17th Annual

Discovery on TARGET

The Industry’s Preeminent Event on Novel Drug Targets and Technologies

September 16-19, 2019
Westin Copley Place
Boston, MA

PLENARY KEYNOTE PROGRAM

PROTACs: Past, Present, and Future
Craig M. Crews, PhD
Professor, Chemistry; Pharmacology; Molecular, Cellular & Developmental Biology; Yale University

Plenary Keynote Introduction Sponsored by Syngene

CONFERENCE PROGRAMS

September 17 - 18
- Target Identification and Validation
- Lead Generation Strategies
- Emerging Ubiquitin and Autophagy Targets
- Targeting NASH
- Immuno-Oncology: Emerging Targets and Therapeutics
- Antibodies Against Membrane Protein Targets – Part 1
- Antibody Forum – Part 1

September 18 - 19
- RNA as a Drug Target
- Kinase Inhibitor Discovery
- PROTACs and Targeted Protein Degradation
- Targeting Fibrosis
- GPCR-Based Drug Discovery
- Antibodies Against Membrane Protein Targets – Part 2
- Antibody Forum – Part 2

REGISTER EARLY FOR MAXIMUM SAVINGS!

DiscoveryonTARGET.com

#BostonDOT19

Organized by Cambridge Healthtech Institute

Preliminary Agenda

Premier Sponsors:
**CONFERENCE PROGRAMS**

**September 17-18**
- Target Identification and Validation
- Lead Generation Strategies
- Emerging Ubiquitin and Autophagy Targets
- Targeting NASH
- Immuno-Oncology: Emerging Targets and Therapeutics NEW!
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"Discovery on Target gave us a platform to make real connections with the leading experts in cell & gene therapy to collaborate on their ground-breaking research."

– Marketing & Client Development Manager, Aldevron
ABOUT THE EVENT

The 17th Annual Discovery on Target (DOT), the industry’s preeminent event on novel drug targets and technologies, will convene over 1,300 drug discovery professionals in Boston, MA, on September 16-19, 2019. This event highlights advances in current and emerging “hot” targets and technologies, as well as target validation strategies for the discovery and development of novel therapeutic agents, ranging from biologics to small molecules. Delegates can customize their experience at the event by choosing from 14 speaker programs, plus focused trainings, comprehensive short courses, moderated roundtables and networking functions to meet their own research needs and those of their organizations.

Additions for 2019 include new programming dedicated to PROTACs and their applications, drugs and targets in fibrosis, novel immune-oncology targets, RNA as an emerging target for small molecule drugs, along with expanded coverage of protein engineering and novel biotherapeutics.
SPONSOR, EXHIBIT AND LEAD GEN OPPORTUNITIES

Comprehensive sponsorship packages allow you to achieve your objectives before, during, and long after the event. Signing on earlier will allow you to maximize exposure to hard-to-reach decision-makers.

Podium Presentations—Available within Main Agenda!
Showcase your solutions to a guaranteed, targeted audience. Package includes a 15 or 30-minute podium presentation on the scientific agenda, exhibit space, branding, full conference registrations, use of the event mailing list and more.

Luncheon Presentations
Opportunity includes a 30-minute podium presentation in the main session room. Lunch will be served to all delegates in attendance. A limited number of presentations are available for sponsorship and they will sell out quickly. Sign on early to secure your talk!

Invitation-Only VIP Dinner/Hospitality Suite
Select specific delegates from the pre-registration list to attend a private function at an upscale restaurant or a reception at the hotel. From extending invitations, to venue to suggestions, CHI will deliver your prospects and help you make the most of this invaluable experience.

Exhibit
Exhibitors will enjoy facilitated networking opportunities with qualified delegates, making it the perfect platform to launch a new product, collect feedback, and generate new leads. Exhibit space sells out quickly, so reserve yours today!

Additional branding & promotional opportunities include:

- Hotel Room Keys
- Footprint Trails
- Staircase Ads
- Conference Tote Bags
- Literature Distribution (Tote Bag Insert or Chair Drop)
- Badge Lanyards
- Program Guide Advertisement
- Notepads
- Water Bottles
- Seating Area Sponsor
- Meter Boards
- Hanging Aisle Sign

To learn more about sponsorship and exhibit opportunities, please contact:

Rod Eymael
Manager, Business Development
781.247.6286 reymael@healthtech.com

Looking for additional ways to drive leads to your sales team?

CHI’s Lead Generation Programs will help you obtain more targeted, quality leads throughout the year. We will mine our database of 800,000+ life science professionals to your specific needs. We guarantee a minimum of 100 leads per program! Opportunities include:

- Live Webinars
- White Papers
- Market Surveys
- Podcasts and More!

2018 ATTENDEE DEMOGRAPHICS

Attendees included industry leaders, innovators and decision makers from many different backgrounds.

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Register Early & Save!

Pre-Conference Short Courses*

Monday, September 16 | 2:00 - 5:00 PM

SC1: Immunology Basics
Instructor: Thomas Sundberg, PhD, Senior Research Scientist I, Center for Development of Therapeutics, Broad Institute of MIT and Harvard

SC2: Targeting of Ion Channels with Monoclonal Antibodies
Instructor: Trevor Wilkinson, PhD, Associate Director, Antibody Discovery and Protein Engineering, AstraZeneca, United Kingdom

SC3: Selection, Screening and Engineering for Affinity Reagents
Instructors: Jonas V. Schaefter, PhD, Laboratory Head, Novartis Institutes for BioMedical Research (NIBR), Switzerland
Christian Kunz, PhD, Director, Discovery Alliances & Technologies, MorphoSys AG, Germany

SC4: How to Best Utilize 3D Cells, Spheroids and PDX Models in Oncology
Instructors: Madhu Lal-Nag, PhD, Office of Translational Sciences, Center for Drug Evaluation & Research, U.S. Food and Drug Administration
Geoffrey Bartholomeusz, PhD, Associate Professor and Director, Target Identification and Validation Program, Department of Experimental Therapeutics, Division of Cancer Medicine, The University of Texas MD Anderson Cancer Center

SC5: Applications of Artificial Intelligence and Machine Learning in Drug Discovery and Development
Instructor: Arvind Rao, PhD, Associate Professor, Department of Computational Medicine and Bioinformatics, University of Michigan
Additional Instructors to be Announced

SC6: Biochemistry and Pharmacology of the Ubiquitin-Proteasome System
Instructor: Alexander Statsyuk, PhD, Assistant Professor, Department of Pharmacological and Pharmaceutical Sciences, University of Houston

Dinner Short Courses*

Wednesday, September 18 | 7:00 - 9:30 PM

SC8: GPCR Structure-Based Drug Discovery
Instructor: Huixian Wu, PhD, Principal Scientist, Structural and Molecular Sciences, Discovery Sciences, Pfizer, Inc.

SC9: Targeted Protein Degradation Using PROTACs, Molecular Glues and More
Instructors: Alexander Statsyuk, PhD, Assistant Professor, Department of Pharmacological and Pharmaceutical Sciences, University of Houston
James Robinson, PhD, Associate Principal Scientist, Discovery Sciences, AstraZeneca
Additional Instructors to be Announced

*Separate registration required

Plenary Keynote Program

Join 1,300 of your colleagues for the Discovery on Target Plenary Keynote Program. Bridging both halves of the event, it’s the only time our whole community of drug discovery professionals assembles in one room to learn about big-picture perspectives, innovative technologies, and thought-provoking trends from luminaries in the field.

PROTACs: Past, Present, and Future
Craig M. Crews, PhD
Professor, Chemistry; Pharmacology; Molecular, Cellular & Developmental Biology; Yale University

Dr. Crews is the American Cancer Society Professor of Molecular, Cellular and Developmental Biology and holds joint appointments in the departments of Chemistry and Pharmacology at Yale University. He graduated from the University of Virginia with a BA in Chemistry and received his PhD from Harvard University in Biochemistry. Dr. Crews has a foothold in both the academic and biotech arenas; on the faculty at Yale since 1995, his laboratory pioneered the use of small molecules to control intracellular protein levels. His first company, Proteolix, developed the proteasome inhibitor, Kyprolis™ for the treatment of multiple myeloma. His second venture, Arvinas, applies his lab’s PROTAC ‘induced protein degradation’ technology to drug development. He has received numerous awards and honors, including the CURE Entrepreneur of the Year Award (2013), Ehrlich Award for Medicinal Chemistry (2014), Yale Cancer Center Translational Research Prize (2015), a NIH R35 Outstanding Investigator Award (2015), the AACR Award for Outstanding Achievement in Chemistry in Cancer Research (2017), the Khorana Prize from the Royal Society of Chemistry (2018), the Pierre Fabre Award for Therapeutic Innovation (2018), the Pharmacia-ASPET Award for Experimental Therapeutics (2019) and was named an American Cancer Society Professor in 2018.

Plenary Keynote Introduction Sponsored by Syngene

Additional Plenary Keynote Speaker to be Announced

*For updated Plenary Keynote details, visit: DiscoveryOnTarget.com/plenary-keynotes
Targeting GPCRs for Drug Discovery

This 1.5-day training seminar is designed for medicinal chemists, discovery biologists and all scientists concentrating on discovering and developing drugs against G Protein-Coupled Receptors (GPCRs). The challenge the seminar addresses is how to predict therapeutic activity – because drug candidate profiles seen in in vitro test systems often do not adequately reflect in vivo responses due to the drug candidate’s interaction with variable ambient physiology. More specifically, this seminar describes the pharmacological procedures needed to convert ‘descriptive data’ (what we see) to ‘predictive data’ (what will be seen) through universal pharmacological scales such as affinity, efficacy, cooperativity parameters, offset rates, etc. The desired outcome is to more fully define ligand properties to reduce attrition in late-stage drug development. Three major classes of GPCR ligands will be discussed: (1) agonists (with special reference to biased signaling), (2) antagonists (with inverse agonists) and (3) allosteric modulators (characterization of NAMs, PAMs). I will illustrate how concepts introduced over the past 15 years have considerably expanded and revitalized the possibilities for GPCRs as therapeutic targets.

Instructor: Terry Kenakin, PhD, Professor, Department of Pharmacology, University of North Carolina School of Medicine

An In-Depth Introduction to Drug Metabolism and Applications to Discovery and Development

This 1.5-day lecture-based interactive seminar, which focuses on small molecule drug metabolism, will begin with a historical background to the origin of the field before reviewing the both well-recognized and more recently discovered drug metabolism pathways. In vitro assays used to access metabolic clearance and medicinal chemistry strategies for modifying structures to overcome metabolism-dependent clearance during lead-optimization will be discussed. The topic of drug toxicity will be discussed in the context of drugs that are toxic through bioactivation to reactive metabolites, examples of drug structure-toxicity relationships and the relevance of idiosyncratic toxicity to the pharmaceutical industry. The role of metabolite identification studies in preclinical and clinical development will be compared and the steps involved in identifying and characterizing metabolites by mass spectrometry will be explained. Advances in the use of in silico tools in the context of drug metabolism will be explored. An overview of the pharmacological properties and functions of drug transporters and some preclinical approaches to investigate drug transport mechanisms will be presented as well as current regulatory guidance on transporters. This seminar is intended for scientists in either academia or industry who would like to become more familiar with small molecule drug metabolism.

Instructor: John C.L. Erve, PhD, DABT, President, Jerve Scientific Consulting, Inc.

Practical Phenotypic Screening

Phenotypic drug discovery is experiencing a renaissance in the pharmaceutical industry, based on its successful track record in delivering first-in-class medicines. This approach offers the promise of delivering both novel targets and chemical matter modulating a disease phenotype of interest. Although phenotypic screening may appear at first sight to be similar to target-based screening, there are some significant differences between the two approaches. These need to be properly considered and addressed to ensure the greatest likelihood of success for phenotypic drug discovery programs. This seminar will cover a range of relevant topics with a goal of providing practical information to help prosecute such programs more effectively.

Instructor: Fabien Vincent, PhD, Associate Research Fellow, Discovery Sciences, Pfizer, Inc.

What is a Training Seminar?

Each CHI Training Seminar offers 1.5 days of instruction with start and stop times for each day shown above and on the Event at-a-Glance published in the onsite Program & Event Guide. Training Seminars will include morning and afternoon refreshment breaks, as applicable, and lunch will be provided to all registered attendees on the full day of the class.

Each person registered specifically for the Training Seminar will be provided with a hard copy handbook for the seminar in which they are registered. A limited number of additional handbooks will be available for other delegates who wish to attend the seminar, but after these have been distributed, no additional books will be available.

Though CHI encourages track hopping between conference programs, we ask that Training Seminars not be disturbed once they have begun. In the interest of maintaining the highest quality learning environment for Training Seminar attendees, and because seminars are conducted differently than conference programming, we ask that attendees commit to attending the entire program, and not engage in track hopping, as to not disturb the hands-on style instruction being offered to the other participants.

STUDENT FELLOWSHIP

Full-time graduate and PhD candidates qualify for a student rate. Students are encouraged to present a research poster and receive an additional $50 off their registration fee. Students with a research poster will be recognized as a student fellow at the event.

Deadline to submit a poster: August 16, 2019
Finding novel, druggable targets for therapeutic intervention remains a top priority for the pharma/biotech industry. It also remains a formidable challenge and companies continue to invest a lot of time and resources in identifying and validating targets that will yield viable drugs. What are the challenges in target discovery today? What new tools and strategies are being used to identify targets and how well are they working? What's being done to adequately validate the targets once they are identified? What efforts are being taken to go after difficult or “undruggable” targets? Cambridge Healthtech Institute’s conference on Target Identification and Validation will bring together leading experts to discuss some of these critical issues. This is an unique opportunity to meet and network with biologists and screening groups from around the world to share ideas and set up collaborations.

TARGET DISCOVERY USING ADVANCED DISEASE MODELS

FEATURED PRESENTATION: CRISPR Screens in Challenging Model Systems
John Doench, PhD, Associate Director, Genetic Perturbation Platform, Broad Institute of Harvard and MIT

Aspartate/Aspergine Beta Hydroxylase (ASPH): A Potential Therapeutic Target for Overcoming HER2 Resistant Metastatic Breast Cancer
Geoffrey Bartholomeusz, PhD, Associate Professor and Director, Target Identification and Validation Program, Department of Experimental Therapeutics, Division of Cancer Medicine, The University of Texas MD Anderson Cancer Center

CRISPR SCREENING FOR TARGET & OFF-TARGET IDENTIFICATION

An Evolutionary Cross-Species Approach to Context-Specifically Identify Essential Genes Using CRISPR Screens
Raghuvir “Ram” Viswanatha, PhD, Postdoctoral Research Fellow, Blavatnik Institute of Genetics, Harvard Medical School

Beyond Viability: Sensor-Based CRISPR Screening
Roderick Beijersbergen, PhD, Group Leader, Division of Molecular Carcinogenesis and NKI Robotics and Screening Center, The Netherlands Cancer Institute

Off-Target Toxicity is a Common Mechanism-of-Action of Cancer Drugs Undergoing Clinical Trials
Jason Sheltzer, PhD, Principal Investigator, Cold Spring Harbor Laboratory

GENETICS-BASED TARGET IDENTIFICATION & VALIDATION

Human Genetics-Based Target Identification & Validation for 2x Success in the Clinic
Narender R. Gavva, PhD, Director, Early Target Discovery, Takeda California, Inc.

Genetic Studies of Multiple Sclerosis Risk and Progression for Drug Discovery
Paola Bronson, PhD, Scientist II, Human Target Validation Core (Translational Biology), Biogen Inc.

ARTIFICIAL INTELLIGENCE FOR TARGET DISCOVERY

Machine Learning-Based Methods to Prioritize Rational Drug Combinations
Arvind Rao, PhD, Associate Professor, Department of Computational Medicine and Bioinformatics, The University of Michigan, Ann Arbor

CASE STUDIES USING PHENOTYPIC SCREENING & CHEMICAL BIOLOGY APPROACHES

Hit Triage and Validation in Phenotypic Screening: Considerations & Strategies
Fabien Vincent, PhD, Associate Research Fellow, Hit Discovery and Lead Profiling Group, Pfizer

Comparison of Target Identification Approaches Using an IRAK4 Inhibitor
Jeff Martin, PhD, Scientist II, Chemical Biology & Proteomics, Biogen Inc.

Influence of Post-Translational Modifications, Metals and Partner Proteins on the Fe-S Cluster Synthesis Machinery
Jaimeen Majmudar, PhD, Senior Scientist, Chemical Biology, Pfizer, Inc.

Luncheon Presentation: A Blueprint for Translational Integrated Drug Discovery
John Montana, PhD, Corporate Vice President, Integrated Drug Development and Strategic Projects, Charles River

PANEL DISCUSSION

Presentation to be Announced
Sponsored by IBM Watson
RNA molecules are crucial for delivering cellular information and genetic regulation, but until recently, the drug discovery world has emphasized protein drug targets. Our lack of knowledge in RNA biology prevented us from exploring possibilities of RNA drug targets, but with recent advances in technologies such as sequencing, new therapeutic strategies are being explored. Join us at the Inaugural RNA as a Drug Target conference, part of Discovery on Target, as we discuss RNA as a novel target site for therapeutics.

**RNA-PROTEIN COMPLEXES**

**RNA Splicing Target Identification**
Tom Chappie, Associate Research Fellow, Pfizer

**Identification of Development Candidate eFT226, a First in Class Inhibitor of eIF4A RNA Helicase**
Justin Ernst, PhD, Director of Medicinal Chemistry, Effector Therapeutics

**Modulating the Epitranscriptomic RNA Modifications for Cancer Therapy**
Pawel Sledz, PhD, Senior Scientist, Department of Biochemistry, University of Zurich

**OLIGONUCLEOTIDES TO TARGET RNA**

**FANA ASO Therapy to Silence Foxp3, Impair Treg Function and Promote Anti-Tumor Immunity**
Wayne Hancock, PhD, Professor of Pathology and Laboratory Medicine, University of Pennsylvania, Chief of the Division of Transplant Immunology, Children's Hospital of Philadelphia (CHOP)

**SMALL MOLECULES TO TARGET RNA**

**FEATURED PRESENTATION: Non-Coding RNA as a Small Molecule Drug Target**
Elliott Nickbarg, PhD, Principal Scientist, Pharmacology Department, Merck & Co, Inc.

**Enabling Modulation of RNA Biology in Human Disease with Small Molecules**
Razvan Nutiu, PhD, Investigator, Chemical Biology & Therapeutics, Novartis

**Directly Targeting RNA with Small Molecules**
Meizhong Jin, PhD, Senior Director, Chemistry, Arrakis Therapeutics

**FINDING THE DRUGGABLE STRUCTURES**

**Structure-Based Discovery of New Functions in Large RNAs**
Kevin Weeks, PhD, Kenan Distinguished Professor of Chemistry, University of North Carolina

**Targeting Structurally and Functionally Diverse RNAs with Drug-Like Small Molecules**
John “Jay” Schneekloth Jr., PhD, Investigator, Chemical Biology Laboratory; Head, Chemical Genetics Section, Center for Cancer Research, National Cancer Institute, NIH
Finding new drugs leads for medical conditions with unmet solutions is one of the biggest hurdles in recent drug discovery as the ‘obvious’ drug candidates have already been found. Plus, there are more molecular targets to develop new drugs against thanks to the rapid pace of medical research. Many of these new molecular targets are more complex, such as protein-protein interactions (PPIs) or protein-nucleic acid complexes and move ‘drug hunters’ into less explored chemical space from which to find or design appropriate lead compounds. Luckily synthetic chemistry and other innovations have expanded the chemical space new drug leads can occupy while still fitting the properties of a ‘good drug’. Join fellow discovery chemists and biologists at the Lead Generation Strategies conference to review the various advances and strategies for finding and creating novel drug leads in today’s expanded chemical and molecular universe.

**PROGRESSING FROM TARGET HITS TO DRUG LEADS**

**Interplay Between Lead Generation and Target Validation in AbbVie Early Chemistry: A Wild-Type Isocitrate Dehydrogenase 1 Case Study**
J. Brad Shotwell, PhD, Senior Principal Scientist, Tool and Lead Generation Chemistry Group Leader, Abbvie

**Exploiting Pilot Screen Hits to Pressure-Test HTS Screening Triage Funnels**
Michael Finley, PhD, Principal Scientist, Screening, Discovery Sciences, Janssen R&D

**A Phenotypic Screen for ALS**
Dean G. Brown, PhD, Director, External Chemistry, Hit Discovery, Discovery Sciences, IMED Biotech Unit, Astra Zeneca

**Case Study: Phenotypic Screen Deconvolution of Mechanism of Action**
Martin Pettersson, PhD, Associate Research Fellow, Internal Medicine & Medicinal Chemistry, Pfizer

**Encoded Library Technologies to Identify Small- and Medium-Sized Starting Points for Lead Generation**
Jonas V. Schaefer, PhD, Laboratory Head, Encoded Library Technologies, Novartis Institutes for Biomedical Research, Chemical Biology & Therapeutics (CBT), Novartis Pharma AG

**FRAGMENT-BASED APPROACHES**

**Fragment Screening to Assess Target Ligandability**
Fredrik Edfeldt, PhD, Structure, Biophysics & Fragment-Based Lead Generation, AstraZeneca R&D Gothenburg, Sweden

**Target-Based Screens to Find Covalent Fragments to Aid Drug Lead Generation**
Alexander Statsyuk, PhD, Assistant Professor, Department of Pharmacological and Pharmaceutical Sciences, University of Houston

**Fragment-Based Covalent Ligand Screening to Target the Ubiquitin System**
Katrin Rittinger, PhD, Group Leader/Principal Investigator, Molecular Structure of Cell Signaling, The Francis Crick Institute, UK

**Talk Title to be Announced**
Gianni Chessari, PhD, Senior Director, Computational Chemistry and Informatics, Astex Pharmaceuticals

**Presentation to be Announced**
The human kinome is a very large and druggable class of targets with many disease indications. Thus, the kinome targets account for a significant portion of drug discovery efforts. Kinase inhibitor discovery is a very active area as developers explore more deeply into designing immune-modulatory agents as single or combination therapies, tackling chronic disease indications such as inflammation and CNS disorders as well as effectively harnessing allosteric modulators and covalently binding compounds. This year we’ll also be discussing PROTACS and the role of artificial intelligence in kinase inhibitor discovery.

**EMERGING CHALLENGES AND OPPORTUNITIES**

**KEYNOTE PRESENTATION: Kinase Inhibitor Drug Discovery – Challenges and Opportunities for the Next Decade**

Bayard R. Huck, PhD, Vice President, Global Head of Medicinal Chemistry, Discovery Technologies, Global Research & Development, Merck

**Targeted Therapy in Patients with PIK3CA-Related Overgrowth Syndrome**

Guillaume Canaud, MD, PhD, Professor of Medicine, Hôpital Necker Enfants Malades, Paris

**SPR Binding Studies of Small Molecule Inhibitors of PRMT5**

Rebecca Eells, PhD, Senior Research Scientist I, Biophysical Assays, Reaction Biology Corporation

**APPROVED, IN-CLINIC AND ADVANCED INHIBITORS**

**Medicinal Chemistry Discovery of BLU-667, a Potent RET Inhibitor**

Chris De Savi, PhD, Head of Chemistry, Blueprint Medicines

**Targeting PI3K-gamma with IPI-549, a Tumor Macrophage-Reprogramming Small Molecule, in Patients with Advanced Solid Tumors**

Jeffery L. Kutok, MD, PhD, CSO, Infinity Pharmaceuticals, Inc.

**Acalabrutinib – Case Study of a Discovery of a Covalent BTK Inhibitor**

Allard Kaptein, PhD, Executive Vice President – Discovery, Acerta Pharma

**PROTACs AND PROTEIN DEGRADERS**

**Orally Active IRAK4 Degraders for Oncology and Autoimmune Diseases**

Nello Mainolfi, PhD, Founder and CSO, Kymera Therapeutics, Inc.

**Targeted Protein Degradation for Treatment of Cancer**

Michael Plewe, PhD, Vice President, Medicinal Chemistry, Culligen Inc.

**Structure-Based Design of Degraders**

Radoslaw Novak, PhD, Scientist, Laboratory of Dr. Eric Fischer, Department of Cancer Biology, Dana-Farber Cancer Institute, Harvard Medical School
Autophagy and the ubiquitin-proteasome system (UPS) are the two major pathways responsible for protein degradation and maintenance of cellular homeostasis. They consist of well-controlled, selective mechanisms for intracellular protein degradation and turnover. New understanding of the role and molecular mechanisms involved in the dysregulation of autophagy and ubiquitin pathways has revealed its underlying role in cancer, CNS, immunology and other diseases. However, the diversity of substrates and the multi-step processes involved, make it difficult to target these pathways for therapeutic intervention. In recent years, the development of high-quality chemical probes, small molecule modulators, assays and screening platforms have helped identify novel autophagy and ubiquitin targets for drug discovery. Cambridge Healthtech Institute’s conference on Emerging Ubiquitin and Autophagy Targets will bring together a diverse group of chemists and biologists to discuss the promise and challenges in this area of research. This conference will be followed by one that focuses exclusively on targeted protein degradation using proteolysis-targeting chimeric molecules (PROTACs) and other molecular entities for hijacking the ubiquitin system.

**KEYNOTE SESSION: PROBING PPI & PROTEIN DEGRADATION**

**Probes and Assays to Discover E3 Ligase Inhibitors, Activators, and Protein Degraders**

Alexander Statsyuk, PhD, Assistant Professor, Department of Pharmacological and Pharmaceutical Sciences, University of Houston

Use of Tip60 PROTACs in Cereblon-Knockin Mice

Wayne W. Hancock, MD, PhD, Professor, Pathology and Chief of Transplant Immunology, Children’s Hospital of Philadelphia and University of Pennsylvania

Solving a 60-Year Mystery: SALL4 Mediates Teratogenicity as a Thalidomide-Dependent Substrate of Cereblon

Mary Matyskiela, PhD, Principal Scientist, Structural and Chemical Biology, Celgene

**Engineering Protein-Protein Interactions to Probe and Rewire Ubiquitin Signaling**

Wei Zhang, PhD, Assistant Professor, Molecular and Cellular Biology, University of Guelph

**TARGETING UBIQUITIN & AUTOPHAGY FOR ONCOLOGY**

ULK3 Kinase as a Key Regulator of Cancer Associated Fibroblast Conversion

Sandro Goruppi, PhD, Instructor in Dermatology, Harvard Medical School, Cutaneous Biology Research Center, Massachusetts General Hospital

Drugging the Fbw7 E3 Ligase with a Combined Computational and Fragment-Based Approach

Carles Galdeano, PhD, Serra Hunter Professor, Department of Pharmacy and Pharmaceutical Technology and Physical Chemistry, University of Barcelona

**Targeting Autophagy in Cancer Treatment**

Andrew Thorburn DPhil, Chair, Department of Pharmacology, University of Colorado, School of Medicine

**UBIQUITIN TARGETS & MODULATORS FOR CNS**

Potent Small Molecule Parkin Activators for Treating Neurodegenerative Diseases

Suresh Kumar, PhD, Senior Director R&D, Progenra Inc.

A Neurodevelopmental Disorder Caused by USP7 Haploinsufficiency

Ryan Potts, PhD, Associate Member, Department of Cell and Molecular Biology, St. Jude Children's Research Hospital

Presentation to be Announced
The ubiquitin-proteasome system (UPS) is a well-controlled, selective mechanism for intracellular protein degradation and turnover, and it acts as a key regulator in cancer, CNS and other diseases. However, the multi-step processes involved, and the diversity of substrates makes it difficult to target the UPS. Proteolysis-targeting chimeric molecules (PROTACs) are a group of engineered hetero-bifunctional chemical entities that bind to the target and ligase to mediate ubiquitination and subsequent protein degradation. Like PROTACs, other chemical entities and molecular glues, using varied mechanisms-of-action, are being developed to trigger targeted protein degradation. These approaches have a lot of potential in seeking out previously "undruggable" protein targets for applications in drug discovery and for developing new therapeutic modalities. However, some challenges do exist in terms of stability, biodistribution and penetration of these molecules in vivo. Cambridge Healthtech Institute’s conference on PROTACs and Targeted Protein Degradation will bring together a diverse group of chemists and biologists to discuss the prospects, as well as, the challenges underlying strategies for targeted protein degradation. This will be preceded by a conference that discusses emerging ubiquitin and autophagy targets for therapeutic intervention.

**IMPROVING SPECIFICITY & SELECTIVITY OF DEGRADATION**

**FEATURED PRESENTATION: Targeting the Undruggables Using PROTACs**
Shaomeng Wang, PhD, Warner-Lambert/Parke-Davis Professor of Medicine, Pharmacology and Medicinal Chemistry, Co-Director, Molecular Therapeutics Program and Director, Cancer Drug Discovery Program, University of Michigan

**Computational Design of PROTACs**
Ye Che, PhD, Head of Computational Design, Discovery Sciences, Pfizer, Inc.

**Structure-Based Design of Degraders**
Radoslaw Novak, PhD, Scientist, Laboratory of Dr. Eric Fischer, Department of Cancer Biology, Dana-Farber Cancer Institute, Harvard Medical School

**In silico Modeling of PROTAC-Mediated Ternary Complexes for Predicting Protein Degradation**
Michael Drummond, PhD, Scientific Applications Manager, Chemical Computing Group

**IDENTIFYING NEW LIGANDS & TARGETS FOR DEGRADATION**

**Screening and Identification of Novel PROTAC Ligase Ligands**
Markus Queisser, PhD, Scientific Leader, Protein Degradation DPU, R&D Future Pipelines Discovery, GlaxoSmithKline

**Establishing a Platform for High-Throughput Identification and Profiling of Target Degraders**
James Robinson, PhD, Associate Principal Scientist, Discovery Sciences, AstraZeneca

**Targeted Protein Degradation for Treatment of Cancer**
Michael Plewe, PhD, Vice President, Medicinal Chemistry, Cullgen Inc.

**Targeted Degradation of IRAK4 Protein Via Heterobifunctional Small Molecules for Treatment of MYD88 Mutant Lymphoma**
Nan Ji, PhD, Executive Director, Head of Chemistry, Kymera Therapeutics

**OVERCOMING EXISTING TRANSLATIONAL CHALLENGES**

**Translating Cellular Degradation Insights to In vivo Models**
Stewart Fisher, PhD, CSO, C4 Therapeutics

**Novel Strategies for Oncoprotein Degradation**
Willem den Besten, PhD, Senior Scientific Researcher, Genentech

**Antibody-Mediated Delivery of Protein Degraders**
Peter Dragovich, PhD, Staff Scientist, Discovery Chemistry, Genentech

**EXPLORING NEW APPROACHES & TARGETS**

**New Ubiquitin Ligases and Novel PROTAC Approaches**
Tauseef R. Butt PhD, President and CEO, Progenra Inc.

**E3 Ubiquitin Ligases for PROTACs Discovery**
Matthieu Schapira, PhD, Principal Investigator, Structural Genomics Consortium and Associate Professor, Pharmacology & Toxicology, University of Toronto
Non-alcoholic steatohepatitis (NASH) is a disease whose incidence is rising and is related to an accumulation of fat in the liver that can lead to its dysfunction due to excessive inflammation and fibrosis. No medical treatments yet exist for NASH but it’s a hopeful time for the field because several drug candidates are in phase 2 and 3 clinical trials. New NASH drug targets are also being revealed due to progress in the fields of NASH contributors: metabolic dysfunction, inflammation and fibrosis. Significant challenges remain, however, such as the need for non-invasive biomarkers and better models for the disease. At Cambridge Healthtech Institute’s Targeting NASH conference, join academic and industry investigators to learn and discuss with one another drug development progress, challenges and solutions in the arena of treating fatty liver disease.

NASH DRUG CANDIDATES

FEATURED PRESENTATION: MGL-3196, a β-selective Thyroid Hormone Receptor (THR) Agonist
Rebecca Taub, MD, CMO & Executive Vice President, R&D, Madrigal Pharmaceuticals

FEATURED PRESENTATION: Parallel Development of Elafibranor and an in vitro Diagnostic (IVD) to Identify Patients for Drug Therapy
Dean Hum, PhD, CSO and COO, Genfit

Combinations with ACC Inhibitor for Treating NASH
Archana Vijayakumar, PhD, Research Scientist, Fibrosis, Gilead

TARGETING INTEGRIN αVβ1 FOR THE TREATMENT OF LIVER FIBROSIS ASSOCIATED WITH NASH
Eric Lefebvre, PhD, CMO, Pliant Therapeutics
Presentation to be Announced

Targeting Intermittent αVβ1 for the Treatment of Liver Fibrosis Associated with NASH
Eric Lefebvre, PhD, CMO, Pliant Therapeutics
Presentation to be Announced

NASH DRUG DEVELOPMENT CHALLENGES

Are Circulating Fibrosis Biomarkers Useful in NASH Drug Development?
Saurabh Gupta, PhD, Director, Translational Medicine and Early Clinical, Takeda Pharmaceuticals International Co.

Federal Landscape for NASH Patients and Products
Barrett Thornhill, JD, Executive Director, NASH Alliance

Drug Development for NASH Cirrhosis
Peter Traber, MD, Partner, Alacrita Consulting; Adjunct Professor of Medicine, University of Pennsylvania School of Medicine

NEW DRUG TARGETS OR EARLIER STAGE COMPOUNDS FOR LIVER DISEASE

Targeting Fructose Metabolism: Update on KHK inhibitor for NASH
Kendra K. Bence, PhD, Senior Director, Metabolism, Internal Medicine Research Unit (IMRU), Pfizer Inc.

Targeting GLP-1 for NASH
Karin Conde-Knape, PhD, Corporate Vice President, Cardiovascular and Liver Disease Research, Novo Nordisk
The incidence of fibrosis, a normal part of wound healing, but also, under persistent inflammation or injury, a disease process that contributes to organ damage, has been steadily increasing over the past decade. This could be partly due to the percentage of elderly and thus chronic disease and inflammation rising in the population. Activity in the drug development arena for fibrosis has also grown. Much of the progress has been spurred by the fields of autoimmunity and inflammation which are revealing common mechanisms for fibrosis across the organs where fibrosis is most frequently observed: lung, liver, heart, kidney and skin. The approval of two drugs for a form of lung fibrosis, idiopathic fibrosis (IPF), has also accelerated progress in the field. However it is likely that multiple therapeutic approaches for treating fibrosis will be necessary because of the many contributors to the condition. For this reason, CHI’s Inaugural Targeting Fibrosis conference aims to convene the leading fibrosis researchers from academics and industry working across organ types, as well as immunology and inflammation investigators to share progress and shape future directions in this burgeoning field of new drug discovery.

INTEGRINS AS FIBROSIS TARGETS

Targeting Integrins for Fibrotic Diseases
Liangsu Wang, PhD, Vice President, Head of Biology, Morphic Therapeutic

Targeting Integrins for Fibrosis: Updates on Drug Leads and Candidates
Ji Zhang, PhD, Scientist, Cardiometabolic & Fibrosis Drug Discovery, Merck Research Labs

IDL-2965: A Selective, Highly Potent, Clinical-Stage, Oral Integrin Antagonist for Treatment of Chronic Fibrosis
Karl Kossen, PhD, Senior Vice President, Translational Science, Indalo Therapeutics

Established and Emerging Integrin Targets and Treatments for Fibrosis
Scott Turner, PhD, Vice President, Translational Sciences, Pliant Therapeutics

EMERGING FIBROSIS TARGETS (NON-INTEGRINS)

Lysyl Oxidase and Lysyl Oxidase-Like Inhibitors for the Direct Treatment of Fibrosis
Jonathan Foot, PhD, Senior Research Scientist, Drug Discovery, Pharmaxis Ltd.

Discovery and Development of NTZ as an Anti-Fibrotic Agent in NASH
Suneil Hosmane, PhD, Executive Vice President, Strategic Development, Genfit

LUNG FIBROSIS

Cell Senescence and Senolytic Strategies in IPF
Cory M. Hogaboam, PhD, Professor, Department of Medicine, Cedars-Sinai Medical Center

CHALLENGES IN ANTI-FIBROTIC DRUG DEVELOPMENT

Developing Translational Tools for the Development of Anti-Fibrotic Therapies
Melanie Ruzek, PhD, Principal Scientist, Translational Immunology, Abbvie

Talk Title to be Announced
Brad Geddes, PhD, Senior Director, Innate Immunity Research Unit, GSK

Attendees can gain further exposure and networking by presenting their work in the poster sessions. Dedicated poster sessions occur in the Exhibit Hall. Network, collaborate and enhance your time out of the office.

Reasons you should present your research poster at this conference:

- Your poster will be available to 1,300+ delegates
- You’ll automatically be entered into our poster competition where two winners each will receive an American Express Gift Certificate
- $50 off your registration fee
- Your research will be seen by leaders from pharmaceutical, biotech, academic and government institutes

Deadline: August 16, 2019
The paradigm of immuno-oncology: figuring out and then circumventing how cancer cells evade the immune system, has been validated by a few high-impact therapeutic successes in the past few years and has thus spurred a flurry of more drug discovery and development in the field. However much of the current pharmaceutical activity is focused on a few cell surface drug targets and their inhibition by biologics-based therapies. CHI’s Inaugural Immuno-Oncology: Emerging Targets and Therapeutics conference will cover newer cell surface targets in the IO field that are being investigated for modulation by biologics as well as by other modalities, especially small molecules that have the potential to be oral-based medicines. We will also cover drug targets that are intracellular, thus only accessible to small molecules or newer, non-biologic modalities. Please join us to stay abreast of this rapidly progressing field.

RE-ACTIVATING THE INNATE IMMUNE SYSTEM AGAINST CANCER

Using Synthetic Biology to Target Innate Immunity in the Tumor Microenvironment
Jose M. Lora, PhD, Vice President, Research, Synlogic, Inc.

Discovery of STING Agonist with Systemic Anti-Tumor Response
Scott Pesiridis, PhD, Associate Fellow, Scientific Leader—Discovery Biology, GSK

Characterization of Novel STING Ligands
Gottfried Schroeder, PhD, Senior Scientist, Department of Pharmacology, Merck Research Labs Boston

Cyclic Dinucleotides that Self-Assemble into Nanostructures as Potent STING Agonists for Immuno-Therapy of Cancer
Radhakrishnan P. Iyer, PhD, CSO, Spring Bank Pharmaceuticals

TARGETING IMMUNO-METABOLISM TO REMODEL THE TUMOR MICROENVIRONMENT (TME)

Targeting the Adenosine Immunosuppressive Pathway
Daniela Cipolletta, PhD, Investigator III, Exploratory ImmunoOncology, Novartis

Antagonists of the Adenosine 2a Receptor (A2AR) to Reverse Tumor Suppression in the TME
Alwin Schuller, PhD, Senior Principal Scientist/Team Lead, Oncology, IMED Biotech Unit, AstraZeneca

Dual Inhibitors of CD73 and A2AR for Effective Suppression of the Adenosine Signaling Pathway
Murali Ramachandra, PhD, CSO, Aurigene Discovery Technologies Limited

Targeting the Dopamine Receptor for Immuno-Oncology
Joshua Allen, PhD, Senior Vice President, Research & Development, Oncoceutics

INTERACTIVE BREAKOUT DISCUSSION GROUPS

Join a breakout discussion group. These are informal, moderated discussions with brainstorming and interactive problem solving, allowing participants from diverse backgrounds to exchange ideas and experiences and develop future collaborations around a focused topic. Details on the topics and moderators are available on the conference website.
G-protein coupled receptors (GPCRs), are proteins that span the cell membrane seven times and relay signals to inside the cell when bound by ligands specific to them such as certain hormones or neurotransmitters. Because GPCRs play roles in many physiological processes, they have been the target of medical therapeutics for decades. Their complexities in signaling though are still being unraveled and starting to be exploited for more targeted therapies. For example, therapeutics with fewer side effects are being sought by finding biased ligands of specific GPCRs that will activate or block the pathway of medical interest while not initiating less desirable signaling cascades that the GPCR also controls. Progress in biophysical techniques and cryo-electron microscopy have also aided targeted drug discovery against GPCRs by enabling biosensor-based screens or by helping elucidate structural features of GPCRs that guide structure-based drug design. Join colleagues and experts in the GPCR field from academics and industry at CHI’s well established GPCR-Based Drug Discovery conference to review advances in the field and discuss cutting edge topics impacting drug development against this very medically relevant class of drug targets.

BIASED AGONISTS AND ALLOSTERISM

Bias and Beyond: Challenges and Opportunities in GPCR Drug Development
Ian James, PhD, Associate Director, Clinical Operations, Trevena Inc.

De novo Design of Gα Mimetics: Generalizable Tools for Allosteric Control of G Protein-Coupled Receptors
Christopher D. Bahl, PhD, Head of Protein Design, Institute for Protein Innovation

Structural Insights into Binding Specificity, Efficacy and Bias of Salmeterol, a β2 Adrenergic Receptor Partial Agonist
Matthieu Masureel, PhD, Postdoctoral Research Fellow, Kobilka Lab, Department of Molecular and Cellular Physiology, Stanford University

BIOPHYSICAL APPROACHES FOR GPCRs AND MEDICINAL CHEMISTRY CASE STUDIES

Lessons Learned from Various GPCR Lead Optimization Projects
Chi Sum, PhD, Senior Research Investigator, Lead Discovery and Optimization, Bristol Myers Squibb & Co.

First Orally Bioavailable Antagonist of the Neuropeptide Y Receptor 2 (NPY2R)
Pierre Wasnaire, PhD, Senior Scientist, Pharmaceuticals R&D, Bayer AG

Nanodiscs for GPCRs
Daniel Oprian, PhD, Professor, Biochemistry, Brandeis University

NON-CLASSICAL SIGNALING

Understanding the Consequences of GPCR Dimerization
Terry Hébert, PhD, Professor, Department of Pharmacology and Therapeutics, McGill University

Non-Traditional Aspects of Gαs: Interaction with Ubiquitin and Regulation of GPCR Endosomal Sorting
Christine Lavoie, PhD, Professor, Department of Pharmacology and Physiology, University of Sherbrooke

GPCR IN DISEASE

GPR84: Can Context-Dependent Signaling Inform Therapeutic Direction?
Carleton Sage, PhD, Vice President, Computational Sciences, Beacon Discovery

Targeting Neurotransmitter Receptors for Cancer
Varun Vijay Prabhu, PhD, Associate Director, Research & Development, Oncoceutics

Using Smart Drug Discovery Software to Enhance Collaboration and Manage Disperse Assay Data
Robert Thorn, PhD, Customer Engagement Scientist, Collaborative Drug Discovery, Inc.

Luncheon Presentation to be Announced
Membrane-bound proteins are attractive drug targets for antibodies and other protein scaffolds, but for the field to advance, fundamental challenges in optimizing antigen quality and presentation, discovery methodologies, protein engineering and target identification must be resolved. This two-part meeting provides a forum in which discovery biologists and protein engineers can come together to discuss next generation strategies and technologies that will allow antibody-based therapeutics directed against GPCR and ion channel targets to advance into the clinic and beyond. Part 1 will focus on best practices for antigen preparation, new approaches to antibody generation and the important role of structural modeling and analysis — and track early stage, preclinical and clinical progress in this space.

INNOVATION IN TARGETING MEMBRANE PROTEINS

Novel Biologies and Modalities for Targeting Membrane Proteins
Zhiqiang An, PhD, Professor, Chemistry; Director, Texas Therapeutics Institute, University of Texas Health Science Center at Houston

Clinical and Preclinical Progress in Targeting Membrane Proteins: What is Working (and Not)?
Catherine Hutchings, PhD, Independent Consultant, United Kingdom

KEYNOTE PRESENTATION: GPCRomics: “New” GPCRs that Expand their Clinical Utility as Drug Targets
Paul Insel, MD, Professor, Pharmacology, University of California, San Diego

ANTIGEN GENERATION AND OPTIMIZATION

Using Proteoliposome to Validate the Functionality of Purified Membrane Proteins
Zhenwei Su, PhD, Senior Scientist, Pfizer

STRATEGIES FOR GENERATING ANTIBODIES AGAINST MEMBRANE PROTEINS

Talk Title to be Announced
Nikša Kastrapeli, PhD, Director, Lead Identification, Biotherapeutics Molecule Discovery, Boehringer Ingelheim

Talk Title to be Announced
Rajesh Vij, PhD, Senior Scientific Researcher, Antibody Engineering, Genentech

High-Quality Antibodies for Therapeutic Applications
Vera Molkenthin, PhD, Chief Scientist, AbCheck

Single-Domain Antibody Fragments as Tools to Interrogate GPCR Structure and Function
Andrew C. Kruse, PhD, Associate Professor, Dept. of Biological Chemistry and Molecular Pharmacology, Harvard Medical School

Single-Domain Antibody Libraries for Difficult Membrane Targets
Jamshid Tanha, PhD, Research Officer, National Research Council, Canada

STRUCTURAL BIOLOGY

Applications of Cryo-EM for Discovery and Development of Antibodies against Membrane Protein Targets
Xinchao Yu, PhD, Group Leader, Cryo-EM, Amgen

How Native-MS can Complement Xray and CryoEM Studies in Understanding the Interactions of Membrane Proteins with Lipids and Proteins
Arthur Laganowsky, PhD, Assistant Professor, Chemistry, Texas A&M University

PANEL DISCUSSION

Membrane Protein Tools and Technologies – What is Working and What Isn’t?
Moderator: Kevin Heyries, PhD, Co-Founder, AbCellera, Canada

Please click here to continue to the agenda for Antibodies Against Membrane Proteins – Part 2
Part 2 explores developments at the discovery and screening stages and offers focused sessions on the GPCR and ion channel target classes.
Membrane-bound proteins are attractive drug targets for antibodies and other protein scaffolds, but for the field to advance, fundamental challenges in optimizing antigen quality and presentation, discovery methodologies, protein engineering and target identification must be resolved. This two-part meeting provides a forum in which discovery biologists and protein engineers can come together to discuss next generation strategies and technologies that will allow antibody-based therapeutics directed against GPCR and ion channel targets to advance into the clinic and beyond. Part 2 explores developments at the discovery and screening stages and offers focused sessions on each of these target classes.

**THERAPEUTIC DEVELOPMENT FOR GPCRs**

- **Talk Title to be Announced**  
  Jan Steyaert, PhD, Professor, Structural Biology, Vrije Universiteit Brussels (VUB), Belgium
- **Talk Title to be Announced**  
  Trevor Wilkinson, PhD, Associate Director, Antibody Discovery and Protein Engineering, AstraZeneca, United Kingdom
- **Development of Therapeutic Antibodies Targeting CSaR1**  
  Brian Booth, PhD, Senior Scientist, Drug Discovery, Visterra

**THERAPEUTIC DEVELOPMENT FOR ION CHANNELS**

- **Controlling Membrane Proteins with Photopharmacology**  
  Dirk Trauner, PhD, Professor, Chemistry, NYU
- **Targeting Kv1.3 with Biologics: Venom Peptides, Antibodies and Things in Between**  
  Heike Wulff, PhD, Associate Professor, Pharmacology, School of Medicine, University of California, Davis
- **Modulating the Function of the P2X7 Ion Channel with Antibodies and Nanobodies**  
  Friedrich Koch-Nolte, PhD, Professor, Laboratory of Molecular Immunology, University Medical Center Hamburg-Eppendorf, Germany
- **Automation of Ion Channel Recordings**  
  Jen Pan, PhD, Director, Translational Neurobiology, Stanley Center at the Broad Institute

**SCREENING AND CHARACTERIZATION**

- **Multiple Discovery Campaigns to Generate a Library of Novel Antibiotics to Study the Roles of its Extracellular Loop Domains**  
  Steven Rutherford, PhD, Scientist, Genentech
- **Cell-Based Assays to Characterize Ligands for Chemokine Receptor CXCR4**  
  Tom Van Loy, PhD, Researcher, Rega Institute, K.U. Leuven, Belgium
- **Talk Title to be Announced**  
  John Blankenship, PhD, Senior Investigator and Group Leader, Library Technologies, Novartis
- **High Throughput Functional Screening**  
  Mariana Lemos-Duarte, PhD, Postdoctoral Researcher, Icahn School of Medicine at Mount Sinai

Please click here to return to the agenda for Antibodies Against Membrane Protein Targets – Part 1

Part 1 will focus on best practices for antigen preparation, new approaches to antibody generation and the important role of structural modeling and analysis – and track early stage, preclinical and clinical progress in this space.

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**DISCOVERY STRATEGIES**

- **Delivering the Best Therapeutic Antibody Molecule by Combination of In Vivo Antibody Discovery with In Vitro Affinity Optimization**  
  Agnieszka Kielczewska, Senior Scientist, Antibody Discovery, Amgen, Canada
- **Lead Antibody Identification Using Rabbit B Cell Cloning Platform**  
  Tomoyuki Igawa, PhD, Research Head, Chugai Pharmaceuticals, Singapore
- **Uncovering Novel Receptor Targets and Assessing Target Specificity against Human Membrane and Secreted Proteins**  
  Alex Kelly, US Business Development Manager, Retrogenix Limited

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- Retrogenix
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Please click here to return to the agenda for Antibodies Against Membrane Protein Targets – Part 1
Discovery on Target’s Antibody Forum offers R&D research scientists the opportunity to participate in a unique meeting format that encourages discussion and the exchange of best practices on the application of new science and technology for the discovery and development of novel biotherapeutics. The meeting will feature short presentations, panel discussions, facilitated roundtables and an audience layout that allows a sharing of ideas and experiences. Part 1 will focus on the discovery stage, offering ideas on how to accelerate and optimize these steps, emerging discovery technologies and the integration of artificial intelligence and machine learning.

**OPTIMIZING THE DISCOVERY WORKFLOW**

**KEYNOTE PRESENTATION:** Talk Title to be Announced  
Partha S. Chowdhury, PhD, Senior Director and Head, Antibody Discovery, Sanofi Genzyme

Functional Interrogation of Antibody Repertoire at Single Cell Level  
Yuxing Cheng, PhD, Principal Scientist, Antibody Discovery, Pfizer

Integrated Antibody Discovery Platforms  
Jane Seagal, PhD, Senior Scientist, Biologics Generation Group, AbbVie Bioresearch Center

**DISCOVERY WORKFLOW CASE STUDIES**  
Talk Title to be Announced  
Irwin Chen, PhD, Principal Scientist, Selection and Platform Engineering, Amgen

**LEVERAGING COMPUTATIONAL APPROACHES IN ANTIBODY WORKFLOW: DISCOVERY, DESIGN AND ENGINEERING**  
Luke Robinson, PhD, Associate Director, Research, Visterra

High-Throughput Production of Antibodies Using Yeast and Mammalian Cells  
Rebecca Hurley, Ph.D., Scientist, High Throughput Expression, Adimab

Talk Title to be Announced  
Speaker to be Announced, AbCellera

**PANEL DISCUSSION**

Emerging Discovery Technologies  
Moderator: Andrew Bradbury, PhD, MB BS (MD), CSO, Specifica, Inc.

**MACHINE LEARNING AND AI FOR ANTIBODY AND PROTEIN ENGINEERING**

Transitioning from Traditional Computational Modeling to Machine Learning and AI  
Enkelejda Miho, PhD, Professor, Digital Life Sciences, FHNW University of Applied Sciences and Arts Northwestern Switzerland, Switzerland

**HIGH THROUGHPUT FUNCTIONAL SCREENING**

Towards Pharmacokinetic Measurements of Hundreds of Individual Multi-Specific Binding Proteins in a Single Experiment  
Pascal Egloff, PhD, Project Leader, University of Zurich, Switzerland

**DATA MINING IN DISCOVERY RESEARCH – LEARNING FROM THE PAST**

Jonas Lee, PhD, Scientist, Biologics, Amgen

Immunizing Divergent Species as a MAB Discovery Strategy for Difficult Targets  
Ross Chambers, PhD, Vice President, Antibody Discovery, Integral Molecular

**PANEL DISCUSSION**

Membrane Protein Tools and Technologies – What is Working and What Isn’t?  
Moderator: Kevin Heyries, PhD, Co-Founder, AbCellera, Canada

Please click [here](#) to continue to the agenda for Antibody Forum – Part 2

Part 2 picks up at the transition from Discovery into Development, examining the screening approaches used for candidate selection, engineering problem solving and approaches for challenging molecules and new modalities.
Discovery on Target’s Antibody Forum offers R&D research scientists the opportunity to participate in a unique meeting format that encourages discussion and the exchange of best practices on the application of new science and technology for the discovery and development of novel biotherapeutics. The meeting will feature short presentations, panel discussions, facilitated roundtables and an audience layout that allows a sharing of ideas and experiences. Part 2 picks up at the transition from Discovery into Development, examining the screening approaches used for candidate selection, engineering problem solving and approaches for challenging molecules and new modalities.

**PART 2: ENGINEERING AND DEVELOPMENT**

**TRANSITIONING FROM DISCOVERY TO DEVELOPMENT**

Using Massive Mutational Scanning for Integrative Structure Determination, Binding Site Characterization, and Conformational Engineering of Dynamic Proteins

Erik Procko, PhD, Assistant Professor, Biochemistry, University of Illinois at Urbana-Champaign

Paratope Refinement to Mitigate Antibody Polyspecificity

Jonny Finlay, PhD, CSO, Ultrahuman, United Kingdom

Emerging Technologies to Evaluate Developability and Manufacturability

Thomas Jostock, PhD, Science and Technology Lead, Novartis, Switzerland

Case Study of AbbVie Developability Methods

Noah Pefaur, PhD, Senior Scientist, AbbVie

Creating a New Paradigm for Biotherapeutics: Attributes More Potent than Potency

Vishal Toprani, PhD, Scientist, Pharmaceutical Development, Alexion Pharmaceuticals, Inc.

**ENGINEERING PROBLEM SOLVING**

Engineering Human Anti-HIV Broadly Neutralizing Antibodies for Therapeutic Development

Nathan Thomsen, PhD, Senior Research Scientist, Gilead Sciences

**KEYNOTE PRESENTATION:** Engineering Approaches for Improving Antibody Biophysical Properties

Peter M. Tessier, PhD, Professor, Pharmaceutical Sciences and Chemical Engineering, University of Michigan

**DEVELOPMENT CHALLENGES OF NEW MODALITIES AND COMPLEX BIOLOGICS**

The Application of Bispecific Antibodies in Treatment for Neurodegenerative Diseases

Zhi (Jay) Guo, PhD, Senior Scientist, Global Protein Sciences, AbbVie Bioresearch Center

Targeting the STn Glycan in Ovarian Cancer using a Highly Specific anti-STn Antibody Drug Conjugate

Jeff Behrens, PhD, President and CEO, Siamab Therapeutics

**PANEL DISCUSSION**

Development Stage Problem Solving

Moderator: Colby Souders, PhD, CTO, Abveris

Presentation to be Announced

**Please click here to return to the agenda for Antibody Forum – Part 1**

Part 1 will focus on the discovery stage, offering ideas on how to accelerate and optimize these steps, emerging discovery technologies and the integration of artificial intelligence and machine learning.