CHAPTER – 7
RECOMMENDATIONS

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- The findings of the present study provide a significant contribution towards the forensic science research in Central Kerala since the first objective of this study identified the four forensically significant blow flies; *C. megacephala, C. rufifacies, C. chani* and *H. ligurriens* based on the morphological and genetic characteristic features with special inference on their life cycle.

- The ultra structural studies of larval instars using SEM for the morphology based identification of blow flies provide great scope for forensic entomological research.

- The present investigation has provided the applicability of molecular characterization using COI gene for the accurate identification of forensically significant blow flies.

- In this regard, similar kinds of studies on blow flies in the region are encouraged for authenticating the species specific data generation especially for forensic application.

- In forensic investigations, the knowledge of the rate of development of the blow fly in the specific geographical location is very crucial in the accurate estimation of PMI. The present investigation has analyzed the effect of temperature and humidity on the life cycle of blow flies and found a strong influence of these parameters on their life cycle.

- The statistically significant differences observed in the developmental rate of all blow fly species reared in the outdoor during different seasons cautions that while

performing the estimation of PMI, the forensic investigators should be very careful about the climatic conditions prevailing in the respective study area.

- As the outdoor rearing cannot be simulated in the laboratory, data generated in the laboratory cannot be relied for the field application in medico legal cases for the estimation of PMI.

- The data regarding the development rate and life cycle of forensically significant blow flies in monsoon, summer and winter seasons is the first report from the Southern Indian region, especially from Kerala, with special inference on estimation of PMI which may be used for future forensic investigations.

- The regression equation method developed in this study emerged as the best suitable method for the estimation of PMI using life history of the blow flies.

- More and more similar works are encouraged to develop species specific data of forensically significant species from maximum geographical regions.