**BOOK BEFORE FRIDAY, JUNE 21 & SAVE UP TO $700**

**August 13-15, 2019** | Boston, MA, USA
**www.b3dd-summit.com**

# B3DD
## Blood-Brain Barrier Drug Delivery

# Addressing the Translational Challenges of Effective & Safe Delivery of CNS Biologic Drug Candidates

## Your 18 Expert Speakers Include:

**Mathias Schmidt**
Chief Executive Officer
**ArmaGen**

**Thomas Cameron**
Associate Director, Biologics Drug Discovery
**Biogen**

**Andrew Goodearl**
Senior Director, Biologics Discovery Group
**AbbVie**

**Allan Jensen**
Senior Director, Biotherapeutic Discovery
**Lundbeck**

**Robert Bell**
Associate Research Fellow
**Pfizer**

"Impressive line-up of industry speakers"
**Sean M. Smith, Executive Director, Merck**

**Tel:** +1 617 455 4188 **Mail:** info@hansonwade.com

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# The Blood-Brain Barrier Drug Delivery Summit (B3DD)

## Overcome Your Translational Challenges of Delivering Drugs Successfully to the CNS

With an emphasis on large molecules and built with the field's thought-leaders from the likes of **Armagen**, **Denali**, **Biogen** and **Genentech**, **B3DD** is the first industry-dedicated meeting on drug delivery for CNS drug developers and will enable delegates to:

- Network with the other leading minds in CNS drug delivery to **form connections for future partnerships**
- Discover the latest advances in CNS drug delivery technology to **identify potential clinical success**
- Discuss the translational challenges hindering drug developers working on **different drug delivery approaches**
- Share their research with their peers at the Poster Session to **establish their work in the field**

Join 70+ CNS drug delivery experts at **B3DD** to help you overcome your translational challenges and successfully deliver your candidates to their CNS targets.

## Hear what other Hanson Wade attendees have to say:

"Outstanding conference"

Richard Wyse, Director of R&D, **The Cure Parkinson's Trust**

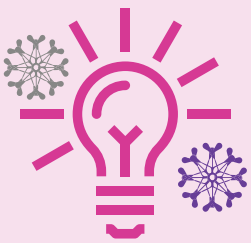
"Excellent networking and learning opportunity for pharma scientists"

Matthew Kennedy, Director, **Merck**

"Excellent conference with a very good and diverse set of speakers and topics"

Jim Cassella, Chief Development Officer, **Concert Pharmaceuticals**

## Join your peers at B3DD to:

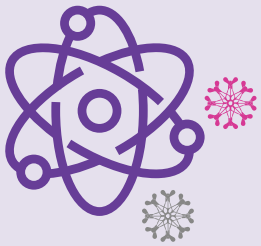


**Explore** the preclinical models available to assess their predictability and **prevent clinical failure**

**Discuss** the success of different CNS drug delivery approaches and evaluate toxicity in preclinical research to **de-risk clinical trials**

**Assess** methods for quantifying drug target exposure to **improve the technology and establish more accurate strategies**

**Evaluate** the different technologies in development for CNS delivery to **identify success**



**Determine** effective and safe dosages for **effective treatment and maintained target exposure**

"Exceptional speakers!Well represented across Pharma / Biotech / Academics/ Service providers"

Linda Hedley, Business Development Consultant, **SRI International**



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# Your 18 Expert Speakers

**Allan Jensen**
Senior Director, Biotherapeutic Discovery
**Lundbeck**

**Andrew Goodearl**
Senior Director, Biologics Discovery Group
**AbbVie**

**Björn Bauer**
Associate Professor
**University of Kentucky**

**Choi-Fong Cho**
Instructor in Neurosurgery
**Harvard Medical School**

**Danica Stanimirovic**
Director, Translational Bioscience Department, Human Health Therapeutics Research Centre
**National Research Council of Canada**

**Frank Walsh**
Chief Executive Officer
**Ossianix**

**Graham Marsh**
Scientist I, Translational Biology
**Biogen**

**Hao Cai**
Associate Scientist
**Genentech**

**Jordi Serrats**
Associate Director
**Takeda Pharmaceuticals**

**Larry Brown**
Executive Vice President & Chief Scientific Officer
**Noveome Biotherapeutics**

**Mario Mezler**
Principle Scientist
**AbbVie**

**Mathias Schmidt**
Chief Executive Officer
**ArmaGen**

**Nathan Yoganathan**
President & Chief Scientific Officer
**KalGene Pharmaceuticals**

**Nir Lipsman**
Neurosurgeon & Scientist
**Sunnybrook Health Sciences Centre**

**Robert Bell**
Associate Research Fellow
**Pfizer**

**Sophie Parmentier Batteur**
Director, Neurodegenerative Diseases Discovery
**Merck**

**Susan Rosenbaum**
Founder, Chairman & Chief Executive Officer
**Lauren Sciences LLC**

**Thomas Cameron**
Associate Director, Biologics Drug Discovery
**Biogen**

# Pre-Conference Workshops Tuesday, August 13

## Workshop A

### The Biology of the BBB - Disease & Drug Delivery

**9:00-12:00**

The greatest challenge for many CNS drug developers is enabling drugs to cross the BBB. Recent studies show that the BBB is affected by brain disorders and itself plays a role in causing brain disease. Therefore, understanding BBB function is critical for devising new therapeutic strategies to enhance brain drug delivery, improve brain protection, and treat brain disorders.

**By attending this workshop, you will:**

- Learn about the role of the BBB in health and disease
- Evaluate which conditions we require drug access to the CNS and for which of these the BBB is compromised
- Understand how the disorders effect on the BBB may affect therapeutics crossing it

**Workshop Leader**
**Björn Bauer**
Associate Professor
**University of Kentucky**

Dr. Bauer's research focus is on the regulation of blood-brain barrier function in epilepsy, Alzheimer's disease and brain cancer

## Workshop B

### Accessing the CNS: Evaluating BBB Technologies for Drug Delivery to the CNS

**12:30-3:30**

Following the successful discovery of a valid therapeutic target for CNS indications, drug delivery to the CNS remains a significant challenge. In addition to direct injection into the CNS, several approaches have been developed to allow therapeutics to cross the BBB.

**Attend this workshop to:**

- Understand the anatomy, function and pathology of the BBB in health and CNS diseases
- Evaluate different strategies for crossing the BBB and alternative approaches to deliver biotherapeutics, gene therapy vectors and oligonucleotides to the CNS
- Assess the pros and cons of existing preclinical model systems used to support BBB research
- Discuss the translational challenges and potential pitfalls in developing BBB-crossing drug delivery technologies
- Observe lessons learned from historical and emerging clinical case studies related to BBB translational research

**Workshop Leader**
**Robert Bell**
Associate Research Fellow,
Rare Disease Research Unit
**Pfizer**

Robert built a preclinical research lab at Pfizer focused on vascular targets in CNS disorders and drug delivery across the blood-brain barrier. He now leads the Gene Therapy Translational Sciences In Vivo Biology Group.

# Conference Day One
# Wednesday, August 14

**8.00** **Chair's Opening Remarks**

## Developing Technologies to Enable Antibodies to Cross the BBB

**Thomas Cameron**
Associate Director, Biologics Drug Discovery
**Biogen**

**8.15** **Protein Engineering of FC5 for Enhanced & Sustained CNS Exposure of Neuro-therapeutic Antibodies**

- FC5 is a single-domain antibody with increased BBB penetration
- Long-term in vivo stability of FC5 was optimized by a combined analytical and protein engineering approach
- Humanized and stabilized FC5-mAb fusion proteins demonstrate enhanced and sustained CNS exposure in rats and NHP

**Mathias Schmidt**
Chief Executive Officer
**ArmaGen**

**8.45** **Clinical Efficacy of Antibody-enzyme Fusion Proteins as Carrier Platform to Transport Lysosomal Enzymes Across the BBB for the Treatment of Mucopolysaccharidosis Type I**

- Reviewing the general misperceptions and challenges of bringing biotherapeutics across the BBB that led to clinical failures
- Overview of various antibody-meditated carrier platforms to bring large molecules across the blood-brain-barrier
- Application of an insulin-receptor-mediated carrier technology using antibody-enzyme fusion proteins for the first time demonstrates the safe and efficacious delivery of a biotherapeutic across the BBB and improved the neurocognitive outcome in pediatric patients with severe untransplanted MPS I

**9.15** **Speed Networking**

This session is the ideal opportunity to meet face-to-face with the key thought leaders working in the CNS field. Specifically designed to connect you with new contacts from the most active companies in the field, the renowned Speed Networking session will be one of the most valuable hours you will spend at B3DD.

**10.00** **Morning Refreshments**

## Modelling the BBB to Predict Drug Delivery Efficiency

**Choi-Fong Cho**
Instructor in Neurosurgery
**Harvard Medical School**

**11.00** **BBB Organoids: A Model for Investigating CNS Drug Delivery**

- Developing an organoid model to mimic the BBB in culture for high-throughput screening and analysis of brain-penetrant drugs
- Discovering the techniques required to culture and maintain BBB organoids
- Describing two detection methods that can be used to analyze drug penetration into the organoids: confocal fluorescence microscopy and mass spectrometry imaging

**Graham Marsh**
Scientist I, Translational Biology
**Biogen**

**11.30 Assessing Microphysiological Models of the BBB**

- Building models of the BBB that recapitulate physiological phenotypes
- Screening drugs in a relevant human model gives us the highest probability of success when testing therapeutics

**12.00 Lunch & Networking**

## Measuring Target Exposure to Assess Drug Delivery Method Success

**Mario Mezler**
Principle Scientist
**AbbVie**

**1.00 Employing *in vivo* Microdialysis & Microperfusion Methods to Understand Brain Disposition of Biologics for the Treatment of CNS Disorders**

- Establishing a quantitative brain microdialysis setup
- Assessing the kinetics of antibody brain disposition
- Looking at pharmacokinetics (PK) and target engagement examples and reviewing the data interpretation

**Danica Stanimirovic**
Director, Translational Bioscience
Department, Human Health Therapeutics Research Centre
**National Research Council of Canada**

**1.30 Reviewing Pharmacodynamic Models for Evaluating Brain Exposure of Bi-specific Antibodies**

- Reviewing the design and engineering principles of brain-targeting bi-specific antibodies
- Looking at the PK of bi-specifics vs. brain exposure
- Presenting pharmacodynamic read-out models

**2.00 Afternoon Refreshments & Networking**

## Bypassing the BBB to Deliver Therapeutics Effectively to the CNS

**Larry Brown**
Executive Vice President & Chief Scientific Officer
**Noveome Biotherapeutics**

**3.00 The Pathway from Preclinical Studies to the Clinic of an Intranasally Administered Amnion Cell-Derived Biologic that Bypasses the BBB**

- ST266 is a neuroprotective, anti-inflammatory complex biologic derived from Amnion-derived Multipotent Progenitor Cells
- Showing that targeted intranasal ST266 delivery reproducibly by-passes the BBB
- Cautious preclinical safety and efficacy studies enable the regulatory pathway into clinical studies

**3.30 Mastermind: Exploring Intrathecal Delivery of Large Molecules to the CNS**

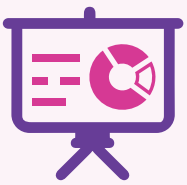
**Discussing the benefits of bypassing the BBB by intrathecal delivery**

**Reviewing the technology advances: lumbar pump vs bolus injection**

**Assessing the safety considerations and debating the advantages vs disadvantages**

This mastermind session will host interactive discussions amongst your tables and allow you to share your opinions with your peers on the future of intrathecal delivery of CNS therapeutics.

**4.15 Chair's Closing Remarks**



**4.30 Scientific Poster Session**

The learning and networking continues at the Poster Session, an informal part of the conference agenda, allowing you to connect with your peers in a relaxed atmosphere and continue to forge new, beneficial relationships. You will have the opportunity to present and review presentations displaying new data from CNS drug delivery approaches, such as novel strategies and advances in clinical development.

# Conference Day Two
# Thursday, August 15

**8.00** **Chair's Opening Remarks**

## Discovering Novel Approaches for Successful Drug Transport to the CNS

**Jordi Serrats**
Associate Director
**Takeda Pharmaceuticals**

**8.15** **Alternative Modalities for CNS Disorders: Where is the Next Frontier of CNS Therapeutics**

- CNS drug discovery/therapeutics is mostly focused on small molecules
- New genetic advances are pointing towards different targets that are not addressable with small molecule, but are addressable with alternative modalities – access to that technology is key for the next wave therapeutics for patients

**Nir Lipsman**
Neurosurgeon & Scientist
**Sunnybrook Health Sciences Centre**

**8.45** **Breaking Barriers with Sound: From Glioblastoma to Alzheimer's Disease**

- MR-guided focused ultrasound can be used to safely and reversibly overcome the BBB to aid the delivery of a wide range of therapeutics
- Early human evidence suggests that intracranial FUS is safe, reversible and well tolerated by patients
- Combining FUS with therapeutics that cannot cross the BBB is a promising treatment strategy for a wide range of diseases

**9.15** **Morning Refreshments & Networking**

## Reviewing the Validity & Progress of BBB Technologies to Maximise Therapeutic Delivery to the CNS

**Frank Walsh**
Chief Executive Officer
**Ossianix**

**10.15** **Delivery of Neurotrophin Receptor (TrKB & TrKC) Agonist Antibodies to the CNS Using VNARs to the Transferrin Receptor**

- Bispecific agonist antibodies to TrKB and TrKC were produced by fusion with TfR VNARs
- The bispecifics retain agonist activity and transfer to the CNS at therapeutic levels when injected IV
- Neurotrophin specific patterns of gene expression were found in the CNS of injected animals

**Susan Rosenbaum**
Founder, Chairman & Chief Executive Officer
**Lauren Sciences LLC**

**10.45** **Developing Non-Invasive, Dual-Targeted Brain Therapeutics for CNS Diseases Using V-Smart® Platform Technology**

- Discover how V-Smart® nanotechnology enables delivery of non-brain penetrant therapeutic agents to CNS
- Learn how V-Smart® BBB platform engineers macro/micro brain targeting for improved target exposure
- See how V-Smart® nanomedicines are used for multiple CNS Indications

**11.15 Lunch & Networking**

## Calculating Dosage for Effective Treatment & Maintained Target Exposure

**Hao Cai**
Associate Scientist
**Genentech**

**12.45 PKPD of Different Therapeutic Modalities for CNS Indications**

- Discussing the PKPD properties of different modalities: regular antibodies, engineered antibodies, ASOs
- Exploring the applications of different modalities for CNS indications
- Understanding dose regimen determination for different modalities

**1.15 Mastermind: Efficacy & Toxicity: Finding the Balance for a Safe & Effective Dosage**

**For which molecules is toxicity a high risk?**

**Which preclinical strategies are the most useful for predicting safe and effective clinical dosages?**

**How does the maintenance of target exposure vary for different molecules?**

This mastermind session will host interactive discussions amongst your tables and allow you to share your opinions with your peers on determining effective dosages whilst accounting for the safety and toxicity challenges of delivering CNS therapeutics using different modalities.

**2.00 Afternoon Networking & Refreshments**

## Reviewing the Clinical Successes in CNS Drug Delivery: What Looks Promising?

**Nathan Yoganathan**
President & Chief Scientific Officer
**KalGene Pharmaceuticals**

**2.30 Receptor Mediated Transcytosis at the BBB to Deliver Alzheimer's Therapeutic**

- Delivering AD therapeutic to the brain
- Using a comparative study with regular antibody
- Assessing the BBB study in three different relevant animal model

**Sophie Parmentier Batteur**
Director, Neurodegenerative Diseases Discovery
**Merck**

**Allan Jensen**
Senior Director, Biotherapeutic Discovery
**Lundbeck**

**Andrew Goodearl**
Senior Director, Biologics Discovery Group
**AbbVie**

**3.00 Panel Discussion: Explaining Clinical Failures – Is Efficacy or Delivery to Blame?**

- Which CNS drug delivery technologies are looking the most promising for the clinic?
- With recent clinical failures, is efficacy or delivery likely to be the cause?
- What's next for CNS drug delivery approaches?

**3.45 Chair's Closing Remarks**

# Partnership Opportunities

## Why Partner?

Partnering with **B3DD** is your opportunity to demonstrate your expertise to leading CNS decision makers.

Network with 60+ leading minds in CNS drug delivery to demonstrate how your products and services can help them to overcome their translational challenges to improve the delivery of their candidate to the CNS.

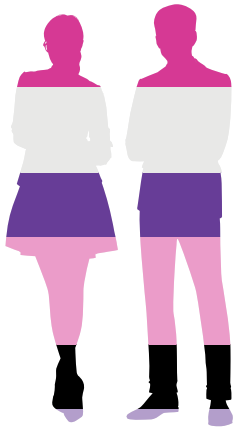
Establish yourself as a field leader to experts from **Biogen**, **Genentech**, **Armagen** and **Lundbeck** as they seek to:

- Discover progress in BBB preclinical models to help them improve the predictability of clinical success from their research
- Learn of the progress of CNS drug delivery platforms and technology to guide their future partnerships

There are many partnership opportunities available at **B3DD** and we will work with you to build a bespoke package to ensure you meet your 2019 business needs.

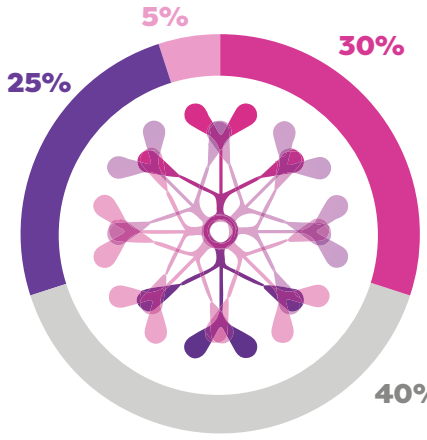
**Please get in touch for more information on how you can be involved in B3DD by emailing: sponsor@hansonwade.com**

## Audience Seniority*



- C-Level: **20%**
- President/VP: **20%**
- Global Head/Head of: **15%**
- Director: **25%**
- Principal Scientist/ Scientist: **15%**
- Professor: **5%**

## Attending Companies*




- **Large Pharmaceutical**
- **Small Biotech**
- **Service Providers**
- **Academia**

** Based on other Hanson Wade CNS events*

> This cosy format of the meeting allowed us to meet all the attendees and to have strong interactions

Naert Gaelle, COO, **CILcare**

> I liked the conference and the chance to interact with many of the sponsors

David Walling, CEO, CNS Network, **LLC**

## GET INVOLVED

**Okeefe Ogholo**
Business Development Manager
**Tel:** +1 617 455 4188
**Email:** sponsor@hansonwade.com

# Ready to Register?

## 3 Easy Ways To Book

www.b3dd-summit.com

Tel: +1 617 455 4188

Email: register@hansonwade.com

1. Network with CNS drug delivery thought leaders to establish new and meaningful connections
2. Widen your knowledge of the different CNS drug delivery technologies being developed to learn of their progress
3. Share your research at the Poster Session to gain feedback from your peers and create valuable collaborations with your peers to facilitate your research

### Team Discounts*

- **20%: 5 or more delegates**
- **15%: 4 delegates**
- **10%: 3 delegates**

Please note that discounts are only valid when three or more delegates from one company book and pay at the same time.

Discounts cannot be used in conjunction with any other offer or discount. Only one discount offer may be applied to the current pricing rate.

Contact: register@hansonwade.com

# SECURE YOUR PLACE

| Package Details | Register & Pay before Friday, June 21 | Standard Prices |
|---|---|---|
| **GOLD** Conference + 2 Workshops | $3397 **(save $700)** | $3797 **(Save $300)** |
| **SILVER** Conference + 1 Workshop | $2998 **(save $500)** | $3398 **(Save $100)** |
| **BRONZE** Conference Only | $2499 **(save $400)** | $2899 |
| Workshops (Each) | $599 | |

For academic rates, please contact: register@hansonwade.com

# VENUE

**Wyndham Boston Beacon Hill**

**5 Blossom Street, Boston, MA 02114**

**For further information or assistance, please visit www.wyndhambeaconhill.com**

TERMS & CONDITIONS

Full payment is due on registration. Cancellation and Substitution Policy: Cancellations must be received in writing. If the cancellation is received more than 14 days before the conference attendees will receive a full credit to a future conference. Cancellations received 14 days or less (including the four-teenth day) prior to the conference will be liable for the full fee. A substitution from the same organization can be made at any time.

Changes to Conference & Agenda: Hanson Wade reserves the right to postpone or cancel an event, to change the location or alter the advertised speakers. Hanson Wade is not responsible for any loss or damage or costs incurred as a result of substitution, alteration, postponement or cancellation of an event for any reason and including causes beyond its control including without limitation, acts of God, natural disasters, sabotage, accident, trade or industrial disputes, terrorism or hostilities.

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