ATC 2017
Antibody Therapeutics Conference

Curriculum Vitae

Name: Larry Lo
Affiliation: Sr. Director R&D, Corvidia Therapeutics
Short Biography (maximum of 400 words):
Currently, Larry serves as a Sr. Director of R&D at Corvidia Therapeutics where he is a strategic leader for translational sciences and oversees activities to support all pipelines' clinical and nonclinical studies for therapeutic antibody and peptide program. Before his current role, he was an independent consultant in biotherapeutic areas. His main roles were to provide a professional advises and services for his clients in needs from early therapeutic antibody technology/discovery to early clinical development. From 2013 - 2015, Larry served as a Director of Global Biomarker Discovery and Development at Biogen. His role was to lead a group of scientists and associates to oversee bioanalytical and biomarker assays, including development, validation/qualification and data review in nonclinical/clinical studies for neurodegenerative and fibrotic diseases at multiple stages, from phase I to post-approval studies. He participated in the cross-function team in which to interact with representatives from different groups to set up the strategy and execution plan of the biomarker for fibrosis indications. Prior to Biogen, he worked different positions in his 11-year tenure at Human Genome Sciences (HGS). He started his career in Antibody Development department where he generated and developed therapeutic antibodies against human chemokine and chemokine receptor using phage display system in 2001. His group also focus on developing PK, immunogenicity and neutralization assays and to analyze the samples to support HGS pre-clinical and clinical study (phase I to phase III) for human therapeutic antibodies. In 2010, Larry started to built a group with multiple functions, including the development of new therapeutic antibody pipelines against novel targets in oncology and autoimmune disease. He also played a critical role in the evaluation of novel antibody platform, in-license biotherapeutic product and served a key personal to interact with HGS collaborators and partners. Larry was a member of HGS core team at FDA Advisory Committee Panel Meeting for belimumab (Benlysta, approved in 2011) and raxibacumab (approved in 2012). Prior to HGS, Larry worked as a Scientist at MedImmune where he developed human/humanized catalytic antibody for cocaine addict therapeutic. Larry obtained his Ph.D. in Macromolecular, Cellular Structure and Chemistry from The Scripps Research Institute. Following his Ph.D.,

Larry continued his work at Scripps in capacity of Research Scientist and then Assistant Professor in Chemistry Department. During his career at Scripps, his works focused in to develop human antibody for catalysis and cancer therapeutic from human antibody phage libraries.

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Speech Summary at ATC 2017

Speech Title:	Biomarker Strategy for Therapeutic Antibody In Early Clinical Development

Speech Summary (200-500 words)

With recent decade of significant progress made in platforms and biological sciences, human therapeutic antibodies became a great success in the fighting of several diseases. While significant advances in the generation of human antibody with certain biological characteristics have not been major hurdles, the challenge remained to assess and evaluate drugs in early clinical stage. The increasing cost of drug development has led to pharmaceutical industry to focus on "Go/No Go" decision as early as possible for the best utilization of resources. In order to mitigate the risk during early clinical drug development, translation research and biomarker strategy provide critical roles for developer to collect vital information/data in intent biological activity as well as safety during the studies. It promoted early collaborations between early discovery research and clinical scientists to identify critical proof-of-biology (POB) and proof-of-concept (POC) questions to be addressed. Working together, a biomarker plan to be formulated and executed to provide a link between biological and clinical events to support further late stage clinical trials.

Through over 25-year research, TGFβ has been shown as a central driver of fibrosis across multiple tissues and diseases. Its co-receptor,αvβ6, is selectively up-regulated on injured epithelial cells and was a key mediator of TGFβ activation. A humanized anti-αvβ6 IgG1 antagonist monoclonal antibody has been developed in clinical as a targeted therapy with potential to impact epithelial injury and fibrosis without systemic inhibition of the TGFβ pathway. In this presentation, we will discuss how to formulate an early clinical biomarker plan from preclinical translational research data. The strategy of plan will address key questions in safety, target engagement, proof-of-human biology, disease biomarker and clinical response to support antibody therapy for patients with Idiopathic Pulmonary Fibrosis (IPF).