

BULLETIN OF *The Society of Medical Friends of Wine*



VOLUME 46 - 2005

Letter from Incoming President

Dear Fellow Members,

To assume the role of president for an organization of such rich and storied history as The Medical Friends of Wine is truly an honor. Furthermore, a review of past presidents demonstrates the quality of leadership, the wisdom within the organization and the high standards the office has had in the past. I approach this year with great respect for the history and traditions of the group but also with an eye toward where society and the medical profession will be headed. The noble goals of the society (i.e. education, enjoyment of fine foods/wines and friendship) remain relevant and are worthy of continued pursuit.

When considering the shape of the upcoming year I look at the changes in medicine. How does the control of third party payers in our practices, the increasing number of hours worked to maintain income, the disruption of elective referral patterns by panel management and the restrictions resulting from increasing government regulations impact the society? What do we need to do to respond to these effects? Are our challenges different from those faced by similar societies?

We know from prior discussions that our greatest challenges are similar to national organizations and center around decreasing membership, decreasing participation of members in governance, and an aging membership population. Additionally, we must adjust to the loss in the fire of the aged wine from our cellar. I do not believe membership is the core of the issue. Instead, I believe membership is a result of the effect of other influences such as time constraints, decreased disposable income, and shifts in work-home lifestyle balances on participation with

the group. If we adjust our group's activities to respond to these pressures and add value to participation we will experience further success and our membership will reach a new and appropriate level.

With this in mind allow me to outline some of the goals for the next year:

- Our quarterly dinners will be organized around the theme of great cultures of the past with the intent to explore not only the cuisine, but where possible the wines produced from that region.
- We will vary both the type of venue and the day of the week to allow the maximum chance that members will find something of interest at a time convenient for participation.

- We will continue to have speakers at dinners but will vary the topics such that we mix scientific with more broadly related subjects to create more discussion and interest.

- We will actively engage similar societies in events to better understand our similarities and expand the social context of the group. This will be spearheaded by a joint wine tour with our sister society in Oregon.

- We need to closely review the financial status of our organization with particular attention to balancing fixed costs with revenue.

- We will continue to expand our education program about both wine and food.

- We will reach out to new members to serve on committees in order to have more new ideas brought forward for the group.

- We will look for every opportunity to encourage more communication and interaction between members at our events.

- We will look to rebuild the wine cellar using donations and very selective purchases. We will need to better define policies around the use of the wines and the role of the wine aging committee.

I look very much forward to the year and our society's activities. I have great faith in our continued success.

Sincerely,

Larry Dennen

Larry E. Dennen Jr. M.D.

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Wine Aging:	R. Blumberg, L.Dennen, M. LeClerc, M.Rosenberg, W.Siegel

Calendar of Events for 2006 - 2007

3/24/06.....233rd. Dinner, Bistro 350 - Culinary Academy
4/11/06.....BOG Absinthe SF
6/9/06.....234th. Dinner, World Trade Club, San Francisco
9/15 & 16/06.....Ashland Vintage Tour
10/7 or 10BOG
11/12/06.....235th. Dinner, Shanghai 1930, San Francisco
2/18/07.....Annual Dinner, Stanford Court Hotel, San Francisco

2005-6 Year in Review

Governors Dinner 2/24/05 San Francisco Yacht Club- Tiburon

229th. Quarterly Dinner 3/1/05

California Culinary Academy, SF.

Dr. Tedd Goldfinger, director of Wine & Health Research Initiative and President of the Desert Heart Foundation spoke on "Advocates for Wine and Better Health"

7 courses Food... Dr. Darlene Lanka, Wine...Dr. Howard Maccabee

230th. Quarterly dinner 6/24/05 Stanford Faculty club

MD Winemakers Dinner, Dr. David Bruce, Dr. Tom Fogarty and guest Dr. Wells Shoemaker.

All three winemakers got up and gave sometimes humorous accounts of how they got in to making wine as physicians.

Wine Tasting 7/31/05

Dr. H. Maccabee's Alamo home

Dr. Larry Dennen presented a German Wine Tasting and Seminar followed by an interesting California Cabernet tasting. This event was so popular that SMFW will plan future such educational tastings. Thank you to the Maccabees for hosting and to Dr. Dennen for planning this educational and enjoyable event. It was a beautiful late afternoon on the deck overlooking Mt. Diablo.

German Wines for Tasting 8/21/05

Karthäuserhofberg, Eitelsbach 2003, Auslese, Mosel J. B. Becker, Eltville Sonnenberg 2002, Kabinett,

J. B. Becker, Rauenthaler Wolfen 2002, Spätlese,

J. B. Becker, Eltville Sonnenberg 1988, Spätlese,

Karthäuserhofberg, Eitelsbach 2003 Spätlese,

Karthäuserhofberg, Eitelsbach 1997 Auslese,

Cabernet-Sauvignon

Simi 1987 Alexander Valley Cabernet SMFW,

Simi 1994 Sonoma Valley Cabernet SMFW

Simi 2002 Alexander Valley Cabernet, Bennett

Family 2002 Reserve Cabernet, Napa Valley

Amizetta Complexity 2002, Napa Valley, Robinson

Family Vineyards 2001 Cabernet, Stag's Leap

Vintage Tour 9/24/05 Carneros – Napa Valley

Etude, Kathryn Hall Estate and Rutherford Hill

Dr. Tom Kenefick, President and winegrower, arranged this year's tour to visit two Napa/Carneros wineries that he sells his fruit to. We included the new Kathryn Hall estate since it is located right above Rutherford Hill and tasting its reserve wines, visiting the beautiful winery and enjoying the spectacular view over the valley below was an added treat. A four course candlelit dinner was served in Rutherford Hill's cave and members of the Napa International Wine and Food Society joined us.

231st. Quarterly Dinner 10/29/05 Stanford Court Hotel, SF.

Dr. Jehon Grist spoke on "Wine in the Biblical Period" Dinner..... Dr. Joe Kohen, Wine..... Dr. Valery Uhl. Unfortunately Dr. Kenefick had to report the loss of the entire wine cellar inventory from the October Vallejo Wines Central fire during this dinner. Dr. J. Grist of Berkeley gave a very interesting and sometimes humorous talk on the evidence of wine making in Babylon, Syria, Israel, & Egypt over 3,000 years ago.

Governors Dinner 11/16/05 Palio d'Asti, San Francisco

67th. Annual Dinner and Meeting 1/28/06 Campton Place Hotel

Dr. Andrew Waterhouse spoke on "Micro-Oxygenation; The Winemaker's Secret Weapon"

Dinner Chair.... Dr. H. Maccabee,

Wine Chair..... Dr. Robert Clark

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"Wine is one of the nobles cordials in nature... I cannot but think, if your wine is good in kind, suited to your constitution, and taken in small quantities, it is fully as wholesome as any liquor in the world, except water."

-John Wesley, found of Methodism

Leon's Passions
written by Bob O'Reilly M.D. 7-27-99

On my many trips with Leon (Leon Adams, founder of SMFW) he rarely discussed his family. The one great exception was his daughter Suzie. She was meeting us in New York where we had a layover on the return trip from the European Vintage Tour. Leon started talking about Suzie a week before the meeting and he never stopped. Leon would even hum and sing snatches from the song "If You Knew Suzie".

Well, the great day arrived in New York when we met Suzie. She was a vivacious young woman who delighted everyone, especially Leon. There was an older woman on the trip with us. She expressed great surprise at their age disparity, "I didn't realize that someone of Mr. Adams's age would have a daughter so young". Suzie was in her late twenties and Leon was in his early eighties. So, to quench her curiosity, I told the woman Leon's life story.

Leon was a San Francisco newspaperman during the roaring twenties. He also ran a small PR firm on the side. He had been married for a while. When it became obvious that Prohibition was to be repealed, Leon started doing PR work for the wine industry. The Wine Institute was founded in 1934 with Leon as its first Executive Secretary. He was so successful in this and other roles that he retired in 1954 at the age of 49 to pursue his passions. First, he built a big home in Sausalito, where I would meet him 5 years later. Then, he wrote books about striped-bass fishing and the wines of America. He micromanaged this Society with great success and, he married his young secretary!

Dr. Bob O'Reilly has written a few stories about his travels with SMFW and they will be featured in future issues of the Bulletin.

The Judgment of Paris

No matter how fine an average American wine might be, the American snob does not praise it highly for fear of being thought naïve, or even chauvinistic...There are two ways to cope with wine snobbery. One is to compare wines with their labels hiddenThe other way is to send American wines to Europe and challenge the imports on their home grounds.

—Leon Adams, The Wines of America, 1973

IN MEMORIUM

The Society notes the passing of the following members:

- S. Wm. Levy M.D.
- Hilliard Katz M.D. Past President
- Stanton Schwartz M.D. Past President
- E. Kracilek M.D.



“Wine, one sip of this, bathe the drooping spirits in delight beyond the bliss of dreams. Be wise and taste.” – John Milton



Third International Wine and Heart Summit
Silverado Resort, Napa Valley, California
March 2nd 2005

Several members of SMFW attended the third International Wine and Heart conference at Silverado. The meeting was organized by Dr. Tedd Goldfinger, who served as Chairman, as in previous years. He is also the Director of the Wine & Heart Health Research Initiative and President of the Desert Heart Foundation. The University of New Mexico School of Medicine was the academic sponsor, providing 12 category one AMA/CME credits.

There were a plethora of “world class” faculty speakers, including Justin Ardill M.D. from Adelaide, Australia; Francois Booyse M.D. from University of Alabama, Birmingham; R. Curtis Ellison M.D. from Boston. University Medical School; Arthur Klatsky M.D. from Kaiser Cardiology Research in Oakland; Tedd Goldfinger DO, FACC, Morten Gronbaek MD, PhD. Professor and Head of Alcohol Research Center, Copenhagen; Matt Kramer, Wine Writer; Ann Nobel PhD. Professor of Enology,

UC Davis; Serge Renaud, PhD. , famous for the “French Paradox” and Research Director at Segalen University in Bordeaux; 2nd Warren Winiarski of Stag’s Leap Wine Cellars, Napa.

Our Society was represented by Al de Lorimier M.D. of Sonoma, Ellen Mack M.D. of Russian Hills Estate Winery, Anthony Truchard of Carneros on the Physician Winemaker Panel and several others including your correspondent, Howard Maccabee PhD. M.D.

As you will have noticed, several of the distinguished faculty have previously spoken during SMFW dinners and some have received our coveted Wine Research Award. Some of the most fascinating presentations were given by Dr. Ellison on the impact of the “French Paradox on Contemporary Society”, Dr. Meredith on the origins of the Zinfandel grape, Dr. Serge Renaud on Wine and Vegetable Consumption in Crete (the lowest cardiac death rate in Europe), and Warren Winiarski’s memories of the

1976 blind tasting in Paris, showing that California red and white wines were as good as the best in the world, and sometimes better.

My favorite event was the wine tasting of eleven wines made by physicians. I scrambled the glasses with numerical labels only to “blind myself”, and was pleasantly surprised to find that 4 of the top 5 were from California, with the top 2 being made by SMFW members Ellen Mack and Tony Truchard .

The conference was educational and entertaining and I recommend it to SMFW members for the future. I have provided an extra copy of the syllabus to our Executive Secretary, Susan Guerguy

Howard Maccabee Phd. M.D

Latest Communication from Dr. Tedd Goldfinger:The next International Wine and Heart Summit will take place February 14 - 17, 2007. The honorary co-chair will be Warren Winarski. Keep tuned to www.winesummit.com for details coming up.

I have a book being published in August that your members may be interested in. Take a look at the amazon listing:http://www.amazon.com/gp/product/0071473637/qid=1145938524/sr=11-1/ref=sr_11_1/104-1509509-6075127?n=283155

Also, the Renaud Society is growing and beginning to plan events. I hope that we can do things with the SMFW as well as other similar groups collectively in the future. See:www.renaudsociety.com

*“Here’s to sparkling wine in glittering glasses,
Wine that awakens joy like a lover’s laughter.
Here’s to wine that is pure, that awakens the
heart to rapture And gay abandon drowns each
somber thought.”*

-The drinking song in Cavalleria Rusticana

Andrew Waterhouse (Speaker at 67th annual dinner)
Department of Viticulture & Enology
University of California, Davis
Micro-oxygenation

The general principle of this technique is the addition of small amount of oxygen into the wine by means of a sparger that distributes the gas in the form of small bubbles (Zoecklein 2000, Miller 2001, Parish 2000, Rieger 2000, Rowe and Kingsbury 1999, Boulet and Moutonet 2000). The technique was created in the early nineties by Patrick Ducournau in France, with experiments carried out using Tannat wine, a highly astringent grape variety.

The description of the benefits of the technique are quite wide ranging, but consistent comments focus on the elimination of vegetal aromas and sulfide character, and an effect on “tannin structure”. In particular, effects such as enhancement of color stability, variation in intensity (A420+520) and hue (A420/520), increases in acetaldehyde concentration, reduction of sulfur-type aromas, extension of fruit aromas in aged wines, reduction of herb character, mouthfeel modification (increasing body, softer tannins, etc.), and reduction of sluggish/stuck fermentation risk during fermentation have been claimed. However, most of this evidence is anecdotal or has originated from poorly controlled experiments.

In practice, vendors of the technique recommend tanks with at least 2 meters of liquid head to allow enough time for the oxygen bubbles to dissolve into the wine as they move upward towards the tank’s headspace. The levels of oxygen added vary depending on the wine characteristics and are normally defined by tasting (between 1 to 60 mL/L/month). The use of micro-oxygenation during malolactic fermentation is generally not recommended due to microbiological problems. Finally, after malolactic fermentation is completed, values of around 1 to 5 mL/L/month can be added (again depending on sensory evaluation) (Parish 2000, Rowe and Kingsbury 1999, Kelly M., and D. Wollan. 2003). As explained before, the temperature of the wine can influence the amount of oxygen that can be absorbed, so vendors

normally recommend values around 13°C.

Currently, ca. 1,700 wineries have micro-oxygenation settings throughout the world and according to the suppliers, the demand keeps increasing. It is noteworthy that even though this technology has been commercially available for more than 10 years, only a few experiments addressing the effects on phenolic composition and concentration have been published, although none of them utilizing the levels of oxygen that are commercially recommended. For instance, the effects of oxygen exposure on red wine color, and phenolic composition was evaluated in a seven-month treatment experiment (Atanasova et al. 2002). Some of the reported results of this research are changes in colour characteristics such as higher levels of pigments non-resistant to SO₂ bleaching leading to significant increases in concentration of pyranoanthocyanins, ethyl-bridged compounds, and derived pigments. HPLC analyses using mass-spectrometric detection showed the presence of compounds derived from reactions involving acetaldehyde (acetaldehyde condensation reactions, and tannin-pyranoanthocyanins formation by cycloaddition of anthocyanins and flavanols).

In another example, Bosso et al. (2000) found changes in colour and “smoother taste” for Barbera wines treated with oxygen. Specifically, red pigments not bleached by SO₂ were more readily developed in the oxygenated wine than in the control wine.

Some of the main problems with this technique are the lack of objective tools to predict determined results, and a means to monitor its progress. Also, problems such as the difficulty of measuring small flows of oxygen (especially when small tanks are used) have to be addressed. All these concerns reveal the necessity of closer study in order to improve the objectivity of such a treatment.

V. Felipe Laurie

OXIDATION

By Jamie Goode, PhD

16 May 2005

Oxygen. It's 21% of the air we breathe and it sustains our life, but no less an authority than Louis Pasteur described it as the 'enemy of wine'. Perhaps this is putting things a little strongly. At certain stages in the winemaking process some oxygen is needed, and there are also a number of wine styles, notably Maderia, Sherry and Tawny Ports, that derive their character – at least in part – from Oxidation. For most wines, though, winemakers go to great lengths to protect them from seeing too much oxygen. Deciding just how much is too much, both during winemaking and for bottled wine, is at the heart of many of the wine world's most heated current debates. The precise role of oxygen in wine development and ageing is still being unraveled.

Of all wine faults, oxidation is perhaps the simplest to experience and diagnose. Other faults occur only sporadically and it usually isn't possible to mimic them convincingly with spiked wines. For instance, cork taint is a hard concept to explain to someone who hasn't experienced a 'corked' wine, and just lacing a wine with TCA (trichloroanisole, the key taint compound) isn't quite the same. Even more difficult to explain is what 'Brett' (the character imparted by rogue yeast *Brettanomyces*) smells and tastes of, which is a problem confounded by the fact that, in some wines, Brett can be regarded as a positive characteristic; opinion is divided about

when it is a fault. (See next month for our feature on *Brettanomyces* and a unique tasting.)

But oxidation is much easier to experience. Simply take a bottle of wine, pour a couple of glasses and enjoy. Recork the bottle and leave it on your worktop for a few days. Then pour another glass and compare your impressions of this wine, which will by now be partly oxidised, with your previous experience of wine from the same bottle. There you have it: that's the fault we're discussing here. Aside from these deliberate experiments, oxidation is a problem usually encountered where the closure has failed, or the winemaking has been shoddy, or the wine has been damaged by poor storage conditions, or where you've been served a glass from a bottle that has been open for too long.

How can you spot an oxidised wine? What do most expert tasters comment on? With oxidation, it's not so much what it contributes as what it takes away. The dominant feature is one of flatness. This is because exposure to oxygen has taken out some of the volatile chemicals that are an important part of wine aroma. But there's also a contribution from chemicals formed by the oxidation process, the most important of which is acetaldehyde (also known as ethanal). This is a significant component of deliberately oxidised wine styles such as Sherry and Madeira, and is described as having an aroma of

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in order of application

freshly cut apples. In addition, the fruit in oxidised red wines begins to take on a caramel-like quality, and oxidised white wines become heavy and dull. The palate of oxidised red wines also changes – they tend to take on a dry, slightly bitter characteristic. The real giveaway, though, is the colour. Reds change and take on a brick-red or even brown hue; whites darken dramatically, eventually taking on a golden-brown colour. These colour changes are, however, actually indicators of past oxidation. The chemical changes that follow oxygen exposure, described below, take place within 24 hours with no significant change in colour.

The chemistry of oxidation

Let's take a look at some of the chemistry involved in wine oxidation. I asked Professor Roger Boulton of the University of California Davis to describe what happens. 'As a wine is exposed to oxygen, the key initial reaction is the oxidation of monomeric phenols with a special reactive group to form hydrogen peroxide,' he explained. 'The peroxide can be consumed by a number of other reactions, either being quenched by tannins and other phenols (dominant in red wines, much less in whites) and the formation of acetaldehyde by reaction with ethanol.' We think of oxygen as being highly reactive, but it isn't. Dr George Skouroumounis of the Australian Wine Research Institute is a wine chemist who is currently researching the interaction of wine and oxygen. 'Molecular oxygen requires an oxidising agent to become reactive,' he emphasises. 'Under the right conditions, however, it can become very reactive. It requires a metal catalyst, a phenolic compound or a photosensitiser to make it more reactive.' This all sounds quite complex, so let's unpack it a bit: oxygen from the air combines with chemical components of the wine, which then produce a new, highly reactive component that then goes on to react with further components of the wine.

Once a bottle has been opened and a glass poured, the reactions with oxygen begin; similar reactions occur whenever wine comes into contact with

air, even during the winemaking process itself. For example, immediately after bottling, wines typically go through a dumb period known as 'bottle sickness' because of the effects of the oxygen encountered. Modern bottling lines typically flush out the air in the bottle with an inert gas to minimise this exposure. Because the interaction of oxygen and wine is potentially damaging, wine needs to be protected – some more than others. Wines all differ in their resistance to oxygen. Typically, young, dense reds with lots of phenolic compounds (tannins, anthocyanins and combinations of both of these) will be able to withstand oxidation much better than fresh, aromatic whites. For this reason, sulphur dioxide and, to a lesser extent, ascorbic acid are used by winemakers as antioxidants – compounds that protect against oxidation.

added to almost all wines, primarily as an antioxidant but also as an antimicrobial agent. It splits into two fractions in wine – bound and free – with only the latter having activity. Smart sulphur dioxide use, therefore, aims to increase the ratio of free to bound and thus maximise the efficacy of any dose. This again is a complicated subject. 'There is a general misconception that sulphur dioxide will protect against oxidation,' says Boulton. 'Its rate of reaction with oxygen is so slow that it cannot compete for the oxygen and stop the phenol oxidation. While it does compete for the peroxide formed, its main role is binding up the aldehyde formed, so that we don't smell the oxidation product'.

How soluble is oxygen in wine? It depends on the temperature: gases are more soluble at cooler temperatures. In water, the solubility of oxygen is about 8mg/litre at room temperature. 'In wine,' points out Skouroumounis, 'it is only possible to measure the unreactive oxygen, which is variable, based on how quickly or slowly it reacts when it comes in contact with the wine and the temperature of the wine medium.' All the measuring devices for oxygen involve an assay on 'triplet' oxygen (unreactive), thus any oxygen that has been converted to the reactive form

cannot be measured. 'We, therefore, do not really have complete knowledge of how much oxygen has got into the wine,' he explains.

Oxygen in winemaking

During winemaking, exposure of the developing wine to oxygen is crucial at certain stages of the process, and getting this right is one of the keys to successful winemaking. The problem is that there's a lot of guesswork involved. Traditional winemaking practices have serendipitously controlled oxygen exposure by using oak barrels (these have varying degrees of oxygen permeability) and processes such as Racking (where wine experiences a brief exposure to quite high levels of oxygen), often to good effect, sometimes not.

One of the successes of modern winemaking has been the use of stainless-steel tanks and practices that protect the must and evolving wine from oxygen throughout the winemaking process. This is known as 'reductive' winemaking. 'In Australia,' says wine scientist and consultant Richard Gibson, 'reductive winemaking has been central to the development of fruit-driven white styles with Crisp palates. In reds, reductive winemaking tends to produce a "tighter", more fruit-driven style.' Some winemakers will, however, deliberately allow their white wine musts to have oxygen exposure, resulting in the oxidation of many of the phenolic compounds present (known as Oxidative juice handling). This must goes an alarming brown colour but, from then on, the wine is handled reductively. The resulting white wine is actually longer lived and more resistant to oxidation.

Micro-oxygenation is a trendy and rather controversial technique that involves the slow application of a measured dose of oxygen to a wine held in tank. It aims to replicate the measured, low-level exposure to air that barrels allow. Proponents of this technique claim that the combination of oxygen with phenolic compounds builds structure in red wines and also reduces any vegetal or green notes the wine may possess. Because all wines differ in their

capacity to interact positively with oxygen, there's no formula: winemakers have to get the timing and level of micro-oxygenation right by a combination of intuition, regular tasting and, no doubt, a bit of luck. Some are wildly enthusiastic, others cautious. If you get it wrong, you've oxidised your wine, and it takes on a hard, slightly bitter edge.

The closure debate

Finally, it's worth mentioning the thorny issue of whether external oxygen is needed for successful ageing of bottled wine. The scientific orthodoxy has been that wine ageing is reductive and the ideal closure is one that allows no oxygen transfer. That is, bottled wine contains all the ingredients for successful ageing and the tighter the seal by the closure the better. But good data on the chemistry of wine ageing are few, and this issue has been thrust into the limelight by the search for alternatives to the taint-ridden cork. It's a complicated subject that I can't do justice to here. Suffice to say that we don't yet have all the data needed to reach solid conclusions.

Screwcaps with a tin/saran liner seal much better than the average cork and, while good corks don't allow much oxygen transfer, screwcaps allow even less. For some wine styles, this is positive, but the jury is still out on whether the tiny amounts of oxygen transmitted by natural corks are beneficial for the successful ageing of red wines over many decades.

Another current concern is that the super-tight seal achieved by screwcaps is resulting in 'reduction' problems in some wines: the presence of sulphur compounds whose formation is encouraged in reductive (absence of oxygen) conditions. In contrast, many synthetic corks seal less well than natural corks and screwcaps, and this enhanced oxygen transmission can lead to premature oxidation of some wines sealed this way.

JAMIE GOODE has a PhD in plant biology and is publisher of www.wineanorak.com.

Reviews of recent research abstracts relevant to health effects of wine.

Selected by Dr. Howard Maccabee from Research Updates of Wine Institute.

Courtesy of Chris Wirth, Wine Institute

Breast Cancer

Does dietary folate intake modify effect of alcohol consumption on breast cancer risk?

British Medical Journal, 2005;331(7520):807-810

OBJECTIVE: to evaluate the effect of dietary folate intake on the relation between alcohol consumption and breast cancer risk.

DESIGN; Prospective cohort study. **SETTING** Melbourne, Australia. **PARTICIPANS:** 17,447 Anglo-Australian women resident in Melbourne, aged 40-69 years at recruitment in 1990-4, and followed up until 12/31/2003. **MAIN OUTCOME MEASURE;** Invasive breast cancers diagnosed during follow-up and ascertained through the Victorian cancer registry. **RESULTS;** 537 invasive breast cancers were diagnosed. Compared with lifetime abstainers, the hazard ratio for breast cancer in women who consumed an average of 40 g or more of alcohol daily at baseline was 1.41 (95% confidence interval 0.90 to 2.23). No direct association was found between dietary folate intake and risk of breast cancer, but a high folate intake mitigated the excess risk associated with alcohol. The estimate hazard ratio of an alcohol consumption of 40g/day or more was 2.00(1.14 to 3.49) for women with intakes of 200 µg/day of folate and 0.77 (0.33 to 1.80) for 400 µg/day of folate (P=0.04 for interaction between alcohol and folate) **CONCLUSIONS:** An adequate dietary intake of folate might protect against the increased risk of breast cancer associated with alcohol consumption.

Baglietto L et al

Coronary Heart Disease, Endothelins

Red wine reduces oxidative stress in patients with acute coronary syndrome.

International Journal of Cardiology, 2005; 104(1) : 35-38

BACKGROUND; Moderate red wine consumption improved endothelial function in normal volunteers. Herein we explored the effects of moderate red wine consumption in endothelial function and in oxidative stress in patients with an acute coronary syndrome.

METHODS; 20 patients treated with percutaneous coronary syndrome were randomized to a red wine group (n=9, 250 ml daily, Cabernet Sauvignon) or to a control group (n=11, abstinence from alcoholic beverages.). Studies were performed at baseline and after 2 mths. Endothelial function was estimated by flow-mediated vasodilatation of the brachial artery. Plasma antioxidant capacity was measured by total antioxidant reactivity and ferric reducing antioxidant power. Oxidative damage was evaluated by measurements of 8-OH deoxyguanosine content in leukocyte deoxyribonucleic acid. **RESULTS;** The endothelium dependent/independent dilatation ratio significantly improved compared to baseline in both groups. The 8-OH deoxyguanosine content decreased significantly in both groups; this effect was more pronounced with wine (p<0.002 vs. control) Oxidative deoxyribonucleic acid damage in controls decreased from 13.1+/-1.1 to 10.0+/-1.0 (P<0.003); with wine from 13+/-0.8 TO 5.6+/-0.7 per 10 (5) guanosines (p<0.001; p<0.002 vs. control). Total antioxidant reactivity increased from 240+/-1.8 to 268+/-18 µM in the wine group (p<0.03 vs. control). Ferric reducing antioxidant power increased from 1106+/-60 to 1235 +/-42 µM in the control group and from 1219+/-82 to 1450+/-63 µM in the wine group (p<0.001 vs. control). **CONCLUSIONS;** The addition of moderate amounts of red wine did not improve endothelial function beyond conventional therapy, whereas it showed benefits in parameters of oxidative stress in these patients. *Guarda E. et al*

Lifestyle

Relationship between lifetime alcohol consumption and Helicobacter pylori infection

Annals of Epidemiology, 2005; 15(8):607-613

PURPOSE: Several studies have demonstrated an inverse relationship between current moderate alcohol consumption and Helicobacter pylori (H. pylori) infection suggesting that alcohol consumption may facilitate elimination of these chronic infec-

tions.. The further aim of this study was to further explore this hypothesis by taking lifetime alcohol consumption, which may be a better marker of the relevant exposure than current alcohol consumption, into account. **METHODS:** A total of 1206 patients between 30 and 70 years of age who underwent inpatient rehabilitation due to coronary heart disease were included in a cross sectional study carried out between January 1999 and April 2000. Participants provided information on average amount of alcohol consumed during past 12 months as well as during lifetime. **H. pylori** infection status was measured by serum immunoglobulin G antibodies. **RESULTS:** There was an inverse non-linear relation between amount of current alcohol consumption and *H. pylori* seroprevalence. By contrast, we found an inverse dose-response relationship between lifetime alcohol consumption and *H. pylori* seroprevalence with the strongest risk reduction among subjects who had consumed more than 500,000 g of alcohol during life (adjusted odds ratio, 0.65; 95% confidence interval, 0.42-1.00). **CONCLUSION:** Our analysis supports the hypothesis that alcohol consumption may facilitate elimination of *H. pylori* infection among adults.

Kuepper-Nybelen J, et al

Colon cancer, Compounds/Polyphenols Apoptotic effect of red wine polyphenols on human colon cancer SNU-C4 cells

Food and Chemical Toxicology 2005

Polyphenols in fruits, soybean, vegetables, herbs, roots and leaves act as bioactive components related with prevention of cancer heart diseases and diabetes. We investigated the apoptotic effects of polyphenols from red wine on human colon cancer cells SNU-C4 using 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) assay, 4,6-diamidino-2-phenylindole (DAPI) staining, terminal deoxynucleotidyl transferase (TdT)-mediated dUTP nick end labeling (TUNEL) assay, reverse transcription-polymerase chain reaction (RT-PCR) expressions of Bcl-2, Bax and Caspase-3 genes, and Caspase-3 enzyme activity. Polyphenols (100µg/ml) increased the apoptosis of SNU-4 cells with apparent apoptotic characteristics including morphological changes of chromatin condensation and apoptotic body formation from DAPI staining and TUNEL assay. Compared with untreated control group, polyphenols (100µg/ml) reduced the expression of Bcl-2 whereas those Bax and Caspase-3 were increased. The Caspase-3 activity in the polyphenols treated

group was significantly increased compared to those in control group ($P < 0.05$). These results suggest that polyphenols have a strong potential for development as an anti-colon cancer agent.

Kim MJ et al

Coronary Heart Disease Red wine acutely induces favorable effects on wave reflections and central pressures in coronary artery disease patients.

American Journal of Hypertension, 2005;18(9): 1161-1167

BACKGROUND: To investigate red wine's acute effects on aortic pressures and arterial stiffness in patients with coronary artery disease (CAD). **METHODS:** Fifteen patients with CAD were recruited in a double-blind, cross-over, which was comprised of 2 study days. Each volunteer consumed either 250 ml of dealcoholized red wine. Wave reflections, expressed as augmentation index (Aix), as well as central and peripheral blood pressures (BP) were discussed at fast and 30, 60, 90 min postprandially. **RESULTS:** Both regular and dealcoholized red wine caused a significant decrease in Aix by 10.5% \pm 1.4% ($P = .001$) and 6.1% \pm 1.4% ($P = .011$), respectively, whereas no significant change was induced in mean BP and timing of wave reflections expressing pulse wave velocity. Peripheral systolic BPs remained unaltered in both beverages, whereas a significant decrease in peripheral and central diastolic BPs was observed after the dealcoholized red wine consumption ($P = .03$ and $P = .035$ respectively). Central systolic BP was decreased after the consumption of regular (-7.4 \pm 2.4 mm Hg, $P = .05$) and dealcoholized red wine (-5.4 \pm 2.7 mm Hg $P = .019$). **CONCLUSIONS** Both types of red wine provoked favorable acute effects on wave reflections and central systolic pressures, whereas no such effect was evident at the brachial artery. Therefore, these findings could be attributed mainly to red wine antioxidant substances, rendering it a possible means of at least acute attenuation of increased wave reflections, arterial stiffness and central pressures in patients with coronary artery disease. *Karatzis KN et al.*

Platelets/Plasma Alcohol consumption and platelet activation and aggregation among women and men: the Framingham Offspring Study.

Alcoholism: Clinical and Experimental Research 2005

BACKGROUND: Alcohol intake has been as-

sociated with lower platelet activity; however, few large-scale studies have included women, and to our knowledge, the relationship of alcohol intake with measures of platelet activation has not been studied.

METHODS: We performed a cross-sectional analysis of adults free of cardiovascular disease enrolled in the Framingham Offspring Study. Study physicians assessed alcohol consumption with a standardized questionnaire. We measured platelet activation in response to 1 and 5 microm of adenosine diphosphate (ADP), epinephrine, and collagen among 2013 participants. **RESULTS:** alcohol consumption was inversely associated with P-selectin expression in response to 1 microm ADP ($p= 0.007$) and 5 microm ADP ($p= 0.02$) among men but not women. Alcohol consumption was also inversely associated with platelet aggregation induced by ADP among

both women ($p = 0.04$) and men ($p \text{ trend} = 0.008$) and by epinephrine among men ($p = 0.03$). **CONCLUSIONS:** Alcohol consumption is inversely associated with both platelet activation and aggregation, particularly in men. Additional research is needed to determine whether these findings contribute to the contrasting associations of alcohol consumption with risk of thrombotic and hemorrhagic cardiovascular events. *Mukamal KJ et al.*

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