

The effect on the cargo molecules

[Science](#), [Biology](#)



The paper generally talks about the effect that the mutations have on the cargo molecules. The molecules are specifically those that contain proteins and are therefore referred to as the cargo proteins. The paper therefore looks into the nature of the effect on each of the cargo proteins and gives an analysis of the effect on the proteins which are apparently of the same class.

. The paper also delves into the question of cargo selection which essentially involves an ER-derived vesicle and this culminated into the picking of Sec24p which has been found to be able to recognize the v-SNARE Bet1p. The research question that is being tested in the paper is the determination of the protein carriers that are well compatible and binds well with the Sec24p subunit. The hypothesis in this case is the fact that the compatible protein carriers were less affected by the mutations.

The essential and the most vital experiment is that which involves the characterization mechanisms of the molecules of cargo recruitment through the Sec24p which is a subunit of the COPII coat. This usually involves the alanine scanning which is basically a mutagenesis approach towards the identification of the mutation characteristics of the Sec24p.

This was regarded as pivotal since the data collected gave the suggestion gave multiple independent sites of recognition of cargo. The weakness of the experiment is on the fact that the control experiment consisted of the Sec24p that were sensitive to temperature. This is due to the fact that many of the Sec24p are responsive towards changes in temperature and therefore this isn't a foolproof method of determination of the needed types of the Sec24 which can be compatible to the cargo protein.

If I was the one conducting the research then variables like temperature and the fact that some aspects which were compatible with the cargo proteins responded well to the changes in temperature would be done away with. These types of control experiments usually in most cases give the wrong picture and result altogether.

The true experiment would therefore be more than that. This might involve the aspects as the solubility of the Sec 24 which was compatible with the protein cargo. This would be more sensible as this would be entirely truth with only a very slight margin for error as opposed to the initial case in which almost all the test subjects would react in an almost similar manner to the experiment and therefore leave a large gap for mistakes.