8. CONCLUSION

1. Uricolytic fungi were abundant in mangrove sediments.

2. Different fungal genera were represented as potent strains (i.e.) different fungi inhabiting in mangrove environment were uricolytic in nature.

3. Optimization parameters, higher uricase activity, higher specific activity on purification indicated that \textit{A. niger} strain under study might be an ideal strain for industrial scale production.

4. Purified uricase itself was stable regarding temperature, pH and proteolytic enzyme activity.

5. PEGylation further widened the stability related to above conditions.

6. The uricase obtained in the present study can be used as a diagnostic agent of hyperuricemic human metabolic disorders and its efficiency was comparable to the methods in use.

7. Hyperuricemic mouse model revealed its therapeutic potential to treat metabolic disorders related to uric acid in human beings.

Thus the present study not only satisfied the objectivies laid but also results obtained were of commercial value with diagnostic and theraperutic importance.