

**INVESTIGATING THE RELATIONSHIP BETWEEN PRO-
APOPTOTIC, ANTI-APOPTOTIC AND PROLIFERATION
PATHWAYS MEDIATED BY TNF-RELATED APOPTOSIS-
INDUCING LIGAND (TRAIL)**

Thesis

submitted for the partial fulfilment of the requirements
for the degree Doctor of Philosophy (PhD)
in Life Sciences (Integrated Biology)

BY

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UNDER THE GUIDANCE OF

DR. RANJANA PAL



DEPARTMENT OF LIFE SCIENCES
PRESIDENCY UNIVERSITY, KOLKATA, INDIA.

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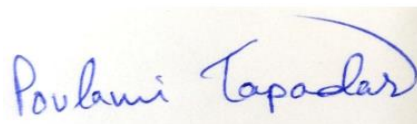
Title of Thesis: Investigating the relationship between pro-apoptotic, anti-apoptotic and proliferation pathways mediated by TNF-related apoptosis-inducing ligand (TRAIL)

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Poulami Tapadar

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***DEDICATED TO MY MOTHER LATE SUDESHNA TAPADAR
AND FATHER UTPAL TAPADAR***

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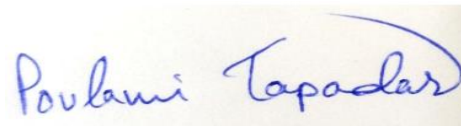
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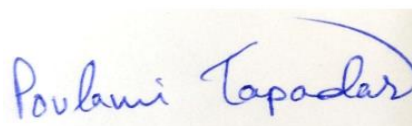
Declaration

I hereby declare that this thesis contains original research work carried out by me under the guidance of Dr. Ranjana Pal, Assistance Professor, Dept. of Life Sciences, Presidency University, India, as part of my PhD program.

All information in this document have been obtained and present in accordance with academic rules and ethical conduct.

I also declare that, as required by these rules and conduct, I have fully sited and referenced all the materials and results that are not original to the work.

I also declare that; this work has not been submitted for any degree either in part or in full to any other institute or university before.



Poulami Tapadar

25.04.2022



Presidency University

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Certificate

This is to certify that the thesis entitled **“Investigating the relationship between pro-apoptotic, anti-apoptotic and proliferation pathways mediated by TNF-related apoptosis-inducing ligand (TRAIL)”** submitted by **Smt. Poulami Tapadar, Registration number- R-15RS18210082 and Date of registration- 17.07.2017**, who got her name registered for PhD programme under the supervision of **Dr. Ranjana Pal** and that neither her thesis nor any part of the thesis has been submitted for any degree/diploma or any other academic award anywhere before.

Dr. Ranjana Pal

25.04.2022

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List of Figures

- Figure 1.1.** Complement Pathway
- Figure 1.2.** Apoptotic pathway
- Figure 2.1.** rhTRAIL purification.
- Figure 3.1.** rhTRAIL induced cytotoxicity and identification DEGs from microarray data.
- Figure 3.2.** GO enrichment analysis of 297 DEGs and Venn diagram of KEGG pathway analysis.
- Figure 3.3.** Module analysis and identification of candidate genes
- Figure 3.4.** Survival analysis of the candidate genes
- Figure 3.5.** x
- Figure 3.6.** Validation of complement activation in rhTRAIL treated MDA-MB-231 cells.
- Figure 3.7.** Schematic representation of the complement pathway genes influenced by TRAIL.
- Figure 4.1.** MDA-MB-231 TR cell population show resistance towards TRAIL mediated cytotoxicity on exposure to rhTRAIL. Inherent TRAIL resistant (TR) cells were selected from a population of TRAIL sensitive (TS) MDA-MB-231 cells using 800 ng/ml (IC99) rhTRAIL. The TR cells and TS cells were maintained in cell culture with 500ng/ml rhTRAIL and mock treatment, respectively, on every alternate passage. Next, both TS cells and TR cells were treated with rhTRAIL (500ng/ml) for 24hrs.
- Figure 4.2.** Analysis of microarray data for identification and functional characterization of candidate differentially expressed genes (DEGs) in MDA-MB-231 TR cells.
- Figure 4.3.** PPI network analysis.
- Figure 4.4.** MDA-MB-231 TR cells show reduced CDH1 expression.
- Figure 4.5.** Overexpression of CDH1 sensitizes TR cells towards TRAIL mediated toxicity. 48hrs posttransfection of CDH1 (or control plasmid) in TS and TR cells.
- Figure 4.6.** TCGA breast cancer patient group with low A/S ratio shows reduced expression of CDH1 mRNA level.
- Figure 4.7.** CDH1 increases DR4 in TR cells.
-

- Figure 4.8.** Graphical representation of the proposed mechanism of TRAIL sensitivity in MDA-MB-231 breast cancer cells.
- Figure 5.1.** Theophylline decreases cell viability in tumorigenic cells but not normal cells
- Figure 5.2.** Theophylline showed cytotoxicity in MDA-MB-231 breast cancer cells.
- Figure 5.3.** Theophylline activates TNFR1 mediated apoptosis.
- Figure 5.4.** Theophylline induces ROS production inhibition of which results in decreased TNFR1 mediated apoptosis in MDA-MB-231 breast cancer cells
- Figure 5.5.** Theophylline competes for adenosine receptor in MDA-MB-231 cells.
- Figure 5.6.** Theophylline treatment causes increased cathepsin activity which is reduced on inhibition of TNFR1 in MDA-MB-231 cells
- Figure 5.7.** Combination treatment decreases cell viability and migration in MDA-MB-231 cells.
- Figure 5.8.** Combination treatment triggers intrinsic apoptotic pathway
- Figure 5.9.** Oxidative stress was measured after the treatment of MDAMB-231 cells with theophylline and/or rhTRAIL
- Figure 5.10.** Upregulation of death receptors by rhTRAIL in combination with theophylline
- Figure 5.11.** TNFR1 inhibitor R7050 causes reduction in ROS level after theophylline treatment in MDA-MB-231 cells.
- Figure 5.12.** ROS did not show any effect of cathepsin activity after theophylline treatment in MDA-MB-231 cells.
- Figure 5.13.** Schematic diagram showing the signalling pathway activated by theophylline in MDA-MB-231 breast cancer cells.
- Figure 5.14:** Graphical representation of apoptosis pathway induced on exposure of cancer cells to rhTRAIL and/or theophylline
-

List of Tables

Table 3.1: Genes that are upregulated in rhTRAIL treated cells compared to control cells

Table 3.2: Genes that are downregulated in rhTRAIL treated cells compared to control cells

Table 3.3: Top 10 significant GO terms based on 297 differentially expressed genes.

Table 3.4: Significant KEGG pathway based on 297 differentially expressed genes.

Table 4.1: Genes that are upregulated in TR cells compared to TS cells.

Table 4.2: Genes that are downregulated in TR cells compared to TS cells.

Table 4.3: Top 10 significant GO terms based on 216 differentially expressed genes.

Table 4.4: Significant KEGG pathway based on 216 differentially expressed genes.

Table 4.5: TRAIL resistant and sensitive breast cancer cell lines
