



Tales of the unexpected

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Received: 12 January 2021 / Revised: 14 January 2021 / Accepted: 28 January 2021 / Published online: 1 March 2021
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*From the large jug, drink to the wine of Unity, so that
from your heart you can wash away the futility of
life's griefs...*

From the poem 'Large jug, drink'.

Hafiz,

خواجه شمس‌الدين محمد حافظ شیرازی

a Sufi poet. 1315–1390. AD.

Most people don't associate Ireland with xenotransplantation or Iran with wine drinking. However, Herodotus, the father of Western history [1] is credited with saying of the ancient Persians (modern day Iran): '*if the Persians decided something while drunk, they made a rule to reconsider it when sober*'. Athenaeus, Fig. 1, a Greek rhetorician (170-223 AD), mentions that King Darius the Great, had the following inscription on his tomb: '*I was able to drink a great deal of wine and to bear it well* [2].' However, some doubt has been cast upon this by Dr. Touraj Daryee at the University of California, Irvine. In another text, *Mēnōy i khrad (The Spirit of Wisdom)*, from the sixth century AD, said wine consumption should be moderate: '*But anyone who drinks wine must be conscious to drink in moderation, since through moderate drinking of wine this much goodness will come to him, because food will be digested and kindle fire [of the body], and increase intelligence and the mind and seed and blood, and reject torment*'.

In present day Iran the manufacture and consumption of alcohol are illegal, but every culture seems to have imbibed

illicit liquor at some time. As it is illicit, it may be adulterated like *poitín* (poteen) in Ireland, sold in illicit drinking establishments, called *shebeens*, in the 19th and 20th centuries (and now during the pandemic), or moonshine sold in 'speakeasys', during prohibition (1920–1933) in the United States. It may cause severe and sometimes life-threatening reactions. Methanol is sometimes substituted for ethanol!

The Hematopoietic Cell Transplant (HCT) program in Iran began in 1991 [3] and it surprised me to learn that thalassaemia was the second most common indication for HCT after acute myeloid leukaemia. Perhaps this is a deficit on my part, as I had assumed that acute and chronic leukaemias would be the most common indications for HCT.

In a time-line published in 2016 [4] correct attribution is given to E Donnall Thomas, Georges Mathé, and Jean Dausset for their role in HCT, but the claim that the first recorded xenograft was carried out in 1992 is surely erroneous. It will probably come as a surprise to you to know that a xenograft was carried out in Ireland in the 8th century AD [5, 6]. However, the outcome is not clearly recorded and the occurrence or not of Graft versus Host Disease is not commented upon Fig. 2.

If HCT was one of the major developments in haematology in the 20th century, then surely the use of the stainless-steel tank for wine fermentation was one of the most important developments in wine making? Stainless steel was invented over 100 years ago [7] by Harry Bearley in Sheffield, UK and since then it has been important in almost every manufacturing sector, from healthcare to the automotive industry and, of course, in wine making. The secret was the addition of chromium to iron which meant that the resultant material did NOT rust. Many people think that stainless-steel does not stain, but this is not true, as manifested by the American inventor John De Laurean and his unsuccessful entry into the sports car market in Detroit, Michigan in 1975. The infamous car had gull-wing doors and a stainless-steel body, Fig. 3. Unfortunately, apart from many design faults, the body exhibited finger marks every time it was touched. De Laurean approached the Irish

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Fig. 1 Kottabos. Banqueters playing Kottabos (a game consisting of throwing a small amount of wine towards a target) while the musician plays the Aulos (a reed pipe), decorated by Nicias. Creative Commons attribution 2.5 generic license. National Archaeological Museum of Spain. Attributed to Marie-Lan Nguyen.



Fig. 2 Xenograft. Cethern, the wounded warrior, sitting in a tub of calf bone marrow. With kind permission from Artist J Cogan.



Fig. 3 The De Laurean car. The infamous De Laurean car. The gull-wing doors looked great but it was a nightmare to park.

Government for financial support which was not forthcoming, and the company went bankrupt in 1982.

The story of stainless-steel and wine making, however, is a much happier one. A Frenchman, Émile Peynaud (1912–2004), an inventor and an oenologist, first used stainless-steel fermentation tanks in the 1960s. Apparently, he was a very gentle man and demystified the science behind wine making using language that ordinary people could understand. He took his inspiration from the dairy industry, which was obsessed with cleanliness and avoidance of bacterial contamination. Stainless-steel fermentation tanks have many advantages including temperature control, ease of cleaning, longevity and prevention of oxidation as the wine ferments. In 1961 Château Haut Brion installed Bordeaux's first stainless-steel fermentation tanks and they have now become ubiquitous in vineyards. Fermentation in Stainless-steel also helps the wine to retain its crispness and freshness which many wine drinkers like in their white wines. Stainless-steel, in addition, does not impart any flavours to the fermenting wine.

Angelo Gaja, the famous Piedmontese wine maker, began using stainless-steel fermentation tanks in the 1970s for most of his wine making, and since 1986, uses them for all his red wines. In Australia wine making was revolutionised in the 1970s when Len Evans (1953–2006) and later Hazel Murphy (1949–2020) penetrated the UK market and eventually many parts of the world. They both demystified wine language and Evans pioneered 'blind tasting'. Murphy, a charming, diminutive and dynamic English woman is credited with increasing the export of wine from Australia from AU\$ 1.4 m to AU\$ 897 m. Today most Australian wine makers use stainless-steel fermentation tanks. I remember my first taste of Rosemount Chardonnay in Dublin in the late 1970s. It was marketed as 'sunshine in a bottle' and it certainly made for easy drinking.

Whatever about the type of fermentation tank used, remember that good wine is made in the fields and minimal intervention is now *de rigueur* in most vineyards. HCT may be replaced eventually by a less toxic modality but it looks like stainless-steel fermentation tanks are here to stay. And remember, don't drink illicit booze...it might kill you.

As promised [8], I opened a bottle of Cru Bourgeois at Christmas, Château Beaumont 2016. Well aerated and decanted it had a nice balance of fruit and tannins and a long finish.

Compliance with ethical standards

Conflict of interest The author declares no competing interests.

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