

Abstract Requirements Mosa Conference 2018

In this document you will find all the information about submitting your abstract for Mosa Conference 2018 on **June 19th & 20st 2018**.

Key points for submitting:

- **Deadline: April 1st 2018, 23:59 h**
- Submission: Upload abstract at mosa-conference.nl → participants → submit abstract
- File name: [Last name_First name.docx]
- File format: Microsoft Word file (.doc or .docx)
- Written in English, max. 300 words
- A4 format, font Arial 11

Detailed instructions and an example abstract are given on the following pages.

Good luck writing your abstract!

Abstract Requirements

Content requirements

- Language: The abstract should be written in the English language only.
- Word limit: The limit of the abstract is 300 words. Title and author are not included. Characters that are not in isonorm 8859-1 cannot be used. This means: α , β or other Greek characters need to be spelled out (“alpha” and “beta”).

Style requirements

- File format: Microsoft Word file (.doc or .docx). Labelled: **Last name_First name.docx**
- Format and point size: Arial, size 11.
- Page Layout Guideline for A4: (21 cm x 29,7 cm) paper size. Page Layout should be as follows: Top – 3 cm, Bottom – 3 cm, Left – 3 cm, Right – 3 cm. This is important to ensure no text is lost when printing your abstract.
- Tables and figures: These can be added in addition to the abstract itself. However, the abstract should not be longer than one A4 page! The organization of Mosa Conference cannot guarantee that tables and figures will be placed in the book of abstracts.
- Refer to your university in English, example: ‘Maastricht University’.
- Mention your co-authors.

Scientific abstracts should contain the following paragraphs:

- **Introduction:**
Describes the current state of scientific progress regarding the scientific field. It should also contain the aim of the project and its scientific and/or social relevance.
- **Materials & methods:**
Materials and methods used in the project should be described, such as a short summary of the study population (humans, animals), materials used (equipment, chemicals, etc.), how data was acquired (status, interviews, etc.) and which statistical analyses have been performed.
- **Results:**
Contains findings and results of the project. A small table or graphic is possible. The results section should not contain an interpretation of the results!
- **Discussion & conclusions:**
Presents the interpretation of the results and the conclusions drawn from the study. Furthermore, limitations of the study, implications for future studies and the consequences can be included

Important: Received abstracts that do not meet the submission requirements as described above will not be published in the book of abstracts.

Additional information

- Abstracts will be compiled in a (digital) book of abstracts.
- Abstracts will be judged and the five best abstracts will get an oral presentation at the conference with the possibility to win the price for best presentation. The five candidates will be informed via mail by the end of May.

Introduction

Multiple myeloma (MM) is a plasma cell disorder, characterized by an accumulation of malignant plasma cells in the bone marrow (BM). Despite the discovery of novel drugs, MM is still an incurable disease. The anaphase-promoting complex (APC) is an E3 ligase and contributes to cell cycle by ubiquitylation of cell cycle proteins such as securin and cyclin B and initiating anaphase. Genetic changes affecting APC and its regulator, the spindle assembly checkpoint are described in MM patients and are associated with chromosomal instability and aneuploidy. The purpose of this study is to examine APC as a possible new target in MM.

Material and methods

The APC inhibitor proTAME (pT) was tested on human MM cell lines (HMCL) LP1 and RPMI, MM patient cells and stromal cells. Cells in metaphase were morphologically counted on May-Grünwald Giemsa stained cytopspins using a light microscope. Viability and apoptosis was determined by respectively the CellTiterGlo assay (Promega) and Annexin V/7AAD flow cytometry staining. Expression of apoptotic and cell cycle proteins was determined by western blot. Statistical analysis was performed by the Mann-Whitney t-test.

Results

HMCL were treated with pT and mitosis was analysed by morphology. PT treatment induced a clear metaphase arrest that was accompanied by an accumulation of cyclin B which is consistent with APC inhibition. A prolonged metaphase can lead to cell death; therefore we measured viability and apoptosis. We observed a significant dosedependent decrease in viability and increase in apoptosis when HMCL and purified patient MM cells were treated with pT. In contrast, no effect on viability could be observed on other cell types from the BM micro-environment. PT had similar effects on MM cells when growth factors (IL-6 or IGF-1) or BM stromal cells were added to the MM cells, indicating that the BM micro-environment cannot abrogate the action of pT. We further analysed the apoptosis mechanisms by western blot and could clearly detect an increased cleavage of caspase 3, 8, 9 and PARP in MM cells treated with pT.

Conclusion

We can conclude that pT induces a prolonged metaphase in HMCL, resulting in reduced viability and induction of apoptosis that is accompanied by PARP cleavage and caspase 3, 8 and 9 activation. These findings suggest that the APC complex may be a promising target in MM.