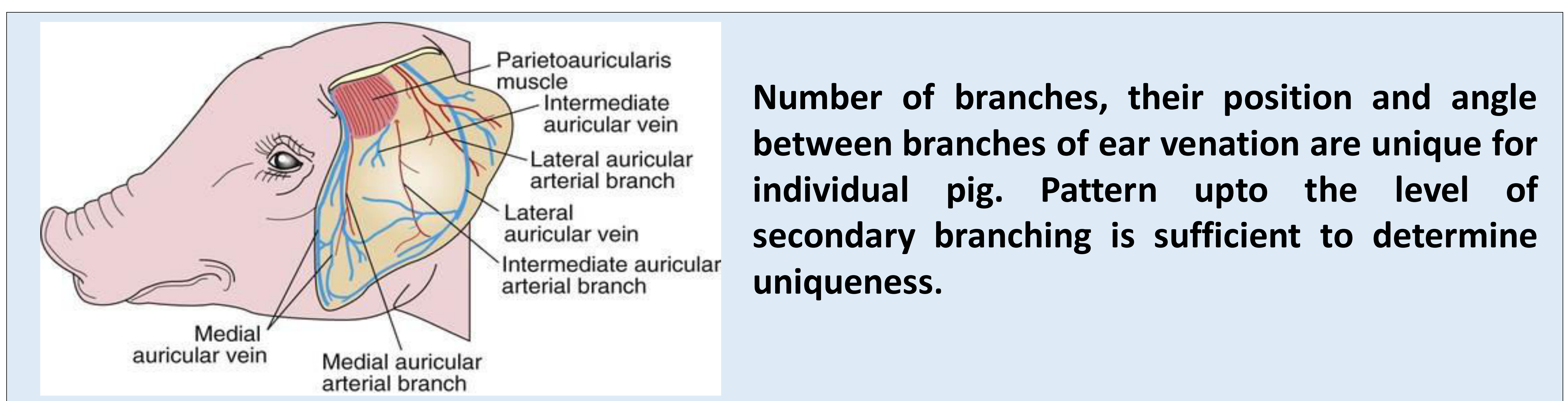# Individual Pig Identification using Ear Venation Pattern

Problem being Solved

All traditional goat and pig identification systems are tamperable and hurtful to the animals. Because of non availability of a dependable identification system, the large number of farmers (mostly marginal) cannot claim proper insurance, and services for their animals, a good traceability system for pork & chevon production cannot be developed. As a result, the small farmers are denied their potential income, and pig fatteners & processors cannot develop potential system of world standards.
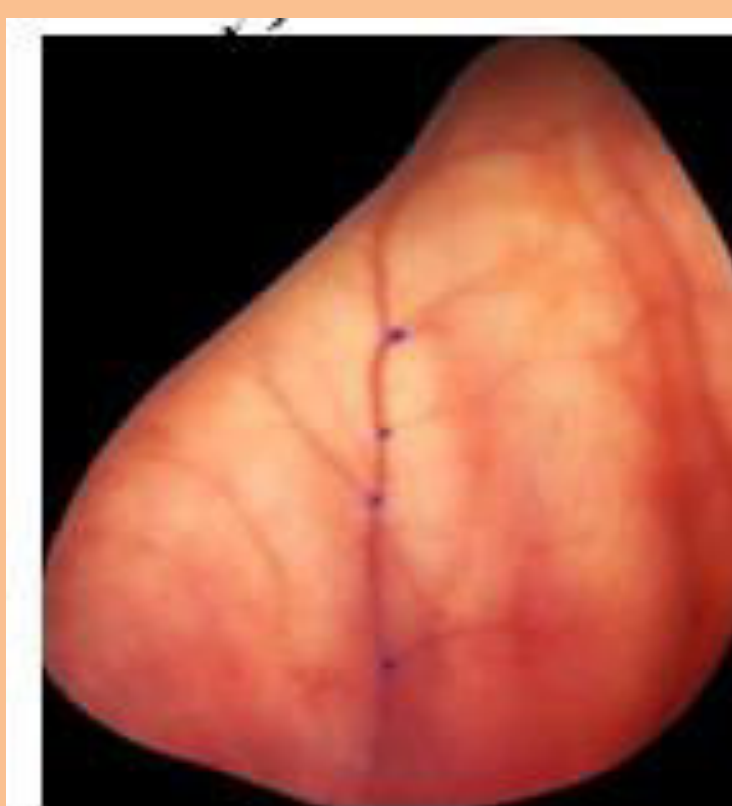
Solution for Pig

As in humans, biometric identification systems would be foolproved for animals too. Hence, various trait features were explored for **constant individual uniqueness** and **ease of capture.** Ear venation pattern was selected as the most suitable for unique identification of pigs.

Number of branches, their position and angle between branches of ear venation are unique for individual pig. Pattern upto the level of secondary branching is sufficient to determine uniqueness.
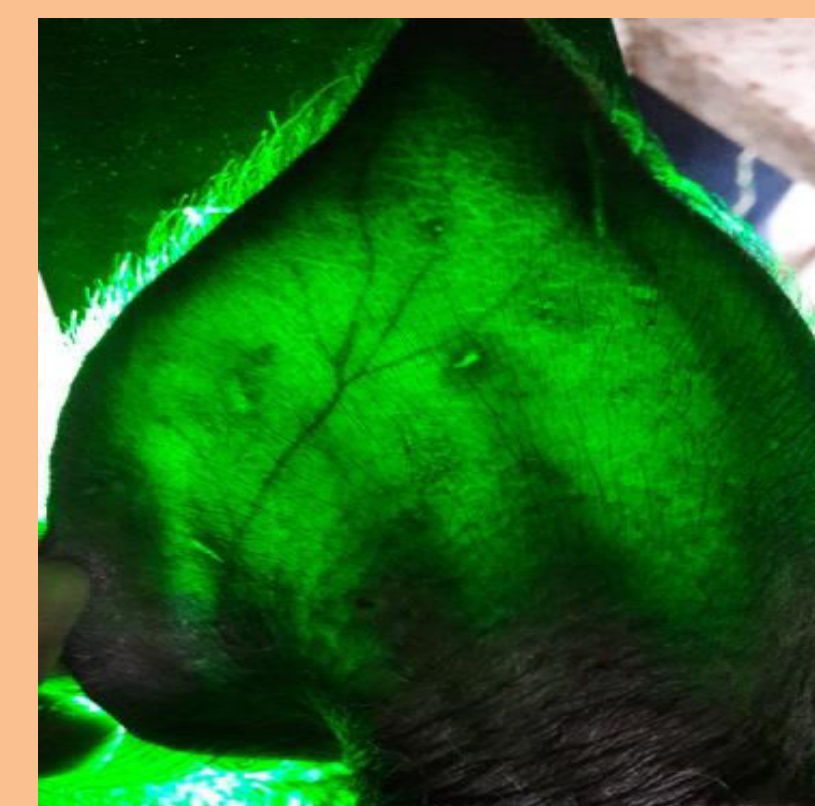
Samsung smart phone with 10MP camera was used for capturing ear veination pictures.
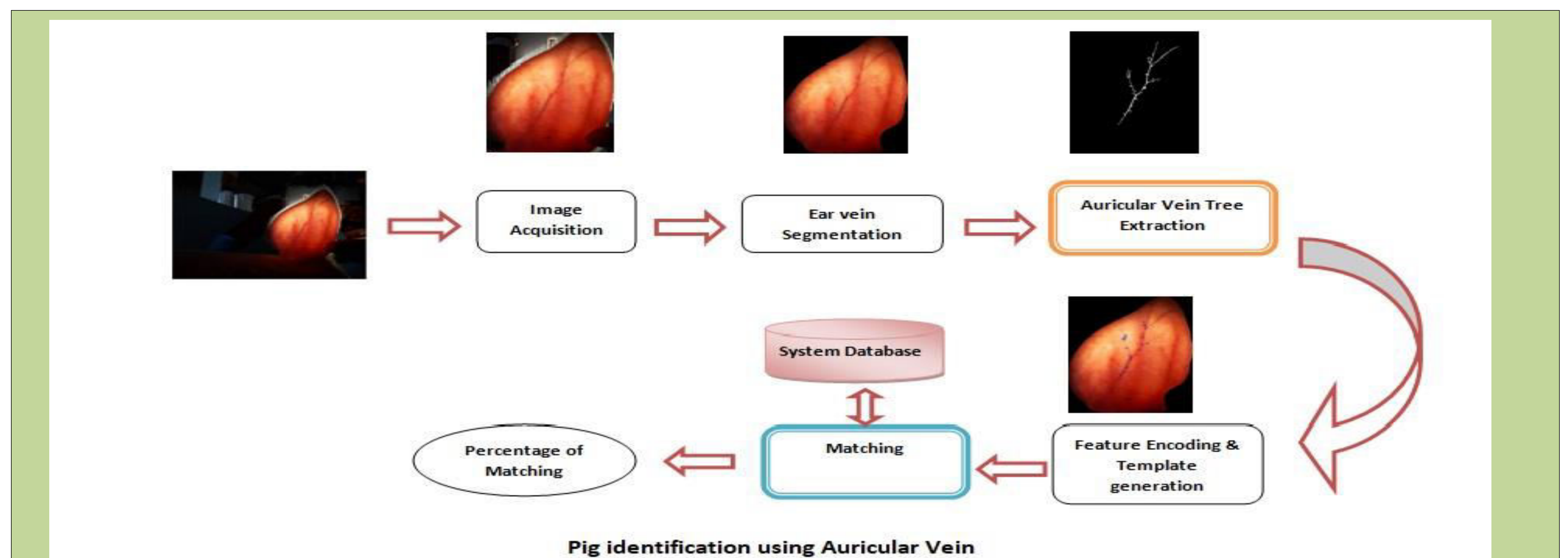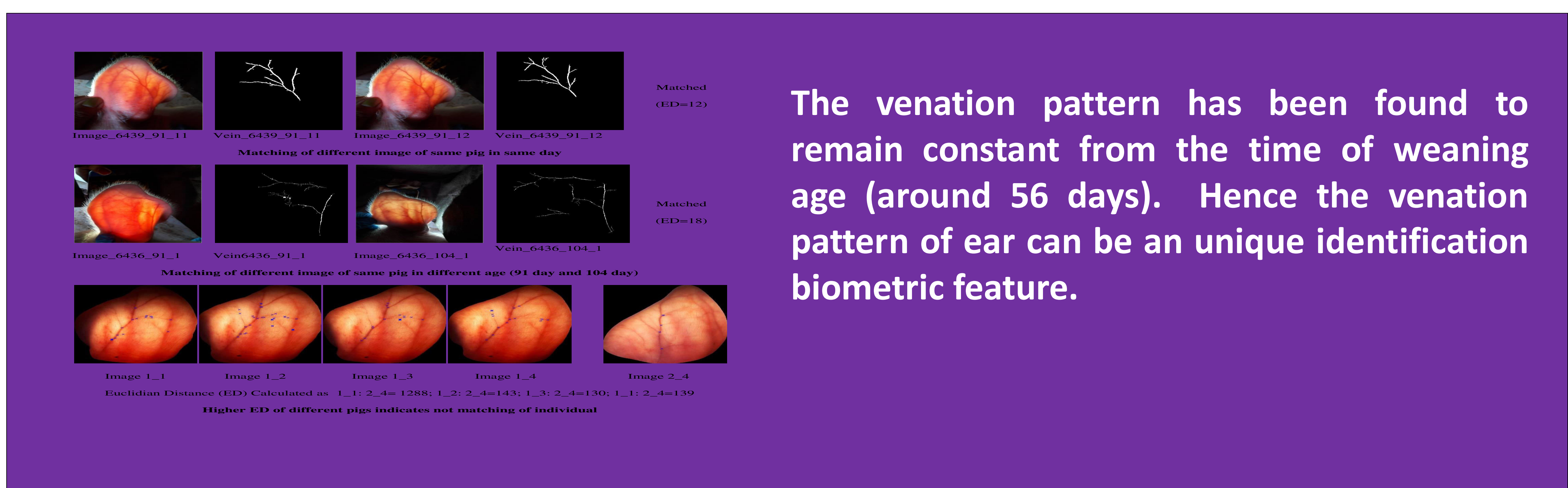
Ordinary mobile camera light is sufficient for light coloured pigs. Special hand held LED device for green light developed for dark coloured pigs.

Light Coloured pigs

Dark Coloured Pigs

The venation pattern has been found to remain constant from the time of weaning age (around 56 days). Hence the venation pattern of ear can be an unique identification biometric feature.

Pig identification using Auricular Vein

Software for Individual pig Identification has been developed and copyright application has been filed. Software for communication between the smart phone (Samsung Galaxy) in the field and a central database is being developed.

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