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Discovery of novel lead compounds by large scale diverse encoded chemical libraries

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In this talk, the author will present the design strategy in building a highly diverse, three dimensional and drug-like DNA encoded libraries (DELs) to facilitate lead-finding for novel protein target families. Library synthesis methodologies that facilitate incorporation of linking chemistry compatible with DNA integrity will be presented. Computational analysis of the resultant libraries' molecular properties will be shown. Validation of affinity screening, coding and decoding processes to identify known and novel enzyme inhibitors will be described, along with our early results in affinity screening of this library of >400 million compounds with highly validated protein targets from several protein families.

Biography

Jin Li holds 26 years of biopharmaceutical experience (at Protherics and AstraZeneca), with scientific and leadership roles in early stage research; as well as experience in initiating and leading major collaboration and outsourcing programmes. Before founding HitGen, he held Global Director position of Compound Sciences and Computational Sciences at AstraZeneca. This included responsibility for computational chemistry, computational biology and compound collection enhancement for lead generation. He completed his BSc at Sichuan University, and PhD in Macromolecular Sciences at Aston University. Then he completed Post-doctoral research in Theoretical Biochemistry at Manchester University, UK.

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