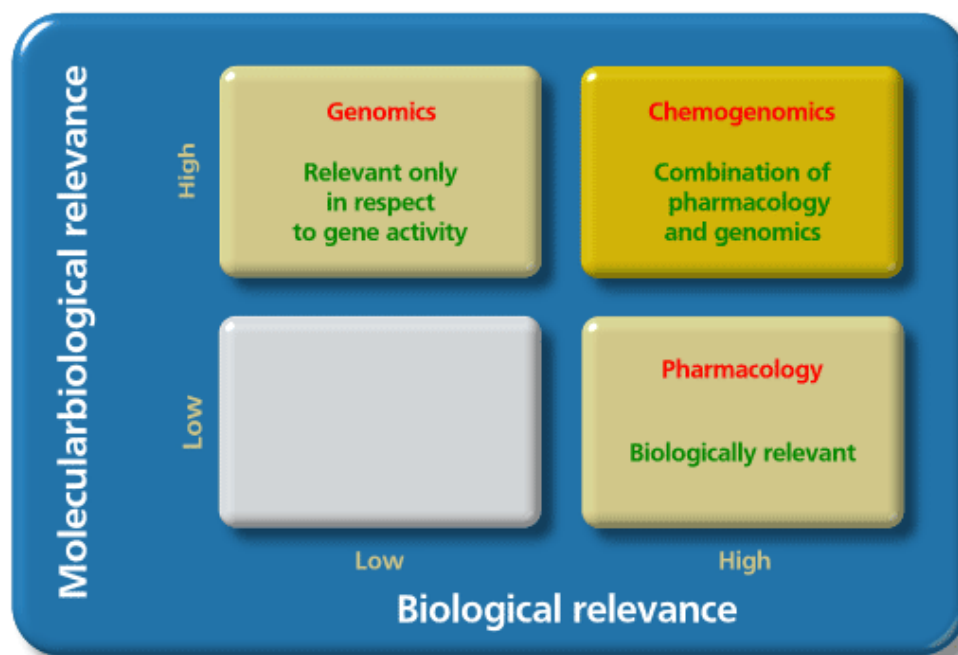




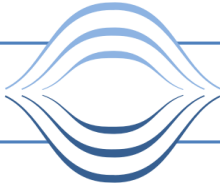
Chemogenomics

The chemogenomics approach of RESprotect has resulted in the identification of a validated target that contributes very strong to the development of chemoresistance by antagonizing apoptosis.

Combining our knowledge of genomic tools and our in-depth understanding of specific biological pathways qualifies us to discover novel drug candidates that have the potential to affect the underlying disease rather than its symptoms.



- * Therapeutic approaches in cancer drug treatment rely on the induction of apoptosis of tumor cells, which is the main anticancer mechanism.
- * One major problem in chemotherapeutic treatment is the induction of chemoresistance, which antagonizes the apoptosis of cancer cells.
- * The chemogenomics approach of RESprotect has resulted in the identification of a number of validated targets that contribute to the development of chemoresistance by antagonizing apoptosis.



The chemogenomics approach for preventing the induction of chemoresistance: Binding to heat shock protein Hsp27

Influence on oncogenes:
Hsp27 interacts with the oncogene Stat3

DNA-repair:
Enzymes of DNA base excision repair (BER) are associated with Hsp27

Apoptosis:
Binding of caspase-3 prodomain to Hsp27 regulates apoptosis

Immune response:
Hsp27 protects cells from monocyte cytotoxicity

Metastasis:
High levels of hsp27 are associated with metastatic tissues

Binding of RP101 to Hsp27 antagonizes the negative effects of Hsp27 in cancer patients