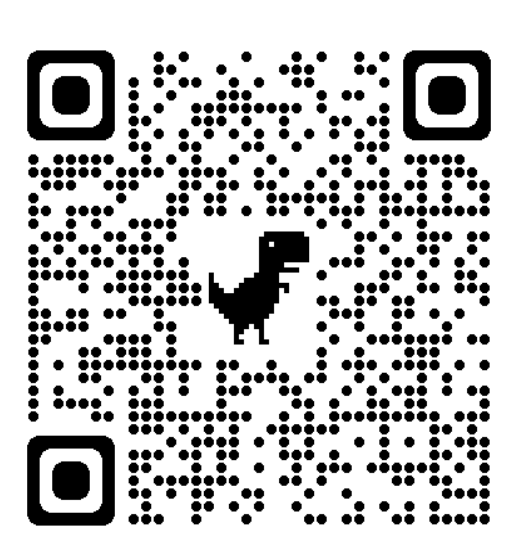




The Application and History of Gossypol

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Poster #: 27

Methods:

- Tera-1 is a testicular cell line with androgen receptor (AR)
- CaOV3 is a ovarian cell line with estrogen receptor α (ER α)
- Gossypol is a drug from cotton plant, that we are testing the effects on the cell lines
- Gossypol was prepared in different concentrations and mixed with DMSO
- Data was analyzed for trends in death and proliferation, indicating how the drug affects the life of the cell

Literature Review

Resisting Reproduction:
Reconsidering Slave
Contraception in the Old South

LIESE M. PERRIN

Weed Women, All Night Vigils, and the Secret Life of Plants: Negotiated Epistemologies of Ethnogynecological Plant Knowledge in American History

Claudia Jeanne Ford
Antioch University - New England

Plants Used for Reproductive Health

Gossypol causes increased cell death and decreased cell proliferation in CaOV3 and Tera-1 cell lines

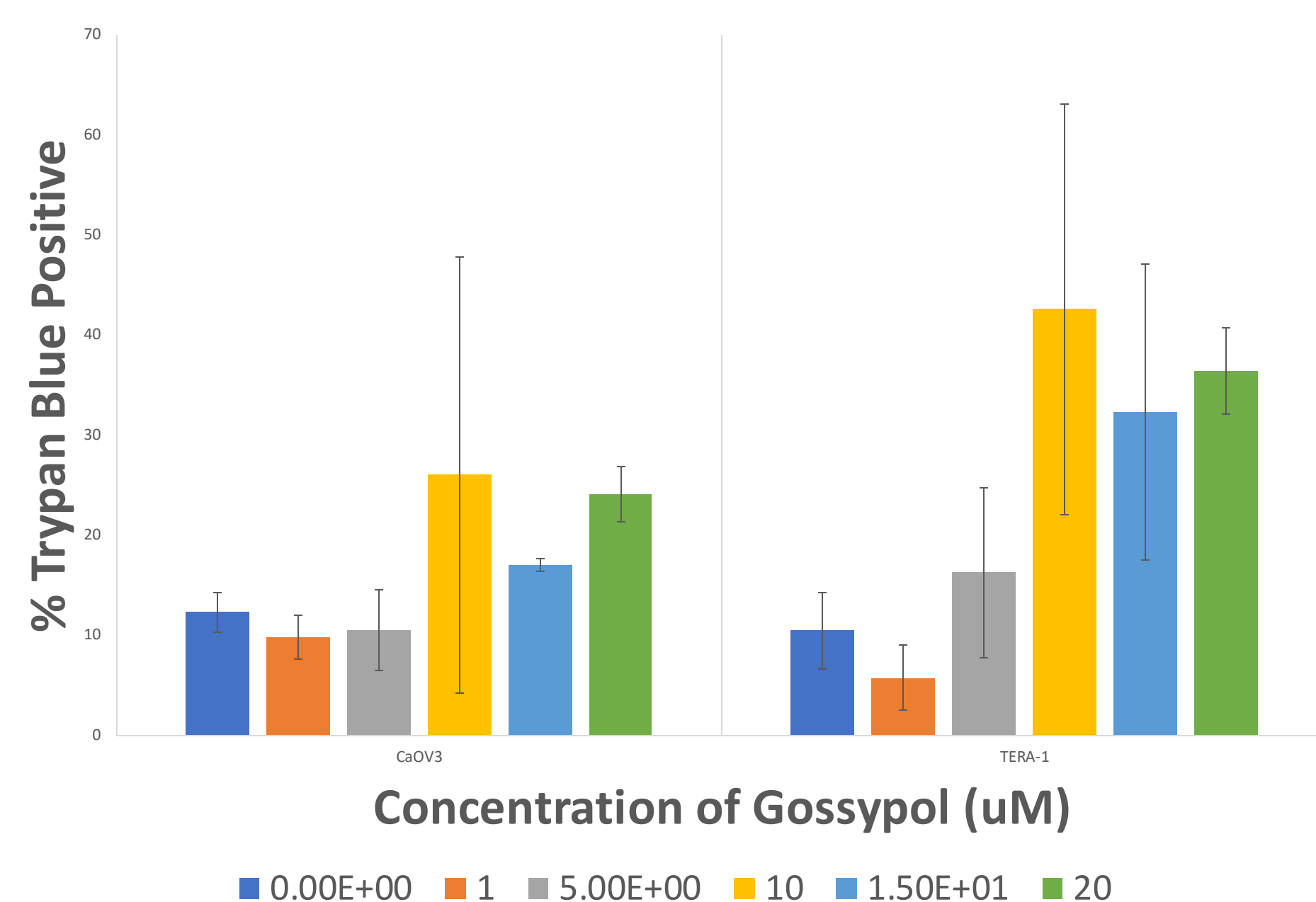


Figure 1. % Trypan Blue Exclusion Assays of CaOV3 (left) and Tera-1 (right) cell lines after 24 hours of treatment with various Gossypol concentrations. Data is a single replication.

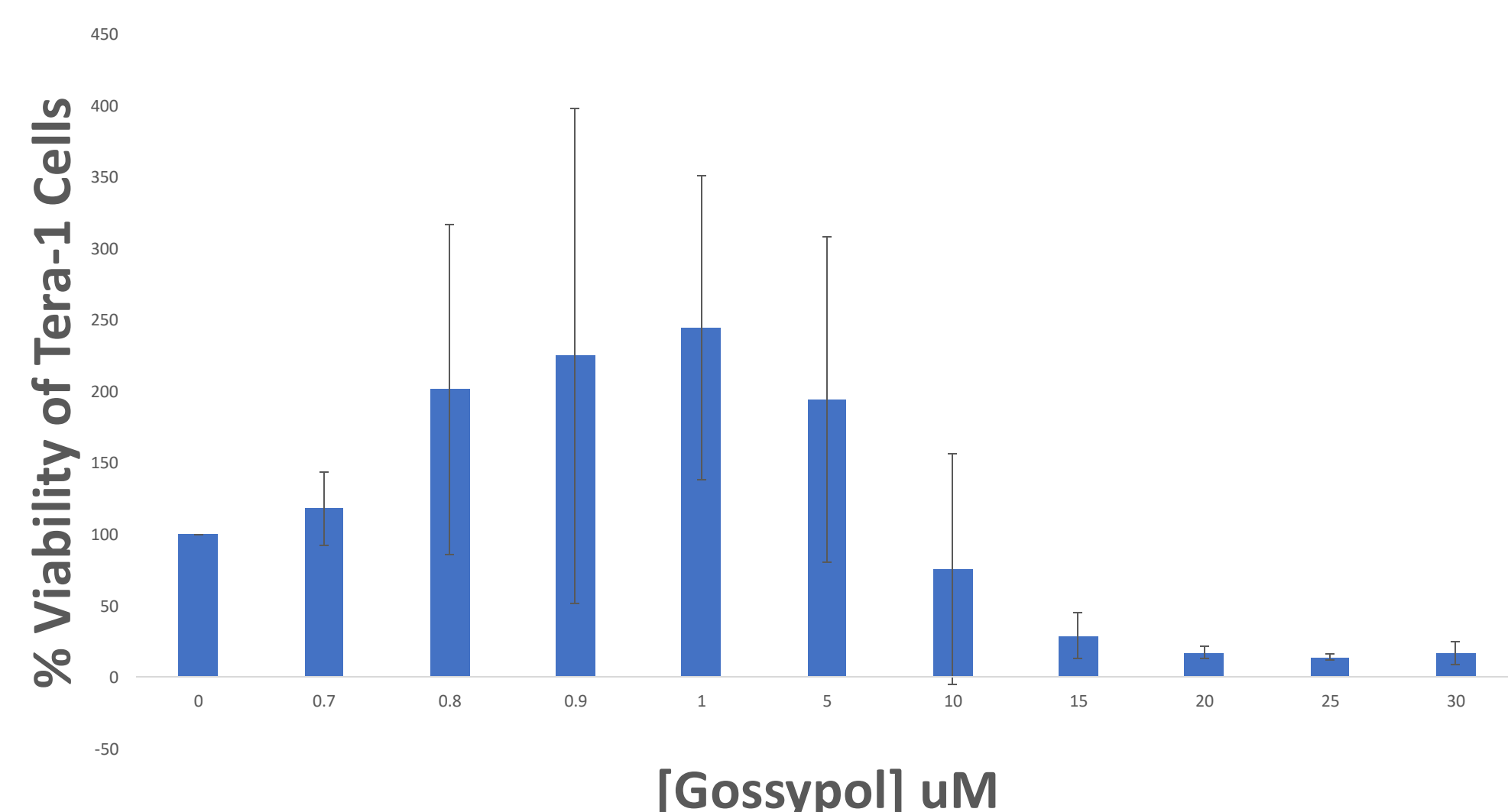


Figure 3. Cell Proliferation of the TERA-1 Cells after 4 days of treatment with various Gossypol concentrations. Data shows an average of 3 biological replications +/- standard deviation.



Figure 5. Visual representation of literature research depicting the transition of the cottonseed and plant to Gossypol. Historical use of cotton in Africa, later as an abortifacient during slave resistance the United States, and finally the chemical structure of Gossypol used in labs today

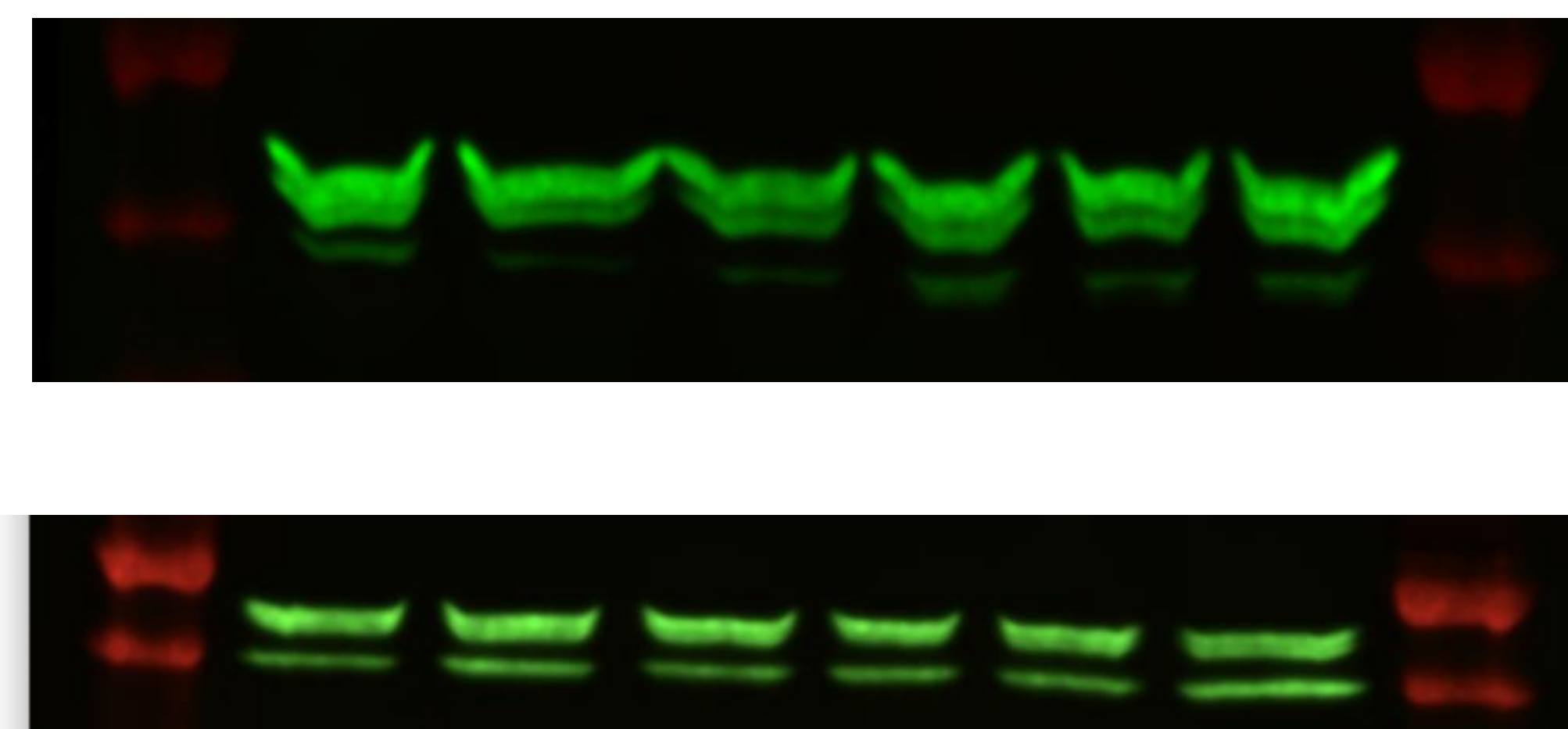


Figure 2. Western Blot Analysis of Tera-1 (top) and CaOV3 (bottom) cells after treatment with various Gossypol concentrations. Beta-actin is shown in green, and ER and AR alpha proteins were probed for but not observed.

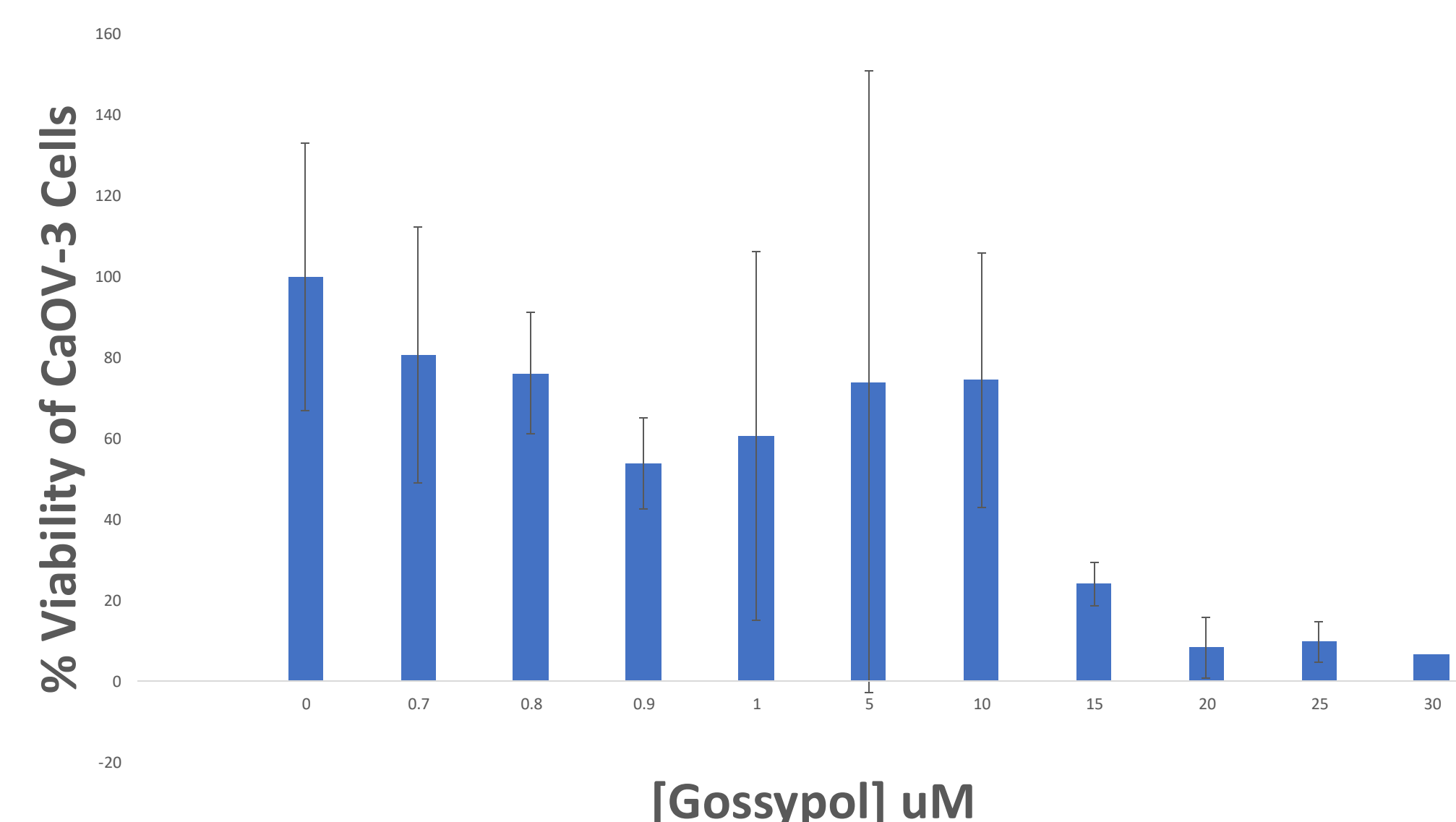
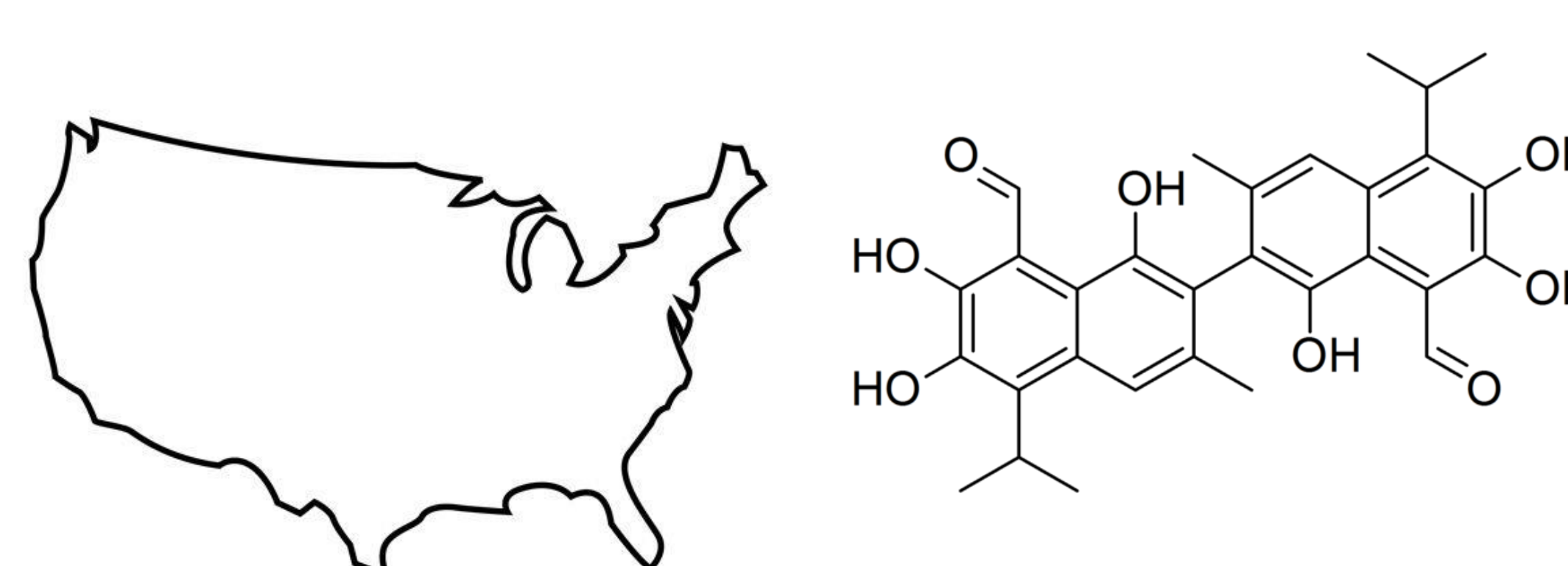


Figure 4. Cell Proliferation of the CaOV3 Cells after 4 days of treatment with various Gossypol concentrations. Data shows an average of 3 biological replications +/- standard deviation.



Discussion:

- These results indicate that an increase in the concentration of Gossypol causes an increase in cell death.
- The western blot reveals a duplicate actin band. This experiment will be repeated.
- Proliferation of cells decreases when treated with high concentrations of Gossypol.

Future Directions:

- Additional Western Blotting studies with a higher concentration of protein loaded
- Triplicate data of the Cell Death Assay
- Study the proliferation effect of Gossypol at low dosage concentrations

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