# Gramercy Cellars: What a Decade Does

We will take you through a selection of Gramercy Cellars new releases and library wines, highlighting the unique characteristics and winemaking processes that define each bottle. Each wine will tell a story of that vintage and vineyard, showcasing our dedication to restraint, complexity and expression of terroir.

# Wine Aging

- The aging of wine, and its potential to improve in quality, distinguishes wine from most other consumable goods.
- Complex chemical reactions involving a wine's sugars, acids, and phenolic compounds can alter the aroma, color, mouthfeel, and taste
- Factors influencing a wine's ability to age include grape variety, vintage, viticultural practices, wine region, winemaking style, and storage.



What a decade does…

Aging way better than most wines……

# History

1

## Ancient Greeks and Romans

The Ancient Greeks and Romans were aware of the potential of aged wines. In Greece, early examples of dried "straw wines" were noted for their ability to age due to their high sugar contents. These wines were stored in sealed earthenware amphorae and kept for many years.

2

## Rome's Prized Wines

In Rome, the most sought after wines—Falernian and Surrentine—were prized for their ability to age for decades. In the Book of Luke, it is noted that "old wine" was valued over "new wine" (Luke 5:39). The Greek physician Galen wrote that the "taste" of aged wine was desirable and that this could be accomplished by heating or smoking the wine, though, in Galen's opinion, these artificially aged wines were not as healthy to consume as naturally aged wines.

3

## Wine Industry Innovations: Cork & Glass Bottle

# What wine can age?

- **Top 10% of red wine and top 5% of white wines:** Only around the top 10% of all red wine and top 5% of all white wines can improve significantly enough with age to make drinking more enjoyable at 5 years of age than at 1 year of age.
- **Top 1% of all wine:** Jancis Robinson estimates, only the top 1% of all wine has the ability to improve significantly after more than a decade.
- **Majority of wines:** It is her belief that more wine is consumed too old, rather than too young, and that the great majority of wines start to lose appeal and fruitiness after 6 months in the bottle.

# Factors and influences

## Grape Growing Conditions

- The ratio of sugars, acids and phenolics to water is a key determination of how well a wine can age.
- The less water in the grapes prior to harvest, the more likely the resulting wine will have some aging potential.

## Winemaking Techniques

- The duration of maceration or skin contact will influence how much phenolic compounds are leached from skins into the wine.
- Tannins and anthocyanins not only influence a wine's resulting color but also act as preservatives.
- During fermentation adjustment to a wine's acid levels can be made with wines with lower pH having more aging potential.
- Exposure to oak will introduce more phenolic compounds to the wines.
- Prior to bottling, excessive fining or filtering could strip the wine of some phenolic solids; lessen the ability to age.

# Wine Storage & Packaging

## Storage Conditions

Vibrations and heat fluctuations can hasten a wine's deterioration and cause an adverse effect on the wines.

## Light Exposure

The ultra-violet rays of direct sunlight should also be avoided because of the free radicals that can develop in the wine and result in oxidation.

## Wine Packaging

Wines packaged in large format bottles, such as magnums and 3-liter Jeroboams, seem to age more slowly than wines packaged in regular 750 ml bottles or half bottles.

The advent of alternative wine closures to cork, such as screw caps and synthetic corks, has opened up recent discussions on the aging potential of wines sealed with these alternative closures.

## Temperature for Aging

On average, the rate of chemical reactions in wine doubles with each 18 °F (8 °C) increase in temperature.

58°F ideal. Wine can be stored at temperatures as high as 69°F (20°C) without long term negative effect.

Professor Cornelius Ough, University of California, Davis believes that wine could be exposed to temperatures as high as 120 °F for a few hours and not be damaged.

However, extreme temperature fluctuations (such as repeated transferring a wine from a warm room to a cool refrigerator) would be detrimental to the wine.

# The Aging Process Summarized

1 Color Decreases

As wines age, their colors tend to lighten, especially in red wines. This change is due to the pigments in the wine, which gradually break down, resulting in a loss of intensity and vibrancy.

2 Aromas Fruity to Earthy

The fruity aromas in young wines evolve into earthy, more complex scents as the wine ages. This transformation is attributed to the breakdown of fruit esters and the emergence of secondary and tertiary aromas.

3 Flavors Fresh to Dried

The fresh, juicy flavors in young wines develop into more complex, dried fruit flavors as the wine matures.

4 Tannins Decrease

Over time, the tannins in red wines soften and mellow, leading to a smoother texture and mouthfeel. This change can enhance the wine's overall balance and integration.

5 Acidity Decreases

As wines age, their acidity gradually decreases, resulting in a smoother and more harmonious taste. This reduction in acidity can contribute to a silkier mouthfeel and greater complexity.

6 Alcohol & Oak Same

Interestingly, the alcohol level and oak influence in wines generally remain relatively constant throughout the aging process. While other characteristics evolve, these elements often retain their original attributes.

# Quick Tasting Primer

# Taste

1 Salty

Wine can have a hint of saltiness, adding depth to its flavor profile.

2 Bitter

Bitterness in wine can come from compounds like tannins.

3 Sweet

Sweetness in wine is often derived from residual sugars.

4 Acid

Acidity in wine adds freshness and can affect its aging potential.

5 Umami

Umami, the savoriness of amino acids, can also be present in wines.

# Acidity

## Freshness and Aging

Acidity contributes to the freshness of wine and influences its aging process.

## Reds vs. Whites

Red wines may age better than whites due to phenolic compounds that help preserve them.

## Types of Acidity

- TA – Total amount of acidity in a wine in grams per liter
- Tartaric - Hard
- Malic - Green
- Citric - Softer
- pH

# pH

1

## Hydrogen Measurement

pH is a measure of hydrogen atoms in wine, typically ranging from 2.8-4.3.

2

## Acidity Scale

A pH of 3 is ten times more acidic than a pH of 4.

3

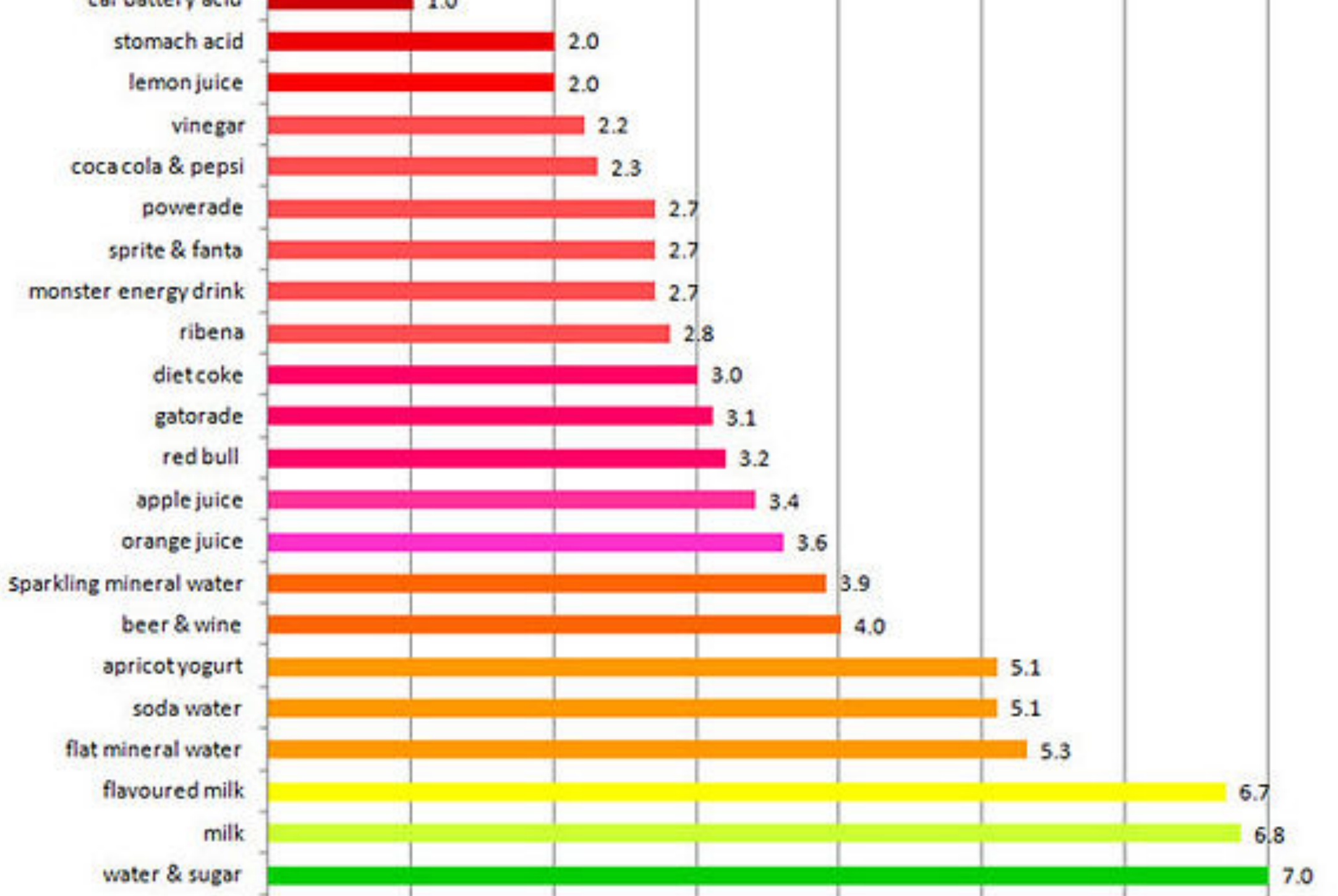
## Aging and Stability

The lower the pH, the longer the wine can theoretically age due to less oxidation and microbial spoilage.

4

## Mouthfeel and Color

pH affects the mouthfeel and can influence the color spectrum of the wine from bright cherry red to purple/blue.


car battery acid 1.0
stomach acid 2.0
lemon juice 2.0
vinegar 2.2
coca cola & pepsi 2.3
powerade 2.7
sprite & fanta 2.7
monster energy drink 2.7
ribena 2.8
diet coke 3.0
gatorade 3.1
red bull 3.2
apple juice 3.4
orange juice 3.6
Sparkling mineral water 3.9
beer & wine 4.0
apricot yogurt 5.1
soda water 5.1
flat mineral water 5.3
flavoured milk 6.7
milk 6.8
water & sugar 7.0

# Wine Flavor: A Harmonious Blend

## Terroir

The unique environmental conditions where the grapes are grown that give wine its character.

## Grape Variety

The specific type of grape that forms the foundation of the wine's flavor profile.

## Microbial Influence

The subtle yet significant impact of yeast and bacteria during fermentation.

## Oak Aging

The nuanced flavors imparted by oak barrels during the aging process.

# How white wines age

# 2022 Gramercy Cellars Viognier

100% Viognier - Antoine Creek and Forgotten Hills. 50% Neutral oak, 50% Stainless steel.

# 2012 Gramercy Cellars Viognier

| | |
|---|---|
| Vintage | 2012 |
| Varietal | 100% Viognier |
| Vineyard | Antoine Creek |
| Aging | 50% Neutral oak, 50% Stainless steel |
| Note | First vintage |

The 2012 Gramercy Cellars Viognier marks the winery's first venture into crafting this aromatic white wine. Sourced entirely from Antoine Creek, the wine is a balance of tradition and innovation, aged in equal parts neutral oak and stainless steel to preserve its vibrant fruit character while adding subtle complexity.

# Origination of Wine Aromas

## Grape Aromas

Aromas and flavors can come directly from the grapes themselves, contributing to the unique characteristics of the wine.

## Yeast Metabolism

Flavors produced by yeast metabolism during fermentation play a significant role in shaping the final aroma and taste of the wine.

## Barrel-Aged Flavors

Aromas and flavors dissolved from oak in barrel-fermented and matured wines contribute to the complexity and depth of the wine.

# Wine Aromas: The role of terpenes

In some grape varieties, viognier, muscat, riesling, gewürztraminer, torrontés, a group of chemicals called terpenes are important. They are highly fragrant and typically give aromas of flowers, rose petal and citrus.

The most important forms in grapes and wine include linalool, nerol, geraniol and citronellol. Unlike most wine aromas, these are relatively stable through the fermentation process.

Decrease quickly as the wine ages.

# Wine Aromas: Other Compounds

**Methoxyrazines** are another important group of compounds contributing to varietal character, particularly in the sauvignon family (including both sauvignon blanc and its offspring cabernet sauvignon). Green pepper and herbaceous aromas are typical and may be regarded as a fault if too dominant. These are produced by grapes, released from skins during crushing and survive fermentation to make it into the wine.

**Rotundone:** a sesquiterpene that gives pepperiness to Syrah, at incredibly tiny concentrations.

One significant **ketone** called diacetyl can be produced during malolactic fermentation. At high levels, it gives a buttery or butterscotch character, regarded as a fault if too dominant.

Another group of chemicals that can be important in wine flavor includes **aldehydes**, give grassy notes (some research suggests that machine harvesting enhances green. It appears that these chemicals mostly breakdown into corresponding alcohols during fermentation though.

**Acetaldehyde** (or more correctly ethanal) is an important flavorant in some wines, most notably sherry, but in most wines when it goes above its perception threshold, it would be regarded as a fault giving bruised apple, stale notes.

# Wine Aromas: Not forgetting esters & thiols...

**Esters** are very important in aroma and flavour and more than 160 have been identified in wine. These are predominantly formed during fermentation in reactions between organic acids and alcohol.

They are often important in giving fruity aromas associated with young wine. Some examples include isoamyl acetate (banana-like), benzyl acetate (apple-like) and ethyl butyrate (pineapple).

Fermentation temperature influences exactly which esters form - cooler temperatures favour esters with fruitier characters, as does the technique of carbonic maceration. Ethyl acetate here - at low levels it helps lift fragrance, but in wines contaminated by certain bacteria (especially Acetobacter), it can show an unpleasant nail-polish-remover smell.

Volatile **thiols** are particularly important in sauvignon blanc, but have also been found in riesling, colombard, semillon, cabernet sauvignon and merlot. These are derived during fermentation from sulphur-containing amino acids and other precursors.

| Chemical Group | Where from | Example | Typical Aroma |
|---|---|---|---|
| Terpenes | Grapes (free and bound to sugars in grape skins), also produced by yeast during fermentation | Linalool<br>Geraniol<br>Nerol<br>Citronellol | Muscat, floral, Iris<br>Floral<br>Floral<br>Citrus |
| Pyrazines | Grapes (bound to sugars in grape skins) | Methoxypyrazine | Green pepper, herbaceous notes |
| Ketones | Bound in grape skins and produced during fermentation and ageing | ß-damascenone<br>ß-ionone | Rose petal, exotic<br>Violet, raspberry |
| | Bacterial fermentation | Diacetyl | Butter, butterscotch |
| Esters | Produced during fermentation | Isoamyl acetate | Banana |
| | | Benzyl acetate | Apple |
| | | Ethyl butyrate | Pineapple |
| Thiols | Flavourless precursors in grape-skins and pulp, transformed during crushing and fermentation | 4-Mercapto-4-methyl pentan2-one (4MMP) | Blackcurrant, box leaf |
| | | 3-mercaptohexyl acetate (3 MHA) | Grapefruit zest, sweaty/cat pee at high concentrations |
| | | 3-mercaptohexan-1-ol (3 MH) | Passion fruit, citrus, leafy, gooseberry, guava |
| Aldehydes | During crushing | Hexanal | Grassy notes |
| | Oxidation of ethanol, especially action of Acetobacter | Ethanal (acetaldehyde) | Bruised apple, stale or sherry like at high levels |

# Color & Aroma Change

White wines start life pale in **color**, typically anything from water-white with tinges of green towards light golden yellow.

With time, color deepens and gains hints of amber, orange and eventually brown.

**Aromas** change from fruity and floral towards nutty, roasted, caramel characters and in some cases, cooked vegetables, canned peas or asparagus, and even petrol or kerosene characters may appear.

# Youthful fruit fades...

For instance, esters degrade into their constituent alcohols and acids, causing the disappearance of those young fruity flavors. However, cool storage temperatures can decelerate the speed of these reactions. Esters may also combine into longer chains, transforming the initially fruity notes into a soapy character.
The highly aromatic terpene, linalool, undergoes oxidation into alpha-terpineol, which not only possesses a musty, pine-like aroma but also has a perception threshold at least 10 times higher. This partly explains why muscat wines don't age well.

Some ketones convert into lactones, and notably, especially in riesling, a hydrocarbon called TDN for short emerges. This imparts the petrol/kerosene smell cherished by enthusiasts of aged German riesling but is considered a fault in Australian versions.

Thiols are particularly vulnerable to oxidation, resulting in a marked decrease in levels of 3 MH during barrel-ageing and malolactic fermentation, while 3MHA decreases significantly in the bottle.

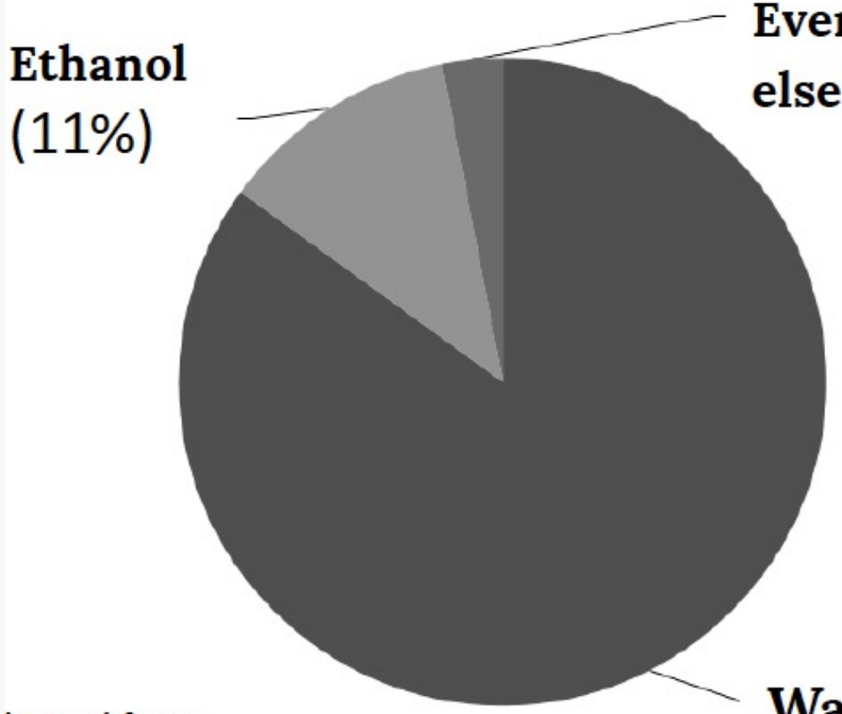
# Flavors can soften

Apart from aroma modifications, other taste changes happen too. The most important grape acid, tartaric acid can undergo esterification which means it loses a carboxyl group so tastes less sour, helping to soften flavour. Tartaric acid can also transform. This is less soluble in wine allowing crystals to form and reducing acid levels in the wine.

It's useful to know that these reactions usually depend on temperature; so cool storage can slow down changes.

# How red wines age

# Chemically, what's in a typical dry red wine?

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**Everything else, a non-comprehensive list**

- Glycerol (6-12 g/L)
- Organic acids (5-8 g/L) → **wine pH is 3-4**
- Hexose sugars (0.5-3 g/L)
- Minerals, e.g. $K^+$ (0.5-2 g/L)
- Important odorants (ng/L to mg/L)
- Phenolics (0.5-2 g/L)
  - Anthocyanins [color]
  - Tannins [astringency]
- Sulfur dioxide (20-40 mg/L)
- Glutathione (15-100 mg/L)

**Reducing compounds** (nucleophiles)

# 2021 Gramercy Cellars Third Man Grenache

1

## Grenache Led

With 77% Grenache, this wine showcases the varietal's ripe red fruit and floral aromas.

2

## Whole Cluster Fermentation

66% whole cluster fermentation adds complexity and a hint of savory notes to the wine.

3

## Extended Aging

Aged for 21 months in neutral puncheons, the wine develops a refined texture and integrated tannins.

# 2012 Gramercy Cellars Third Man

1

## Grenache Dominant Blend

The Third Man blend is led by 57% Grenache, offering a juicy and fruit-forward profile.

2

## Syrah's Depth

With 38% Syrah, the wine gains structure and dark fruit notes, providing a robust backbone.

3

## Mourvedre's Spice

The 5% Mourvedre introduces a touch of spice and complexity to the blend.

Grenache and Mourvedre from Olsen & Alder Ridge and Syrah from Les Collines and Oldfield

# Red Wine Aging Summary

## Young Red Wine Characteristics

Young red wine is pinkish-purple in color with typically fruity aromas and flavors such as berries, cherries, blackberry, cassis, plum, and strawberry. These are derived from grapes and changes during fermentation.

## Color and Aroma Changes with Aging

As red wine ages, the color changes to ruby, garnet, brick-red, then brown. Fruity notes may gradually fade, and other aromas appear, giving complexity to the wine. Typical aged aromas include pencil shavings, violet cedar, tobacco, caramel, toast, coffee, leather, and vegetal notes.

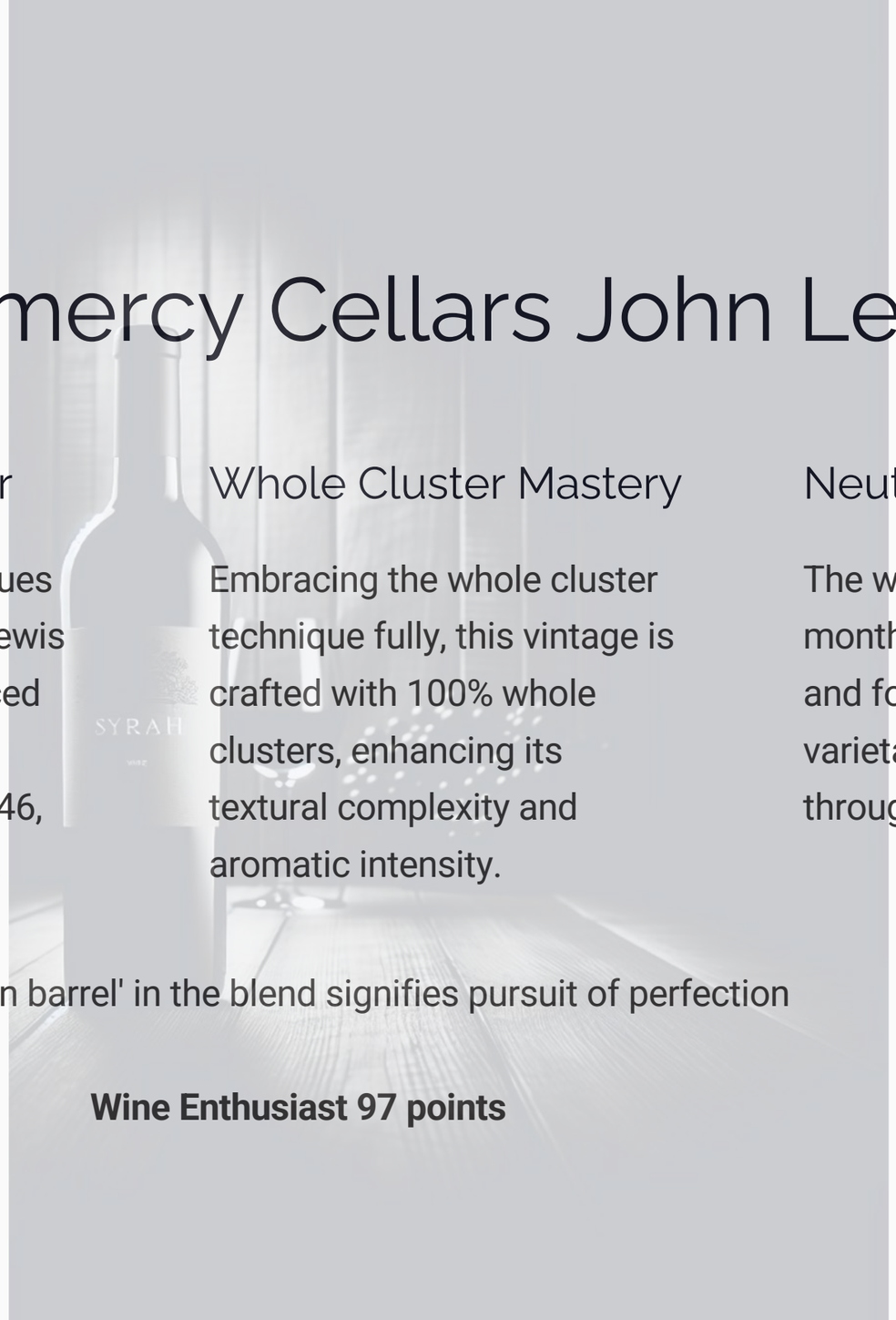
## Changes in Tannins and Acidity

Tannins appear to mellow and become softer to taste, and acidity is perceived as less sharp in well-aged wines. A wine that has aged well has enough fruit concentration to benefit from these softer textures and more complex aromas and flavors.

## Factors Affecting Aging Potential

Many wines don't age well, either because their joy is in those youthful fruit characters, or because the wine does not have the fruit intensity, along with tannins and acid, to develop in an appealing way so that brown, fruitless, and dull is the result.

# 2020 Gramercy Cellars John Lewis Syrah




## Les Collines Terroir

The 2020 vintage continues the legacy of the John Lewis Syrah, with grapes sourced from the esteemed Les Collines vineyard, Block 46, and a hint of Holy Roller.

## Whole Cluster Mastery

Embracing the whole cluster technique fully, this vintage is crafted with 100% whole clusters, enhancing its textural complexity and aromatic intensity.

## Neutral Oak Maturation

The wine matures for 22 months in neutral puncheons and foudre, allowing the varietal character to shine through unmasked by oak.

The inclusion of a 'golden barrel' in the blend signifies pursuit of perfection

**Jeb Dunnuck 96 points.** **Wine Enthusiast 97 points**

# 2010 Gramercy Cellars John Lewis Syrah

1

## Single Varietal Focus

This wine is a pure expression of Syrah, sourced from Les Collines Block 46 & a touch of SJR.

2

## Whole Cluster Influence

80% whole cluster fermentation contributes to the wine's structure and spice.

3

## French Oak Aging

Aged for 18 months in 10% new French oak barrels and puncheons, adding layers of subtlety.

**Wine Advocate 96 points**

# Polyphenols in Wine

The phenolic compounds in wine, known as polyphenols, affect the taste, color, and mouthfeel.

They can be broadly separated into **flavonoids** and **non-flavonoids.**

Flavonoids, such as anthocyanins and tannins, contribute to the color and mouthfeel of the wine.

Non-flavonoids include resveratrol and compounds derived from acids in wine.

**Vanillin** is a phenolic aldehyde commonly associated with the vanilla notes in oak-aged wines. It is found naturally in grapes but is most prominent in the lignin structure of oak barrels. Newer barrels impart more vanillin, with the concentration decreasing with each subsequent usage.

# Polyphenols/Phenolics in Winemaking

During the growth cycle of the grapevine, sunlight increases the concentration of phenolics in the grape berries, an important component of canopy management. In winemaking, maceration or "skin contact" is used to increase the influence of phenols in wine. Phenolic acids are found in the pulp or juice of the wine and can be commonly found in white wines, which usually don't go through a maceration period. The process of oak aging can also introduce phenolic compounds to wine, most notably in the form of vanillin which adds a vanilla aroma to wines.

# Flavonoids

In red wine, up to 90% of the wine's phenolic content fall under the classification of flavonoids. These phenols, mainly derived from the stems, seeds and skins are often leeched out of the grape during the maceration period of winemaking.

They contribute to the astringency, color and mouthfeel of the wine. In white wines the number of flavonoids is reduced due to less skin contact that they receive in winemaking.

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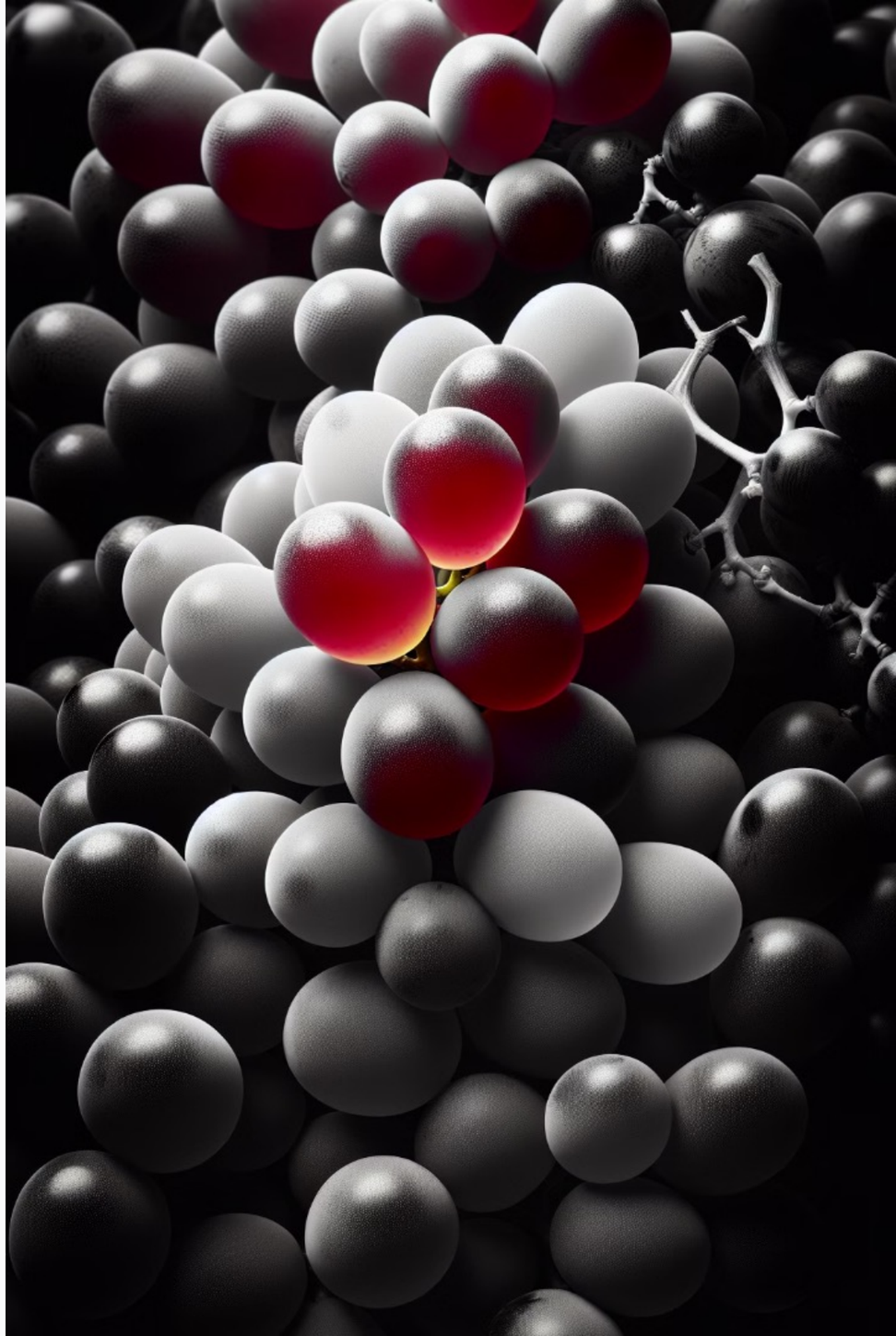
# Flavonoid: Anthocyanins

Anthocyanins are responsible for the vibrant red colors in wine grapes, developing during the veraison stage. They are found in the outer cell layers of the skin, requiring contact with grape skins during fermentation to extract the pigmentation.

White wine can be made from red wine grapes, except for teinturiers like Alicante Bouschet, which produce pigmented juice from the pulp.

The ionization of anthocyanin pigments caused by the acidity of the wine.

A wine with low pH will have a higher occurrence of ionized anthocyanins, resulting in bright red pigments. Higher pH will appear more blue.



# Anthocyanins & Color Changes

Anthocyanins are grape-derived pigments responsible for the pinkish-purple hue of young wines. These pigments begin to disappear rapidly, even during fermentation, as they undergo a series of complex chemical reactions. It seems that around 25% of the anthocyanins have disappeared by the end of the alcoholic fermentation, 40% after a year of ageing and then the process of polymerisation continues gradually as a wine ages, so that the purple tones fade and the brick and orange-toned polymers come to dominate.

# Flavonoid: Tannins

The other important group of phenolic polymers, or **polyphenols**, in wine are the tannins. These polyphenols get their name from their traditional use for tanning leather - because they bind to and cross-link proteins (useful for turning floppy animal skin into firm leather for instance).

This is more of a tactile sensation than a flavor as tannins react with proteins in saliva and make the mouth seem dry, something that probably originally evolved as a defence against grazing animals.

The source of tannin will be a factor. Tannins mostly come from grape skins or seeds, and possibly stems too depending on the winemaking method. Seed tannins are regarded as tasting rougher and usually show more noticeable bitterness than the longer chain tannins from than skin. There are also tannins from wood.

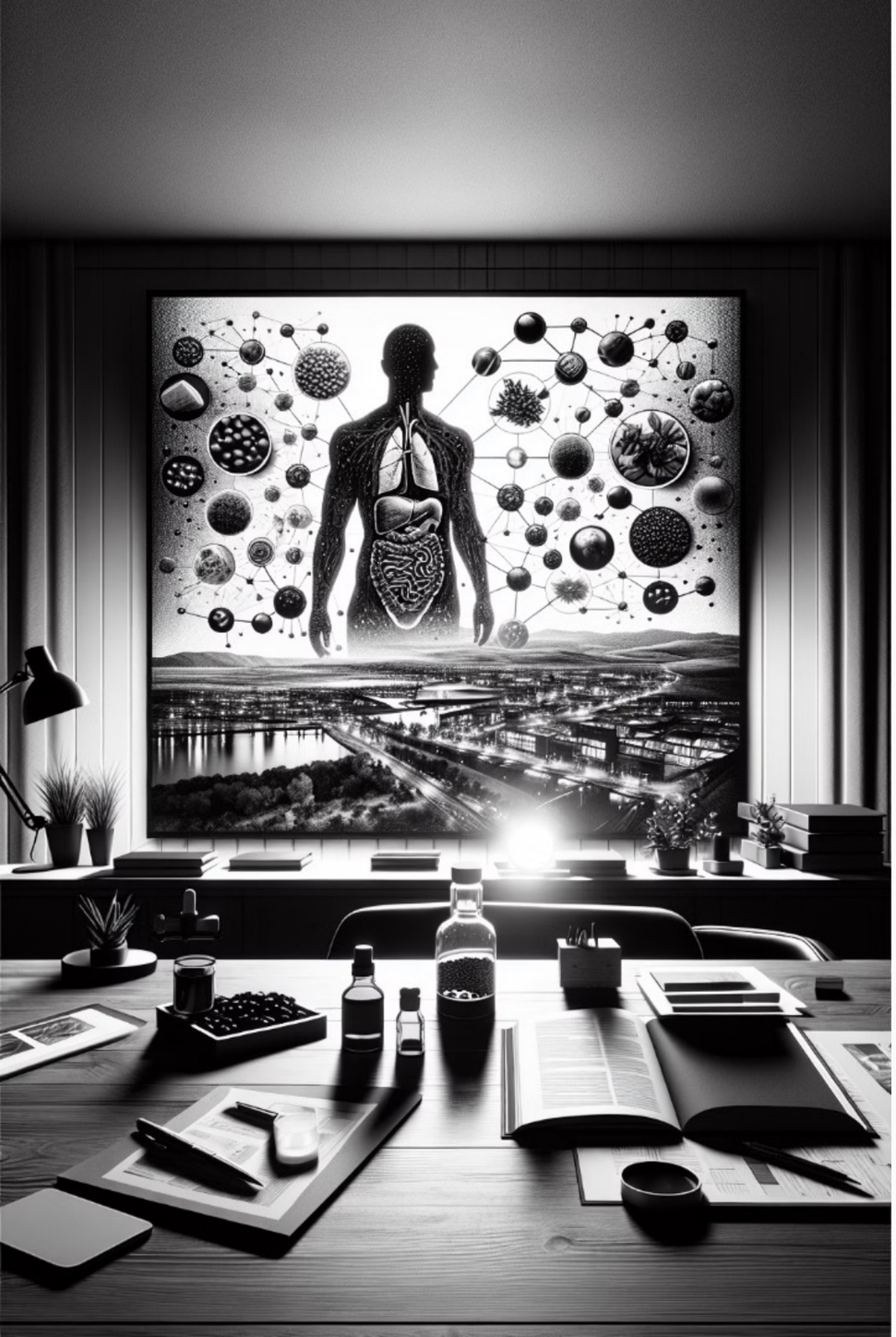
# Role of Tannins in Wine Aging

Winemakers are meticulous about harvesting grapes only when the pips are ripe and brown, employing techniques to avoid extracting bitter seed tannins. Tannins play a crucial role in the aging potential of red wine, forming complex combinations with anthocyanins. These compounds act as a 'sink' to absorb oxygen and undergo gradual oxidative changes. However, the detailed science requires further research to comprehend the changes in tannin perceptions as wine ages. Oxidation and the hydrolysis of tannin polymers into smaller units may also contribute to this process.

# Do Tannins Taste 'Softer' in Aged Wine?

One frequently repeated story about how wine tastes softer as it ages is being disproved. The old myth was that tannin chains get longer and longer until they are too big and heavy to stay in the liquid, so they fall out as sediment, making the wine literally taste softer by removing a portion of the tannins.

Unfortunately, research has found this to be wrong and it is short-chain tannins that taste softer, with longer ones tasting more astringent and drying. If the myth were true, wine would get more astringent as it aged, as tannins polymerised into longer chains but that's not what we see. Tannins do appear to taste softer as a wine ages, but no one has quite worked out why yet, and it seems they don't disappear either - analysis of 50-year-old wine in Australia still found high tannin levels.



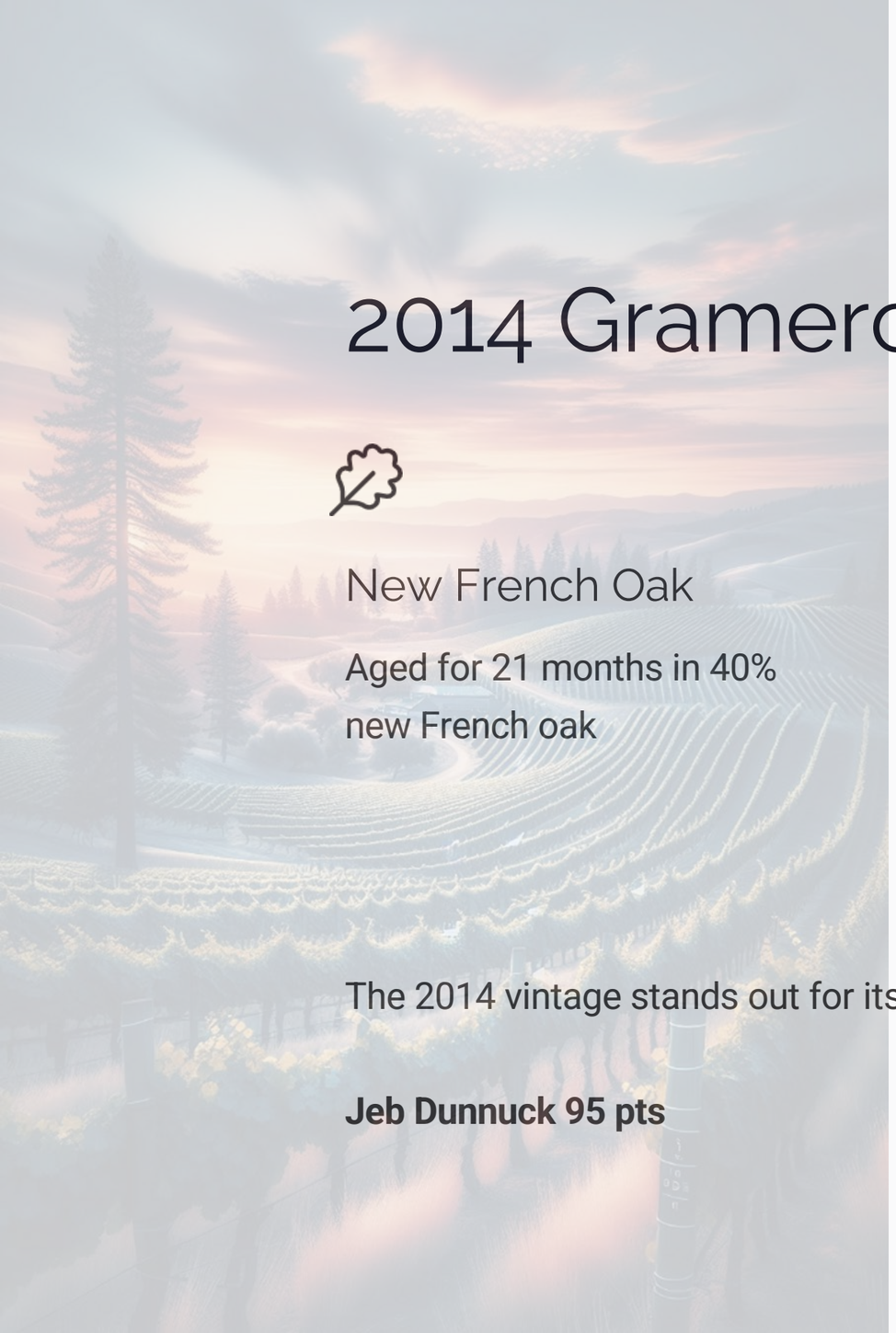
# Tannins and Health

A study in wine production and consumption has shown that tannins, in the form of proanthocyanidins, have a beneficial effect on vascular health. The study showed that tannins suppressed production of the peptide responsible for hardening arteries. To support their findings, the study also points out that wines from the regions of southwest France and Sardinia are particularly rich in proanthocyanidins, and that these regions also produce populations with longer life spans.

# 2019 Gramercy Cellars Columbia Valley Cabernet Sauvignon

Comprised of 86% Cabernet Sauvignon, 10% Merlot, 3% Cabernet Franc, and 1% Petit Verdot, this exceptional wine hails from Phinny Hills, Sagemoor (Bacchus & Dionysus), Gramercy Estates, and Loess. It has been aged for 22 months in 28% new French oak, resulting in a rich and complex flavor profile.

**Jeb Dunnuck** awarded this vintage an impressive **95 points**, while **Wine Advocate** bestowed it with **94 points**, solidifying its status as a standout offering from Gramercy Cellars.



# 2014 Gramercy Cellars Cabernet Sauvignon

## New French Oak

Aged for 21 months in 40% new French oak

## Cabernet Dominant

With 95% Cabernet Sauvignon, this wine is a bold statement of the varietal's prowess, complemented by Cabernet Franc and Petit Verdot.

## Selected Vineyards

The grapes are meticulously selected from Phinny Hill, Sagemoor, and Octave Estate

The 2014 vintage stands out for its concentration and balance.

**Jeb Dunnuck 95 pts**

# 2008 Gramercy Cellars Columbia Valley Cabernet Sauvignon

## Blend Composition

The 2008 CV Cab Sauv is a blend of 79% Cabernet Sauvignon, with Merlot, Cabernet Franc, and Petit Verdot adding depth and complexity.

## Diverse Vineyards

Sourced from Phinny Hill, Portteus, Estate Vineyard, Pepper Bridge, and Va Piano; Washington's finest terroirs.

# When Will A Wine Be Ready to Drink?

I have absolutely no clue when a wine will be ready to drink.

## Guidelines

Some Gramercy guidelines can help predict a wine's peak drinking time.

When someone asks if you're a "red or white" wine person