

# GENERANDO CONOCIMIENTO PARA UNA SALUD EQUITATIVA E INCLUSIVA



## Toxicological analysis of organochalcogen compounds derived from AZT: An alternative for the treatment of COVID-19

Análisis toxicológico de compuestos organocalcógenos derivados de la Zidovudina: una alternativa para el tratamiento de la COVID-19

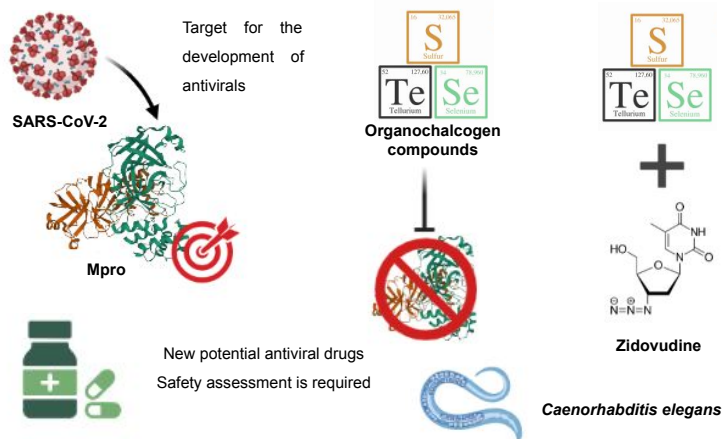
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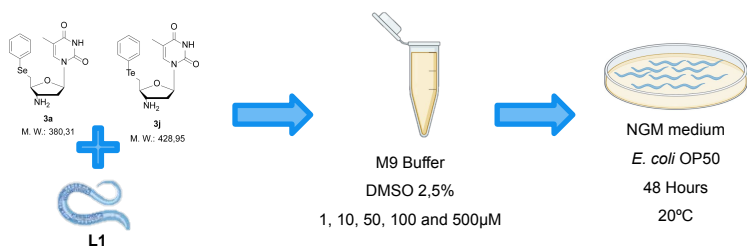
### Introduction



### Objective

To evaluate the toxicity and safety of two AZT-derived organochalcogenic compounds using the *in vivo* *Caenorhabditis elegans* model.

### Methods



#### Assays

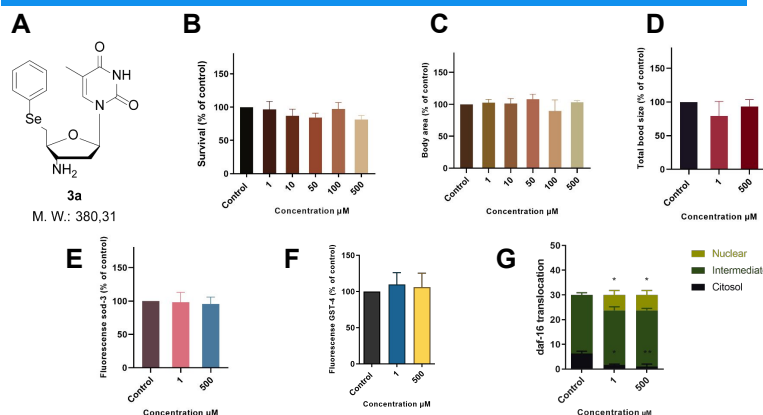
- ✓ Survival rate;
- ✓ Body area;
- ✓ Brood size;
- ✓ SOD-3::GFP fluorescence;
- ✓ DAF-16::GFP translocation;
- ✓ GST-4::GFP fluorescence;

#### Strains

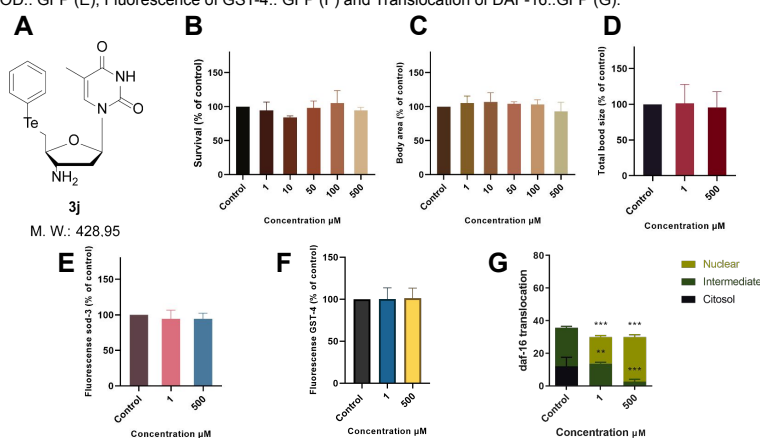
N2 (Wild type)

CF1553: [(pAD76) *sod-3p::GFP* + *rol-6(su1006)*]  
TJ356: [*daf-16p::daf-16a/b::GFP* + *rol-6(su1006)* ]  
CL2166: *dvls19* [(pAF15)*gst-4p::GFP::NLS*] III

### Results



**Figure 1.** Analyses of chronic exposures to compound 3a at concentrations of 1, 10, 50, 100 and 500µM. Chemical structure compound 3a (A), Survival rate (B), Body area (C), Brood size (D), Fluorescence of SOD::GFP (E), Fluorescence of GST-4::GFP (F) and Translocation of DAF-16::GFP (G).



**Figure 2.** Analyses of chronic exposures to compound 3j at concentrations of 1, 10, 50, 100 and 500µM. Chemical structure compound 3a (A), Survival rate (B), Body area (C), Brood size (D), Fluorescence of SOD::GFP (E), Fluorescence of GST-4::GFP (F) and Translocation of DAF-16::GFP (G).

### Conclusion

Our results suggest that, for initial toxicological tests, the compounds proved to be potentially safe, being able to modulate pathways related to oxidative stress.