The nucleolus is a dense area in the nucleus when a cell is in interphase. One of the main functions of the nucleolus is ribosomal biogenesis. Malfunctions or dysfunction in any step of the production of ribosomes can induce ribosomal stress. Ribosomal stress effects many proteins and can lead to main diseases. In our research, we are directly focused on how ribosomal stress effects ribosomal protein (RP) L11 which is an important component of the large ribosomal subunit that loads 5S rRNA. RPL11 also plays a significant role in regulating growth associated pathways. Ribosomal stress causes RPL11 and ubiquitin ligase MDM2 to interact and cause tumor suppressor p53 activation leading to apoptosis. Through bio computer screening, thirty-five drugs were selected that targeted L11. The drugs selected had the potential to disrupt and promote ribosomal biogenesis. Through testing, it was found that the drugs were quite toxic more than aid in cell survival. Therefore, the top nine cytotoxic drugs showed potential to be used to aid in anticancer therapies and were chosen to be tested on other cancer lines. Afterwards, the drugs’ effect on nuclear morphology was analyzed.