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## ***In ovo* mefloquine and 4-aminopyridine administration inhibits chorioallantoic membrane (CAM) angiogenesis in chicken embryos through ion-channel modulation**

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**Rationale:** Angiogenesis is formation of new blood vessels. Abundant ion channels are located on the endothelial cell surface. Ion channels have significant role in cell proliferation and thus in angiogenesis.

**Objective:** To evaluate and compare the antiangiogenic activity of chloride channel blocker (Mefloquine ) and potassium channel blocker (4-Aminopyridine).

**Methods:** Chorioallantoic Membrane (CAM) Assay (*in ovo*).

**Results:** All of the data obtained from the experimental groups have been compared to the control group. The data was analyzed by one-way ANOVA followed by posttest, the Dunnett test to compare mean of every group with the control mean, using graph pad prism 5.0 software. In the CAM assay, the parameters evaluated were number of branches per unit area based on the angiogenic score. Medium (4-Aminopyridine -250 µg/egg, Mefloquine -50 µg/egg) and high (4-Aminopyridine -500 µg/egg, Mefloquine -100 µg/egg) doses of both the channel blockers gave significant results.

**Conclusion:** From the results obtained, Mefloquine and 4-Aminopyridine have shown effective anti-angiogenesis which may be therapeutically beneficial. The molecular pathways may be due to negative regulation of cell volume, cell migration and thus proliferation.

### **Biography**

Chandana Kamili has completed her MPharmacy in the year 2010 and presently doing her PhD from JNTUH. She is working as Assistant Professor in CMR College of Pharmacy and she has keen interest in the field of Angiogenesis. She has published papers in both nation and international journals.

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