

num, even when they are aware that their colleague is unfairly treated, for fear of being dragged into the quagmire. To attack the committee with credible scientists is also unfair and it would only drive the community to its shell, leaving public causes to vested interests. The committee stands by its earlier decision of exonerating Kundu and colleagues of any manipulation between the two papers.

I would like to make an appeal to the *JBC* to rescind its decision to withdraw the *JBC* (2005) paper.

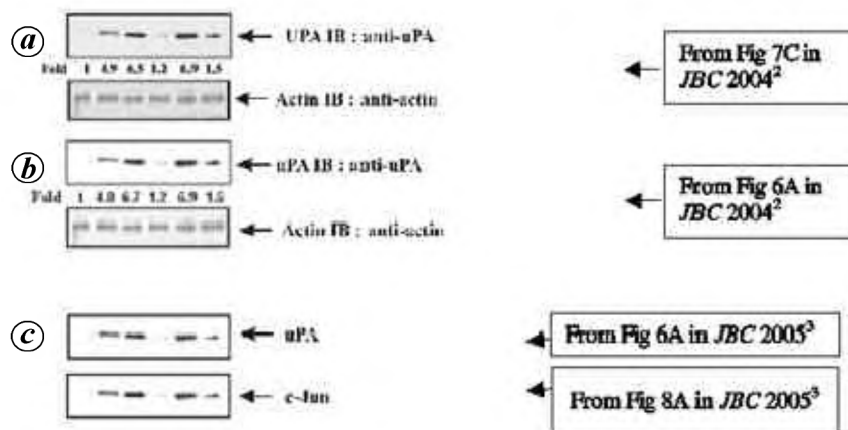
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### Response (Modak)

G. Padmanaban (GP) makes a great fuss about his committee's analyses of pictures of Western blots. However, his descriptions show that he has cleverly obfuscated the issue. For example, does a gel band have features? It is shocking to read his explanation, which is not scientifically acceptable. Here, I reproduce a composite of Western blots (Figure 1, based on refs 1 and 2 above). A densitometric comparison of these two, carried out using MATLAB software is available (in ref. 3 above). Rangaswami *et al.* claimed that the two Western blots represent two different experiments on two different proteins. Actually, a mere look at the gel pictures should be enough to any experienced and intelligent scientist to recognize the identical features.

It is true that a bland band cannot be easily questioned. However, if it has intrinsic features such as a double hump and so on, it is not humanly possible to have two identical bands. The way to distinguish them is to do computer analysis of the digitized images, which is what SSV did (ref. 3 above). I cannot accept that small noise bands are due to defects/grooves in the gel, gel support or comb. These are invariably stray artifacts, which, by definition, are random and their spontaneously repetitive occurrence in gels has a possibility less than a snowflake in the desert. Thus, there is more than sufficient evidence that the committee of six chaired by GP, the seventh, has



**Figure 1.** The top (a) two Western blot strips represent detection of differences in expression of UPA 1B as compared to the control for Actin 1B as shown in Figure 7c of Rangaswami *et al.* (ref. 1 above). The same strips are shown (b) to represent the same polypeptide in Figure 6A of Rangaswami *et al.* (ref. 2 above). Note that the authors insinuate small differences in the amount of UPA 1B expressed in these gels, and the near identity is suggestive of the same experimental blot being shown in two different papers. In the bottom (c) two western identical blots are shown to represent entirely different proteins. Note the total identity in the shape, size and intensity of each band pair.

mis-stated the obvious. GP attempts escape by stating that he is no computer expert, but neither does he tell us who did the professional computer analysis nor does he provide the results of such analysis for open scrutiny. It is also unfortunate that the Padmanaban committee pretends not to understand 3-dimensional morphology and morphometry of bands in a gel that require quantitative analyses of shapes, sizes, volumes and patterns.

GP is correct up to the point that the output of the computer depends on what is fed in. Thus, according to him, *JBC*-SSV allegations, based on analysis of the published figures as such, would not mean much and that the lab records and raw data were more important. He saw nothing wrong in the fact that the raw data was not available in Kundu's lab at the time of the first enquiry and had to be presumably brought from the USA by Hema Rangaswami! Nonetheless, the records hurriedly produced were sufficient to convince the GP committee, who did not even care to undertake forensic analyses by dating these.

GP's subterfuge over controls and experimental blots is equally intriguing, especially considering that three out of seven re-used figures clearly listed and established by SSV (ref. 3 above) deal with experimental blots. In contrast, GP's report or letter does not clearly define the specific figures investigated by his committee. I am wonderstruck by GP's belief

that there is no need to reproduce data and controls in every experiment when so many gels would be easy to lay hands on and their misuse will not change the conclusions. Brutally stated, when a control is found to be false, the clock strikes thirteen, as noted by Mark Twain, meaning all that happened before and after is equally unreliable.

It is important to mention that, while GP's committee fully exonerated Kundu, *JBC* has withdrawn the 2005 paper (ref. 2 above), published an editorial against image manipulation and also banned manipulation of digital image data (ref. 5 above). It is also pertinent that the GP committee owes its very origin to Kundu's withdrawal of a written confession to the first enquiry committee, practically admitting that misconduct occurred and that the published papers would be retracted. GP never worried as to why such a confession was given and what was the nature of the 'duress' cited by Kundu and the motives for its withdrawal. I wonder whether, like Maradona's (in)famous goal in the Football World Cup final, there also was 'The Hand of God' controlling the psyche of the committee of *The Magnificent Seven*.

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