

Say Yes to Sirtuin; No to Lamp Shades



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he Pinot Noir Society of New York is planning a party. From all indications, this is going to be *the* soirée of the year, if not the millennium. Unfortunately, your chances of being invited are less than your attending a barbecue in the Oval Office. Look who is on the A-list:

Dr. David A. Sinclair of Harvard Medical School

Dr. Konrad T. Howitz of Biomol Research Laboratories

Ed Cannon of Elixir Pharmaceuticals of Cambridge, Mass.

Dr. Mark Tatar of Brown University

Dr. Leonard Guarente of MIT

Jef Boeke of Johns Hopkins School of Medicine

Dr. David Finkelstein of the National Institute of Aging

Dr. Toren Finkel of the National Heart, Lung and Blood Institute

In addition to these luminaries, there will be a select assortment of mice, fruit flies and yeast cultures. An RSVP from a gaggle of rhesus monkeys is expected. There will be an open bar with unlimited access to flagons, indeed, barrels of red wine, a substance that is the *raison d'être* for this whing-ding. Besides being the progenitor of some awesome headaches, this beverage has long been credited with the ability to lower the risk of heart disease. What appears to you to be a derelict lying comatose in the gutter clutching a bottle of \$1.98 Chianti in a brown paper bag, could very well be a well-preserved individual who is likely well into his late 90s thanks to a marvelous enzyme of the sirtuin (pronounced sir-TOO-in) class called resveratrol. Yes! This is the anti-aging ingredient that has biologists and scientists of every persuasion, including Phyllis Diller and Elizabeth Taylor, all a-twitter.

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"It's looking like these sirtuins serve as guardians of the cell," said Dr. David Sinclair of Harvard Medical School. He spoke from a conference in Arolla, a small village in the Swiss Alps. This is a scientific destination favored by scientists for its attractive income tax deductions. "These enzymes allow cells to survive damage and delay cell death," claimed Sinclair. So the race is on, he said, to find the most potent sirtuin stimulators, or create synthetic ones. Initially the benefits, if any, will fall on cells of flies and worms, mice and monkeys and, eventually, humans if the red wine they've consumed hasn't left them disinterested in anything but hair of the dog.

There's a gold mine out there awaiting the team that perfects a drug or nutritional supplement that can fool the body into thinking it's living on a radically reduced caloric diet. The red wine has already fooled them into thinking they are having a good time, so the next step is allow them to have their cake and eat it, too.

Although the experiments have not yet been completed, already compounds have shown evidence of extending the life spans of two organisms: the soil-dwelling nematode worm known as *C. elegans* (for the dignified way it emerges from its soil home to predict another six weeks of winter if it spies its shadow) and the common—but still elegant in its own way—fruit fly.

Unqualified approbation, as usual, is not unanimous. David Finkelstein, for one, suggested caution in taking the resveratrol results too literally. He's an

expert in metabolic regulation at the National Institute of Aging. "Tell people to eat a healthy diet," he said with the religious fervor one associates with a recent Jenny Craig convert.

He doesn't exactly pooh-pooh the red wine theory, but rains a little on the parade by mentioning the inevitable weight gain and the possibility of having your picture taken wearing a lamp shade.

A gerontologist at the University of Wisconsin, Richard Weindruch, probably won't be getting an invite to the party. He questions the relevance of all the yeast experiments, which, strictly speaking, he pointed out, don't mean diddly-squat because they measure not the life span, but the number of times a yeast cell could divide and produce daughter cells. Jef Boeke, a yeast geneticist at Johns Hopkins echoed this feeling. "Let's face it," he argued, "aging isn't the same in humans and yeast." This is the sort of stuff you learn at Johns Hopkins and why high school career counselors should be prepared for a flood of applications to enter this line of work.

Regardless of the outcome, it appears that white wine just doesn't have the sirtuin potential of extending your hangover for as long as the reds. Coffee isn't in the running at all. Perhaps if you get invited to parties often, it's best to only accept those that are plainly announced as BYOB.

The dead worm (obviously not a *C. elegans*) in the tequila is another story



and will be thoroughly investigated at a scientific conference to be held in Rio, Monaco, St. Tropez or some other venue with favorable currency exchange rates. **CDA**