

# WE BREW WITH YOU.™



Welcome to the latest edition of the Lallemmand Brewing newsletter. We are excited to share some developments in our business.

We launched our **LalBrew® Voss** Kveik strain at Brau Beviale show in November and the market has gone crazy for this 'beast of a yeast'! We present here the experiences of just some of the brewers who have brewed with **LalBrew® Voss** - it has lived up to and even exceeded our every expectation!

In this edition we devote a significant portion to a discussion on the challenges and opportunities associated with the use of dry brewing yeast. Dry brewing yeast has come a long way in the past 10 years with a real focus on improvement of quality and availability of different strains.

Our Research and Development team have been super busy lately, developing our product pipeline (did you know that it can take 1- 2 years from the first 'hey, let's look at bringing this strain to market' to actually getting it into the market?). In this edition Avi Shayevitz, Senior Research Associate in our Montreal yeast labs, discusses the significance of yeast strain selection from a flavor viewpoint - it is all about flavor!

What an exciting time for the Siebel Institute as well! Siebel just completed the move into an amazing, purpose-designed new training and education facility at Green Street, Chicago (located in the West Loop neighborhood of this vibrant city). We are all so excited to be a part of this new chapter at Siebel, and look forward to welcoming those in search of the highest quality brewing education experience through our (new) doors! Of course, Siebel has a place in the hearts of the thousands of former students who learned their craft with us and we have been working hard to continue our support for alumni beyond graduation. We are delighted to announce the launch of the new Siebel Alumni app, which creates a modern networking environment for students, alumni and Siebel faculty.

The new Siebel campus is equipped with great audio-visual capabilities and so we thought we would put them to good use with the inaugural 'LalBrew® Technical Day' on June 25, 2020. LalBrew® Technical Day will be a livestreamed event at which key industry leaders will present several hot topics. We will publish the full list of topics, speakers and other information about the event, on our Lallemmand Brewing site in the coming weeks. Stay tuned!

Nothing beats the Craft Brewers Convention for mixing business with fun! Look out San Antonio - the Lallemmand Brewing team will be there and we hope to see you on our booth to taste some beers brewed using our premium brewing yeast and bacteria strains - and you can also get a sneak peek at some of our new products due for launch later this year.



**Editorial by Brent Jordan, General Manager, Lallemmand Brewing**



MARCH 16 – 20

## **IBD Asia Pacific Convention 2020**

Perth, Western Australia

[ibdasiapac.com.au](http://ibdasiapac.com.au)

APRIL 05-08

## **Trends in Brewing**

Leuven, Belgium

[trendsinbrewing.org](http://trendsinbrewing.org)

APRIL 19-22

## **Craft Brewers Conference**

San Antonio, Texas

U.S.A.

Booth #22089

**CRAFT  
BREWERS  
CONFERENCE**  
& BrewExpo America

PROUD SPONSOR 2020

[craftbrewersconference.com](http://craftbrewersconference.com)

# LALLEMAND PREMIUM DRY YEAST FOR QUALITY, CONSISTENT FERMENTATIONS

*The challenge of the brewer is to produce consistent and high quality beer with every brew. Using high quality yeast is essential in achieving this goal. With the increased variety and overall quality of dry yeast strains, many brewers are choosing to incorporate dry yeast into their fermentation toolkits.*

## THE DRY YEAST ADVANTAGE

Lallemand Premium dry yeast offers many advantages to achieve consistent and high quality fermentations.

- Viability is stable over time (Figure 1)
- Measure dry yeast by weight with no need to count cells
- Rehydrate or pitch dry directly into the wort for easy use
- Aeration is not required for first pitch

## LALLEMAND QUALITY SPECIFICATIONS

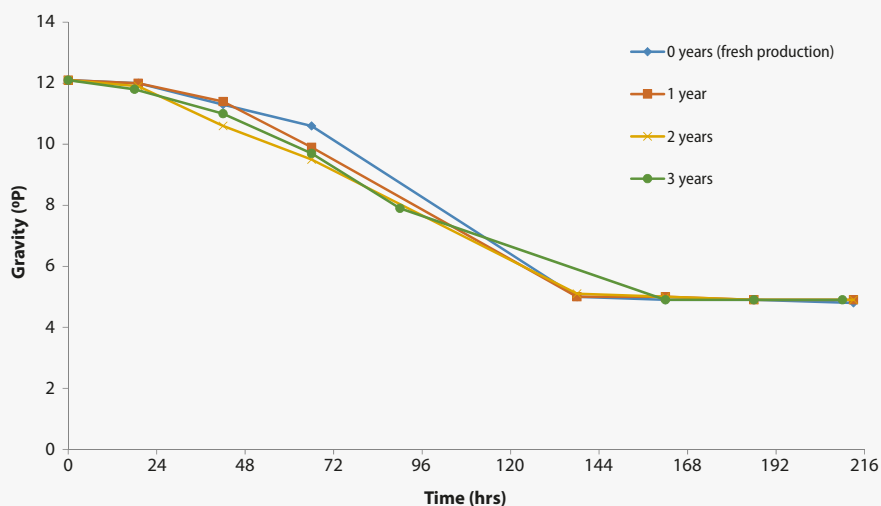
We perform a battery of QC tests including genetic identification, microbiological purity, fermentation performance and sensory analysis. Since dry yeast is stable, we are able to perform a more in depth characterization over several weeks to ensure that only production lots meeting our high quality specifications are released for sale. Production facilities are separated for all *diastaticus* strains and brewing bacteria to eliminate the risk of cross contamination.

Furthermore, all Lallemand dry yeast is traceable for each production lot, which is useful for troubleshooting any problems in the brewery, whether related to yeast and fermentation or not.

## REPITCHING & PROPAGATION

As a result of the industry leading quality of Lallemand Premium dry brewing yeast and we certify that all of our strains are of sufficient purity to re-pitch and propagate while maintaining genetic stability and

**Figure 1: Consistent fermentation performance for 0 to 3 year old yeast samples**  
Diamond Lager yeast, 200g/hL pitch rate, fermented at 12°C



consistent flavor profiles to similar liquid yeast cultures (Chris Powell & Tobias Fischborn (2010) Serial Repitching of Dried Lager Yeast, Journal of the American Society of Brewing Chemists, 68:1, 48-56)

When re-pitching, the slurry harvested from a fermentation pitched with Lallemand dry yeast can be treated according to normal re-pitching best practices. Standard QC tests should be applied such as measuring cell density, viability and microbiology tests for contamination with wild yeast or bacteria. While dry yeast can be pitched without aeration (sufficient sterol and unsaturated fatty acid reserves support several cell divisions without requiring oxygen) the re-pitched yeast must be aerated to 8-10 ppm dissolved oxygen.

Whether you use dry yeast for regular or seasonal brews, pitching fresh or re-pitching for several generations, or simply keeping a few bricks in the fridge to re-start a stuck fermentation; with new strains being released every year, it is an exciting time to be using dry brewing yeast!



## DID YOU KNOW...

**In the 18th century, beer helped Joseph Priestley discover oxygen.**

*He noticed gases rising from the big vats of beer at the brewery, produced by the yeasts activity, and asked to do some experiments.*



## Testimonials

# TESTING LALBREW® VOSS

with Glen Affric and Vocation Brewery

Full-scale commercial trials are a vital part of any new product development and throughout January and February Lallemand has been running wide-ranging collaborations with brewers across the globe to put our new LalBrew Voss through its paces. Here we focus on two recent trials from the UK to bring you some of the highlights and potential with this exciting new addition to the LalBrew Premium range of brewing yeasts.

First, we head to Liverpool where Glen Affric brewery produced "Ingimund IPA" (named after a Viking Warlord who invaded the local area in 902AD). This 6.5% modern IPA puts all the emphasis on late hops; minimal bittering but a substantial dry hop including hop varieties such as Ekuanot, El Dorado and Comet lend a bold and impressive aroma. Lalbrew Voss was pitched at 29°C and SG went from 16°P to 3°P in under 72 hours.



As well as an impressively fast ferment, LalBrew® Voss complimented the hop profile of the beer with Brewer Matt Lloyd saying **"you can really smell the tangerine. Very fruity [orange peel/essence, ripe peach]. No hint of any off flavours you would associate with high temperature fermentation and stress, very clean and fresh"**.

Voss is clearly very well suited to this style of modern IPA, our congratulations to the brewing team at Glen Affric for producing such an outstanding beer.

A trip over the Pennine hills in the North of the UK took us Vocation Brewery near Hebden Bridge. The forward thinking and innovative brewing team, led by head brewer Matt Howgate, tried something very special for their "Fen and Vale" sour IPA. High mash temperatures combined with a grist containing healthy amount of oats and wheat

deliver a full bodied smooth base, the perfect canvas for bold dry hopping. The unhopped wort was transferred to FV at 35°C and the brewery firstly inoculated with WildBrew Sour Pitch, bringing pH down to 3.5 within 24 hours at which point LalBrew Voss was pitched to complete a fast fermentation. This technique of sequential inoculation



Matt Howgate, Head Brewer, Vocation Brewery

was ideal given the optimal temperature range for both the bacteria and this exciting yeast strain with dry hops added toward the end of fermentation.

Head brewer Matt Howgate was impressed, summarizing **"The esters produced by this yeast worked well in this beer. They complemented the use of North West American hops perfectly. The flavours produced by fermentation were clean and vibrant, something not normally common with such hot fermentations"**.



The acidity and tang produced by Sour Pitch worked perfectly to deliver a unique take on a modern IPA; **"Soft balanced acidity, refreshing. Prominent tropical fruit and citrus aroma. Hop forward but not bitter taste. Very clean flavour and well balanced finish resulting in high drinkability"** reported Robert Percival.

From a range of trials in the UK and across the globe it is obvious just how versatile Lalbrew Voss is and what diverse potential it has across application and style. The future of brewing is here.

## Siebel Alumni

# SIEBEL AND WBA APP LAUNCH



We are so excited to announce the launch of our Siebel alumni app. We believe in the power of networks, formal or informal camaraderie of being in the business of making great beer – wherever you are, from farming great brewing barley and hops to serving the perfect pint in a brewery taproom. There is so much to celebrate and knowledge share amongst our Siebel/World Brewing Academy (WBA) alumni. So we want to amplify the power of our graduates and help facilitate networking.

Since launch in December of 2019 we have compiled 437 new members.

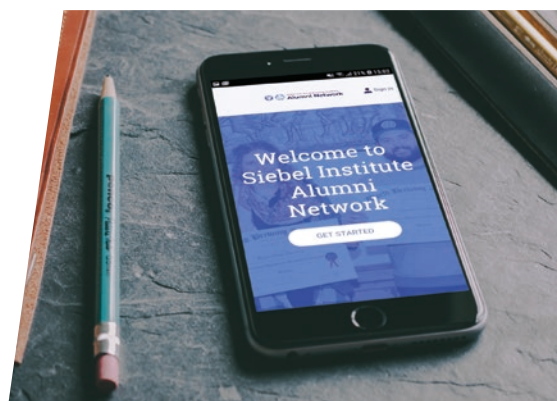
If you are Siebel Alumni, please support us by joining via our new app.

Contact: [alumni@siebelinstitute.com](mailto:alumni@siebelinstitute.com)

Erin Glass – Alumni secretary – first point of contact: Colorado office: voice 1[720].404.2986

Christian R von der Heide – President and CEO – Siebel Institute of Technology: 1 [312].255.0705

Dr.-Ing. Gerrit Blümelhuber MBA – Managing Director – Consulting, Seminars, Services  
[bluemelhuber@doemens.org](mailto:bluemelhuber@doemens.org)



## HOW TO DOWNLOAD:

### Android

- Step 1: Go to Google Play Store
- Step 2: Download app
- Step 3: Enable auto update \*optional\*
- Step 4: Sign in/Register

Note: If app already installed, perform update from Google Play Store.

### iOS

- Step 1: Go to App store to 'Graduway Community'
- Step 2: Download app
- Step 3: Enable auto update \*optional\*
- Step 4: Search for Institution name
- Step 5: Sign in/Register

## R&D Update

# STRESSOR RESPONSE AND STRAIN CORRELATION

No matter the domain of life, stress is a constant. Whether that be from specific external stimuli or the general possibility of damage, life has evolved response mechanisms to help organisms cope with stressful situations. In humans, overt stress may activate metabolic pathways that boost the production fight-or-flight hormones. In bacteria, chemical stress may trigger temporary physical changes in protein structures to increase odds of survival. These are singular examples of a diverse, complex, and well-coordinated response honed over millions years of selective pressures and evolution. The common factor, however, is increased production of secondary metabolites in direct response to stress stimuli; i.e. compounds that are produced by, but not directly involved with normal cellular growth cycles.

In ethanol technology humans have learned through trial and error to harness the stress responses of *Saccharomyces cerevisiae* in the production of flavorful and creative forms of expression manifested as beer. As with any other ingredient used in brewing, yeast is very important. Arguably the most important. The final flavor and aroma of a finished beer is a delicate interplay of hundreds of volatile compounds, nearly all of which are secondary metabolites produced

during fermentation processes. What makes *S. cerevisiae* remarkable is the immense intra-species diversity found among domesticated variants. Much like our second oldest companion, *Canis lupus familiaris*, this diversity is driven by adaptation to specific jobs – or, rather, styles. Hence, for example, the peppery and spicy flavor of Saison yeast versus the clean, crisp flavor of a pale ale yeast.

Thus, it is here at the core of Lallemant's testing and selection regimen for novel strain application that stress plays a vital role. **In brewing, environmental stress is split into four primary categories: pH, osmotic, temperature, and ethanol.** This is a targeted, multifaceted approach in which a battery of genetic and practical field tests are performed. Potential candidates undergo genotyping to determine origin. They are then tested in-house according to rigorous protocols established by both the European Brewing Convention (EBC) and the American Society of Brewing Chemists (ASBC). Laboratory-scale fermentations are performed, and the trial beer is then subjected to sensory evaluation by lab personnel while quantifiable data on stressor response metabolites are collected using High Performance Liquid Chromatography (HPLC) and Gas Chromatography (GC). Finally, the metadata analysis will reveal ideal applications for selected yeast strains where industry partners perform pilot-scale brews in preparation for the final and toughest test: consumer reception.



## Homebrew Update

# QUEEN OF BEER



We are pleased to announce **Katherine Gooding**, winner of the 26th annual Queen of Beer Competition! She not only took the Best of Show with her Ubelicious Lager (31A), but also was awarded the Siebel Institute's World Beer Academy Concise Course in Brewing Technology for the January 2020 enrollment.

Queen of Beer, launched in 1994, teamed up with both the Pink Boots Society and Drake's Brewing for the competition December 14th, 2019.

Pink Boots is an internationally known nonprofit organization that supports and encourages women in the professional brewing industry. Drake's Brewing of San Leandro, CA, offered the winner of the Queen of Beer Competition the opportunity to brew their beer with Drake's for the ProAm at the 2020 Great American Beer Festival.



### How and when did you decide to start brewing?

*My brewing story started about 10 years ago when my partner and I bought a full kit from a colleague who was getting out of the hobby. Over time I learned that I want to make clean, exceptional examples of classic German and American styles; kolsch, fest bier, and helles lager are my favorites.*

### How did it feel to win Queen of Beer?

*It was so cool to be there for the announcement! The event was so well run and the company of so many amazing beer women was really special. I was really proud to have two beers on the Best of Show table, let alone finish 1st and 3rd! The winning beer was inspired by my friend Norresa; she wanted a beer made with Ube to pay homage to her Filipino heritage and family tradition.*

### About being awarded the Siebel Concise course?

*I feel so lucky to have this opportunity as a homebrewer. There is a lot of lore and myth in the homebrewing community; I want to understand the theory and science behind the beer. I do know life is better with good beer! It is really convenient to have access to the Concise platform from anywhere with internet access. Even better is the access to the course tutors and other students for questions and clarifications.*

### What is your favorite beer style?

*Helles Lager or Fest Bier*

[WWW.QUEENOFBEER.BEER](http://WWW.QUEENOFBEER.BEER)