

## ABSTRACT

Genetical concept and morphology characteristics have been used to explain a species ( Wayne and Gittleman, 1995 ). Another approach that is also used to explain in abreed is by observing the characteristics of reproduction system in each species. Study to identify *Rattus rattus diardii* that is used as experiment hasn't done yet, based on identification of morphology characteristics *Rattus rattus diardii* has similar characteristics with *Mus musculus* and *Rattus rattus* .

The aim of this study is to identify *Mus musculus*, *Rattus rattus* and *Rattus rattus diardii* in relation with standard breed characteristics on *rattus rattus diardii*. This study is an analytic observational research with cross sectional and experimental study. The use of this experimental study is dealing with synchronization and super ovulation on female rat. This study used 50 *Mus musculus*, 50 *Rattus rattus* and 50 *Rattus rattus diardii* as sample. This study done in Bio Medical Laboratory, Medical Faculty, Airlangga University Surabaya, East Java.

In the study of estrus circle that has classified into 4 stages for each *Mus musculus*, *Rattus rattus* and *Rattus rattus diardii* (female) in the first research (first day) to the variety of estrus circle. The result of this estrus circle in these three types is fertile. In the result of statistical analysis using fertile data (+) and not fertile (-) found that there is no differentiation in those three types in proestrus stage, estrus stage, metestrus stage as well as in diestrus stage.

Biometrics variables that was used as comparison in this study are length and weight of body and length of tail. Data used to analyze is changes in the length and weight of body and the length of tail (Delta). The result of measurement in the last experiment (the 30<sup>th</sup> day) used as a comparison.

The analysis result shows that in *Mus musculus* and *Rattus rattus* have changes in the length of tail, in *Mus musculus* and *Rattus rattus diardii* changes in tail happens as well as but, between *Rattus rattus* and *Rattus-rattus diardii* there is no different both of them, have similarity.

The analysis cluster linkage verage method and euclid used a comparison shows that there is a close relation in the weight of body between *Rattus rattus* and *Rattus rattus diardii*. In the lenght of body *Rattus rattus* and *Rattus rattus diardii* have the similarity. This result shows that those two types have different characteristic. Thus in research that use this species as an experiment can use *Rattus rattus diardii* because it has similarity with *Rattus rattus*.