Reviewer's report

Title: Mass spectrometry protein expression profiles in colorectal cancer tissue associated with clinico-pathological features of disease

Version: 1 Date: 20 March 2010

Reviewer: Kristina Schwamborn

Reviewer's report:

Major compulsory revisions

As the study is mass spectrometry based it is surprising that the authors do not show any mass spectra (not even in the additional files). Depiction of spectra is essential to evaluate their quality.

The authors did not identify any of the potential markers included in their models to verify them. This is a commonly required procedure and is not even addressed in the discussion.

Were all samples run in duplicates? The authors describe that duplicate spectra with a cross-correlation function of <0.950 were discarded. How many spectra did not match this criterion? Was there a high reproducibility between duplicate spectra (especially for the peaks used for classification)? It would beneficial if authors could report the CV values for those peaks.

Why was no external calibration performed? How did the authors calibrate the spectra internally (how many and what masses were used?)?

Minor essential revisions

MALDI is not a variant of SELDI! The authors should be aware of the severe critics that arouse regarding the SELDI technique.

The characteristics of training and test set should be better described.

Please change the spelling from Tof to TOF as used in the literature.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests.