How to present research?

Research presentations can be:

1. Poster presentation
2. Oral presentation
3. Thesis
4. Research paper

POSTER PRESENTATION

What is a Research Poster?

-- Posters are a key component of **communicating** your science and an important element in a successful scientific career.

-- The poster is usually a **mixture of a brief text mixed with tables, graphs, and pictures.**

What makes a good poster?

-- Important information readable from about **5 feet away**

-- **Short title** to draw interest

-- Word count of **300-800** words

-- **Clear** and **to the point text**

-- Use of **bullets, numbering**, and **headlines**

-- Effective use of **graphics**, **color** and **fonts**

-- Includes **acknowledgements**, **presenter's name** and **institutional affiliation**

Format

-- Never use less than a **24 point font**, and make sure the main points can be read at **eye level.**

-- **Title** should **go across the top** of the entire poster.

-- Use a **column format**.

-- Try to keep **30-40%** of the poster area empty of text and images.

Logo

Title of the Research Study

Logo

PEOPLE WHO DID THE STUDY

UNIVERSITIES AND/OR HOSPITALS THEY ARE AFFILIATED WITH

Introduction

We hope you find this template useful! This one is set up to yield a 100x140 centimeter horizontal poster.

We've put in the headings we usually see in these posters, you can copy and paste and change to your hearts content! We suggest you use keep black text against a light background so that it is easy to read. Background color can be changed in format-background-drop down menu.

The boxes around the text will automatically fit the text you type, and if you click on the text, you can use the little handles that appear to stretch or squeeze the text boxes to whatever size you want. If you need just a little more room for your type, go to format-line spacing and reduce it to 90 or even 85%.

The dotted lines through the center of the piece will not print, they are for alignment. You can move them around by clicking and holding them, and a little box will tell you where they are on the page. Use them to get your pictures or text boxes aligned together.

How to bring things in from Excel® and Word®

Excel- select the chart, hit edit-copy, and then edit-paste into PowerPoint®. The chart can then be stretched to fit as required. If you need to edit parts of the chart, it can be ungrouped. ***Watch out*** for scientific symbols used in imported charts, which PowerPoint will not recognize as a used font and may print improperly if we don't have the font installed on our system. It is best to use the Symbol font for scientific characters.

Word- select the text to be brought into PowerPoint, hit edit-copy, then edit-paste the text into a new or existing text block. This text is editable. You can change the size, color, etc. in format-text. We suggest you not put shadows on smaller text. Stick with Arial and Times New Roman fonts so your collaborators will have them.

Scans

We need images to be 72 to 100 dpi in their final size, or use a rule of thumb of 2 to 4 megabytes of uncompressed .tif file per square foot of image. For instance, a 3x5 photo that will be 6x10 in size on the final poster should be scanned at 200 dpi.

We prefer that you import tif or jpg images into PowerPoint. Generally, if you double click on an image to open it in Microsoft Photo Editor, and it tells you the image is too large, then it is too large for PowerPoint to handle too. We find that images 1200x1600 pixels or smaller work very well. Very large images may show on your screen but PowerPoint cannot print them.

Preview: To see your in poster in actual size, go to view-zoom-100%. Posters to be printed at 200% need to be viewed at 200%.

Feedback: If you have comments about how this template worked for you, email to sales@megaprint.com.

We listen! Call us at 800-590-7850 if we can help in any way.

Methods

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Figure #1

CHART or PICTURE

Results

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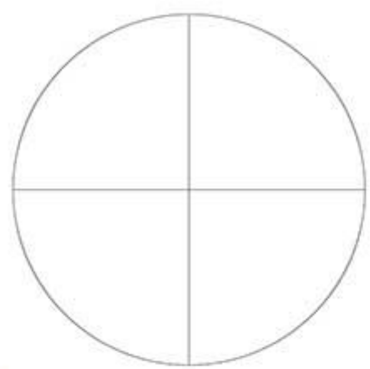
Figure #2



Conclusions

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-- Don't place all of your images on **one side** of the poster.

-- Images should be **spread evenly** over the surface, pulling the viewers eyes to all areas.

PACCESS: Enabling Easy Access to Radiology Images at a Hospital

Henrik Gater, Viktoria Research Institute, Informatics, Göteborg University, Sweden

institute Viktoria

Development

About the development

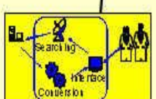
- Development was based on design sessions with health care professionals
- The interface design was a collaborative effort, where the users' knowledge about working in the hospital was combined with the technological expertise of the researchers
- The interface was designed to be as simple as possible

The iterative design process

Users

- All health care professionals within the hospital
- Staff from other hospitals
- Remote users

Design



- Design sessions were held with health care professionals
- The sessions informed the interface design

Programming

Integrating different programming languages to optimize different parts

- Perl scripts: CGI
- C: conversion
- HTML: interface

Problems

- *Access time*: Physicians believe they would benifit from instant access
- *Mobile and situated work*: The work activities of the physicians are often highly situated and mobile
- *Mutual access*: The difficulties of mutual access to image studies disqualify effective cooperation

Why Web technology?

- Platform independency
- Does not require system specific maintenance of client software
- Uses existing infrastructure, requires few investments, and generates low maintenance cost

Interface

Searching

- The user enters the patient identification code to access information
- The patient identification code is the most common way of accessing information, and is used in PACCESS
- The use of the patient identification code is also favorable for the underlying search algorithm

Examination list

- Examination numbers are used to identify an examination
- The examination reports are positioned to the left and the images for each examination to the right
- By clicking on the examination number button icons for the examination images are displayed

Icons

- A new window is opend for the icons
- The main idea with this is the ability to see all images as an overview
- We called this design the remote control
- By clicking on an icon a new window with the full radiological image is opened

Image viewing

- In our design sessions we decided the best alternative would be to open new window with the large image
- Physicians often look for changes in radiological images, and compare old images with new
- By opening a new window it is possible to maximize it, thus utilizing the screen more efficiently

Use

Research site

- The project was conducted at **Sahlgrenska University Hospital**
- It is the largest hospital in Sweden with approximately 1000 hospital beds
- The radiology department at Sahlgrenska is a centralized resource
- The department handles all radiology images within the hospital
- Approximately 130 000 examinations were made in 1997

Physical images

- Clinical physicians refer patients to the radiology department for examination
- The referring physicians use the examination report, and the X-ray, to determine treatment of patients
- Physicians often need old image studies, which can take up to 24 hours to retreive
- The image archive does not have any back-up, requested image studies might be unavailable

Dedicated equipment

- The existing system for viewing image studies is tailored for radiologists, thus it involves many radiology-specific features
- Unnecessary complexity for other user communities could be a barrier of adoption
- Staff articulated clearly that they did not want any unnecessary features in the system

PACCESS

- The aim of PACCESS is to make radiology images easily available for health care professionals with access to WWW browsers on networked PCs
- PACCESS requests the particular image from the image data base, converts it and displays it in full
- The user-oriented design approach adopted in this project did not only inform the interface design, but also the sequence of dialogues in the system
- Users can easily browse all images of the particular examination

Text

-- There is **no abstract** in a poster.

-- Keep displays **simple** and **text brief**.

-- The text must conform to the norms of sound scientific reporting: **clarity**, **precision of expression**, and **economy of words.**

-- Have a **clear** and **obvious** set of **conclusions**.

Multidisciplinary Review of the Medication Use System Results in Successful Reduction of Buretrol Use in Pediatric Patients

Amy L. Potts, PharmD, BCPS, Autumne Mayfield, RN, Julie Sinclair-Pingel, PharmD, Vickie Thompson, RN
Monroe Carell Jr. Children's Hospital at Vanderbilt, Nashville, TN

Background

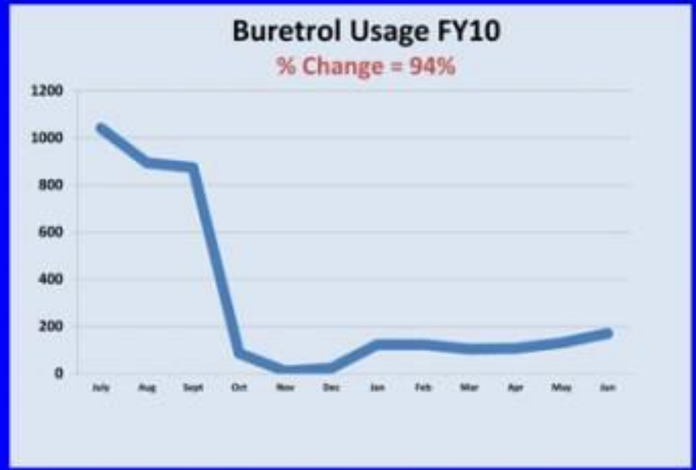
- Pediatric patients are more vulnerable to medication errors and adverse drug events.
- Medication delivery often requires complicated calculations and frequent dilutions to meet the specific weight or age-based needs of the individual patient.
- In 2009, the ISMP published a safety alert that highlighted the use the buretrols .
- Safety concerns identified included: drug misidentification, drug inactivation or precipitation and sterility.
- All pose additional risk to adverse patient outcomes, increased lengths of stay and costs.
- Buretrols have been a standard of practice at our institution for decades.
- Initiatives to eliminated buretrols in the past had proven unsuccessful.

Objective

- To eliminate the use of buretrols as a standard of practice for medication delivery in pediatric patients at our institution.

Methods

- In August 2009, a workgroup was established to review our current medication use process for drug delivery.
- Recommendations from national accreditation and best practice organizations were reviewed and a gap analysis was performed.
- Opportunities for improvement and specific barriers in adopting best practice recommendations were identified.
- Medication safety strategies were evaluated and implemented through a collaborative multidisciplinary effort with hospital administration support.
- Purchasing data was collected to determine impact of collaborative on buretrol usage.



Medication Safety Strategies

Standardization	Use of ready to administer (RTA) doses; standard concentrations; smart pump technology (drug library development)
Resources	Reallocation of resources to optimize nursing and pharmacy workload
Culture	Educational initiatives regarding best practice for medication delivery

Results

- Medication safety strategies were identified targeting three main barriers: standardization, resources and culture.
- A concurrent smart pump upgrade with wireless technology provided a timely initiative to introduce new standards as a part of the drug library.
- Buretrol usage declined 94% during FY10 which has resulted in an annualized cost savings of over $85,000.
- We continue to target specific instances such as supplemental electrolyte doses in the NICU, narcotic infusions in the PCCU, and some chemotherapy.

Conclusions

- Standardization, resource reallocation, and educational initiatives that targeted culture change resulted in successful elimination of buretrols as a standard of practice for medication delivery for pediatric patients at our institution.
- This effort has demonstrated cost, compliance, quality and safety benefits since its implementation.
- Although we have not completely eliminated their use in specific instances, we have eliminated buretrols as a standard of practice.
- We are hopeful that our experience will provide additional support and guidance to other institutions struggling to change practice and culture.

The authors would like to acknowledge the Medication Use Safety Improvement Committee (MUSIC) including dedicated nursing and pharmacy staff, hospital administration and physician leadership at MCJCHV for their participation and support in this collaborative.

O6-Benzylguanine Inhibits Tamoxifen Resistant Breast Cancer Cell Growth and Resensitizes Breast Cancer Cells to Anti-Estrogen Therapy

MD ANDERSON CANCER CENTER ORLANDO

SUPPORTED BY THE CHARLES LEWIS INSTITUTE

Joshua Smith[1], George C Bobustuc[1], Rafael Madero-Visbal[1], Jimmie Colon[1], Beth Isley[1], Jonathan Ticku[1], Kalkunte S. Srivenugopal and Santhi Konduri[1]

[1]Cancer Research Institute of M.D Anderson Cancer Center Orlando [2]Texas Tech University Health Sciences Center, Amarillo, TX

Abstract

Endocrine therapies using anti-estrogens are least toxic and very effective for breast cancers, however, tumor resistance to tamoxifen remains a stumbling block for successful therapy. Based on our recent study on the involvement of the DNA repair protein MGMT in pancreatic cancer (Clin Cancer Res. 15, 6087, 2009), here, we investigated whether MGMT overexpression mediates tamoxifen resistance. Specifically, we determined whether administration of MGMT inhibitor [O6-benzylguanine (BG)] at a non-toxic dose alone or in combination with the anti-estrogens (tamoxifen/fulvestrant) curtails human tamoxifen resistant breast cancer cell growth. Further, we also determined whether BG sensitizes breast cancers to tamoxifen using tamoxifen resistant cells.

MGMT expression was found to be increased in breast cancer cells relative to normal breast epithelial cells. Also, MGMT levels were significantly higher in tamoxifen resistant MCF-7 compared to the parent cells. Silencing of the ER-α expression using a specific siRNA resulted in augmentation of MGMT mRNA and protein levels by 2 fold. We also observed an inverse correlation between MGMT and p53 levels in breast cancer cell lines; moreover, p53 downregulation was accompanied by increased MGMT expression. Other experiments showed that BG alone or BG in combination with tamoxifen or fulvestrant decreased ER-α expression, whereas tamoxifen alone and fulvestrant alone increased and decreased the same respectively. However, all these treatments increased the p21cip1 mRNA and protein expression significantly. BG inhibited tamoxifen resistant breast cancer growth in a dose-dependent manner and it also resensitized resistant breast cancer cells to anti-estrogen therapy (TAM/ICI). These combinations also enhanced the cytochrome C release and the PARP cleavage, indicative of apoptosis. In breast cancer xenografts, BG alone or a combination of BG with tamoxifen or fulvestrant caused significant tumor growth delay and immunohistochemistry revealed that BG inhibited the expression of MGMT, ER- α, ki-67 and increased p21cip1 staining. These findings suggest that MGMT inhibition may provide a novel and effective approach for overcoming tamoxifen resistance.

Introduction

Recent advances in breast cancer research have identified key pathways involved in the repair of DNA damage induced by chemotherapeutic agents. The ability of cancer cells to recognize DNA damage and initiate DNA repair is an important mechanism for therapeutic resistance and has a negative impact on therapeutic efficacy. A number of DNA-damaging alkylating agents attack the nucleophilic O6 position on guanine, forming mutagenic and highly cytotoxic interstrand DNA crosslinks. The DNA repair enzyme O6-alkylguanine DNA alkyltransferase (AGT), encoded by the gene MGMT, repairs alkylation at this site and is responsible for protecting both tumor and normal cells from alkylating agents. MGMT is expressed constitutively in normal cells and tissues. In breast tumors, MGMT gene expression is elevated and levels are up to 4-fold higher than in the normal breast. Interestingly, it has been shown that tamoxifen accelerates proteasomal degradation of MGMT in human cancer cells. In 1991, Pegg, Moschel, and Dolan observed that O6 benzylguanine (BG) inhibited AGT and potentiated the cytotoxicity of both chloroethylating agents and methylating agents. In a series of important observations, they fully characterized the interaction between BG and AGT and its therapeutic impact. They showed that BG binds AGT, transferring the benzyl moiety to the active-site cysteine [29]. The reaction is very rapid and more potent than any other previously known AGT inhibitor. BG is not incorporated into DNA in living cells and reacts directly with both cytoplasmic and nuclear AGT. Because BG is a psuedosubstrate for MGMT which results in the covalent transfer of benzyl group to the active site cysteine, the MGMT protein is degraded after each reaction. This stoichiometric reaction mechanism effectively depletes the AGT content in tumors and the associated repair of alkylation damage. BG is currently undergoing clinical trials in various cancers to increase the efficacy of alkylating agents.

Interestingly, several observations suggest an inverse correlation between the levels of MGMT and p53 tumor suppressor proteins where wild-type p53 suppresses transcription of human MGMT expression. Unfortunately, p53 function is often inactivated or suppressed in human cancers; therefore, restoration of wt-p53 activity is essential for the success of some treatments. However, whether or not this is mediated by suppression of MGMT expression has yet to be determined. To date, the cross-talk between MGMT and ER-alpha (and the link to p53 expression) has not been explored in drug (i.e., tamoxifen) resistant breast tumors. The anti-estrogen tamoxifen is the most commonly used treatment for patients with estrogen receptor positive breast cancer. Although many patients benefit from tamoxifen in the adjuvant and metastatic settings, resistance to this endocrine therapeutic agent is an important clinical problem. The primary goal of present study was to investigate the mechanisms of anti-estrogen drug resistance and to design new therapeutic strategies for circumventing this resistance. The results show that MGMT expression is increased in TAM-resistant breast cancers and inhibition of MGMT by BG significantly improves TAM-sensitivity.

Results

Prolonged Treatment of Tamoxifen Increases MGMT Expression: We developed a tamoxifen resistant MCF-7 cell line by using prolonged treatment of tamoxifen on the parental ER-positive breast cancer cell line, MCF-7. Tamoxifen-resistant MCF-7 cells proliferate at rates similar to the parental MCF-7. Prolonged treatment of tamoxifen onto MCF-7 cells increased MGMT expression compared to parental MCF-7 cells by 2 fold (Fig.1).

Knocking Down ERα Enhances MGMT Expression in Tamoxifen Resistant Breast Cancer Cells: It is not known whether ERα and MGMT transcriptionally regulate each other in tamoxifen resistant breast cancer cells. We therefore investigated whether down regulation of ERα has any effect on endogenous MGMT expression in these cells. As expected, downregulation of ERα using specific siRNA significantly reduced ERα protein levels in these cells. Western blot analysis was performed and the results in the left panel (Fig. 2A) shows that silencing of ERα increases MGMT expression in these cells, and interestingly, the results in the right panel (Fig.2B) show increased MGMT mRNA levels were increased as assessed by qRT-PCR. These data suggest that ERα–mediated signaling functions to repress MGMT gene expression in breast cancer cells.

Transcriptional Regulation Between MGMT and p53: Previously, it was reported that p53 negatively regulates MGMT in breast cancer cells. Therefore, we addressed whether or not silencing the p53 enhances endogenous MGMT transcription. Tamoxifen resistant MCF-7 cells were transfected with either p53 siRNA (p53-KD) (Fig.2C) or MGMT siRNA (MGMT-KD) (Fig.2D) along with Non-specific siRNA (NS). MGMT expression was consistently increased in p53 knock down cells, with different experiments showing a ~ fold augmentation (Fig. 2A) and as expected, knocking down MGMT decreased MGMT transcription where as p53 mRNA levels were unaffected in MGMT knockdown cells (Fig.2D). These results confirm that p53 can regulate MGMT at the transcriptional level.

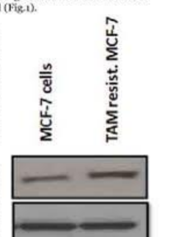


Figure 1. MCF-7 parental and tamoxifen resistant MCF-7 cell pellets were prepared, proteins were isolated and MGMT expression was detected by western blot analysis. Tamoxifen resistant MCF-7 breast cancer cells significantly increased MGMT expression compared to MCF-7 parental cells.

O6-Benzylguanine Plays a Dual Role in Tamoxifen Resistant MCF-7 Cells: Contrasting with the experiments above, next, we studied whether or not knocking down MGMT has any effect on ERα transcription. As expected, knocking down MGMT decreased MGMT gene transcripts. However, it was interesting to find that ERα gene transcription was also reduced after MGMT silencing. (Fig.2E). These data demonstrate that BG has the ability to attenuate the not only the MGMT, but also the ERα transcription, indicating a possible dual role for MGMT blockers in these breast cancer cells.

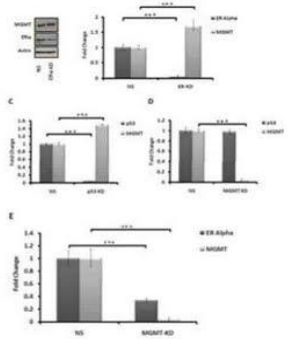


Figure 2. (A) Tamoxifen resistant MCF-7 cells were transfected with ERα siRNA (100nM) (ERα-KD) and NS siRNA (100nM) (NS), and cells were harvested 72h post transfection. Total proteins were isolated and ERα and MGMT expression was determined by western blot analysis. MGMT protein was significantly increased in ERα knock down cells (B) Tamoxifen resistant MCF-7 cells were transfected with ERα siRNA (100nM) (ERα-KD) and NS siRNA (100nM) (NS), and cells were harvested 72h post transfection. Total RNA was isolated and MGMT and ERα transcription was determined by qRT-PCR. MGMT transcription was significantly increased in ERα knock down cells. (C) Total RNA was isolated from non-specific siRNA (NS) (100nM) and p53 siRNA (20 nM) knock down tamoxifen resistant MCF-7 breast cancer cells. MGMT and p53 transcription was determined by qRT-PCR. (D) Total RNA was isolated from non-specific siRNA (NS) (100nM) and MGMT siRNA (100nM) knock down tamoxifen resistant MCF-7 breast cancer cells. MGMT and p53 transcription was determined by qRT-PCR. There is an inverse correlation between MGMT and p53 in tamoxifen resistant breast cancer cells (C & D).

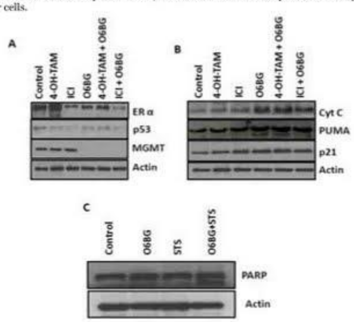


Figure 3. (A) Tamoxifen resistant MCF-7 breast cancer cells were treated in presence or absence of BG (50 μg) and 48h post treatment 4-OH-TAM (1μM), ICI (1μM) either alone or in combination with BG. 24h post treatment cells were harvested and proteins were isolated and western blot analysis was performed. (A) ERα, p53 and MGMT expressions (B) Cytochrome C, PUMA and p21 was determined by western blot analysis (C) tamoxifen resistant MCF-7 cells were treated with or without BG for 48h and later treated with staurosporin (5 μM/L) for 6 hrs PARP cleavage was determined by western blot analysis.

O6-Benzylguanine Modulates p53 Down-Stream Targeted Protein Expressions: Encouraged by the results reported, we investigated the effect of combination therapy on endogenous MGMT, p53, and ERα protein expressions. As expected, BG decreased MGMT expression, while combination therapy (4-OH-TAM or ICI combined with BG) significantly decreased both MGMT and ERα expressions. BG alone or in combination with tamoxifen or ICI decreased ER-α expression, whereas tamoxifen alone and ICI alone increased and decreased the same respectively (Fig.3A). p53 expression was slightly altered after ICI treatment. The reduction in p53 expression by ICI alone was reversed when BG was combined (Fig.3A). We investigated the effect of BG on proteins which are involved in cell cycle regulation, apoptosis in tamoxifen resistant breast cancer cells. All these treatments significantly increased the p21cip1 protein expression (Fig.3B). PUMA expression was also increased with these treatments. Hence, PUMA may have translocated to the mitochondria, cytochrome C is released (Fig.3B), and apoptosis was triggered in these cells in presence of combination therapy. PARP cleavage is seen in BG treated cells in presence of staurosporin as an indicative of apoptosis (Fig.3C). Therefore, this data suggest that BG promotes cell cycle arrest and can induce apoptosis by modulating p53 function.

O6-Benzylguanine Modulated Transcriptional Targets in Tamoxifen Resistant Breast Cancer Cells: The effect of combination therapy on endogenous MGMT mRNA levels ws aso stuid. Quantitative real-time PCR (qRT-PCR) resulted that anti-estrogens (TAM/ICI) increased the MGMT expression while the combination therapy decreased it compared to control levels. ERα transcription was decreased compared to controls with all these treatments (Fig.4A). Surprisingly, p21 and PUMA mRNA was significantly increased in the presence of combination treatments (Fig.4B &C). These results suggests that p53 mediated target gene transcription was affected by the drug combinations in breast cancer cells (Fig. 3 & 4).

O6-Benzylguanine Enhances p21 Transcriptional Activity in Tamoxifen Resistant Breast Cancer Cells: In order to investigate the effect of BG on p53 function, we performed luciferase reporter assays. Tamoxifen resistant MCF-7 breast cancer cells were transfected with p21 luc promoter construct in presence or absence of BG (target gene of p53). These results clearly demonstrate that BG significantly enhanced p21 transcriptional activity by 4-5 fold in these cells (Fig.4D).

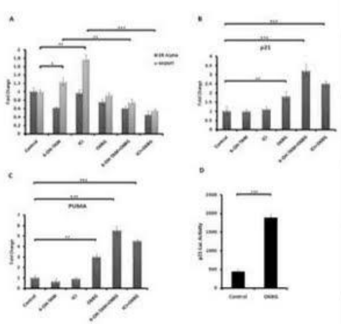
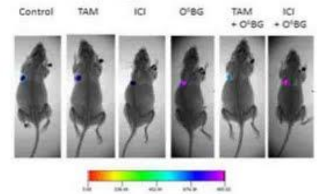


Figure 4. Tamoxifen resistant MCF-7 breast cancer cells were treated in presence or absence of BG (50 μg) for 48h and later 4-OH tamoxifen and ICI (1μM) was either alone or in combination with BG and 24h later cells were harvested and total RNA was isolated. (A) MGMT and ERα (B) p21 transcription (C) PUMA transcription was determined by qRT-PCR. 4-OH tamoxifen and ICI induces MGMT transcription. BG induced PUMA and p21 transcription. (D) Tamoxifen resistant MCF-7 breast cancer cells were transfected with p21-luc promoter and later treated with BG and 24h later cells were harvested. p21 transcriptional activity was significantly increased by BG in these cells.

O6-Benzylguanine Inhibits Tamoxifen Resistant Breast Cancer Cell Growth and Increase Resistant Breast Cancer Cell Sensitivity to Anti-Estrogen Therapy (TAM/ICI): Detailed necropsy revealed that all the mice had tumors in the breast. The data summarized in Table 1 show the daily BG alone or in combination with twice weekly tamoxifen/ICI significantly decreased median tumor volume and weight as compared with that seen in tamoxifen/ICI treated and control mice. The combination of BG with tamoxifen or ICI produced the greatest decrease in median tumor volume as compared with control mice (83.99 mm^3, 9.33 mm3 (TAM+BG), respectively; $p < 0.0001$); (83.99 mm^3, 31.60 mm^3 (ICI+BG), respectively; $p<0.0001$). Tumor weight was also significantly reduced in mice treated with combination therapy as compared with control mice (81.23 mg, 22.30 mg (TAM+BG), respectively, $p<0.0005$); (81.23 mg, 51.57 mg (ICI+BG), respectively, $p<0.0005$). (Table.1). Body weight was not changed among all treatment groups as compared with control mice. No visible liver metastases were present (enumerated with the aid of a dissecting microscope) in all treatment groups.

Histology and IHC Analysis: We next determined the *in vivo* effects of BG (alone or in combination) with tamoxifen/ICI. Tumors harvested from different treatment groups were processed for routine histological and IHC analysis. Tumors from mice treated with BG alone or in combination with tamoxifen/ICI exhibited a significant decrease in MGMT, ERα, ki-67 as compared with tumors treated with tamoxifen/ICI alone or control group. p53 expression was not much altered in these treatment groups. In sharp contrast, the expression of p21 was significantly increased in tumors from mice treated with BG either alone or in combination with tamoxifen/ICI. The images were analyzed by ImageJ (NIH) and MGMT, ERα, p53, p21 and ki-67 expressions were quantified by the ImmunoRatio plugin. (Fig.5).



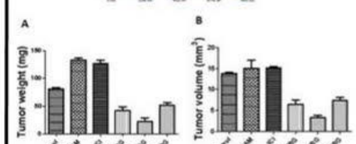
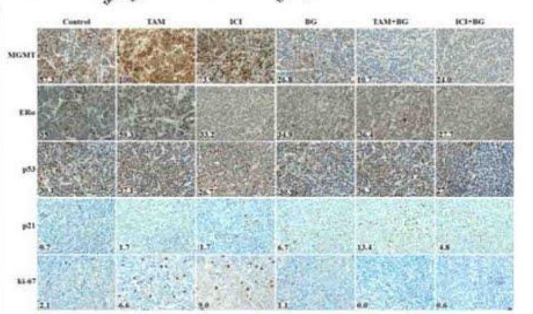


Figure 5. Tumors were harvested from control mice and mice treated with tamoxifen/ICI, BG, or both tamoxifen/ICI and BG. The sections were immunostained for expression of MGMT, ERα, p53, p21 and ki-67. Tumors from mice treated with BG either alone or in combination with tamoxifen or ICI had a significant decrease in the expression of MGMT, ERα and ki-67. p53 expression was not much altered in these treatment groups. In sharp contrast, expression of p21 was significantly increased in all these treatment groups compared to controls. Representative samples (40X) are shown.

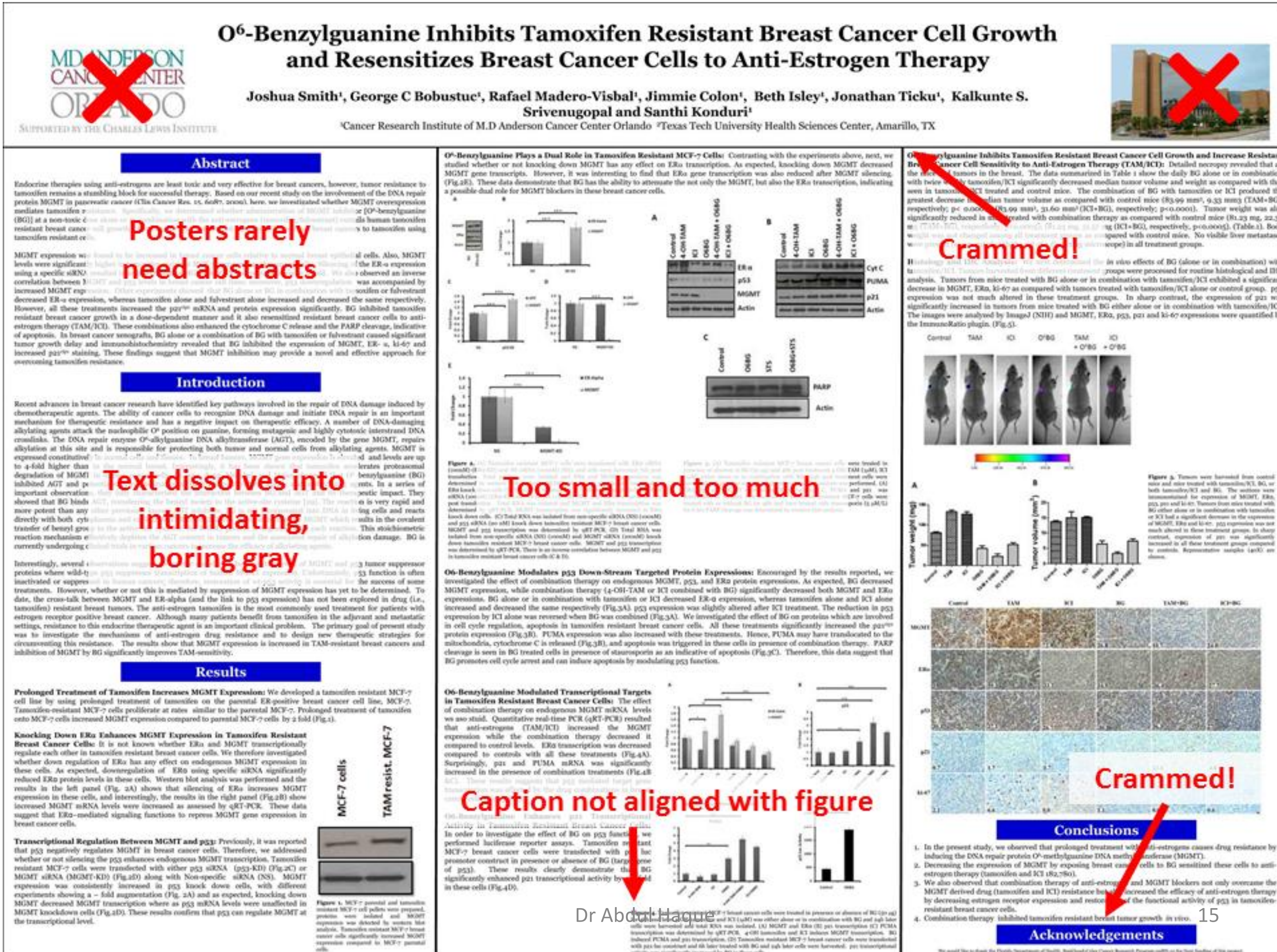


Conclusions

1. In the present study, we observed that prolonged treatment with anti-estrogens causes drug resistance by inducing the DNA repair protein O6-methylguanine DNA methyltransferase (MGMT).
2. Decreasing the expression of MGMT by exposing breast cancer cells to BG sensitized these cells to anti-estrogen therapy (tamoxifen and ICI 182,780).
3. We also observed that combination therapy of anti-estrogens and MGMT blockers not only overcame the MGMT derived drug (tamoxifen and ICI) resistance but also increased the efficacy of anti-estrogen therapy by decreasing estrogen receptor expression and restoration of the functional activity of p53 in tamoxifen-resistant breast cancer cells.
4. Combination therapy inhibited tamoxifen resistant breast tumor growth *in vivo*.

Acknowledgements

We would like to thank the Florida Department of Health, Bankhead-Coley Cancer Research Program 09BN-10 for their funding of this project.


O6-Benzylguanine Inhibits Tamoxifen Resistant Breast Cancer Cell Growth and Resensitizes Breast Cancer Cells to Anti-Estrogen Therapy
Joshua Smith, George C Bobustuc, Rafael Madero-Visbal, Jimmie Colon, Beth Isley, Jonathan Ticku, Kalkunte S. Srivenugopal and Santhi Konduri
Cancer Research Institute of M.D Anderson Cancer Center Orlando Texas Tech University Health Sciences Center, Amarillo, TX
Abstract
Introduction
Results
Conclusions
Acknowledgements
Posters rarely need abstracts
Text dissolves into intimidating, boring gray
Too small and too much
Caption not aligned with figure
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Crammed!

Multidisciplinary Review of the Medication Use System Results in Successful Reduction of Buretrol Use in Pediatric Patients

Amy L. Potts, PharmD, BCPS, Autumne Mayfield, RN, Julie Sinclair-Pingel, PharmD, Vickie Thompson, RN
Monroe Carell Jr. Children's Hospital at Vanderbilt, Nashville, TN

Background

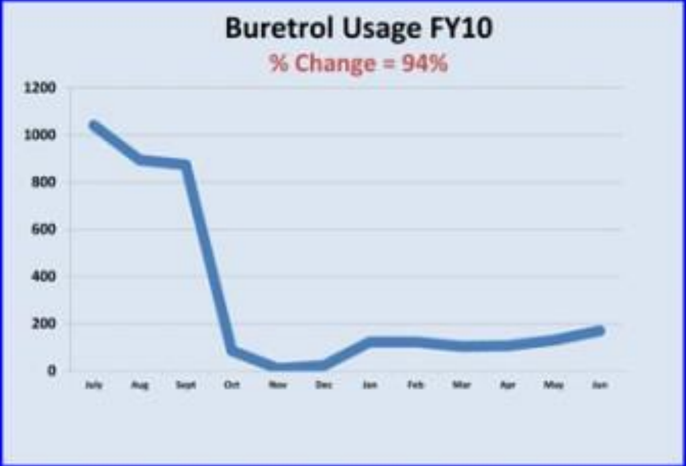
- Pediatric patients are more vulnerable to medication errors and adverse drug events.
- Medication delivery often requires complicated calculations and frequent dilutions to meet the specific weight or age-based needs of the individual patient.
- In 2009, the ISMP published a safety alert that highlighted the use the buretrols .
- Safety concerns identified included: drug misidentification, drug inactivation or precipitation and sterility.
- All pose additional risk to adverse patient outcomes, increased lengths of stay and costs.
- Buretrols have been a standard of practice at our institution for decades.
- Initiatives to eliminated buretrols in the past had proven unsuccessful.

Objective

- To eliminate the use of buretrols as a standard of practice for medication delivery in pediatric patients at our institution.

Methods

- In August 2009, a workgroup was established to review our current medication use process for drug delivery.
- Recommendations from national accreditation and best practice organizations were reviewed and a gap analysis was performed.
- Opportunities for improvement and specific barriers in adopting best practice recommendations were identified.
- Medication safety strategies were evaluated and implemented through a collaborative multidisciplinary effort with hospital administration support.
- Purchasing data was collected to determine impact of collaborative on buretrol usage.



Medication Safety Strategies

Standardization	Use of ready to administer (RTA) doses; standard concentrations; smart pump technology (drug library development)
Resources	Reallocation of resources to optimize nursing and pharmacy workload
Culture	Educational initiatives regarding best practice for medication delivery

Results

- Medication safety strategies were identified targeting three main barriers: standardization, resources and culture.
- A concurrent smart pump upgrade with wireless technology provided a timely initiative to introduce new standards as a part of the drug library.
- Buretrol usage declined 94% during FY10 which has resulted in an annualized cost savings of over $85,000.
- We continue to target specific instances such as supplemental electrolyte doses in the NICU, narcotic infusions in the PCCU, and some chemotherapy.

Conclusions

- Standardization, resource reallocation, and educational initiatives that targeted culture change resulted in successful elimination of buretrols as a standard of practice for medication delivery for pediatric patients at our institution.
- This effort has demonstrated cost, compliance, quality and safety benefits since its implementation.
- Although we have not completely eliminated their use in specific instances, we have eliminated buretrols as a standard of practice.
- We are hopeful that our experience will provide additional support and guidance to other institutions struggling to change practice and culture.

The authors would like to acknowledge the Medication Use Safety Improvement Committee (MUSIC) including dedicated nursing and pharmacy staff, hospital administration and physician leadership at MCJCHV for their participation and support in this collaborative.

-- As the **host** of the work presented on the poster, be **attentive, open, curious**, and **self-confident** but **never arrogant and aggressive**.

-- Work all the **audience at once**, do not leave visitors waiting for your attention.

-- **Make eye contact with every visitor.**

-- Make it easy for a conference attendee to **contact you afterward.**

-- Have copies of relevant papers on hand as well as **copies of the poster** on standard-sized paper.

-- Have your **e-mail** and other demographics clearly displayed.

ORAL PRESENTATION

-- An oral presentation may be as a **part of examination process** or a **representation in a conference** as a student or an expert.

-- It provides a bridge between the **researcher** and **audience**.

-- The researcher can present the results and interpretations which are **not clearly understood** by him/her and may request the experts in the audience to give their opinions and suggestions.

-- Before starting the preparation of an oral report, an **outline** should be drawn based on the **time duration** of the report and the **quality of the audience**.

-- Departmental seminar is usually of **45 minutes** duration.

-- In other meetings, time duration is **fixed by the organizer** based on the **number of days** of the meeting, **number of speakers** and the **status of a speaker**.

For a **45–60 minute** presentation, one may have enough time to:

-- Introduce the topic

-- Define the problem

-- Describe the methods

-- Give technical details

-- Present results and conclusion

-- For a **15–30 minute** oral presentation, one cannot find enough time to discuss complete details of the work.

-- In this case **less informative** materials must be **dropped**.

-- Methods used can be presented very **briefly** without going into technical details.

-- **Most of the time** should be reserved for **results, conclusions** and **future prospects**.

Methods

S. Typhi isolates (previously characterized as vi positive & vi negative) from NIBGE stock revived on tryptic soy broth

↓

Subculture on MacConkey agar plates

↓

Biochemical identification on TSI agar slants

↓

Molecular identification of *S.* Typhi by PCR targeting *fliC* gene

↓

Selection of virulence genes from database

↓

PCR based detection using the oligonucleotide primers targeting for various reported virulence genes

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-- Prepare a **write-up** of the oral presentation.

-- Then **evaluate** the written material.

-- The success of a presentation lies in making it **long enough to cover the topic** and **short enough to arouse curiosity and avoid boredom.**

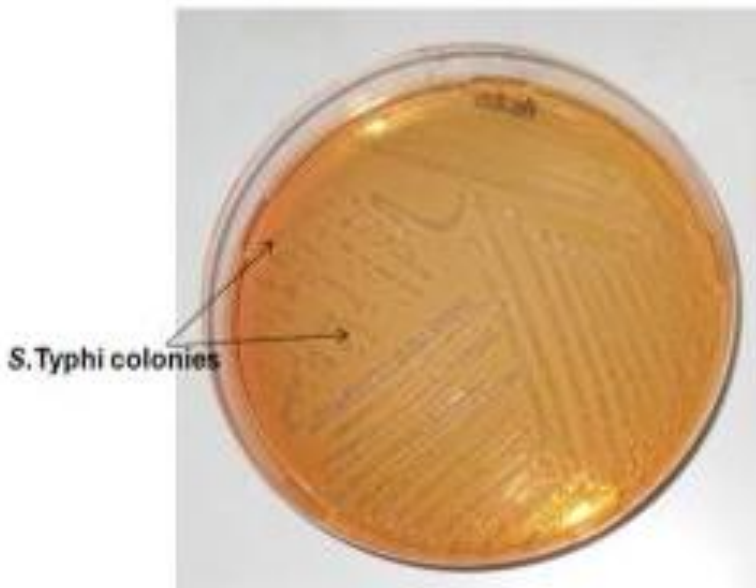
-- **Figures** and **photographs** should be **liberally used** instead of text where ever possible.

It is opposite of **paper writing** where **tables are more important.**

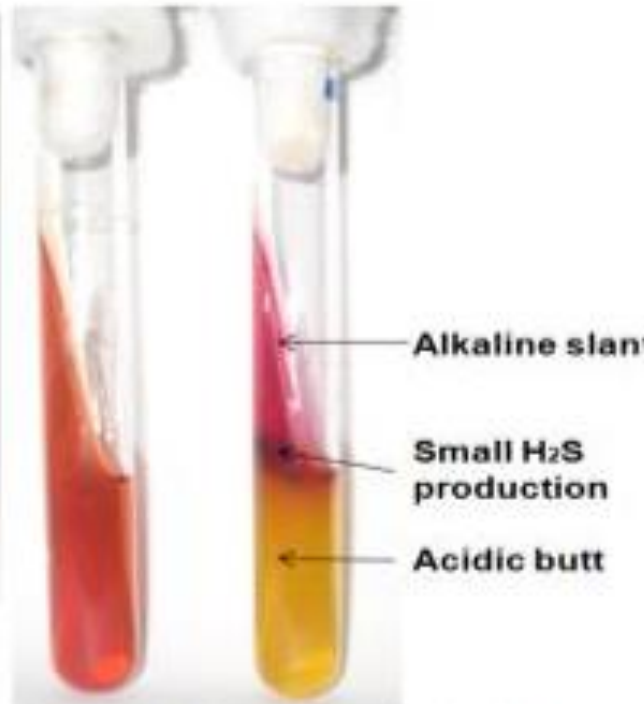
-- Use **large font** and **do not put too much material** in one slide.

But make sure that important information is not missed out.

Isolation and biochemical identification of *S.*Typhi



MacConkey agar plate with *S.*Typhi growth



S. Typhi on Triple Sugar Iron (TSI) agar slant

If tables have to be used, they should be **simple** and **small**.

Total Population	159.06: million
Total Health Facilities	13,937
Hospitals	965
Population per bed	1,515
Population to health facility ratio	11,413

Doctors	107,835
Doctors registered as specialists	19,623
Dentists	7446
Dental specialists	433
Nurses	43,646
Population per doctor	1,475
Population per dentist	21,362
Population per nurse	3,644

Note: Figures are for 2007

http://www.pmdc.org.pk/

-- Use **maximum space** available in the slide but it should not look overcrowded.

-- Use **animation** only where it is **absolutely necessary**.

-- Keep the background **simple**.

-- Use **contrasting colors** for text and background.

It is a good day

It is a good day

It is a good day

It is a good day

It is a good day

-- Do not **just read** the text.

Explain it in a **different** sentence formation.

-- An abstract or a short write-up of the presentation may be **circulated** to the participants of the meeting.

-- One should **allow interaction**; don't forget to **modulate** the voice as and when required and **don't violate the time frame.**

-- **Logical continuity** is another key aspect.

Move from the **simple to the complex**, from the **known to the unknown.**

-- Your statements should sound **sensible** and **reasonable**.

-- Wherever possible, give the **source of information**.

CAPSULAR POLYSACCHARIDES

-- The capsular polysaccharides (CP) have no demonstrable pharmacologic activity. *

-- They exert their virulence by 'shielding' the pathogen from the protective actions of serum complement. *

-- Only a few of many CP are associated with systemic infections in human.

-- Capsular PS have mol.wt of 1×10^5 to 5×10^6 Da. **

* *Sutton A et al. Infect. Immun. 35: 95-104*

** *Robbins JB et al. Pure App. Chem. 1999; 71:745-754*

-- **Stage fright** is the bane of most presenters.

There is **no shortcut** to overcome this fear.

One has to **practice, practice and practice**.

-- Do not speak **too fast** and compromise on clarity, or speak **too slowly** and bore the audience.

-- Make the session **interactive** by posing questions if possible.

-- Avoid repeated use of words or phrases such as “well”, “you see”, “you know”, “I mean”, “I think”, “that is” and “basically”.

-- You should also concentrate on your **body language**. It should **show confidence**.

-- **Eye contact** should be maintained with the audience.

One or two **rehearsals** of the report in the presence of colleagues, supervisor and collaborators can be exercised in order to:

-- Complete the presentation **within the allotted time**

-- Improve **the quality of presentation** and

-- Maintain the **fluency of the presentation**


Thank You!