



## Stents, Anticoagulants and Wine

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Received: 27 February 2019 / Accepted: 27 February 2019 / Published online: 13 March 2019  
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The Heart's a Wonder—The Playboy of the Western World.

J M Synge. (1871–1909). Irish Playwright

Ischaemic heart disease (IHD) and cancer continue to be leading causes of morbidity and mortality in developed countries. There is an increase in the incidence of IHD in recipients of haemopoietic cell transplantation (HCT) [1].

According to Doctor Richard Schatz (Scripps Clinic, La Jolla, California, USA), co-inventor of the Palmaz-Schatz stent, the first coronary stent to be approved by the FDA, in 1994: 'I began collaborating with Doctor Julio Palmaz, formerly at the University of Texas, USA, on stent development in 1985. I was at the Brooke Army Medical Center (San Antonio, Texas, USA) at the time. Dr. Palmaz had conceived the idea of a balloon-expandable 'scaffold' to hold the artery open after seeing ground-breaking research on balloon angioplasty presented by Doctor Andreas Grüntzig in 1977'. While dramatically successful at opening blocked arteries, balloon angioplasty was often limited by abrupt artery closure and restenosis. Dr Schatz continued: "Early exploratory stent devices included self-expanding springs; however, these were hampered by delivery issues and high complication rates. Dr. Palmaz designed a balloon-expandable stainless-steel slotted metal tube, instead of a spring or coil. By trying different designs and types of metal, we ultimately developed the Palmaz-Schatz stent. We placed our first stents in dog coronaries in 1985 and,

with funding support from Johnson & Johnson, in the first humans in 1987".

The Palmaz-Schatz stent, cut from one bit of tube with a hinge point in the middle was the stent used extensively and probably reached its maximum usage from 1994 to 1998. Following on from that stents with coiled wire (a bit like the spring in a pen). The original design was rapidly superseded when coated stents came into clinical practice in 2002 and have evolved since. Currently aspirin (ASA) 75 mg/day is used indefinitely and clopidogrel, ticagrelor or prasugrel from 1 month for bioFreedom stents to 3 months to 1 year for others. There has been a push to reduce the duration of dual antiplatelet drugs but most cardiologists tend to use them for 1 year apart from the Biofreedom stents which are used in patients in whom the prolonged regimen could be problematic. For patients with atrial fibrillation bioFreedom stents are useful as dual antiplatelet agents are mandated for 1 month: then ASA and an oral anticoagulant (NOAC) can be used. Even if you don't have a stent low dose ASA might have a protective effect perhaps by inhibiting platelet function [2, 3].

You may well ask what, if any, is the connection between cardiac stents and wine? I'll tell you. Julio Palmaz sold the patent for his stent and bought a vineyard in Napa Valley, Palmaz Vineyards. My wife and I visited him there on the advice of Dr Ernest Bates, one of the few or only Afro-American vineyard owners in Napa Valley when I was attending the ASH annual meeting in San Francisco (2014). Having got past Amber, the girl in the 'front of the house,' we were conducted on a tour of the vineyard by Julio's son Christian. He was most charming and showed us in detail the electronic control of the vineyard including everything from grape selection to fermentation and ageing. He uses aluminium tanks for fermentation and French oak barriques (225 litres) for ageing.

After the tour we enjoyed a 'tasting' with Julio. It was a most affable affair (Fig. 1 & Fig. 2). He makes wine from Cabernet Sauvignon, Merlot, Malbec, Muscat and Chardonnay grapes and bottles about 8,000 cases per year and only sells to club members. We tasted the 2012 Chardonnay

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Fig. 1 The tasting room at Palmaz Vineyards



Fig. 2 Dr Julio Palmaz

‘Amalia’, the 2010 Estate Cabernet Sauvignon and the 2011 Estate Cabernet. All were beautiful. The Chardonnay was pale, fruity and made without malolactic fermentation. His wines range from \$ 55 to \$ 250 per bottle. He told us he had no formal training in wine making but that when he was a Fellow he used to visit vineyards in Napa and Sonoma in his ‘Spitfire’ (I can identify with this as I drove a Triumph Spitfire when I was a resident). He now drives a vintage Porsche and a helicopter!

Most of us will never aspire to owning a vineyard but the nectar is within our reach and it makes the world seem a better place. If we drink enough wine perhaps we won’t need a stent!

**Acknowledgements** I am grateful to Dr Brendan Foley, Cardiologist, St James’ Hospital, Dublin, Ireland for information on cardiac stents.

### Compliance with ethical standards

**Conflict of interest** The author declare that he has no conflict of interest.

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