SUMMARY
1. Immature male albino rats of 21 day old were employed for the study to understand the possible influence of PRL on the puberty of the animals. This age group was particularly selected because the endogenous gonadotropin secretion was minimum and the animals show maximum response towards exogenous gonadotropins.

2. The rats were divided into two groups, namely control and experimental. While the experimental animals received subcutaneously standard dose of PRL (1.0 μg/gm body wt.) dissolved in saline, the control rats received similar volume of saline for 5 days.

3. PRL administration induced overall elevation in TSI of reproductive and non-reproductive tissues exhibiting growth-hormone like influence, either directly or through androgen mediation.

4. The pattern of tissue growth in reproductive and non-reproductive tissues of PRL treated animals showed the attainment of tissue weights of higher ages at 26th day when compared to the control animals. Testis, prostate, epididymis and seminal vesicles of PRL treated rats showed the weights similar to those found in 28, 30, 35, 45 days old rats respectively at 26th day.
5. Similarly non-reproductive tissues also showed attainment of higher weights in PRL treated rats. While brain and kidney showed the weight similar to those found in 28 days old rats liver and muscle showed the weights similar to those found in 30 days old rats, suggesting the accelerated growth rate in non-reproductive tissues also in response to PRL administration.

6. Sex accessories like seminal vesicles, epididymis and prostate showed higher growth rate than the testis in PRL treated rats, which is indicative of accelerated functioning of sex accessories than testis, which might be a pre-requisite for the overall maturity of the animal.

7. Reproductive and non-reproductive tissues studied showed elevated dry weights in experimental rats suggesting the accelerated synthetic activities in response to PRL.

8. The tissues accumulated considerable water content in PRL treated rats, which was correlated towards osmo-regulatory influence of PRL.

9. The activity level of AChE was elevated in all the tissues of experimental rats, suggesting higher responsiveness of the tissues towards PRL administration. Since the percent rise in AChE activity was more in reproductive tissues than non-reproductive tissues, specificity of reproductive tissues to PRL administration was suggested.
10. In general all the tissues of PRL treated animals elevated the total protein content, suggesting the accelerated protein-biosynthetic activities. However the percent increase was more in reproductive tissues than the non-reproductive tissues, suggesting the gonadotropin influence of the hormone.

11. Among the reproductive tissues all the sex accessories elevated structural protein level, while testis elevated soluble protein content, suggesting the higher rate of structural growth in sex accessories over the testis. All the non-reproductive tissues had higher elevation in structural protein level over the soluble protein level.

12. The tissues of experimental rats in general had inhibited cathepsin activity with decreased free amino acid level, indicating the inhibited degradative phase in all these tissues in response to PRL administration.

13. The levels of DNA and RNA indicated overall elevation in the tissues of experimental rats supporting the view point of accelerated proliferative and synthetic activities of the tissue in response to PRL administration.

14. The total carbohydrate level of all the tissues excepting testis and liver of experimental rats was elevated
over those of controls. The increased carbohydrate level of sex accessories in suggestive of initiation of seminal plasma formation in them. The testicular tissue had depleted level of carbohydrate in spite of decreased carbohydrate utilizations through glycolysis. It was attributed to operate HMP pathway for generating pentose sugars needed for nucleic acid synthesis.

15. The liver, being the centre of blood sugar regulation, the active addition of sugar into the blood from liver was envisaged.

16. The activity level of SDH was elevated in all the tissues of PRL treated rats over the controls suggesting the possible accelerated energy releasing system in the tissues.

17. Since SDH activity was elevated, the active mobilization of amino acids into TCA cycle was suggested.

18. The activity levels of ACP and ALP were elevated in all the PRL treated rat tissues over the controls, indicating formation of hexose sugars in these tissues. Since seminal plasma requires hexose sugars, the increased activity of ALP and ACP was correlated towards the initiation of seminal plasma formation.

19. Since ACP level is directly correlated towards andro-
genicity, its elevation in response to PRL treatment suggested the possible release of androgens in to circulation.

20. The total lipid level was elevated in all the non-reproductive tissues with a depletion in all the reproductive tissues of PRL treated rats over the controls, which was correlated towards the utilization of lipids in the accelerated activities in the reproductive tissues.

21. The testicular phospholipid content was depleted in PRL treated rats over the controls, suggesting the utilization of these energy rich compounds in the proliferative activities of this tissue.

22. Among the non-reproductive tissues brain had considerable depletion in phospholipid content in experimental rats, which was correlated with the probable maturation processes of the animal.

23. All the tissues except testis had elevated cholesterol content in response to PRL administration.

24. The kinetic parameters of GIN were modulated by PRL administration.

25. Both substrate-enzyme and co-factor-enzyme affinities
increased in PRL treated tissues, suggesting increased catalytic potential of the enzyme.

26. Studies on pH dependency and active site ionization pattern revealed slight changes at the primary and secondary specificity sites of GRI, in response to PRL administration.