



7TH WORLDWIDE
DISTILLED SPIRITS
 VIRTUAL CONFERENCE

6TH – 8TH SEPTEMBER 2021

MONDAY 6TH SEPTEMBER

09:00 - 9:45	Session 1: Welcome and conference opening - Sponsored by Briggs of Burton	Joe Arciero
09:00 - 09:15	Opening of WDSC 2021	Douglas Murray
09:15 - 09:45	On the path to recovery: challenges & opportunities for global spirits growth after the COVID crisis	Ulrich Adam
09:45 - 12:30	Session 2: Diversity of Raw Materials and their Processing - Sponsored by Fermentis	Douglas Murray
09:45 - 10:15	Drought tolerant barley could 'future-proof' the brewing and distilling industry?	Ross Alexander
10:15 - 10:45	<i>Coffee break & Visit Virtual Exhibition</i>	
10:45 - 11:15	Grain Skinning and its Effects on Malting Barley	Paulina Okoro
11:15 - 11:45	The Impact of Barley Variety on Scotch Malt New Make Spirit Flavour	Barry Harrison
11:45 - 12:30	Poster Session 1	
12:30 - 13:45	<i>Lunch & Visit Virtual Exhibition</i>	
13:45 - 15:15	Session 3	
Session 3.1 - Innovation and Diversity in Fermentation - Sponsored by Lallemand		Dawn Maskell
13:45 - 14:15	Vacuoles under vacuum: Effects of reduced pressure on yeast performance and morphology during rum fermentations	Mario Guadalupe-Daqui
14:15 - 14:45	Exploring microbial alternatives for whisky flavour diversity	Elena Fossati
14:45 - 15:15	Effect of Terroir in Whiskey Production	Dustin Herb
Breakout 3.2 - Big Data		Scott Davies
13:45 - 14:05	Management of Casks – Big Data in Action	Roy Burns
14:05 - 14:25	Trustworthy Autonomous Assistants	David Flynn
14:25 - 15:15	Discussion	
Breakout 3.3 - Raw Materials and Flavour		Barry Harrison
13:45 - 14:05	Evolution of flavour volatiles during malted barley roasting and impact upon distillate congener profile	Rutele Marciulionyte
14:05 - 14:25	Unravelling the genetic and aromatic variability of sour and sweet orange and determination of the influence of the terroir on the triple-sec Cointreau.	Vincent Ferrer
14:25 - 14:45	Legumes as environmentally sustainable feedstocks for brewing and distilling fermentations	Kirsty Black
14:45 - 15:15	Discussion	
15:15 - 15:45	<i>Coffee break & Visit Virtual Exhibition</i>	
15:45 - 17:15	Session 4	
Session 4.1 - Distillation Processes - Present and Future - Sponsored by Blyth & Blyth		Gillian Macdonald
15:45 - 16:15	Designing and building a new spirits production facility in China	Zack Chen
16:15 - 16:45	Lessons learnt from the thermal oil still heating system at Bently Heritage Distillery	Tom Barnett
16:45 - 17:15	Discussion	
Breakout 4.2: The Art of Storytelling and Why We Need It!		Penny Willson
15:45 - 16:15	The Art of Story Telling	Ian Wisniewski
16:15 - 17:15	Discussion	
Breakout 4.3 - Delve into Baijrou		Dawn Maskell
15:45 - 16:05	Fermentation Microbiomes of Different Styles of Chinese Liquor (Baijiu)	Feng-Yan Bai
16:05 - 17:15	Discussion	



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TUESDAY 7TH SEPTEMBER

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09:00 - 10:30	Session 5	
Session 5.1 - Authenticity and Security		Craig Owen
09:00 - 09:30	Strengths and limitations of radiocarbon for establishing year of distillation of single malt whiskies	Gordon Cook
09:30 - 10:00	Automated detection of fake and adulterated Scotch Whisky using comprehensive gas chromatography and artificial intelligence	Geraint Morgan
10:00 - 10:30	Discussion	
Breakout 5.2 - Analytical Chemistry 1		Gillian Macdonald
09:00 - 09:20	Assessing Spirit Quality Using GC-MS-O and Aroma Extraction Dilution Analysis	Peter Cockburn
09:20 - 09:40	Whisky Flavour analysis- an alternative approach	Kathy Ridgway
09:40 - 10:00	The Characterisation of Commercial Gins using HS-SPME-GC-MS and Rate-all-that-apply (RATA) Methodologies	Hugh Holds
10:00 - 10:30	Discussion	
Breakout 5.3 - Environmental Impact - Sponsored by AB Biotek		Morag Garden
09:00 - 09:20	Sustainable Landscapes delivering zero carbon brewing and distilling	Tom Mellor
09:20 - 09:40	Legume biorefining – alcohol production as a short cut to yielding protein isolates as food ingredients	Kelly Stewart
09:40 - 10:30	Discussion	
10:30 - 11:00	<i>Coffee break & Visit Virtual Exhibition</i>	
11:00 - 12:15 Session 6: Diversity of People		Dawn Maskell
11:00 - 11:30	Inclusion & Diversity Ambitions	Heather Pritchard
11:30 - 12:15	Poster Session 2	
12:15 - 13:30	<i>Lunch & Visit Virtual Exhibition</i>	
13:30 - 15:00 Session 7		
Session 7.1 - Chemistry and Flavour of Spirits - Sponsored by Forsyths		Craig Owen
13:30 - 14:00	Comparison between orthonasal and retronasal perception of flavour in spirit drinks	Irene Baxter
14:00 - 14:30	Napping – UFP as a tool for comparison cachaça from different toasts and aging times between experts and consumers	Mariana Castro
14:30 - 15:00	Quantification of Whisky Congeners by NMR Spectroscopy	Marc Stockwell
Breakout 7.2 - Challenging Tradition - R&D Approach		Barry Harrison
13:30 - 13:50	Challenging Traditions: A Structured Approach to Innovation within the Context of a Traditional American Whiskey Making Process	Kevin Smith
13:50 - 14:10	Accelerated Manufacturing Using Digital Twin Technology	Gordon Fleming
14:10 - 15:00	Discussion	
Breakout 7.3 - Celebrating Process Diversity		Scott Davies
13:30 - 13:50	Amburana, the finest Brazilian wood to make barrels	Aline Bortoletto
13:50 - 14:10	Design, build and commissioning of the Roe & Co Distillery	Lora Hemy
14:10 - 15:00	Discussion	
15:00 - 15:30	<i>Coffee break & Visit Virtual Exhibition</i>	
15:30 - 17:00 Session 8		
Session 8.1 - Challenging Tradition		Barry Harrison
15:30 - 16:00	Exploring Terroir in Whiskey	Rob Arnold
16:00 - 16:30	Agave farming and the use of new technologies to evaluate its development to Tequila production	Miguel Cedeno
16:30 - 17:00	Proprietary strains, a good economic alternative to in house yeast propagation for tequila distillers	Alejandro Aguilar
Breakout 8.2 - Fun with Fermentation		Gillian Macdonald
15:30 - 15:50	Influence of non-Saccharomyces yeast on Scotch whisky fermentation and flavour development	Martina Daute
15:50 - 16:10	Modelling the Effects of Yeast Format and Pitching Rate for Scotch Malt Whisky Fermentations	Struan Reid
16:10 - 16:30	Proteases: Current adoption and opportunities for a traditional distilled spirits industry	Annick Mercier
16:30 - 17:00	Discussion	
15:30 - 16:15	Poster Session 3	
17:00 - 18:00	Happiness Hour, Sponsored by Briggs	



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WEDNESDAY 8TH SEPTEMBER

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09:00 - 10:45	Session 9: Improving our Environmental Impact 1	Scott Davies
09:00 - 09:30	Major Accidents to the Environment – Risk Potential in the Whisky Industry	Euan Munro
09:30 - 10:00	Future Ready businesses - long term environmental trends, and how can companies best respond?	David Symons
10:00 - 10:45	Poster Session 4	
10:45 - 11:15	<i>Coffee break & Visit Virtual Exhibition</i>	
11:15 - 12:45	Session 10	
Session 10.1 - Improving our Environmental Impact 2		Morag Garden
11:15 - 11:45	Spatial modelling of barley responses to climate change in Scotland	Mike Rivington
11:45 - 12:15	Implementation of a formal energy efficient design process for distillery projects	Aoife Hamill
12:15 - 12:45	Live Session: Sustainability has never been so good for business	Morag Garden & Scott Davies
Breakout 10.2 - Analytical Chemistry 2		Craig Owen
11:15 - 11:35	Exploring the spirit aging bouquet in oak casks: contribution of key molecular markers responsible for nutty and roasted aromas in matured spirits	Magali Picard
11:35 - 11:55	Evolution of fatty ethyl esters concentration and other aromatic compounds extracted from the lees during the distillation of an Ugni Blanc wine.	Adeline Barreau
11:55 - 12:45	Discussion	
12:45 - 14:00	<i>Lunch & Visit Virtual Exhibition</i>	
14:00 - 15:30	Session 11	
Session 11.1 - Consumer Engagement		Penny Willson
14:00 - 14:30	Consumption Behavior for Whisky and Other Distilled Spirits: A Social Media Based Survey in Turkey	Burkay Adalig
14:30 - 15:00	Understanding sensory properties and consumer preference among vodkas	Tess Aldredge
15:00 - 15:30	Discussion	
Breakout 11.2 - Small Distilleries - challenges and opportunities		Douglas Murray
14:00 - 14:20	Experimental study and modelling of terpenes in gin distillation	Jan Hodel
14:20 - 14:40	Banik Still: An innovation in Gin distillation technique.	Abhishek Banik
14:40 - 15:30	Discussion	
15:30 - 16:15	Session 12: Conference Close	Joe Arciero
15:30 - 16:00	Closing keynote speaker	Liam Donegan
16:00 - 16:15	Closing remarks	Joe Arciero
16:15	<i>Coffee break & Visit Virtual Exhibition</i>	