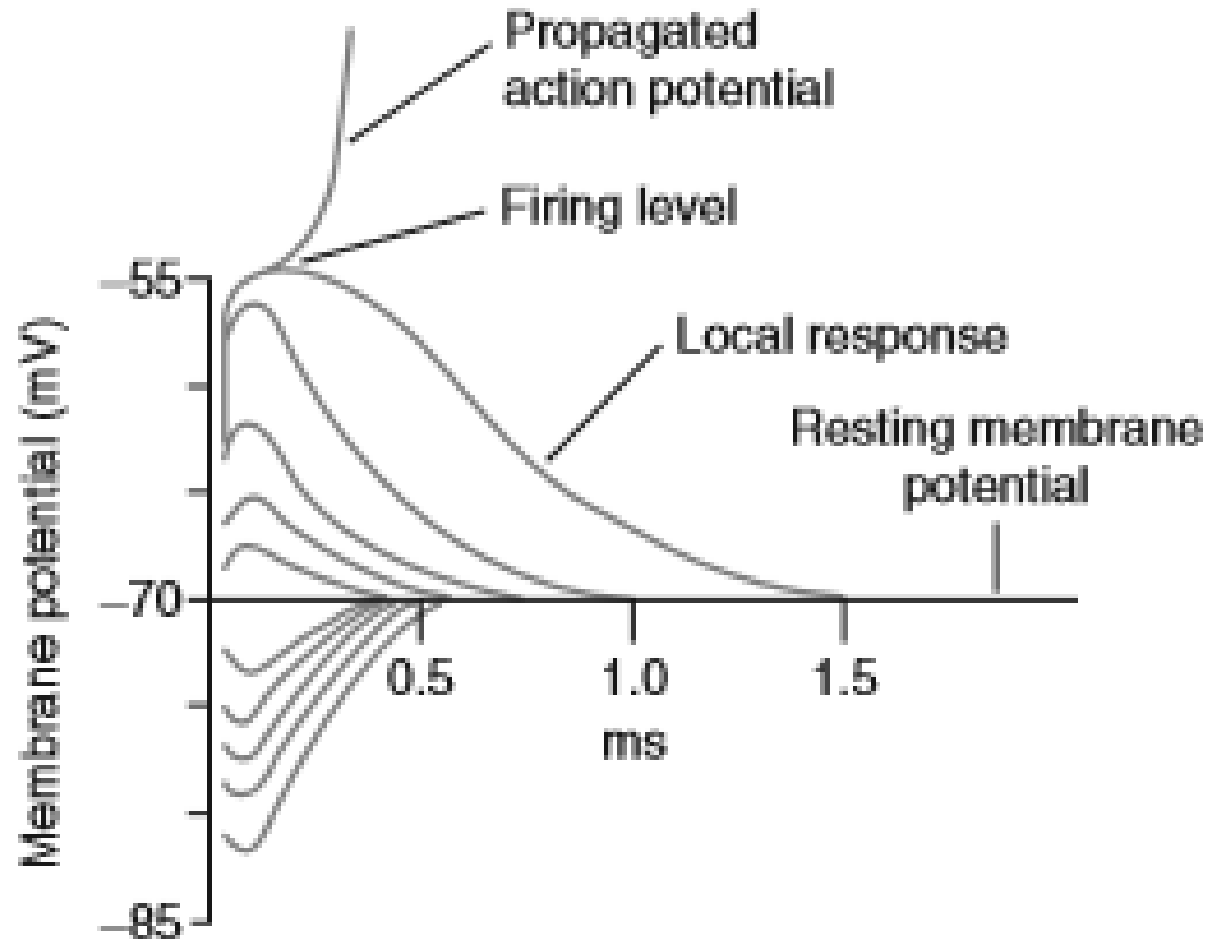
Dr Jayanti Pant



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Electrotonic or Graded potential





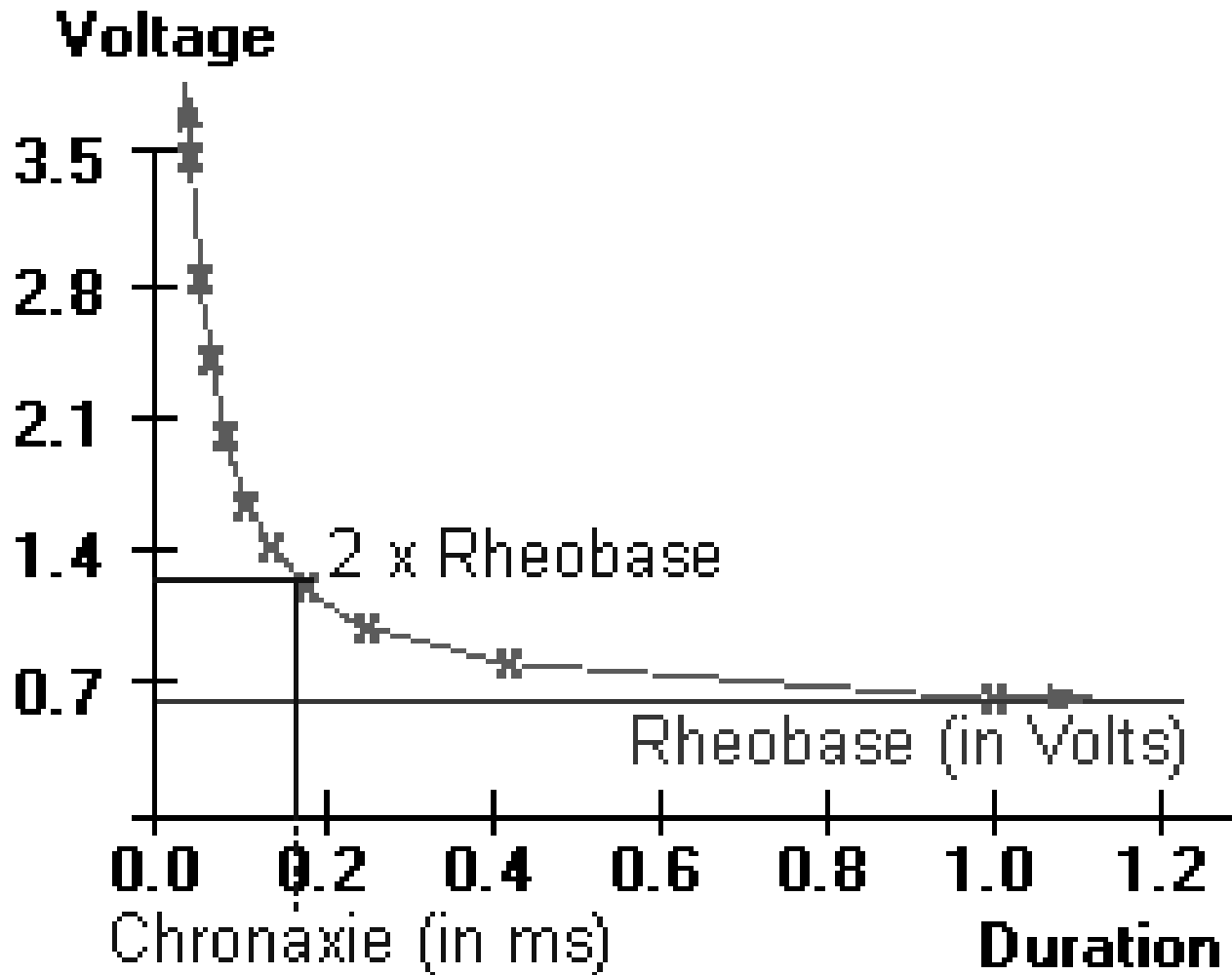
Properties of Graded Potential

- Graded in nature
- Decremental conduction
- Depolarizing or Hyperpolarizing nature
- Summation

Types of Stimuli

- Threshold stimuli
- Subthreshold stimuli
- Suprathreshold stimuli

Strength –Duration curve





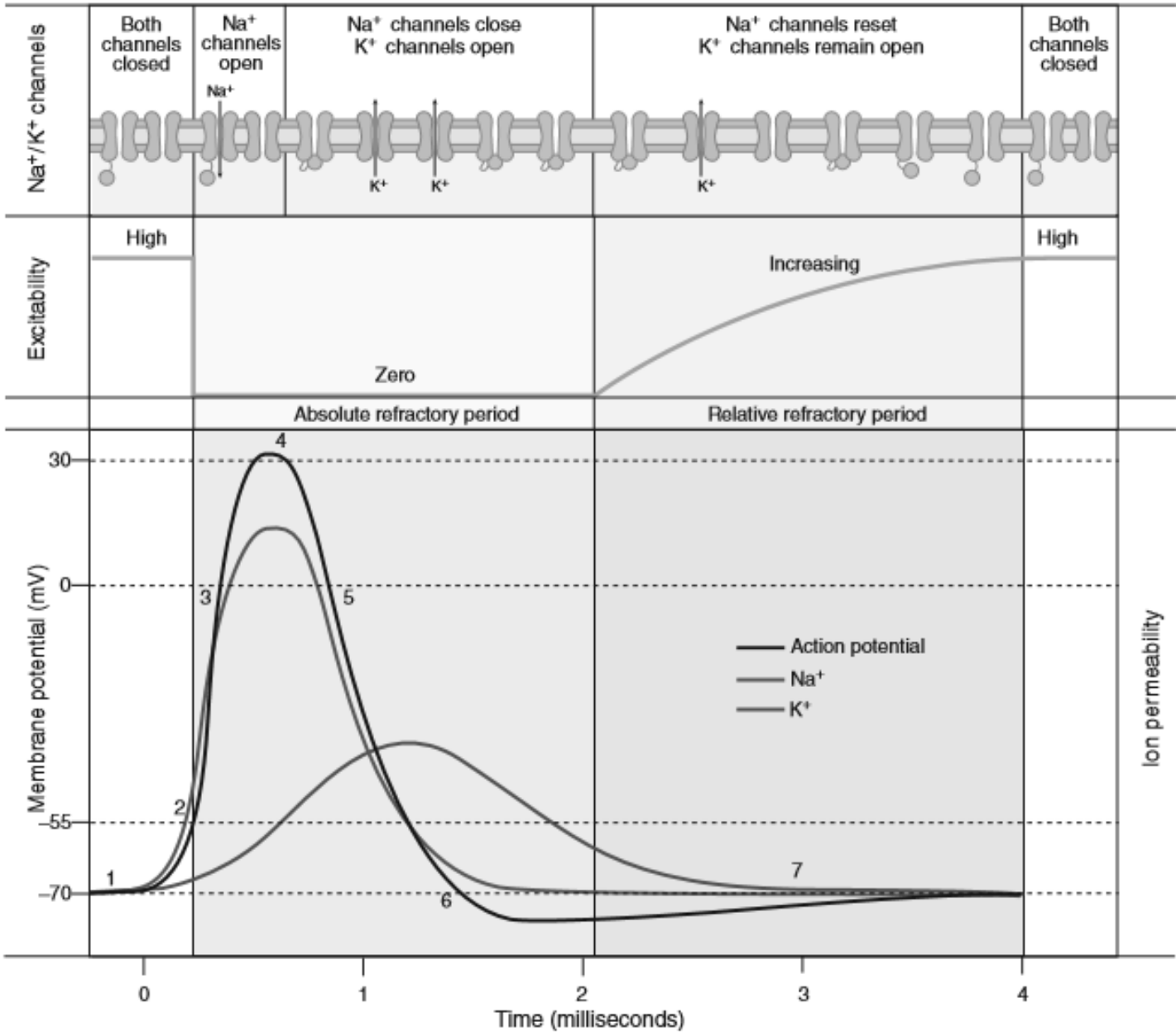
A.L. Hodgkin

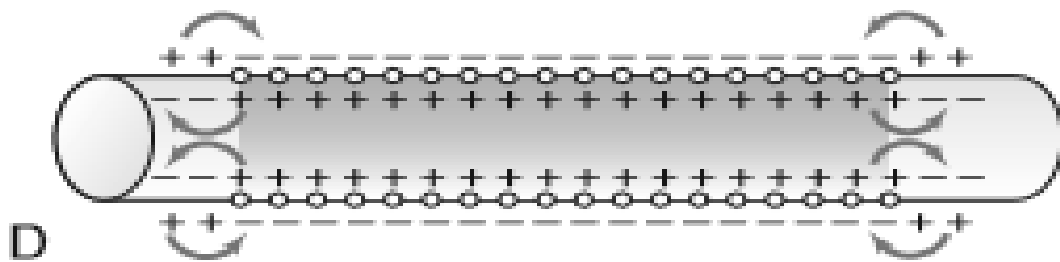
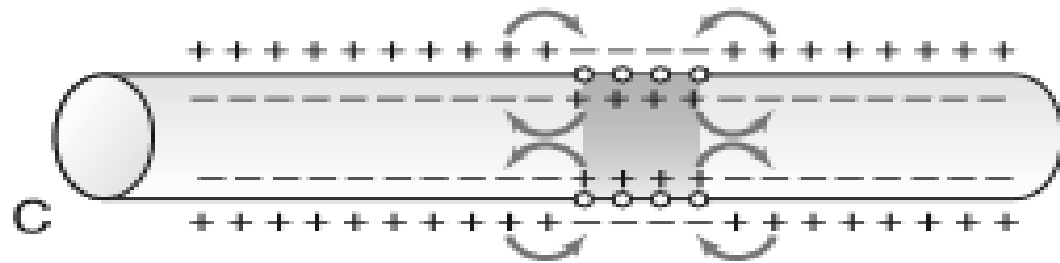
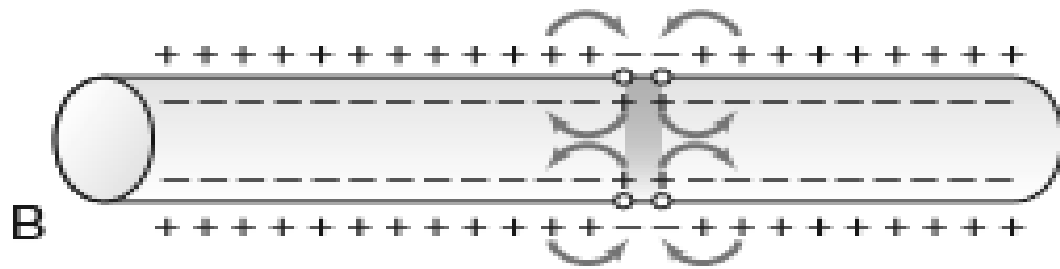
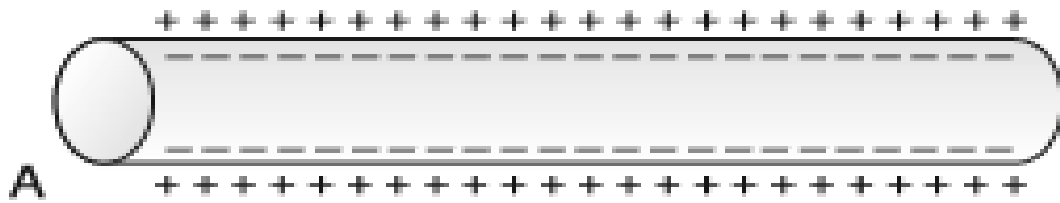


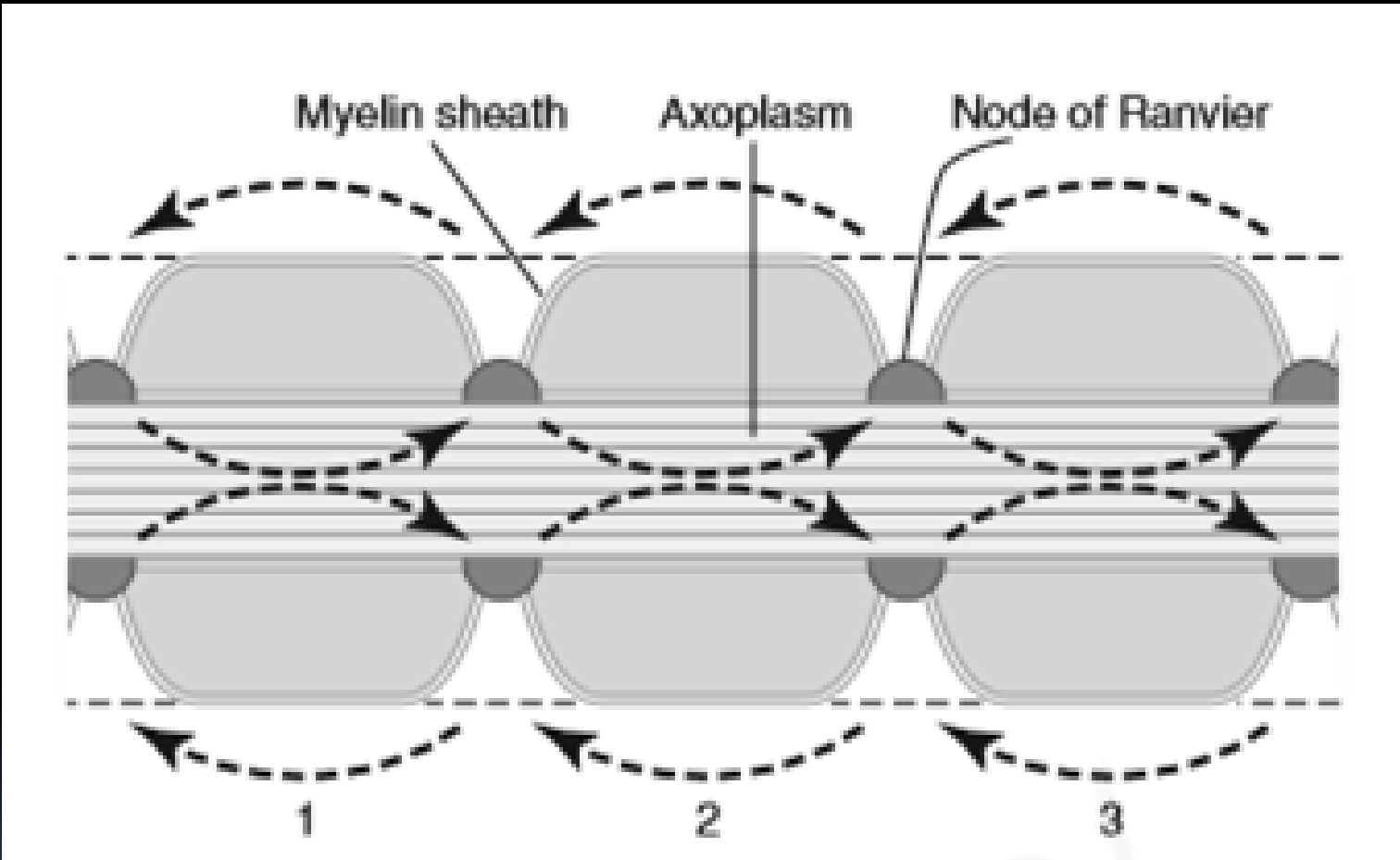
A.F. Huxley



John C. Eccles







■ Graded Potential

1. Amplitude is proportionate to the strength of stimulus
2. Decremental: amplitude decreases with time and distance
3. Can be summated
4. Depolarizing or hyperpolarizing
5. No threshold or refractory period
6. Due to ligand gated or leaky channels opening

■ Action Potential

1. Amplitude remains same
2. Conducted in All or none manner
3. Cannot be summated
4. Large depolarizing potential
5. Has threshold and refractory period
6. Due to opening of voltage gated channels

Compound Action Potential

