

ANTIBODIES, BIO THERAPEUTICS & B2B & GENETIC AND PROTEIN ENGINEERING

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Evolution of Bt proteins overcomes Bt resistance in insects

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The development of insect resistance to insecticidal proteins, such as Bt proteins, is a continuous threat to insect control traits in biotech agricultural crops. This requires constant search for insecticidal proteins with new modes of action (MOA), which enhance insect resistance management options via delaying new resistance development and combating already existing resistant insects. This presentation will describe the successful onboarding of phage-assisted continuous evolution (PACE) technology, and its application to Bt toxins for generating new MOAs.

Biography

Victor Guzov has his expertise in protein engineering and evolution, mode of action of insecticidal proteins and genetic engineering of crop plants. He has been long involved in optimization of insecticidal proteins for the purpose of protection of crop plants from insect infestation using biotechnology approaches. That led him to research on mode of action of insecticidal proteins, and ways to assess their value for insect resistance management. His collaborative research with both industry and academic scientists on evolution of Bt proteins resulted in new opportunities for effective management of insect resistance to genetically-modified crop plants.

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