The Amyotrophic Lateral Sclerosis (ALS) Targeted Venom Discovery Array™ (T-VDAALS) is specifically designed to maximise discovery of new tools. One of the key pathologies seen in ALS muscular degeneration is excess calcium (Ca\(^{2+}\)). Ca\(^{2+}\) channels are, therefore, important drug targets for this neurological disorder. Venoms from theraphosids (tarantulas), scorpions and snakes are rich sources of new Ca\(^{2+}\) channel tools. The ALS targeted array contains pure venom fractions from 12, 24, 48 or 96 species optimised for identification of novel tools. Each array contains characterised venoms active on calcium channels from the literature to act as positive controls. The control venoms for T-VDA\(^{2+}\) include Parabuthus transvaalicus (South African fattail scorpion), which contains Kurtoxin with broad spectrum calcium channel activity L,T,N and P type channels\(^1\); Dendroaspis angusticeps (Eastern green mamba) venom which contains Calcicludin, a potent L-type calcium channel blocker\(^2\); and Hysterocrates gigas (Cameroon red baboon tarantula) venom which blocks N and E type calcium currents\(^3\). With a special focus on Grammastola species, other venom fractions making up the library have been specially selected by our drug discovery scientists to maximise novel hit potential.

- Venoms are supplied lyophilised in Echo® qualified acoustic source plates (Labcyte Inc) and are useable on any SBS footprint liquid handling device or by hand.
- 384-well format has 1µg venom fraction per well, re-suspension with 30µl will produce ~1.6µM-16µM stock concentration of peptides.
- 1536-well format has 300ng venom fraction per well, re-suspension with 10µl will produce ~1.5µM-15µM stock concentration of peptides.


Data compiled from UniProt: Reorganizing the protein space at the Universal Protein Resource (UniProt), Nucleic Acids Res. 40: D71-D75 (2012).