

# Screening of Potential Anticancer Drugs Targeting Topoisomerase II

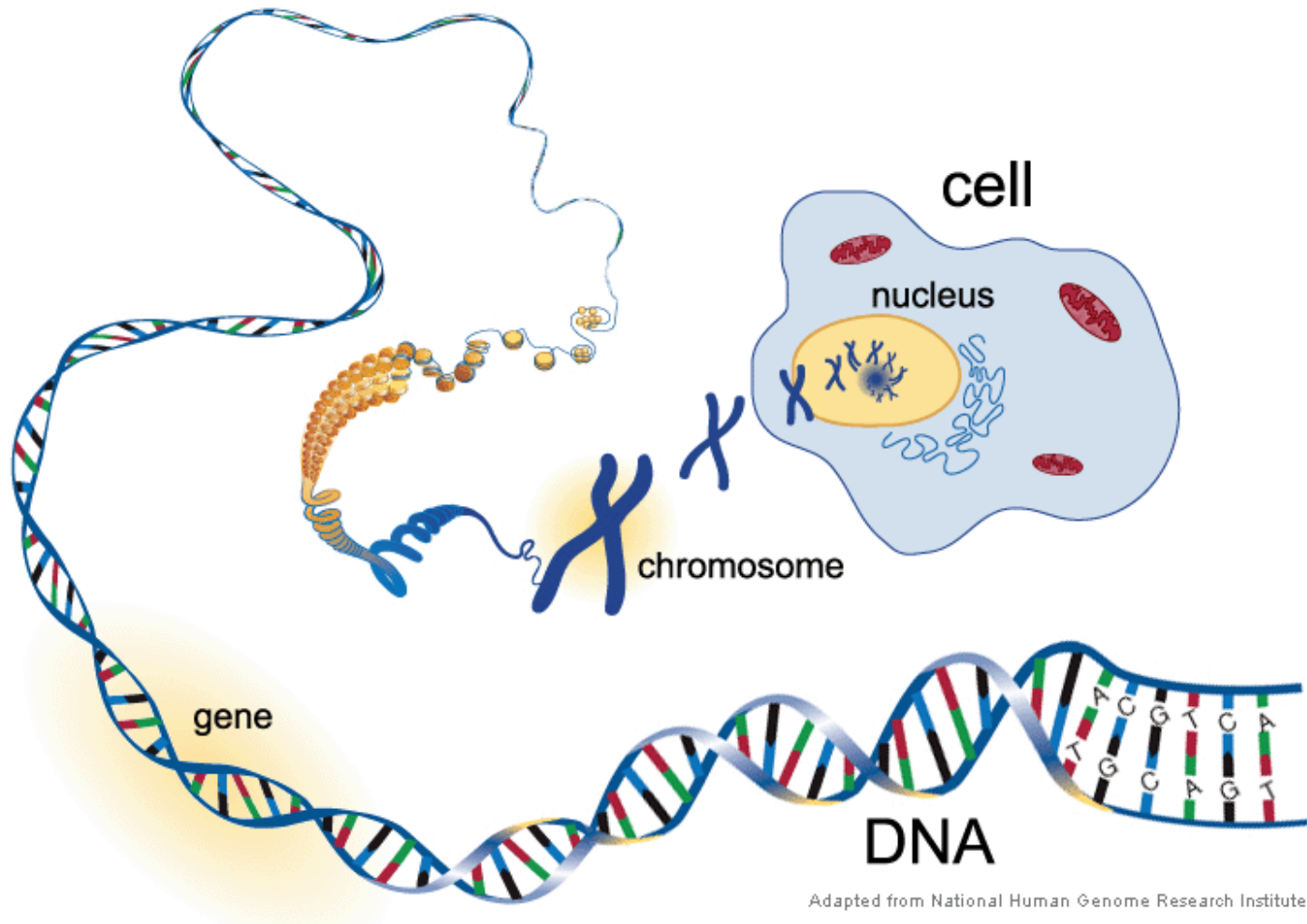
Dr. Xiaohua Jiang

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# Cancer

- Cancer is the second most common cause of death in the United States.
- Growing out of control and invading other tissues are what makes a cell a cancer cell.
- DNA replication is one of the target for cancer treatment.

# DNA to Chromosome

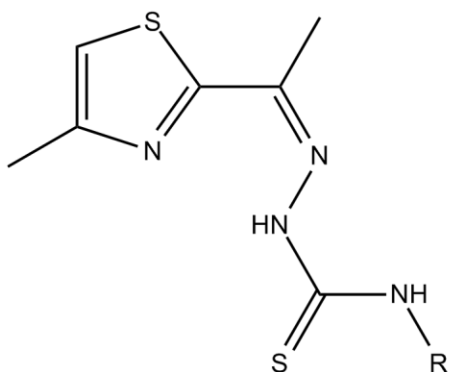


Adapted from National Human Genome Research Institute

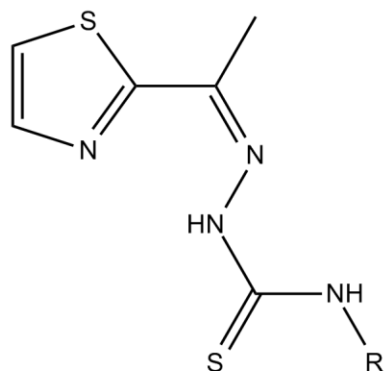
# Topoisomerase II

# Thiosemicarbazones

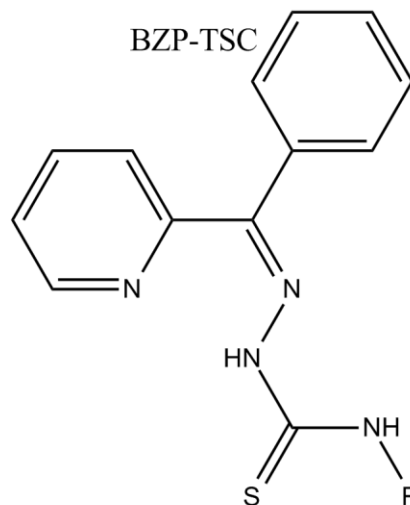
AMT-TSC



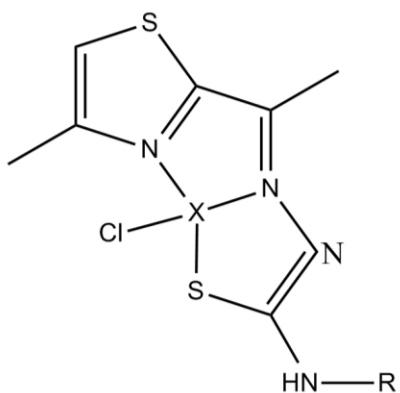
ATZ-TSC



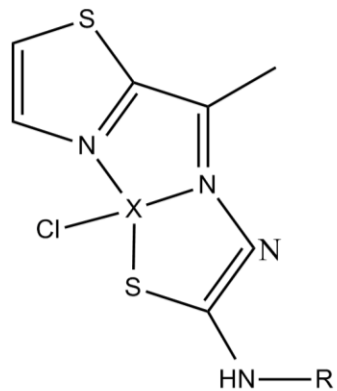
BZP-TSC



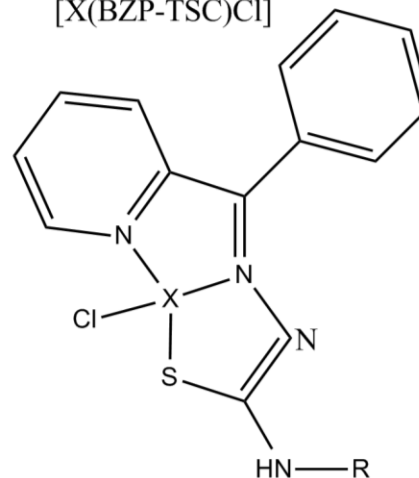
[X(AMT-TSC)Cl]



[X(ATZ-TSC)Cl]

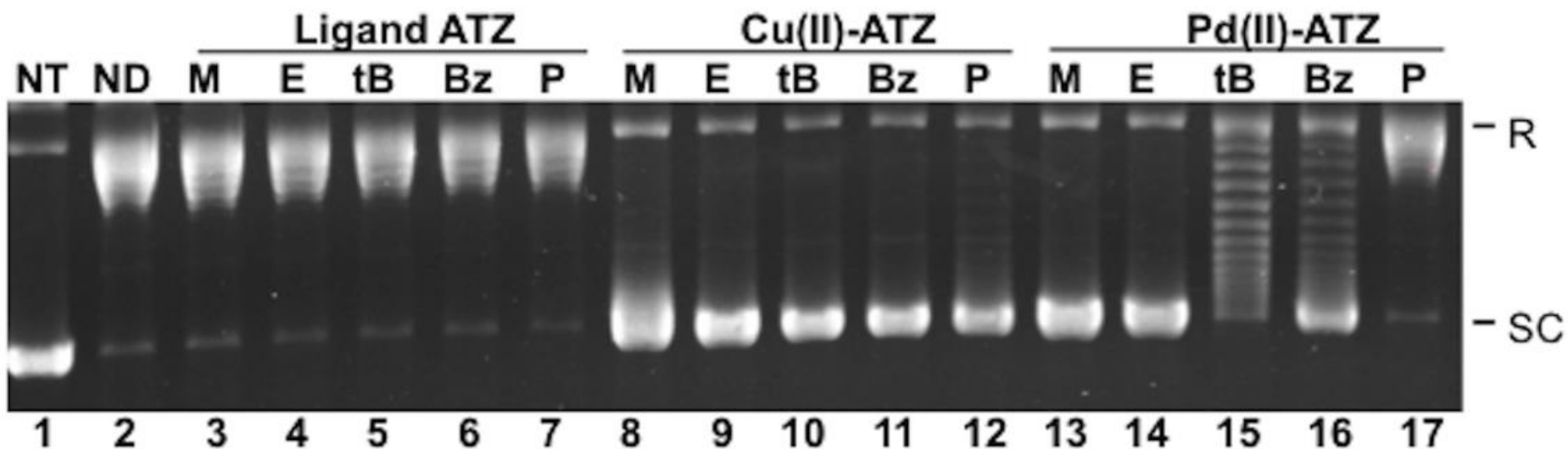


[X(BZP-TSC)Cl]



Name	Side chain R group
MTSC	Methyl
ETSC	Ethyl
tBTSC	t-Butyl
bzTSC	Benzyl
PTSC	Phenyl
dMTSC	dimethyl

# Metal ATZ-ETSC complexes inhibit TopoII $\alpha$



# What will you learn in the lab

- Gel electrophoresis
- Enzyme assays
- Gel image system
- Affinity of ligand binding to TopoII
- Data analysis
- Publications
- Working collaboratively with students from Dr. Jiang and Dr. Lisic

# Contact Information

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