VENOMICS RESULTS
VENOMS: Unique High Throughput Screening compatible strategy

SEQUENCE DATABASE
Sourcing, transcriptomics proteomics.

TOXIN BIOBANK
4,000 toxins in HTS format.

SCREENING
Allergies, diabetes, obesity and cardiovascular.

MAIN RESULTS

REDUCTION OF COMPLEXITY IN DRUG DISCOVERY
Application of omic technologies creating a groundbreaking paradigm shift to exploit natural bioactive compounds.

BIODIVERSITY POTENTIAL
Largest and most diverse collection of samples worldwide with more than 200 venomous species studied.

SEQUENCE DATABASE
25,000 validated toxin sequences of less than 120 residues in size containing at least one S-S bond

VENOMS
Include large natural library reticulated toxins with potential pharmacological activity.

TOXINS
Are continuously refined by the evolution process up to the point that every molecule is valuable in the context of human use.

DRUG DISCOVERY
Is a slow and costly process incompatible with industrial high throughput approach.

203 new species studied

TRANSCRIPTOMICS
BIOINFORMATICS integration

PROTEOMICS

VENOMS

TOXINS

DRUG DISCOVERY

25,000 sequences Database

4000 peptides produced recombinant and chemical synthesis

SCREENING

CARDIOVASCULAR DISEASES
DIABETES
OBESITY
IMMUNE RESPONSE

A FEW SCREENED VENOMICS HITS EXAMPLES

Conus lithoglyphus
25 residues, 2 SS
Ki = 5 nM

Poecilotheria regalis
28 residues, 3 SS
Ki = 100 nM

Parabuthus transvaalicus
34 residues, 3 SS
Ki = 300 nM

CONCLUSIONS

Sourcing, transcriptomics proteomics.

4,000 toxins in HTS format.

Allergies, diabetes, obesity and cardiovascular.