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September 10-12, 2019
Boston, USA
International-cdp.com

2nd Annual
International Cannabinoid Derived Pharmaceuticals Summit

Pioneering the Advancement of Cannabinoid Pharmaceuticals

Expert Speakers Include:

Guy Chamberland
Chief Executive Officer
Tetra Biopharma

Dennis Ahern
Vice President, Global Regulatory Affairs
Greenwich Biosciences

Mara Gordon
Founder & Director
Zelda Therapeutics

Brian Murphy
Chief Executive Officer
Emerald Bioscience Inc.

Dominic Chiapperino
Director, Controlled Substances Staff
Center for Drug Evaluation and Research, U.S. Food and Drug Administration

Ethan Russo
Professor
International Cannabis and Cannabinoids Institute

Andrea Small-Howard
Chief Science Officer
GB Sciences

Robert Walsh
Chief of Regulatory Affairs Branch Division of Therapeutics & Medical Consequences of Drug Abuse
NIDA

Sara Ward
Researcher, Oncology
Temple University

Partner

Noramco™
Leader in Controlled Substances

Welcome to the 2nd Annual International Cannabinoid Derived Pharmaceuticals Summit

Just a little over a year from the anniversary of Epidiolex's approval, we will unite once again to look at what has changed since that landmark day for this field. Our expert speakers will be breaking down the critical issues that are obstructing the development of cannabinoid therapeutics. They will cover issues such as; how to establish robust preclinical methodologies that will ensure later success in the clinical development stages and how to identify new and improved sources of cannabinoids, both common and rare, through the use of new technologies like biosynthesis, and how to analyze them in granular detail. In addition to this, we will have open and frank discussions about where the future of cannabinoid pharmaceuticals is going and what the future might hold.

Finally, iCDP Summit will unite the community of key opinion leaders and decision makers who are dedicated to proving the therapeutic potential of cannabinoids in accordance with current regulatory guidelines for pharmaceuticals.

Hear what last year's attendees have to say:

"[iCDP] was a unique amalgamation of industry and academia, where innovative researchers and business leaders were able to connect and share in an intimate setting that facilitated exciting new opportunities for collaboration"

Manu Caddie, Chief Executive Officer, Hikurangi Cannabis

"The iCDP Summit has achieved its goal by bringing together leading researchers and industry professionals at a conference of the highest level"

Manuel de Pra, R&D Coordinator, Entourage Phytolab

5 Key Reasons to Join Us:

Hear how NIDA are exploring the therapeutic potential of cannabinoids, alongside an in-depth overview on the regulatory landscape from the Vice President of Regulatory Affairs at Greenwich Biosciences, Dennis Ahern

Enhance your preclinical studies to achieve more accurate and reliable results using the practical insights on offerfthrough our interactive workshop with Sara Ward of Temple University

Explore your options when it comes to extracting, synthesizing and sourcing cannabinoids with Josh Hoerner of Noramco and our panel of experts who will discuss the potential of plant-derived vs. synthetics

Find out how the rise of cannabinoid biosynthesis is disrupting the field and what this could mean for cannabinoid pharmaceutical developers

See how an array of preclinical and clinical case studies are linking cannabinoids to important therapeutic areas, including oncology, pain, addiction and many others

YOUR EXPERT SPEAKERS

George Annasstasov
Chief Executive Officer
Axim Biotech

Matt Callahan
Executive Chairman
Botanix Pharmaceuticals

Haleli Sharir
Principal Scientist
Cannabics Pharmaceuticals

Loren DeFalco
Partner
CB1 Capital

Barbara White
Chief Medical Officer and Head of Research
Corbus Pharmaceuticals, Inc.

Brian Murphy
Chief Executive Officer
Emerald Bioscience Inc.

Dominic Chiapperino
Director, Controlled Substances Staff
Center for Drug Evaluation and Research, U.S. Food and Drug Administration

Andrea Small-Howard
Chief Scientific Officer
GB Sciences

Dennis Ahern
Vice President, Global Regulatory Affairs
Greenwich Biosciences

Benjamin J. Whalley
Director of Research
GW Pharmaceuticals

Michael Woudenburg
Vice President, Chemistry, Manufacturing and Control (CMC)
InMed Pharmaceuticals

Josh Blacher
Chief Financial Officer
InMed Pharmaceuticals

Eric Hsu
Senior Vice President, Preclinical Research and Development
InMed Pharmaceuticals

Ethan Russo
Professor
International Cannabis and Cannabinoids Institute

Sagnik Bhattacharyya
Reader of Translational Neuroscience & Psychiatry
King's College London

Robert Walsh
Chief of Regulatory Affairs Branch Division of Therapeutics & Medical Consequences of Drug Abuse
NIDA

Josh Hoerner
Managing Director & Senior Director, Innovation & Product Development
Noramco Inc.

Alex Makriyannis
George D. Behrakis Chair in Pharmaceutical Biotechnology & Director for the Center for Drug Discovery
Northeastern University

Michael Freeman
Associate
Paradigm Capital

Rahul Sarungaser
Analyst
Paradigm Capital

Jeff Margolis
Senior Vice President, Treasurer, Secretary & Chief Financial Officer
RespireRx Pharmaceuticals

Sara Ward
Researcher in Oncology
Temple University

Guy Chamberland
Chief Executive Officer
Tetra Biopharma

Robert Brooke
Chief Executive Officer & Co-Founder, Director of Scientific Research & Development
Vitality Biopharma

Brandon Zipp
Director of Scientific Research & Development & Co-Founder
Vitality Biopharma

Mara Gordon
Founder & Director
Zelda Therapeutics

CONFERENCE DAY ONE
WEDNESDAY, SEPTEMBER 11

Brian Murphy
Chief Executive Officer
Emerald Biopharma

8.20 **Chair's Opening Remarks**

Considerations from NIDA & Navigating the Regulatory Landscapes

Dominic Chiapperino
Director, Controlled Substances Staff
Center for Drug Evaluation and Research, U.S. Food and Drug Administration

8.30 **Keynote Presentation: FDA Regulatory Roles Concerning Cannabis and New Drug Research**

- The presentation will discuss FDA regulatory roles for cannabis under both the Food, Drug & Cosmetic Act and the Controlled Substances Act
- Under FDCA, FDA provides regulatory oversight, and scientific and regulatory support, for research conducted under an IND investigating potential therapeutic uses of cannabis
- Under the CSA, FDA assists DEA with review and DEA registration of protocols involving Schedule I drugs and considers appropriate drug scheduling for cannabis-related substances

Robert Walsh
Chief of Regulatory Affairs Branch Division of Therapeutics & Medical Consequences of Drug Abuse
NIDA

9.15 **NIDA Perspective on Cannabinoid Pharmaceuticals**

- Explore the ongoing research taking place within NIDA's structure
- Discuss NIDA's concerns about cannabinoids and cannabinoid research
- Explain how industry can collaborate with NIDA to advance this growing field quickly and safely

Dennis Ahern
Vice President, Global Regulatory Affairs
Greenwich Biosciences

9.45 **Industry Perspective on the Regulatory Approval Pathway**

- Explore the current system from the side of industry
- Identify the key challenges and uncertainties that industry have to face
- Discuss the key issues with the currently understood structure and how industry can work with regulators to improve it

10.15 **Speed Networking & Morning Break**
This session is the ideal opportunity to meet face-to-face with many of the brightest minds working in the field and establish meaningful business relationships to pursue for the rest of the conference

Extraction, Synthesis & Sourcing of Cannabinoids

Josh Hoerner
Managing Director & Senior Director Innovation & Product Development
Noramco Inc.

11.45 **The New Era of Ultra-Pure Pharmaceutical Cannabinoids: CBD, THC, and Beyond**

- Compare various technology platforms (botanical extraction, synthetic, and biosynthetic). Using the technology platform to unlock access to low weight percent constituent compounds of the cannabis sativa plant
- Building a bridge from naturally-occurring compounds to synthetic compounds via unequivocal structural elucidation
- Considerations for scale-up and commercialization of an ultra-pure, highly stable cannabinoid API

12.15 Panel Discussion: Whole Plant Vs. Synthetic Cannabinoids and their Relative Potential in Pharmaceuticals

- Debate the relative importance of each source in relation to the current needs that developers have
- Break down the current understanding of each source's therapeutic potential
- Consider how the rise of biosynthesis could impact cannabinoid research

Guy Chamberland
Chief Executive Officer
Tetra Biopharma

Mara Gordon
Founder & Director
Zelda Therapeutics

Michael Woudenburg
Vice President, Chemistry, Manufacturing & Control (CMC)
InMed Pharmaceuticals

Andrea Small-Howard
Chief Science Officer
GB Sciences

13.00 Lunch

Key Updates in the Pharmacology of Cannabinoids, the ECS & Cannabinoid Receptor Biology

Alex Makriyannis
George D. Behrakis Chair in Pharmaceutical Biotechnology & Director for the Center for Drug Discovery
Northeastern University

14.00 The Structures and Functions of the Cannabinoid Receptors

- Structure of the CB1 and CB2 receptors
- Designing new and improved drugs using these structures

Ethan Russo
Professor
International Cannabis and Cannabinoids Institute

14.30 The Importance of Understanding the ECS in Drug Design & Formulation

- Link new discoveries about the ECS to new therapeutic potentials of cannabis
- Discuss how much is known about new pathways that we are seeing cannabinoids act down and what effects they could lead to

15.00 Panel Discussion: Summarizing the Advances in Cannabinoid Pharmacology and ECS Targeting

- Our experts in cannabinoid pharmacology and endocannabinoid biology will field questions from the audience

Alex Makriyannis
George D. Behrakis Chair in Pharmaceutical Biotechnology & Director for the Center for Drug Discovery
Northeastern University

Ethan Russo
Professor
International Cannabis and Cannabinoids Institute

15.30 Afternoon Refreshments & Poster Session:

This session is a great opportunity to introduce yourself to the attendees that you would like to have more in depth conversations with. This session is the ideal opportunity to get face-to-face time with many of the brightest minds working in cannabinoid drug development to establish meaningful business relationships

Analyzing the Potential of Biosynthesis

Rahul Sarungaser
Analyst
Paradigm Capital

16.30 Cannabinoid Biosynthesis: Engineering the Most Disruptive Technology in the Cannabis Industry

- Cannabinoid biosynthesis, or cellular agriculture, is the practice of incorporating genetic instructions for producing the plant's active molecules into simple organisms, like yeast or microalgae. In this way, the cells can be engineered to produce any cannabinoid, terpene, flavonoid, or derivatives thereof, at high volume and concentrations, using low-cost input materials.
- This technology we see as fundamentally disruptive to the cannabis industry, which, presently, relies on cultivation to provide access to active cannabis ingredients. The orders-of-magnitude reduction in production footprint and capital requirement associated with cannabinoid biosynthesis relative to cultivation, not to mention the process' scalability, reliability, and pure, bio-identical output molecules, will make it the source-of-choice for companies seeking introduce cannabis' active molecules to global supply chains (i.e. pharmaceutical, food and beverage, consumer packaged goods markets).

17.00 Panel Discussion: The Potential Effects Biosynthesis Could Have on the Cannabinoid-Derived Pharmaceuticals Development Process and the Wider Industry

- With the potential of biosynthesis growing more in the last few months than ever before, gain an insight into what has driven this sudden advance
- How could biosynthesis affect the cost and supply of APIs, with consideration of the potential in medical cannabis as well as CDP and how are these related?

Michael Freeman
Associate
Paradigm Capital

Brandon Zipp
Director - Scientific Research & Development & Co-Founder
Vitality Biopharma

Eric Hsu
Senior Vice President, Preclinical Research & Development
InMed Pharmaceuticals

The Investor's Perspective

17.30 Panel Discussion: The Investor's Perspective on the Cannabinoid Pharmaceuticals Field

- Have an open and frank discussion about the issues at the heart of investor decisions with investment experts whose primary focus is the cannabinoid space
- Discuss how the CDP field is interacting with the medical cannabis space and the effects that sweeping legalization is having on both sides

Loren DeFalco
Partner
CB1 Capital

Jeff Margolis
Senior Vice President, Treasurer, Secretary & Chief Financial Officer
RespireRx Pharmaceuticals

Josh Blacher
Chief Financial Officer
InMed Pharmaceuticals

Brian Murphy
Chief Executive Officer
Emerald Bioscience Inc.

18.00 Chair's Closing Remarks

18.00-19.00 Drinks Reception Open to All Attendees

"The conference was well organized and the organizers did a great job. I also enjoyed the networking and the entire atmosphere was very pleasant"

Adi Zuloff-Shani, Chief Technology Officer, Therapix Biosciences

CONFERENCE DAY TWO
THURSDAY, SEPTEMBER 12

Brian Murphy
Chief Executive Officer
Emerald Bioscience Inc.

8.20 **Chair's Opening Remarks**

Improving Formulation, Drug Delivery & Preclinical Testing for Greater Clinical Efficacy

George Annasstasov
Chief Executive Officer
Axim Biotech

8.30 **Improving the Bioavailability of Cannabinoids**

- Increase systemic bioavailability of CBN'
- Increase the local availability of CBN'
- Bypassing the first pass (liver metabolism)

Andrea Small-Howard
Chief Science Officer
GB Sciences

9.00 **Unique Methods to Identify Strong Lead Compounds**

- Understand lead identification strategy
- Explore different methodologies and their effectiveness in the cannabinoid research field

Haleli Sharir
Principal Scientist
Cannabics Pharmaceuticals

9.30 **Advancing Personalized Therapies using Cannabinoid APIs**

- Implement high-throughput screening into R&D process to create more effective therapies
- Look at the preclinical analysis that has been done on current candidates and what results they have yielded

10.00 **Morning Refreshments**

Challenges in Clinical Trials & Linking Cannabinoids to their Areas of Therapeutic Potential

Benjamin J. Whalley
Director of Research
GW Pharmaceuticals

10.30 **Perspectives on Future Development of Cannabinoid-Based Medicines**

- FDA approval of Epidiolex for Lennox-Gastaut and Dravet syndrome in 2018 represented the first approval of a cannabis-derived medicine.
- The development of Epidiolex taught many lessons associated with drug development from cannabis.
- A substantial preclinical and anecdotal literature suggests that plant cannabinoids may be useful in the treatment of other diseases.
- This presentation will offer perspectives on the development of future cannabis-derived medicines in the context of lesson learned from Epidiolex development

Brian Murphy
Chief Executive Officer
Emerald Bioscience Inc.

11.00 **The Therapeutic Potential of Cannabinoids in Ocular Disease: The EMBI Experience**

- Review of endocannabinoid involvement in the eye
- Review of data using a prodrug of THC to manage hypertensive glaucoma
- The potential of cannabinoids to address Asian forms of glaucoma

Sagnik Bhattacharyya
Reader of Translational Neuroscience & Psychiatry
King's College London

11.30 **Cannabinoids for Neuropsychiatric Disorders: Focus on Cannabidiol**

- Learn how pharmacological challenge with delta-9-tetrahydrocannabinol may be used to model different psychiatric symptoms and understand their neural underpinnings in man
- Learn about King's College London's research on the trajectory of cannabidiol from proof-of-concept studies to definitive clinical trials- Psychosis exemplar
- Discuss the therapeutic potential for cannabidiol in different neuropsychiatric disorders

12.00 **Lunch**

Mara Gordon
Founder & Director
Zelda Therapeutics

13.30 Comparison of the Anti-Tumor Efficacy of A Whole-Plant Extract Vs. Pure THC in Preclinical Models of HER2-Positive Breast Cancer

- Whole-plant extracts are more effective antitumor tools than pure compounds
- The plant contains hundreds of compounds with potential therapeutic effects
- Explore the cannabinoids that inhibit proliferation of cancer cells in vitro (e.g. THCA, CBDA, etc.) and other non-cannabinoid compounds that activate cannabinoid receptors (e.g. beta-caryophyllene)
- Discuss why most of the constituents of cannabis have not been studied in cancer, even though there is already clinical evidence for other ailments supporting this idea (e.g. effect of marinol vs whole-plant extracts)

Guy Chamberland
Chief Executive Officer
Tetra Biopharma

14.00 Pain & Opioids – How are Cannabinoids Playing a Role in Both Pain Relief & Addiction?

- Analyze recent clinical data to illustrate the potential of cannabinoids in pain relief
- Discuss the challenge of oral cannabinoid formulations for pain relief
- Discuss the potential role cannabinoids could play in curbing addiction

14.30 Afternoon Refreshments

Matt Callahan
Executive Chairman
Botanix Pharmaceuticals

15.00 Cannabinoids in Dermatology – Sorting Fact From Fiction

- Scientific basis for cannabinoids in skin diseases
- Clinical outcomes
- New research directions

Robert Brooke
Chief Executive Officer & Co-Founder, Director - Scientific Research & Development & Co-Founder
Vitality Biopharma

15.30 VBX-100: A GI-targeted Prodrug of THC for Inflammatory Bowel Disease

- Overview of cannabinoids for treatment of inflammatory bowel disease (including pediatric Crohn's disease and ulcerative colitis) and other GI conditions
- The discovery of cannabosides, a new class of pharmaceutical prodrugs that enable targeting of cannabinoids to the gastrointestinal tract while avoiding psychoactivity
- The production methods for cannabosides, using a novel biocatalysis process enabled by an enzyme derived from the Stevia rebaudiana plant

Barbara White
Chief Medical Officer and Head of Research
Corbus Pharmaceuticals, Inc.

16.00 Targeting the Endocannabinoid System to Develop Medicines to Treat Inflammatory and Fibrotic Diseases

- Will discuss opportunities to use CB2 agonists and CB1 inverse agonists as medicines to treat inflammatory and fibrotic diseases
- Will provide specific examples using lenabasum a CB2 agonist and CRB-4001, a CB1 inverse agonist

Brian Murphy
Chief Executive Officer
Emerald Bioscience Inc.

16.30 Chair's Closing Remarks

16.40 End of Conference

PRE-CONFERENCE WORKSHOP DAY TUESDAY, SEPTEMBER 10

Workshop A

Strengths and Weaknesses of Current Preclinical Cannabinoid Research

9:00 - 12:00

The goal of the workshop will be to give an overview of the current state of preclinical research on cannabinoid-based therapeutic approaches, with emphasis on the effects of cannabinoids in animal models of pain and CNS injury/disease. Specific topics to be covered will include:

- The types of cannabinoid-based therapies being tested
- The appropriateness of the preclinical models used across laboratories
- Potential issues surrounding disconnects between preclinical and clinical results

The workshop will be comprised of a lecture-based format as well as smaller group brainstorming sessions.

Workshop Leader

Sara Ward
Researcher, Oncology
Temple University

Workshop B

Cannabinoid Formulation & Methods of Administration

13:00 - 16:00

Establishing an effective dosing and dose administration strategy is an integral part of the early development of your cannabinoid drug. It ensures both the effectiveness and the safety of it to your patients. This workshop is an expansion of the highly popular formulation workshop we featured at CDP 2018. This workshop will take aim at the critical issues surrounding the preclinical formulation and assessment of cannabinoids. At this workshop, attendees will discuss:

- Enhancing the bioavailability of cannabinoids
- Single vs. combinations of cannabinoids
- Current understanding of drug-drug interactions
- Avoiding the issues associated with the first pass effect

Workshop Leader

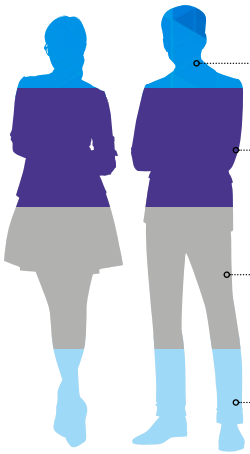
Ethan Russo
Professor
International Cannabis and Cannabinoids Institute

"Very good, well organised conference"
Matthew Collins,GW Pharmaceuticals

PARTNERSHIP OPPORTUNITIES

The 2nd Annual International Cannabinoid-Derived Pharmaceuticals Summit is a unique opportunity to engage directly with the organizations, industry and academics, who will lead this growing field this year. If you have capabilities that would benefit our audience in the cannabinoid space, this is a unique platform to showcase your solutions, generate new business leads and source opportunities for partnerships. **Act now to stay ahead of the curve and seize the wealth of opportunity on offer**. Get in touch today for more information about the various partnership opportunities available.

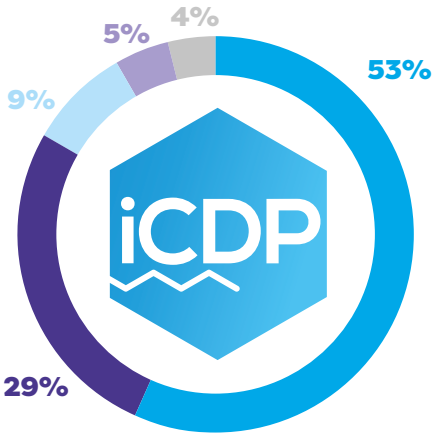
TYPICAL ATTENDANCE SENIORITY



- C-Level and VP: 20%
- Director & Above: 35%
- Scientist & Team Leader: 30%
- Academic: 15%

*Based on market research and previous events' statistics

ESTIMATED ATTENDANCE BY SECTOR



- Drug Developer
- Research Institute
- Manufacturer
- Drug Delivery Service Providers
- Other

EXPERTISE PARTNER

Noramco Inc.

Noramco is the global leader in developing and manufacturing pharmaceutically-produced cannabinoid APIs. Our portfolio includes Cannabidiol, Dronabinol, Nabilone, as well as various phytocannabinoids partnered with extensive offerings of degradants, metabolites and analytical reference standards. Ultra-high purity materials (low ppm THC in CBD) are designed for brand and generic dosage form lifecycles, through clinical stages to scaled commercial production. GMP manufacturing in USA and Europe, provides true global supply chain reach to our expanding customer base.

www.noramco.com

GET INVOLVED

Jacob Roberts-Kendall
Partnerships Manager
Tel: (+1) 617 455 4188
Email: sponsor@hansonwade.com

READY TO REGISTER?

3 EASY WAYS TO BOOK

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Email: register@hansonwade.com

Team Discounts*

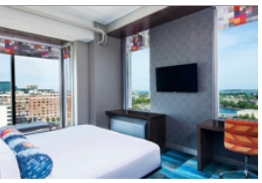
- 10% discount – 3 delegates
- 15% discount – 4 delegates
- 20% discount – 5+ delegates

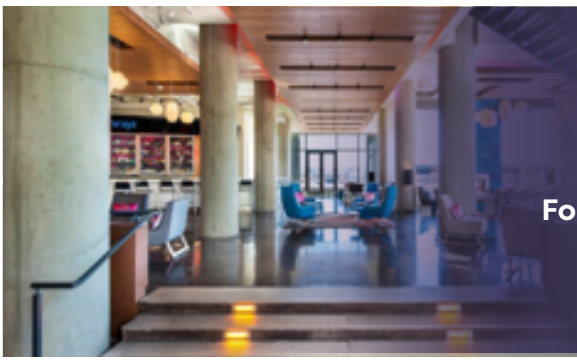
*Please note that discounts are only valid when three or more delegates from one company book and pay at the same time.

SECURE YOUR PLACE

STANDARD	Register & Pay before Friday, June 28	Standard Prices
Conference + 2 Workshops	$2897 **(save $400)**	$3097 **(save $200)**
Conference + 1 Workshop	$2398 **(save $300)**	$2598 **(save $100)**
Conference Only	$1899 **(save $200)**	$2099
Workshops Only	$599	

ACADEMIC	Register & Pay before Friday, June 28	Standard Prices
Conference + 2 Workshops	$1997 **(save $400)**	$2197 **(save $200)**
Conference + 1 Workshop	$1698 **(save $300)**	$1898 **(save $100)**
Conference Only	$1399 **(save $200)**	$1599
Workshops Only	$399	





VENUE

Aloft Boston Seaport
401-403 D St, Boston, MA 02210, USA
For further information or assistance, please visit www.marriott.co.uk/hotels/travel/bosal-aloft-boston-seaport-district/

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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