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To: Jeff Epstein <jeeproject@yahoo.com>

Subject: Is sitting down bad for you? Do your mice arrive with hidden baggage? And much more!

Date: Mon, 01 Jun 2009 16:06:35 +0000

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[Editor's choice: Is sitting down bad for you?](#)

After years of health campaigns, we all know that lack of exercise is bad for our health, and many of us take time out of our day to do some physical activity. The authors of this paper, evaluated by [Craig Harms](#) of the [Physiology](#) Faculty, with Sara K Rosenkranz, suggest that, regardless of exercise levels, the amount of time spent sitting down each day has a detrimental effect on our health.

Dr Harms [writes](#)

"The interesting findings from this study are that there appears to be a dose-response relationship between sitting time and mortality from all causes and CVD, and that this association is independent of whether or not the person is physically active outside of the sedentary time."

Dr Harms [explains](#)

"It appears that it is not just a lack of exercise which increases the risk of mortality, but the quantity of sitting time."

He also goes on to [say](#)

"The authors propose that future physical activity guidelines may need to include recommendations which address daily sitting time. They present strong evidence for such future recommendations."

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[Broad Impact: New co-catalytic role found for scaffolding protein Ste5 in yeast](#)

The scaffold protein Ste5 has long been known to facilitate the directional flow of mitogen-activated protein kinase (MAPK) intracellular pathways in yeast by recruiting signalling molecules. However, in this recent 'Must Read' article highlighted on Faculty of 1000 the authors identify an additional catalytic role.

[Moosa Mohammadi](#) of the [Structural Biology](#) Faculty, with Andrew Beenken, [explains](#)

"They show that the MAPK Fus3 is recruited to the Ste5-bound mitogen-activated protein kinase kinase (MAPKK) Ste7, enabling Ste5 to unlock the A-loop conformation of Fus3 and turn it into a better substrate for Ste7."

[Plant Biology](#) Faculty Member, [Dominique Bergmann](#), [feels this raises some questions](#) about applying the idea to other organisms, including mammals.

"Ste5 is a wonderful binary switch - allowing a single MAPKK to choose between two MAPKs. But what happens when a single MAPKK has more than two MAPK targets to choose from? This is the general situation in plants (*Arabidopsis*, for example, must contend with 10 MAPKKs and 20 MAPKs). How many activities might we find these scaffolds capable of that would allow them to discriminate among many potential targets?"

[Jane Endicott](#) of the [Cell Biology](#) Faculty, [believes](#)

"whatever the outcome of that future work, this paper will ensure a significant revising of our current models for how scaffold proteins work!"

The [structure of Faculty of 1000 Biology](#) makes it possible to identify papers of broad interest, irrespective of the journal in which they are published. You can see the [full comments](#) of all the evaluating Faculty Members on this 'Must Read' Broad Impact paper by visiting the [Faculty of 1000 Biology website](#).

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The results will be published in *The Scientist's* **November 2009** issue. Help us help you - Tell your colleagues about the survey by passing this email around! The more responses we receive, the more accurate the results will be. Thank you for your time. We appreciate your contribution!

See last year's results: [2008 Best Place to Work in Academia Survey results](#)

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[Hidden Jewel: "Do your mice arrive with hidden baggage?"](#)

The authors of this enlightening paper, evaluated by [Susan Akana](#) of the [Physiology](#) Faculty look at the effect of shipping age of laboratory mice on later reproductive behaviour and make an interesting and worrying observation that could impact on reproductive behavioural studies.

Susan [writes](#)

"This paper clearly details that female mice shipped during the peripubertal period demonstrate a lower index of reproductive behaviour in mature adulthood."

She notes the wide-reaching consequences of such a finding, [saying](#) that,

"Because many laboratories purchase rodents at this age (5-6 weeks), it behooves investigators to re-inspect their own data and research models to ensure their experimental outcomes are not confounded or nuanced by these findings."

She [concludes](#)

"These studies are a strong cautionary note on interpreting rodent sexual behaviour without knowing the shipping history of the subjects."

[\[See full evaluation\]](#)

[The Hidden Jewels lists](#) are one of the most popular features on the Faculty of 1000 Biology site as they bring to scientists' attention papers they otherwise might have missed (especially

in fields adjacent to their own). These lists are compiled daily and include highly viewed papers evaluated within the previous month.

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