Quiz 3.4: Dendritic current

Passive cable

0 points possible (ungraded)
The space constant of a passive cable is:

- [x] $\lambda = \frac{r_m}{r_L}$
- [ ] $\lambda = \frac{r_L}{r_m}$
- [ ] $\lambda = \sqrt{\frac{r_L}{r_m}}$
- [ ] $\lambda = \sqrt{\frac{r_m}{r_L}}$ ✔

✖

Submit You have used 1 of 1 attempt

ℹ Answers are displayed within the problem

Dendritic current injection

0 points possible (ungraded)
If a short current pulse is injected into the dendrite:

- [x] the voltage at the injection site is maximal immediately after the end of the injection.
- [ ] the voltage at the dendritic injection site is maximal a few milliseconds after the end of the injection.
- [ ] the voltage at the soma is maximal immediately after the end of the injection.
- [x] the voltage at the soma is maximal a few milliseconds after the end of the injection.

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Submit You have used 1 of 1 attempt

ℹ Answers are displayed within the problem

Shape of EPSP

0 points possible (ungraded)
It follows from the cable equation that:

- [x] the shape of an EPSP depends on the dendritic location of the synapse.
- [ ] the shape of an EPSP depends only on the synaptic time constant, but not on dendritic location.

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