

**Positive aspects  
of moderate wine consumption  
in the context of  
medical knowledge**



**Jan Žaloudík, Prof, MD, PhD,**

**Brno, CZ**

**Professor of Surgery and Oncology**

**Past Director of the Masaryk Memorial Cancer Institute**

**Dean of Medical School of the Masaryk University 2003-10**

**Senator of the Czech Parliament since 2010**

**Fisherman**

**Pensioner**

**Moravian Citizen**

**Wine lover**

**Doctors are expected to condemn drinking alcoholic beverages, ... *but drink them hypocritically themselves.***

**In fact, there is no banquet, congratulation, celebration or feast without alcohol.**

**Hypocrisy ?**

Cham, Sem and Jafet found their father drunk and they covered his nudity



Noah's Drunkenness : Giovanni Bellini ( 1515)

***The Story of Forefather Noah*** **the birth of hypocrisy ?**

*Bible, Old Testament, Book of Genesis, Section Nine*



Noah, when he got sober and woke up, he was angry with Cham because he named his nudity and drunkenness - **hypocrisy arose !**

in Czech - joke and pun 😊 : pokrývka - **pokrytectví**  
in English : blanket - **hypocrisy**

anyway, **hypocrisy - die Heuchelei – hipocrisie –  
hipocrisia – hipokryzja – ketszínuseg** as

Covering up the truth (*eng*)

Die Wahrheit vertuschen (*ger*)

Masquez la verité (*fran*)

Encubrir la verdad (*esp*)

Zaslaniać prawde (*pol*)

Az igazság fedezese (*hung*)

Zakrývat pravdu (*czech*)

***„drunken monkey“***

***hypothesis***

Robert Dudley, 2000



*Gaspar de Crayer : Roman charity*  
*Museo del Prado, Madrid*



„wine is the milk of old men“

**organic products** as **milk** or fruits **ferment** and are thus temporarily **preserved** for the happier uses, even as **more digestible, biologically valuable and tasty** (yoghurt, **wine**, beer, kimchi, sauerkraut etc)





# PubMed Database citations (May 2022) by topics/passwords

*empirical, experimental and randomized controlled studies*

|   |               |
|---|---------------|
| Wine and <b>health</b>                    | <b>4 876</b>  |
| Wine and <b>cancer</b>                    | <b>2498</b>   |
| Wine and <b>cardiovascular diseases</b>   | <b>906</b>    |
| Wine and <b>diabetes</b>                  | <b>649</b>    |
| Wine and <b>myocardial infarction</b>     | <b>180</b>    |
| Wine and <b>cerebral stroke</b>           | <b>224</b>    |
| Wine and <b>microbiome</b>                | <b>454</b>    |
| <br>                                      |               |
| Alcohol dehydrogenase (ADH)               | <b>21 526</b> |
| Alcohol dehydrogenase and <b>drinking</b> | <b>1 633</b>  |
| Alcohol and <b>race</b>                   | <b>552</b>    |
| Alcohol and <b>adaptation</b>             | <b>670</b>    |
| <u>Alcohol and <b>ancestors</b></u>       | <b>263</b>    |



**accurate studies  
based on inaccurate  
questioning and data**

*„Babylonian  
confusion  
of languages“*

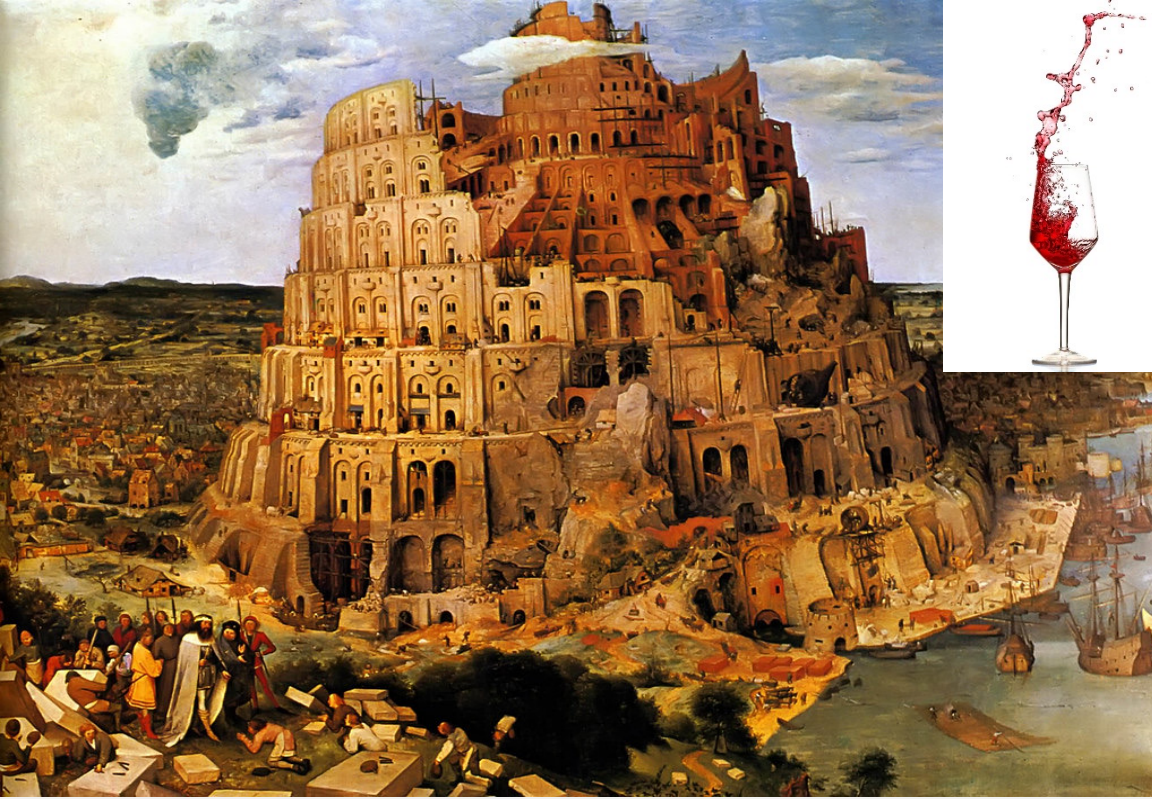
## **What is alcoholic beverage ?**

**Are beer, wine and spirits (drinks) really comparable ? Surely not.  
Concentrations, content, context of use, metabolisms are different !**

**Beer – large volumes, low alcohol (3-5%)**

**Wine – moderate volumes, moderate alcohol (11-14%)**

**Spirits – low volumes, high alcohol (40%, home-made even 50-56%)**



**accurate studies  
based on inaccurate  
questioning and data**

*„Babylonian  
confusion  
of languages“*

**How many drinks per day / per week ?**

**And what „drinks“ ? Glasses of wine?**

**before eating ?**

**with eating ? what dishes ?**

**outside food ?**

**125 ml ?**

**175 ml ?**

**200 ml ?**

**250 ml ?**



the dose of alcohol  
at a given time  
is crucial !

# alcohol dehydrogenase (ADH)

five classes,  
isoforms, gender and  
race-related variants



**the dose decides  
the consequences !**



**+ ADH individuality**

**everyone is somewhat different genetically and behaviorally  
everyone drinks somewhat differently**



**no general conclusions can be expected 😊**

but let's think differently  
about **wine**

**who drinks wine regularly,  
has no need for alcohol  
(*the Mikulov Rule*)**

**concentrated  
captured  
sun**

**with lots of molecules ☺**





***In vino veritas,  
in aqua sanitas***

*Note : there is a lot of water in the wine anyway 😊*

**According to World Health Organisation (WHO),  
health is defined as an individual's  
comfort physical, mental and social**

*Note : Let's not just focus on formal physical health,  
mental and social health is equally important !*



academic approach 😊

annual competition  
*Masaryk University Wine*

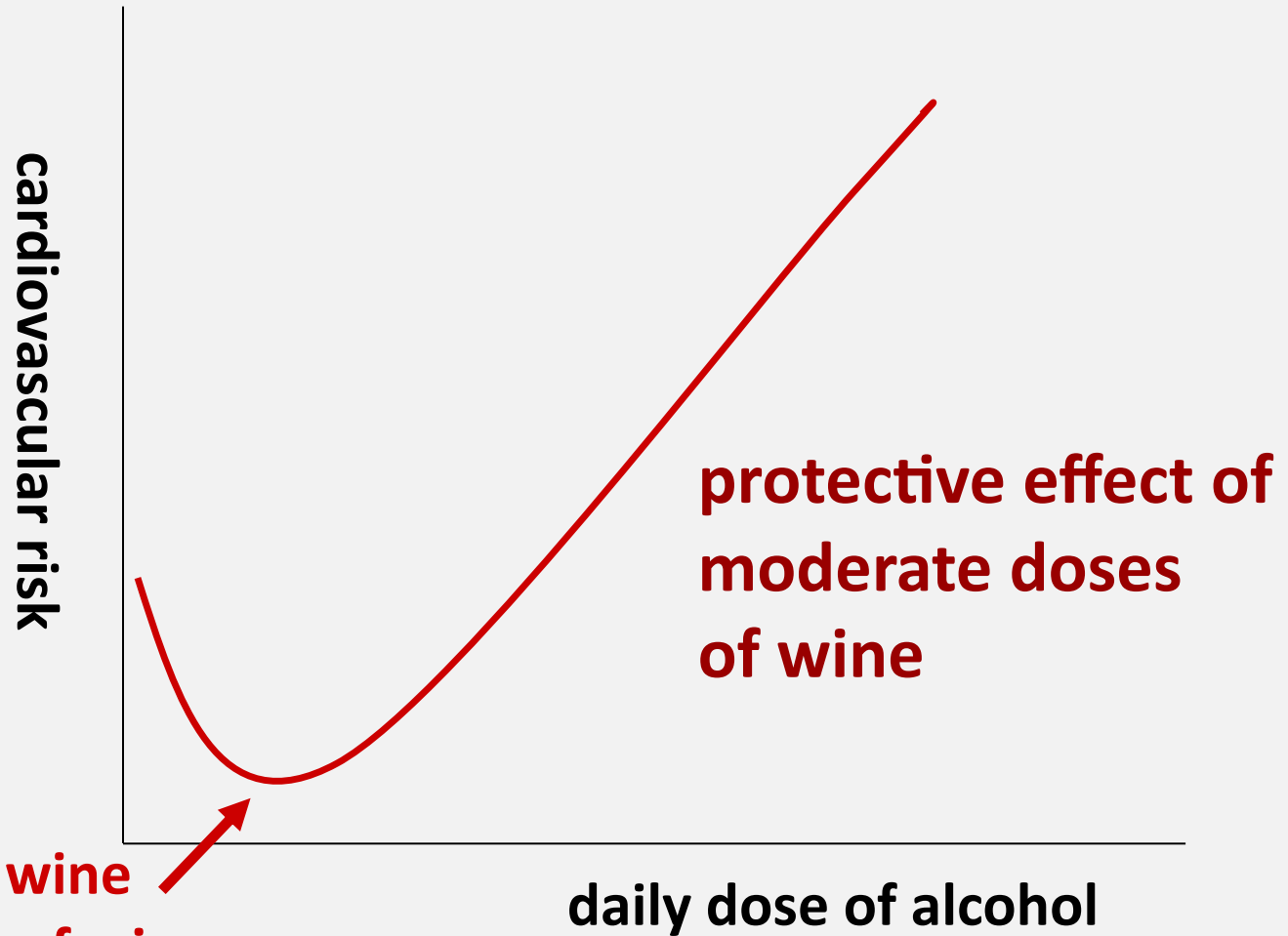


Annual conferences „*Wine and Health*“ in Brno since 2003,  
later „*Wine and Man*“,  
semestral courses „*School of Winery*“  
at the Masaryk University Brno



**„French paradox“** (*paradoxical only from the U.S. viewpoint* 😊)

**reduction in the risk of heart and blood vessel diseases  
by moderate use of alcohol**



**men : 4 dcl of wine**  
**women : 2 dcl of wine**  
**5-6 days a week**

**up to 3-times lower rates of myocardial infarction  
in Mediterranean countries comparing to US and UK**

ethanol C<sub>2</sub>H<sub>5</sub>OH 10-15%

*water*

*but  
also*



**Tao in wine**



**many bioactive substances :**

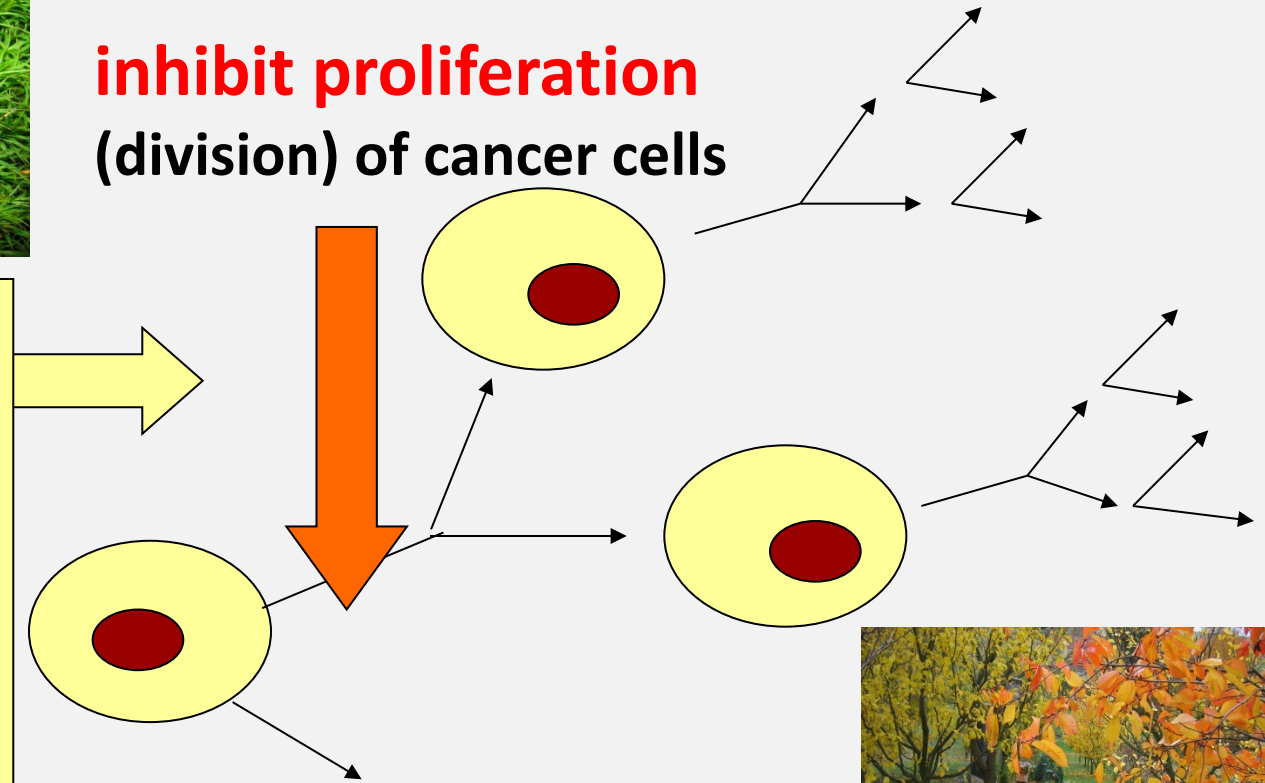
*polyphenolic flavobions as resveratrol, catechin or quercetin,  
organic acids, tannins, anthocyanins, aromatic compounds*



**Alcohol-free wine ???**



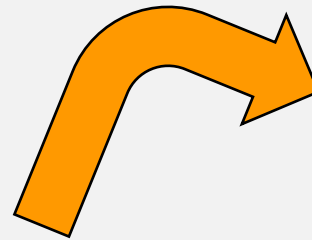
**inhibit proliferation**  
(division) of cancer cells



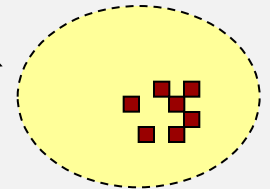
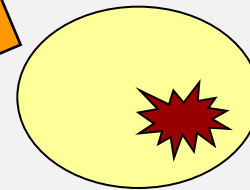
resveratrol  
quercetin  
catechin  
genistein  
apigenin  
luteolin

*polyphenols or  
flavonoids  
from wine  
are*

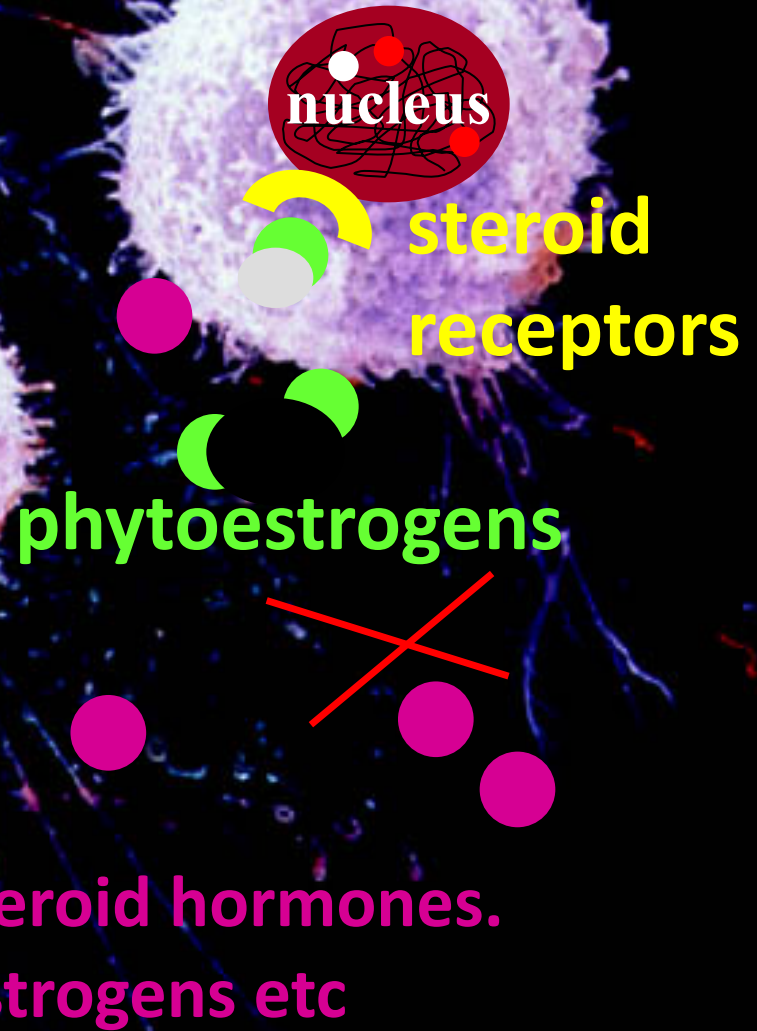
**antioxidative** and  
**anti-inflammatory**



**promote apoptosis**  
(programmed death )  
of cancer cells



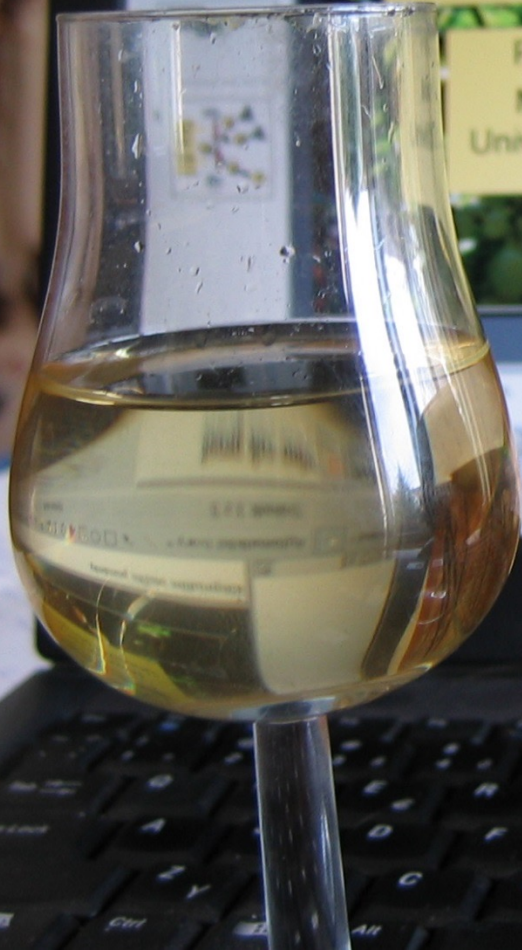
phenolic substances from wine also have binding properties of steroid hormones and may compete on steroid receptors



**antioxidants and phytoestrogens present in wine  
may be beneficial in prostate cancer**

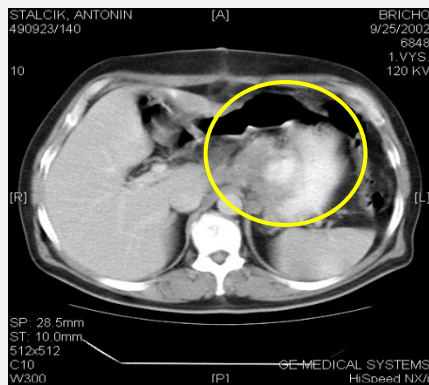
## Víno a rakovina prostaty

Prof. MUDr. Jan Žaloudík, CSc.  
Masarykův onkologický ústav  
Univerzitní onkologické centrum





**Barstad B et al. (2005)** in *Danish study* analyzed **wine drinking in relation to incidence of stomach cancer** in **15 236 men a 13 227 women** from **1964-1992**,

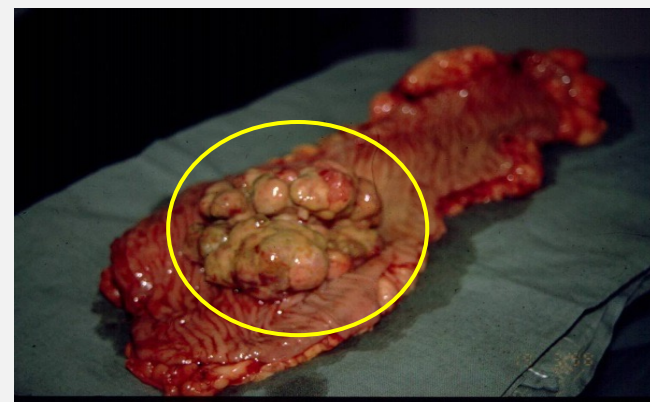


In the group with 1-6 glasses of wine a week the incidence of stomach cancer was **reduced to 76%**, and in group drinking up to 13 glasses of wine a week **even to 16%** versus those who didn't drink wine at all

**Anderson et al. (2005)** in U.S. study evaluated drinking **a variety of alcoholic beverages** in **2 291 patients with colorectal cancer**

Drinking between 1 to 8 doses of wine a week **reduced to 55%** the chance of developing colorectal cancer comparing to those who did not drink

The chance of developing colorectal cancer was **153% higher** in consumers of more than 8 doses of **spirits** and **143% higher** in drinkers of more than 8 bottles of **beer** a week



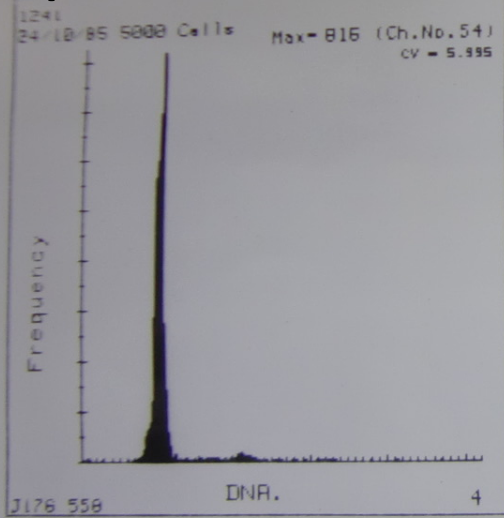
# Effect on cell kinetics

Lissa D, Senovilla L, Rello-Varona S et L. :

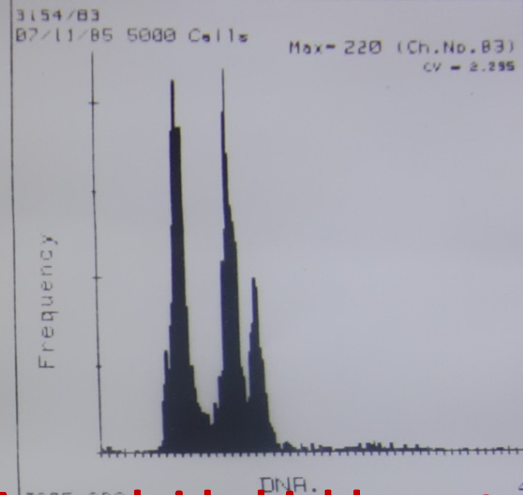
**Resveratrol and aspirin eliminate tetraploid cells for anticancer chemoprevention.**

Proc Natl Acad Sci USA, 111, Feb 2014,3020-5

**Diploid - normal-like**

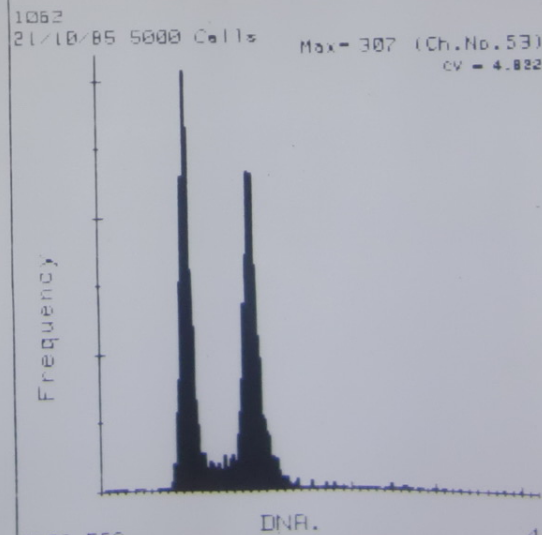


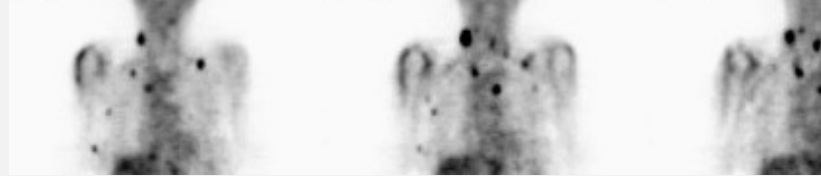
**Aneuploid - highly unstable**



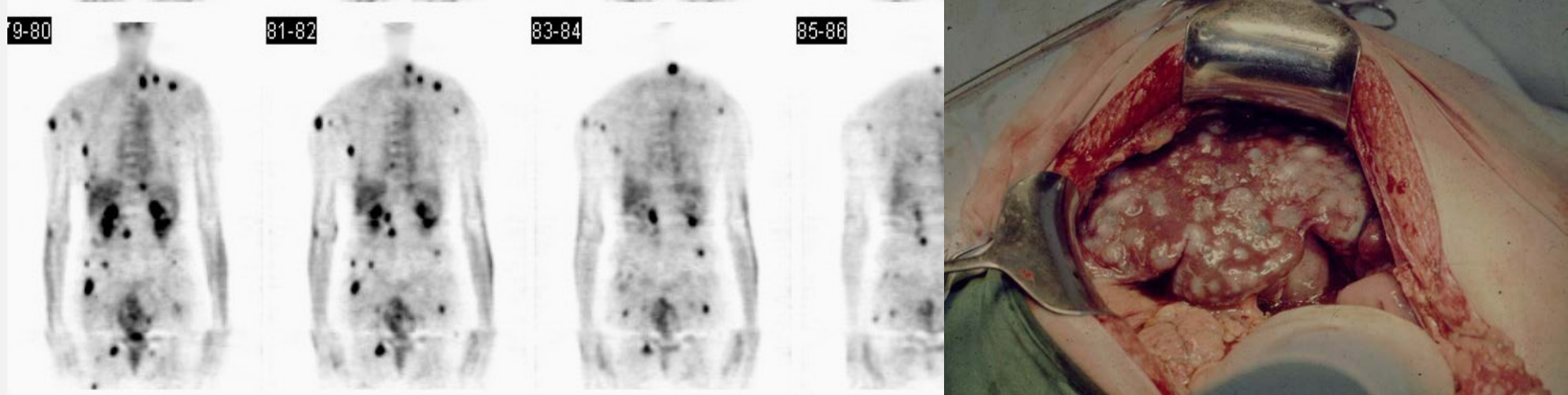
**DNA profiles :  
flow cytometry  
of cancer cell nuclei**

**Tetraploid - unstable profile**



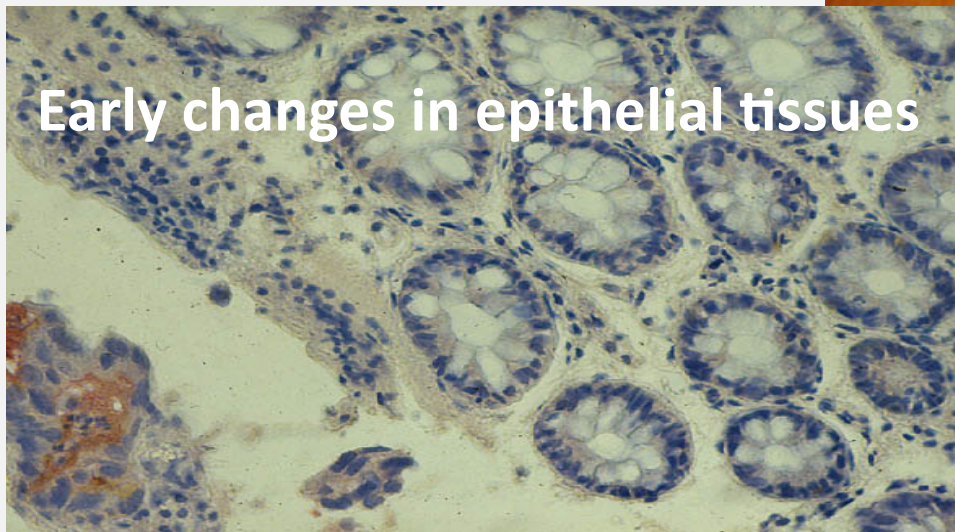


**we really don't intend to treat advanced cancers with wine !**



# Chemo-preventive substance requirements (according to WHO)

- 1) consumable as a food
- 2) non-toxic in recommended dose
- 3) more broadly effective
- 4) known mechanism of action
- 5) cheap and affordable
- 6) generally acceptable





 GRADA®

*Jan Žaloudík*

# *Vyhněte se rakovině*

*aneb prevence zhoubných nádorů  
pro každého*

**Avoid cancer**  
or cancer prevention for everyone

**BigPharma  
solution ?**

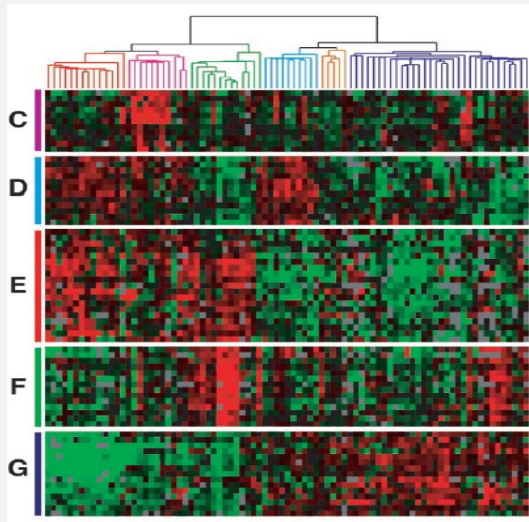


**would you replace the  
positive health effects  
of wine with pills?**



Piero Dolaro et al., Univ Florence (2005):

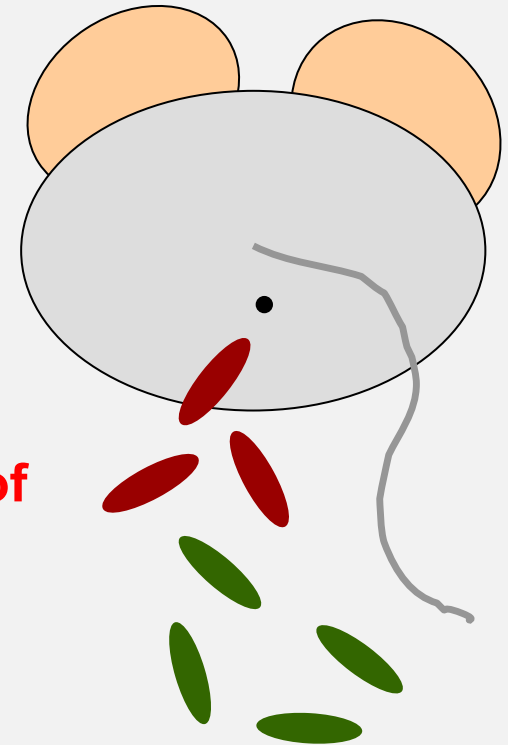
Wine polyphenols in dose 50mg/kg **dampen or stop chemical induction of bowel cancer** in rats with azoxymethan or dimethyhydrazine



Analysis of 5700 genes :

wine polyphenols **reduce the activity** of pro-inflammatory and steroid-regulating genes

Wine polyphenols also **change the composition of the intestinal flora** from the predominance of Bacteroides, Clostridium and Propionbacterium strains in favour of combination of strains **Bacteroides, Lactobacillus and Biffidobacterium**





**Smoking does not fit with wine 😊**



KDYŽ SE SNOUBÍ  
JÍDLO S VÍNEM

When food and wine are combined



McCann et al.(2003) followed **eating habits** and life style in relation to the preference for **different alcoholic beverages** in 1846 men and 1910 women in New York

**Regular wine drinking** is associated with **higher education** and **higher income groups**, **non-smoking** and in particular **higher proportions of fruits, vegetables, cereals, fibre, potassium, vitamin E and carotenoids**, along with **lower proportions of fats** in the diet



---

Ruidavets JB et al.((2004)

analyzed eating habits of 1,100 French men

**Drinking wine** in this study was associated with a significantly **higher quality of diet** compared to both abstainers and consumers of other alcoholic beverages



Moravian wines  
go with  
Moravian fish

in the elderly :



Das DK et al. (2011)

resveratrol stimulates  
transcription  
of **anti-aging genes**  
(Sirt1,3,4, Foxo1,3, PBEF)

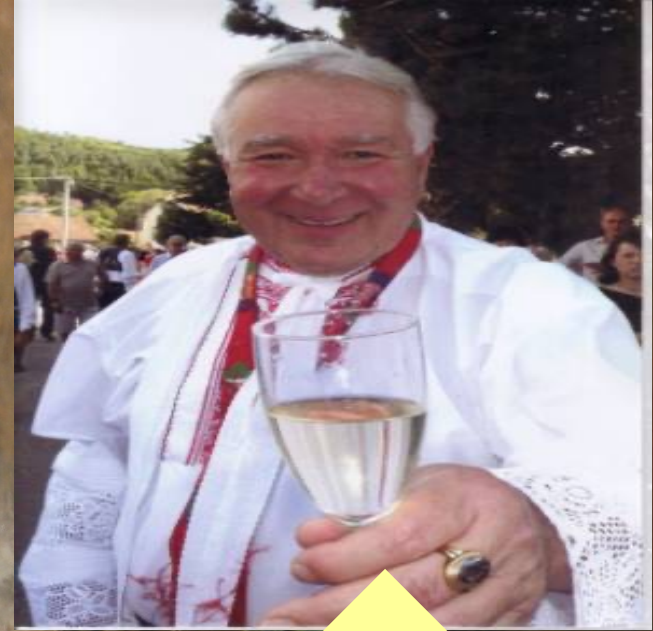
Corley J et al. (2011)

positive effect  
of moderate drinking  
on the **memory** of 70-year-olds  
in both men and women,  
and on **verbal ability** in women



**healthy ageing  
with wine**

slight mental problems  
sleeping disorders



choose the better one



A woman is relaxing in a white hot tub filled with soapy water. Her legs are stretched out, and her feet are resting on the edge of the tub. She is holding a flute glass of champagne. The hot tub is surrounded by a tiled deck with several lit candles in glass holders. In the background, there are three rolled-up white towels and another lit candle. The wall behind the hot tub is tiled with a mosaic pattern of small, colorful tiles.

**Let's not forget**

**mental and psychical relaxation  
as the basis of healthy life**



.. and a relaxing lifestyle





**wine also improves partnership relations**



# social aspects of health



wine and the health of the European Union ? 😊





do not worry,  
be happy !



wine, white or red,  
at a moderate dose  
is clearly beneficial !