

# *The Alcohol School 2018*



## *Agenda*

## **Toulouse**

**Mercure Toulouse Atria**

**April 9 - 13, 2018**



**ETHANOL  
TECHNOLOGY  
INSTITUTE**

6120 West Douglas Avenue  
Milwaukee, WI 53218 USA  
800 583-6484 | 414 393-0410  
Fax 414 358-8012  
institute@ethanoltech.com  
www.lbds.com

## *Ethanol Technology Institute Staff*

### **Graeme Walker, Ph.D**

Scientific Director  
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### **Nadya Antoniades**

Administrative Director  
nantoniades@lallemand.com

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Milwaukee, WI 53218 USA  
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## *Hotel Information*

### **Hotel Mercure Toulouse Atria Compans Caffarelli**

Boulevard Lascrosses  
8, Esplanade Compans Caffarelli  
31000 Toulouse  
France

**Phone** +33 (0) 5 61.11.09.09

**Fax** +33 (0) 5 61.23.14.12

**Website** [www.mercure.com/mercure/fichehotel/gb/mer/1585/fiche\\_hotel.shtml](http://www.mercure.com/mercure/fichehotel/gb/mer/1585/fiche_hotel.shtml)

**E-mail** [H1585@accor.com](mailto:H1585@accor.com)

**Alcohol School Booking Code:** DELEGUES0418

## *Facility Visit*

### **Lallemand S.A.S Lab**

#### **Lallemand S.A.S.**

19, rue des Briquetiers  
B.P. 59  
31702 Blagnac, Cedex, France  
+33 (0) 5 62.74.55.55  
[www.lallemand.com](http://www.lallemand.com)

## *Toulouse and Transportation Information*

### **Toulouse Tourist Office**

[www.ot-toulouse.fr](http://www.ot-toulouse.fr)

### **Hotel Map**

[www.mercure.com/mercure/fichehotel/gb/mer/1585/fiche\\_hotel.shtml](http://www.mercure.com/mercure/fichehotel/gb/mer/1585/fiche_hotel.shtml)  
(click on Location and Access icon in menu bar at left)

### **Shuttle Bus**

[www.tisseo.fr](http://www.tisseo.fr)

# The Alcohol School 2018



## Monday

fuel alcohol

APRIL 9, 2018

– Global Industry Review. Feedstocks & Processing –

10:45 am – 12:15 pm	REGISTRATION & LUNCH	Terrace Foyer
12:15 pm – 12:30 pm	Welcome <i>Angus Ballard, Lallemand Biofuels &amp; Distilled Spirits (Canada)</i>	Auditorium Gavarnie
12:30 pm – 12:45 pm	Introduction to the Programme <i>Graeme Walker, Ethanol Technology Institute (Scotland)</i>	
12:45 pm – 1:10 pm	Global Fuel Alcohol Industry <i>Craig Pilgrim, Lallemand Biofuels &amp; Distilled Spirits (USA)</i>	
1:10 pm – 1:40 pm	European Fuel Alcohol <i>Rob Vierhout, Alcogroup (Belgium)</i>	
1:40 pm – 1:50 pm	STRETCH/COMFORT BREAK	
1:50 pm – 2:20 pm	Global Beverage Alcohol Industry <i>Steve Wright, Lallemand Biofuels &amp; Distilled Spirits and Spiritech (Canada)</i>	
2:20 pm – 2:50 pm	Impact of Fuel Alcohol Production on Beverage Alcohol <i>Charles Abbas, iBiocat Inc. (USA)</i>	
2:50 pm – 3:15 pm	COFFEE BREAK	
3:15 pm – 4:00 pm	Grain Receiving Storage & Milling <i>Chris Richards, Lallemand Biofuels &amp; Distilled Spirits (USA)</i>	
4:00 pm – 4:45 pm	Enzymes as Processing Aids for Alcohol Production <i>Kulinda Davis, Consultant (Kenya)</i>	
4:45 pm – 4:55 pm	STRETCH/COMFORT BREAK/SESSION CHANGE	Auditorium Gavarnie
4:55 pm – 5:35 pm	Feedstocks for Fuel Ethanol <i>Dale Monceaux, AdvanceBio LLC (USA)</i>	
5:35 pm – 6:15 pm	Wet Milling & Mash Production for Fuel Ethanol <i>Ben Sunderhaus, Lallemand Biofuels &amp; Distilled Spirits (USA)</i>	
6:15 pm – 6:55 pm	Small Grains: Liquefaction & Downstream <i>Dale Monceaux, AdvanceBio LLC (USA)</i>	
7:30 pm – 10:00 pm	WELCOME RECEPTION	Patio sous verrière

# The Alcohol School 2018



## Monday

## beverage alcohol

APRIL 9, 2018

– Global Industry Review. Raw Materials & Processing–

10:45 am – 12:15 pm	REGISTRATION & LUNCH	Terrace Foyer
12:15 pm – 12:30 pm	Welcome <i>Angus Ballard, Lallemand Biofuels &amp; Distilled Spirits (Canada)</i>	Auditorium Gavarnie
12:30 pm – 12:45 pm	Introduction to the Programme <i>Graeme Walker, Ethanol Technology Institute (Scotland)</i>	
12:45 pm – 1:10 pm	Global Fuel Alcohol Industry <i>Craig Pilgrim, Lallemand Biofuels &amp; Distilled Spirits (USA)</i>	
1:10 pm – 1:40 pm	European Fuel Alcohol <i>Rob Vierhout, Alcogroup (Belgium)</i>	
1:40 pm – 1:50 pm	STRETCH/COMFORT BREAK	
1:50 pm – 2:20 pm	Global Beverage Alcohol Industry <i>Steve Wright, Lallemand Biofuels &amp; Distilled Spirits and Spiritech (Canada)</i>	
2:20 pm – 2:50 pm	Impact of Fuel Alcohol Production on Beverage Alcohol <i>Charles Abbas, iBiocat Inc. (USA)</i>	
2:50 pm – 3:15 pm	COFFEE BREAK	
3:15 pm – 4:00 pm	Grain Receiving Storage & Milling <i>Chris Richards, Lallemand Biofuels &amp; Distilled Spirits (USA)</i>	
4:00 pm – 4:45 pm	Enzymes as Processing Aids for Alcohol Production <i>Kulinda Davis, Consultant (Kenya)</i>	
4:45 pm – 4:55 pm	STRETCH/COMFORT BREAK/SESSION CHANGE	Cordes Room
4:55 pm – 5:35 pm	Raw Materials for Beverage Alcohol Production <i>Douglas Murray, Diageo (Scotland)</i>	
5:35 pm – 6:15 pm	Mash Preparation for Distilled Beverages <i>Steve Wright, Lallemand Biofuels &amp; Distilled Spirits and Spiritech (Canada)</i>	
6:15 pm – 6:55 pm	Rum Production <i>Shernell Layne, Lallemand Biofuels &amp; Distilled Spirits and Spiritech (Barbados)</i>	
7:30 pm – 10:00 pm	WELCOME RECEPTION	Patio sous verrière

# The Alcohol School 2018



## Tuesday

combined

APRIL 10, 2018

– Lab Visits. Molasses & Cereal Processing. Tasting –

8:30 am – 9:15 am	Bus to Blagnac Labs	Bus
9:15 am – 9:30 am	Blagnac Lab Arrival/Welcome/Lab Coats	Blagnac
9:30 am – 12:30 pm	Blagnac Labs Tours	
12:30 pm – 1:00 pm	Bus Returns to Hotel	Bus
1:00 pm – 2:00 pm	LUNCH	HOTEL
2:00 pm – 2:45 pm	Alcoholic Fermentation of Molasses <i>Shernell Layne, Lallemand Biofuels &amp; Distilled Spirits (Barbados)</i>	Auditorium Gavarnie
2:45 pm – 3:30 pm	Sweet Sorghum as a Feedstock for Alcohol Production <i>Serge Braconnier, CIRAD (France)</i>	
3:30 pm – 4:00 pm	COFFEE BREAK	
4:00 pm – 4:40 pm	Troubleshooting Fermentations <i>Ben Sunderhaus, Lallemand Biofuels &amp; Distilled Spirits (USA)</i>	
4:40 pm – 5:20 pm	Yield, Efficiency and Profitability in Alcohol Plants <i>Jack Swanson, Lallemand Biofuels &amp; Distilled Spirits (USA)</i>	Cordes-Conques Room
5:20 pm – 7:00 pm	Tutored Whisky Tasting <i>Jonathan Miles, Lallemand Biofuels &amp; Distilled Spirits (South Africa)</i>	
FREE EVENING		

### TOUR OF LALLEMAND BLAGNAC LABORATORIES (ORDER ROTATION TO VARY)

<b>Lab Visit I</b>	A) Microbiology & Flow Cytometry:	Demonstration of serial dilutions, inoculation, plating, identification tests and enumeration techniques
	B) Laboratory Fermentation:	Demonstration of bacteria process production at laboratory scale
<b>Lab Visit II</b>	Fluorescence Microscope:	Demonstration of fluorescence microscope and techniques
<b>Lab Visit III</b>	A) Bacteria Pilot Station:	Demonstration of lyophilizers and their use, measurement and extracts at pilot scale
	B) Yeast Pilot Station:	Explanation of yeast production from new strains to field trials
	C) Alcoholic Fermentation Room:	Demonstration of mass balance method in a climate controlled environment for ethanol measurement
<b>Lab Visit IV</b>	Genetics:	Overview of genetics used for identifying and differentiating yeast strains in the ethanol industry
<b>Lab Visit V</b>	Formulation:	Demonstration of formulation from grinding to packaging

# The Alcohol School 2018



## Wednesday

combined

APRIL 11, 2018

### – Yeast & Fermentation. Alcohol Distillation –

<b>8:30 am – 9:20 am</b>	Physiology of Ethanol-Producing Yeasts <i>Graeme Walker, Ethanol Technology Institute (Scotland)</i>	Auditorium Gavarnie
<b>9:20 am – 10:10 am</b>	Yeast Nutrition <i>Jim Miers, Lallemand Biofuels &amp; Distilled Spirits (USA)</i>	
<b>10:10 am – 10:40 am</b>	COFFEE BREAK	
<b>10:40 am – 11:30 am</b>	Yeast Production for Fuel and Beverage Alcohol <i>Tobias Fischborn, Lallemand R &amp; D (Canada)</i>	
<b>11:30 am – 12:20 pm</b>	Distillery Yeast Management <i>Alan Smart, Lallemand Biofuels &amp; Distilled Spirits (Scotland)</i>	HOTEL
<b>12:20 pm – 1:30 pm</b>	LUNCH	
<b>1:30 pm – 2:20 pm</b>	Yeast Strain Development for Alcohol Production <i>Emily Stonehouse, Lallemand Biofuels &amp; Distilled Spirits and Mascoma (USA)</i>	
<b>2:20 pm – 3:10 pm</b>	Distillation - Theory (Both Fuel & Beverage) <i>Phil Madson, KATZEN International Inc. (USA)</i>	
<b>3:10 pm – 3:40 pm</b>	COFFEE BREAK	Auditorium Gavarnie
<b>3:40 pm – 4:30 pm</b>	Distillation - Practice (including anhydrous ethanol) <i>Tara Vigil, KATZEN International Inc. (USA)</i>	
<b>4:30 pm – 5:20 pm</b>	Membrane Technologies for Fuel & Beverage Alcohol <i>Stephan Blum, Whitefox (Canada)</i>	
<b>5:30 pm – 11:30 pm</b>	TOULOUSE TOUR AND NETWORKING DINNER	

### TOULOUSE TOUR

Join the staff and speakers of The Alcohol School 2018–Europe as we embark upon an afternoon and evening exploration of Toulouse on Wednesday, April 11. This is an excellent opportunity to experience the beauty of our host city while networking with your Alcohol School colleagues. This bustling regional capital has much to offer the visitor. The guided walking tour will depart the Mercure Hotel at 5:30 pm. As we walk toward the historical part of the city to admire its key monuments, our guide will begin to reveal the secrets of Toulouse, the largest of the “Pink Cities,” enabling us to have a much better idea of its architectural and cultural richness. We will discover Saint-Sernin, Europe’s most imposing Romanesque basilica that was consecrated in 1096 by Pope Urban II, built to welcome the many pilgrims following the trail of Saint James. Then we will visit Capitol Square where the Town Hall is located and which houses paintings of Henri Martin and Paul Gervais. Finally, we will head toward the Jacobins convent, head church of the Dominican order during the 13th century, established to combat the Cathar heresy. The tour will end at around 7:30 pm at the Assezat Hotel, a Renaissance style town mansion, where we will have cocktails and dinner.

# The Alcohol School 2018



## Thursday

fuel alcohol

APRIL 12, 2018

– Process Monitoring & Control. Bioethanol Developments (Including 2G) –

<b>8:30 am – 9:20 am</b>	Contamination & Control <i>Johnny McGhee Doyle, Lallemand Biofuels &amp; Distilled Spirits (Scotland)</i>	Auditorium Gavarnie
<b>9:20 am – 10:10 am</b>	Fermentation Management & Control <i>Chris Richards, Lallemand Biofuels &amp; Distilled Spirits (USA)</i>	Auditorium Gavarnie
<b>10:10 am – 10:40 am</b>	COFFEE BREAK / SESSION CHANGE	Auditorium Gavarnie
<b>10:40 am – 11:30 am</b>	Eliminating Substrate & Product Inhibition <i>Vijay Singh, University of Illinois (USA)</i>	Auditorium Gavarnie
<b>11:30 am – 12:20 pm</b>	Dryhouse Technologies <i>Dale Monceaux, AdvanceBio LLC (USA)</i>	Auditorium Gavarnie
<b>12:20 pm – 1:30 pm</b>	LUNCH	HOTEL
<b>1:30 pm – 2:20 pm</b>	Key Analytical Methods for Fuel Alcohol Production <i>Joseph Kalkwarf, Lallemand Biofuels &amp; Distilled Spirits (USA)</i>	Auditorium Gavarnie
<b>2:20 pm – 3:10 pm</b>	Troubleshooting Distillations <i>Tara Vigil, KATZEN International Inc. (USA)</i>	Auditorium Gavarnie
<b>3:10 pm – 3:40 pm</b>	COFFEE BREAK	Auditorium Gavarnie
<b>3:40 pm – 4:20 pm</b>	2nd Generation Bioethanol Technology <i>Frederic D'Aoust, Lallemand Biofuels &amp; Distilled Spirits (Canada)</i>	Auditorium Gavarnie
<b>4:20 pm – 5:00 pm</b>	Cellulosic Feedstocks & Cellulases <i>Raquel Rodriguez, Lallemand Biofuels &amp; Distilled Spirits (Spain)</i>	Auditorium Gavarnie
FREE EVENING		



# The Alcohol School 2018



## Thursday beverage alcohol APRIL 12, 2018

### – Process Monitoring & Control. Distilled Beverage Developments –

<b>8:30 am – 9:20 am</b>	Contamination & Control <i>Johnny McGhee Doyle, Lallemand Biofuels &amp; Distilled Spirits (Scotland)</i>	Auditorium Gavarnie
<b>9:20 am – 10:10 am</b>	Fermentation Management & Control <i>Chris Richards, Lallemand Biofuels &amp; Distilled Spirits (USA)</i>	
<b>10:10 am – 10:40 am</b>	COFFEE BREAK / SESSION CHANGE	Cordes Room
<b>10:40 am – 11:30 am</b>	Batch & Continuous Beverage Alcohol Distillation <i>Alan Wolstenholme, Caledonian Solutions (Scotland)</i>	
<b>11:30 am – 12:20 pm</b>	Flavour Distillation in Scotch Grain Whisky <i>Douglas Murray, Diageo (Scotland)</i>	
<b>12:20 pm – 1:30 pm</b>	LUNCH	HOTEL
<b>1:30 pm – 2:20 pm</b>	Monitoring Whisky Fermentations <i>James Pryde, Whyte &amp; MacKay Ltd (Scotland)</i>	Cordes Room
<b>2:20 pm – 3:10 pm</b>	Key Analytical Methods for Distilled Spirits <i>Robert Fotheringham, Pernod Ricard (Scotland)</i>	
<b>3:10 pm – 3:40 pm</b>	COFFEE BREAK	
<b>3:40 pm – 4:20 pm</b>	Distilled Spirits Maturation <i>Gillian Macdonald, Glenmorangie (Scotland)</i>	
<b>4:20 pm – 5:00 pm</b>	Sensory Perceptions of Spirits <i>Steve Wright, Lallemand Biofuels &amp; Distilled Spirits and Spiritech (Canada)</i>	
FREE EVENING		



# The Alcohol School 2018



## Friday

### fuel alcohol

APRIL 13, 2018

– *Emerging Scientific & Technological Advances* –

<b>8:30 am – 9:10 am</b>	New Cereal Processing Technologies <i>Vijay Singh, University of Illinois (USA)</i>	Auditorium Gavarnie
<b>9:10 am – 9:50 am</b>	Alcohol Plants as Biorefineries <i>Charles Abbas, iBiocat Inc. (USA)</i>	
<b>9:50 am – 10:10 am</b>	COFFEE BREAK	
<b>10:10 am – 10:50 am</b>	Management of Distillery Residues <i>Stuart MacBeath, Veolia (UK)</i>	Auditorium Gavarnie
<b>10:50 am – 11:00 am</b>	STRETCH / COMFORT BREAK	
<b>11:00 am – 11:40 am</b>	A Nutritionist's View of DDGS <i>Kurt Rosentrater, Iowa State University (USA)</i>	
<b>11:40 am – 12:30 am</b>	Technical Opportunities in the Alcohol Industry <i>Phil Madson, KATZEN International Inc (USA)</i>	
	Course Wrap up and Certificate Presentation <i>Staff</i>	

## Friday

### beverage alcohol

APRIL 13, 2018

– *Selected Spirits. Co-products. Technical Opportunities* –

<b>8:30 am – 9:10 am</b>	Developments in Wine-based Distilled Spirit Production <i>Luc Lurton, BNIC (France)</i>	Cordes Room
<b>9:10 am – 9:50 am</b>	Gin & Vodka Production <i>Kirsty Black, Arbikie Distillery (Scotland)</i>	
<b>9:50 am – 10:10 am</b>	COFFEE BREAK	
<b>10:10 am – 10:50 am</b>	Management of Distillery Residues <i>Stuart MacBeath, Veolia (UK)</i>	Auditorium Gavarnie
<b>10:50 am – 11:00 am</b>	STRETCH / COMFORT BREAK	
<b>11:00 am – 11:40 am</b>	A Nutritionist's View of DDGS <i>Kurt Rosentrater, Iowa State University (USA)</i>	
<b>11:40 am – 12:30 am</b>	Technical Opportunities in the Alcohol Industry <i>Phil Madson, KATZEN International Inc (USA)</i>	
	Course Wrap up and Certificate Presentation <i>Staff</i>	