

Ancient drinks fight cancer

Penn Museum researchers saw anti-cancer activity in ancient fermented beverages

BY GRACE ORTELERE
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Greeks, drink up — Romans, you too.

Findings from a recent Penn laboratory study have confirmed that additives in ancient alcoholic beverages carry anti-cancer properties.

The study showed that certain compounds in alcohol exhibit activity against colon and lung cancer, according to a Penn press release.

The tests were conducted by researchers at Penn Medicine's

Abramson Cancer Center in collaboration with the University of Pennsylvania Museum's Biomolecular Archaeology Laboratory, run by adjunct anthropology professor Patrick McGovern.

Ancient societies — particularly the Greeks and Romans — used alcohol to stop infection and cure diseases before synthetic medicines, McGovern

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Wormwood might allay cancer

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explained.

Researchers focused on alcohol's ability to dissolve herbal compounds, McGovern explained. The team analyzed residues found inside ancient pottery vessels which had accumulated compounds in their bases.

These compounds were tested in vitro against the cell lines of colon and lung cancers — and some induced tumor cell death.

The next steps will be to test the compounds in vivo with mice and, if positive results are found, move onto human testing.

Researchers in Germany

are in Phase I human testing of the effects of similar compounds against cancer.

McGovern is particularly optimistic about the compound artemisinin, commonly known as wormwood, which the Penn study shows "is highly effective against lung and colon cancers, as good as most of the standard treatments that are available."

Not everyone shares his optimism — including University of Pennsylvania School of Medicine Clinical Professor Kenneth Algazy.

"Until we see randomized trials using these agents vs. placebo or standard care in humans, I remain skeptical as to any of ancient biologic agents," Algazy wrote in an email. "If they really were effective Methuselah would have lived 900 years," referencing a Biblical figure who is said to have lived 969 years.

However, McGovern hopes to get more funding to test more ancient samples from other parts of the world, and points to the potential importance of the Neolithic period for human medicine.

"Humans obviously figured out a lot in that period about how to domesticate plants and animals," he said. It was a time when humans only lived twenty to thirty years, and "were very interested in searching their environments for solutions."

But he added, "over thousands of years sometimes the real value of some of the plants can be obscured by certain superstitions."

Other contributors to the study — titled "Archaeological Oncology: Digging for Drug Discovery" — include medicine professor Melpo Christofidou-Solomidou, Psychiatry Professor Caryn Lerman and Wafik El-Deiry, former medicine professor.