 UCD School of Medicine (SoM)

Summer Student Research Elective

SSRA SUBMISSION ABSTRACT FORM

All SSRA students, whether taking the module for credit or audit, are required to submit an Abstract of their research on Wednesday August 7th 2024 and a poster for the SSRA poster adjudication on Tuesday 17th September 2024. Please note that failure to adhere to the strict instructions provided in the SSRA information book on abstract format and submission will result in your abstract being sent back to you.

Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

SSRA Project Number (eg: Project 16): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please confirm that both you and your supervisor wish to publish your abstract in the following publications

1. PUBLICATION IN THE Irish Journal of Medical Science (IJMS) TICK YES/NO

Yes  No

1. PUBLICATION IN THE BOOK OF SSRA 2022 ABSTRACTS FOR THE ADJUDICATORS TICK YES/NO

Yes  No

1. Did you received funding to complete research within your SSRA Project?

Yes  No

(If yes, please state where funding was obtained and value)

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| --- |
| Funding Body: |
| Value in €: |

1. Please indicate below if you are interested in attending a 1 hour focus group to provide feedback on your SSRA experience.

Yes  No

**PLEASE ADHERE TO ALL OF THE GUIDELINES AS DETAILED:**

Your abstract **should not exceed 250words** excluding the title, author(s) name(s), address(es), references and acknowledgement of any external funding. The text should be single spaced, Times New Roman, font size 11 and justified. The abstract must have no more than **ONE** table that fits on the same page as your abstract and figures are **NOT** allowed. When using abbreviations, spell out the full name on first mention. Avoid excessive use of abbreviations.

**YOUR ABSTRACT SHOULD BE STRUCTURED AS FOLLOWS:**

* + A descriptive title in **BOLD CAPITAL LETTERS (NOT UNDERLINED)**
  + The initials and surname of the author(s) without titles or degrees should appear below the title.
  + The department(s), institution(s) and city(ies) /town(s) should be listed next. (Not written in *italics* or **BOLD**)
  + The text should be single spaced, Times New Roman, font size 11 and justified. The abstract should be of the informative type containing **FOUR** paragraphs but **without any** subtitles or paragraph headings:
  + Brief Background and specify the purpose of the study
  + Outline the methods used, for example study design, study population, statistical test(s).
  + Results of the study and include key statistical data.

## Outline the main implication(s) of the study.

Up to two references in the Vancouver style can be included (See examples provided below) References: (YOU ARE ONLY ALLOWED TO HAVE 2); Please adhere to the following format

**JOURNAL ARTICLE:**

1. Drummond PD. Triggers of motion sickness in migraine sufferers. Headache. 2005; 45(6):653-6.
2. Halpern SD, Ubel PA, Caplan AL. Solid-organ transplantation in HIV-infected patients. N Engl J Med. 2002; 347(7):284-7.
3. Geck MJ, Yoo S, Wang JC. Assessment of cervical ligamentous injury in trauma patients using MRI. J Spinal Disord. 2001; 14(5):371-7.

**MORE THAN SIX AUTHORS:**

Gillespie NC, Lewis RJ, Pearn JH, Bourke ATC, Holmes MJ, Bourke JB, et al. Ciguatera in Australia: occurrence, clinical features, pathophysiology and management. Med J Aust. 1986; 145:584-90.

**SUBMITTING:**

The abstract should be submitted through Brightspace Assignment 1.

**PLEASE NOTE:**

Only Abstracts submitted in using **WORD Doc.** and submitted to Brightspace Assignment 1 can be reviewed.

**EXACT EXAMPLE OF WHAT YOUR ABSTRACT SHOULD LOOK LIKE**

**IL6 TARGETING IN TRIPLE NEGATIVE BREAST CANCER (TNBC) ENHANCES THE EFFICACY OF THE ANTI-PROLIFERATIVE CHEMOTHERAPEUTIC PACLITAXEL (TAXOL®).**

O’ Malley C1, Gorzel K2, O’Reilly E2, McCann A1, 2

1UCD School of Medicine, University College Dublin, Belfield, Dublin 4.

2UCD Conway Institute of Biomedical and Biomolecular Research, University College Dublin, Belfield, Dublin 4.

Triple Negative Breast Cancer (TNBC) is a subset of breast cancer immunohistochemically negative for the expression of the oestrogen receptor, progesterone receptor and the tyrosine kinase receptor HER-2. TNBC is associated with poor prognosis, early relapse and a significantly shorter survival rate following disease recurrence when compared to non-TNBC cancers [1]. This aggressive subset of breast cancer relies critically on the cytokine IL-6 to drive tumour growth and suppress apoptosis [2].

The aim of this research was to (a) investigate what impact targeting the IL-6 pathway in triple negative breast cancer cells has on IL6- mediated growth and (b) investigate how this affects the resultant cellular response to the anti-mitotic chemotherapeutic drug Paclitaxel (Taxol®).

The cytotoxic effects of the anti IL-6 monoclonal antibody MAB206 and Paclitaxel on MDA-MB- 231 TNBC cells was assessed using the MTT assay. MDA-MB-231 cells were seeded (5000 cells/well) in 96-well plates in culture medium containing the Paclitaxel IC50 concentration in one treatment and then Paclitaxel and MAB206 in combination. Levels of the cytokine IL6 were analysed using an IL-6 ELISA (Immuntools ®). Cell viability decreased when MDA-MB-231 cells were treated their Paclitaxel IC50 values in combination with MAB206 compared to Paclitaxel treatment alone. This was concomitant with clinical data that shows low IL-6 expression is associated with a better disease free survival in breast cancer patients (DFS).

The results demonstrate that the combination of an IL-6 monoclonal antibody and Paclitaxel attenuated cellular proliferation in a synergistic manner and enhanced the cytotoxic effects of the chemotherapeutic Paclitaxel.

## Acknowledgment:

**The author would like to acknowledge funding from the Pathological Society of Great Britain and Ireland.**

## References:

1. Rodler E, Korde L, Gralow J, *et al.* Current treatment options in triple negative breast cancer. Breast Disease. 2010, vol. 32(1-2):99-122.
2. Hartman Z, Poage G, Hollander P, *et al.* Growth of Triple Negative Breast Cancer Relies upon Coordinate Autocrine Expression of the Proinflammatory Cytokine IL-6 and IL-8. Cancer Res. 2013; vol 73(11); 1-11.

Presenting Author: Cian O’Malley Supervisor: Dr Amanda McCann

Co-Supervisor: Dr Karolina Weiner Gorz

**2024 ABSTRACT ASSESSMEN**

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| --- | --- |
| **SCORE SHEET /15** | **MARK** |
| 1. A descriptive title in **BOLD CAPITAL LETTERS** (NOT UNDERLINED). |  |
| 2. The initials and surname of the author(s) without titles or degrees should appear below the title. |  |
| 3. The department(s), institution(s), city(ies) and town(s) should be listed next (NOT IN **BOLD** OR *ITALICS*). |  |
| 4. The abstract should be of the informative type containing FOUR SEPARATE paragraphs, WITHOUT ANY subtitles or paragraph  headings. |  |
| - Specify the purpose of the study and include a brief background statement. |  |
| - Outline the methods used. For example: Study design, study population, statistical test(s). |  |
| - Summarise the results of the study and include key statistical data. |  |
| - Outline the implication(s) of the study. For example: It is not satisfactory to state “results will be discussed”. |  |
| 5. The abstract MUST NOT EXCEED 250 WORDS - Excluding title, author(s) name(s), Address(es) and any reference. |  |
| 6. The text should be single spaced. |  |
| 7. The font size (Times New Roman) should be 11point. |  |
| 8. The Abstract must have no more than one table. Figures are not  allowed. |  |
| 9. The abstract must be contained WITHIN THE WIDTH of the above margins. |  |
| 10. When using abbreviations, spell out the full name on first mention. Avoid excessive use of abbreviations. |  |
| 11. Up to 2 references in the VANCOUVER STYLE can be included. |  |
| 12. Keywords ARE NOT TO BE INCLUDED at the bottom of the abstract. |  |
| **TOTAL** | **/15** |