

In the manuscript the authors investigated a permeability of cyanotoxin MC-RR across a differentiated intestinal Caco-2 cells monolayer.

There are several comments.

It should be emphasized in the text of the manuscript:

- 1) What scientific hypothesis is being tested?
- 2) Why was this particular model chosen?
- 3) What is the scientific novelty of the study?

Unfortunately, the scientific significance of the article is not obvious.

- 4) Can the results of *in vitro* experiments be extrapolated to an *in vivo* system? How valid are the conclusions drawn?

Minor comments:

(1) Results

There are only One Table and one Figure in this section.

Figure 1. Donor compartment: black dots and lines. Why deviations were not shown for these results?

Table 1. Why four NDs (not determine) are in this Table (Transport B-A)? Why the authors did not determine these values? Please, explain.

(2) Material and Methods

Line 168. "Cell culture products". Please, indicate which ones?

Lines 177. "1% non-essential amino acids". Please, indicate which ones?

Why 50 IU/mL penicillin and 50 µg/mL streptomycin were added? Please, explain this point to readers.