Author's response to reviews

Title: Identification of apoptosis promoting constituents of Ukrain

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Version: 2 Date: 19 September 2005

Author's response to reviews: see over
To whom it may concern,

please find enclosed our manuscript entitled Identification of apoptosis promoting constituents of Ukrain by Daniel Habermehl, Bernd Kammerer, René Handrick, Therese Eldh, Charlotte Gruber, Nils Cordes, Ludwig Plasswilm, Michael Bamberg, Claus Belka and Verena Jendrossek.

In the present contribution we show for the first time that the antineoplastic drug preparation Ukrain is a potent inducer of apoptosis in human Jurkat T lymphoma cells involving mitochondrial damage and caspase-activation. However, by mass spectrometric analysis we also demonstrate that Ukrain represents a mixture of Chelidonium majus L alkaloids instead of the Ukrain-molecule suggested by the manufacturer. Alltogether, our data implicate that the cytotoxic efficacy of Ukrain is not due to the hypothetical Ukrain-molecule but instead to apoptosis inducing alkaloids from Chelidonium majus L. Together with a recent critical review of published clinical trial data for Ukrain (Ernst and Schmidt, BMC Cancer 2005, 5:69) our investigation further challenges clinical use of Ukrain. Instead of Ukrain, we recommend purified Chelidonium majus L. alkaloids for further preclinical and clinical development as single drugs or in combination with standard therapies including ionizing radiation.
The data have not been published previously, all authors agreed to the submission of this manuscript. We do strongly believe that the manuscript is within the scope of “BMC Cancer” and hope that the manuscript is accepted for publication.

For the reviewing process we would kindly like to suggest the following scientists:

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Sincerely,

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