

Presenting Your Research

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The Purpose of Your Presentation

- Convey your ideas...
- From your mind to the viewer's mind..
-*Everything serves this single goal*

Keep your audience in mind

- Who is your audience?
 - Are they experts in your field?
 - Scientists not experts in your field
 - Students, residents, fellows
 - Lay people

Often a mix

Goal of presentation

Is to

- Convey what your work is about
- Convey the findings, their importance and significance
- Make them want to read your paper
- Get feedback on your work

Is not to

- Tell them all *you* know about a subject
- Present every little detail of your work

Details: How much?

A Balancing Act

- Include essential details. Choose carefully
- Don't fill up your slides with lots of minute details
- Consider back-up slides to answer questions.

Use the Active Voice!

- These experiments were performed by us
- 34 tests were run
- These properties were thought to be desirable
- We performed these experiments
- We ran 34 tests
- We wanted to retain these properties

Use simple, direct language

- On an annual basis
- Endeavour to ascertain
- Yearly
- Find out

Oral Presentation

- Brevity: Less is more
- Layout, color font size and type - be consistent across slides
- Use slide real estate effectively
- Use color to emphasize some points but limit to 2 or 3
- Use animation sparingly

Slide Layout

- Use bullet or numbered points
- Show one point or few points at a time:
 - Will help audience concentrate on what you are saying
 - Will prevent audience from reading ahead
 - Will help you keep your presentation focused

Slide layout - Bad

- This page contains too many words for a presentation slide. It is not written in point form, making it difficult both for your audience to read and for you to present each point. Although there are exactly the same number of points on this slide as the previous slide, it looks much more complicated. In short, your audience will spend too much time trying to read this paragraph instead of listening to you.

Fonts

- Use a decent font size
- Consider different size fonts for main points and secondary points
 - this font is 24-point, the main point font is 32-point, and the title font is 44-point
- Use a standard font like Times New Roman or Arial

All fonts are not created equal!

- This font is too small to read
- **Complicated fonts create complications**
- ALL CAPITALS IS DIFFICULT TO READ.
USE ALL CAPITALS SPARINGLY.

Color – Use it Effectively

- Font colors that contrasts sharply with the background
 - Blue font on white background
- Color can reinforce the hierarchy of structure
 - Example: light blue title and dark blue text
- Use color to emphasize a point

Color – Can Create Problems

- Using a font color that does not contrast with the background color is hard to read
- Using color for decoration is distracting and annoying.
- Using a different color for each point is unnecessary
- Trying to be creative can also be bad

Slide Background

- Keep it simple
- Use backgrounds which are light and provide contrast
- Keep the background consistent throughout your presentation

BACKGROUND

- **Patients with DM have increased atherosclerotic and acute vascular events.**
- **Diabetes mellitus is a procoagulant state.**
- **The rupture of atherosclerotic plaque is a major cause of sudden death in humans.**
- **Both high glucose and high insulin levels are independently associated with increased mortality.**
- **The effects of hyperglycemia and hyperinsulinemia on blood coagulation are unknown.**

Background – Bad

- Avoid backgrounds that are distracting or difficult to read from
- Always be consistent with the background that you use

Graphs – Visual Impact

- Use graphs rather than just tables and words
 - Graphs are easier to comprehend and retain
 - Trends are easier to convey in graph form
- **Always title your graphs!**

Graphical Illustrations

- Bar Charts
- Pie Charts
- Line Charts
- Others

Chose the one that best conveys the message effectively and accurately

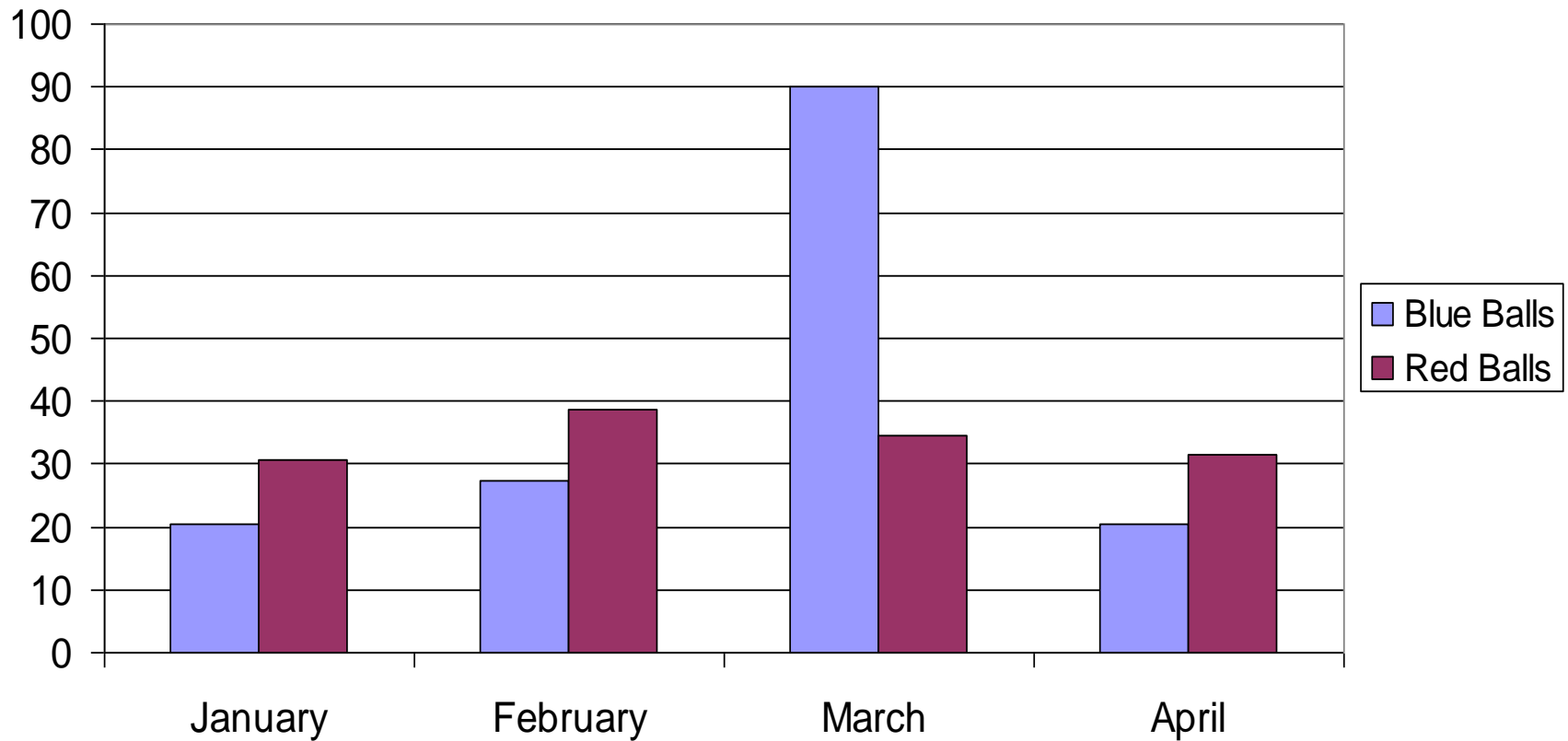
Tables – Don't Do so Well Visually

	January	February	March	April
Blue Balls	20.4	27.4	90	20.4
Red Balls	30.6	38.6	34.6	31.6

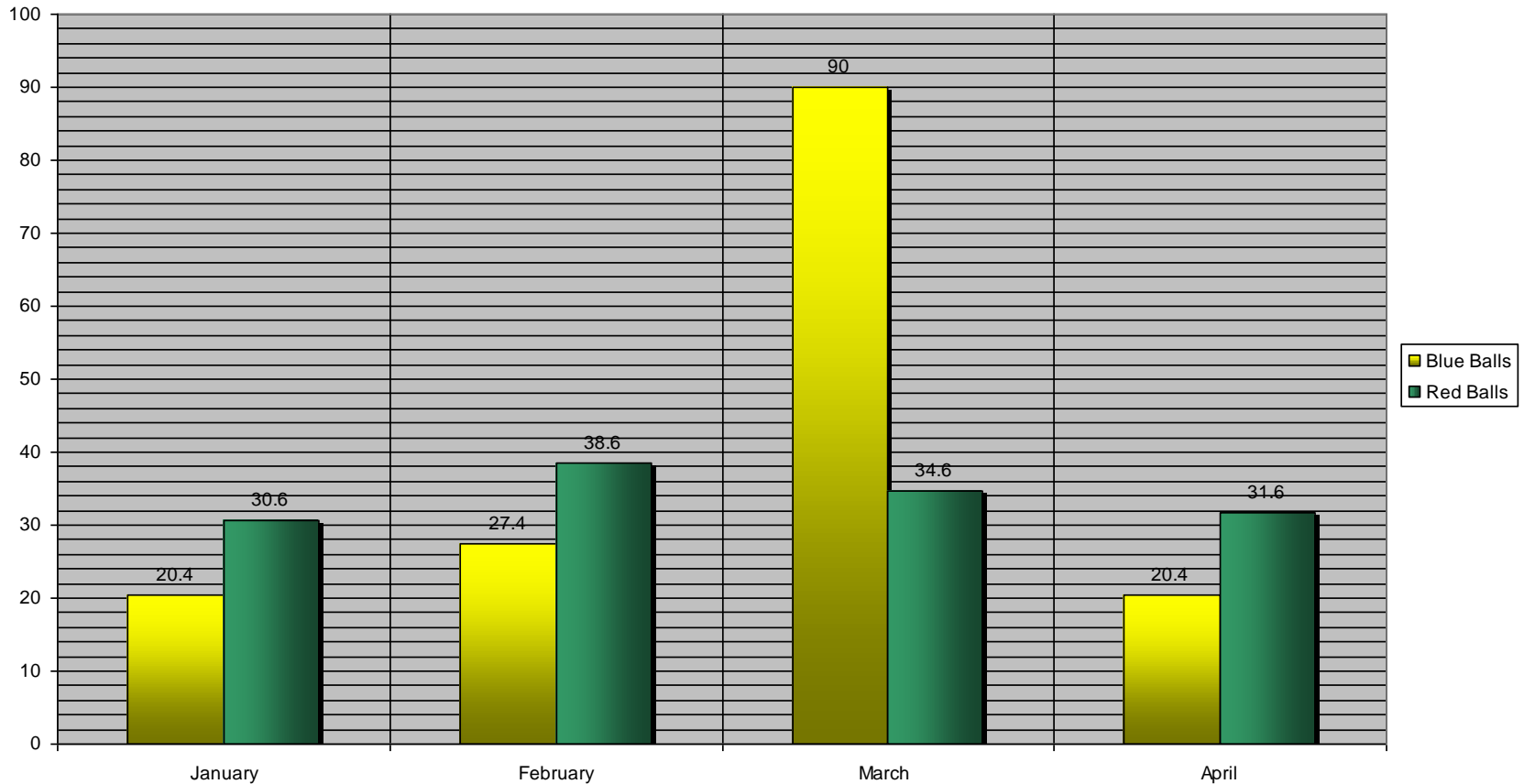
Lucia Dettori, DePaul University; June 29th 2007, Research Talk 101

Graphs

Items Sold in First Quarter of 2002



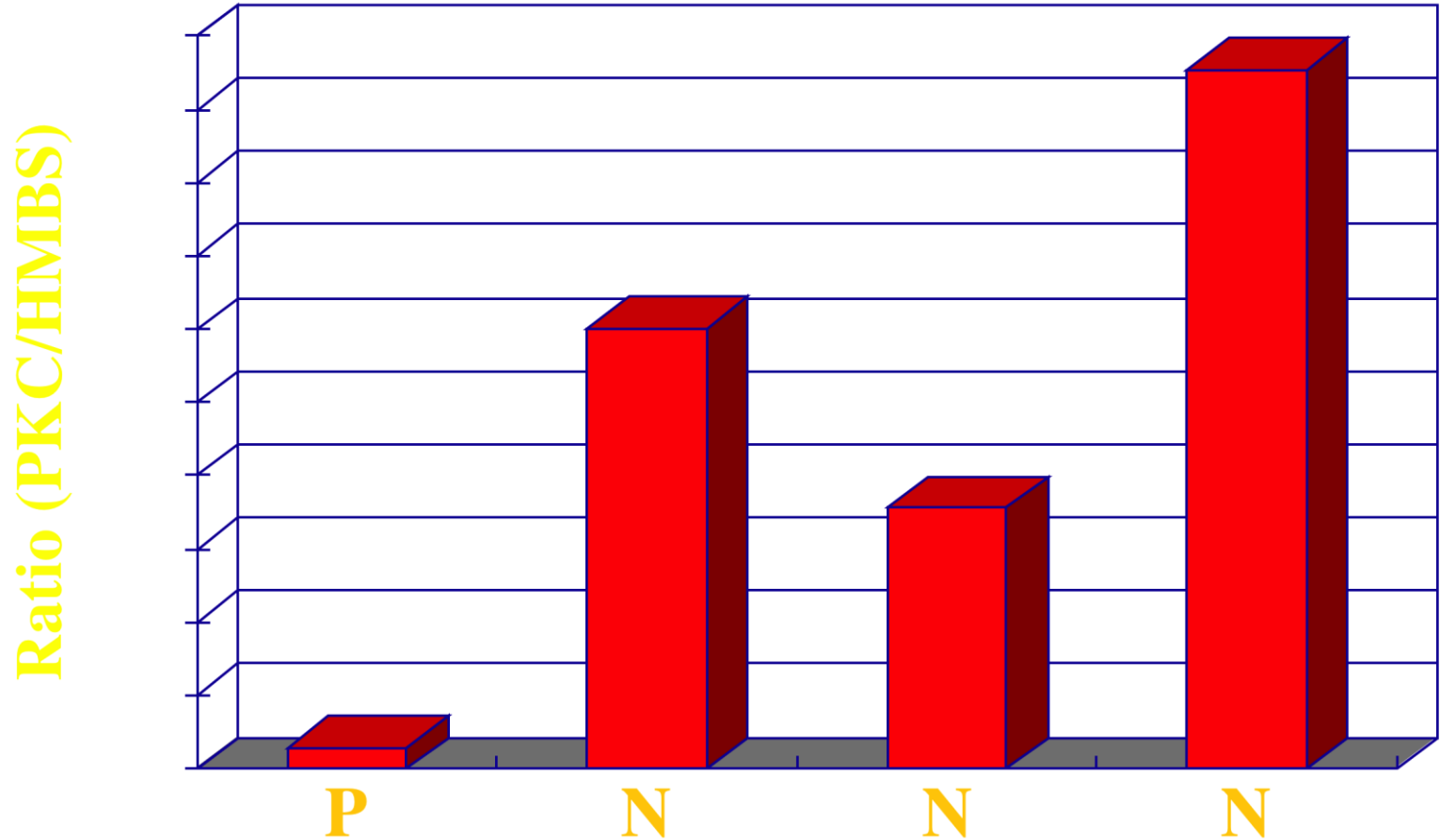
Graphs - Overdone



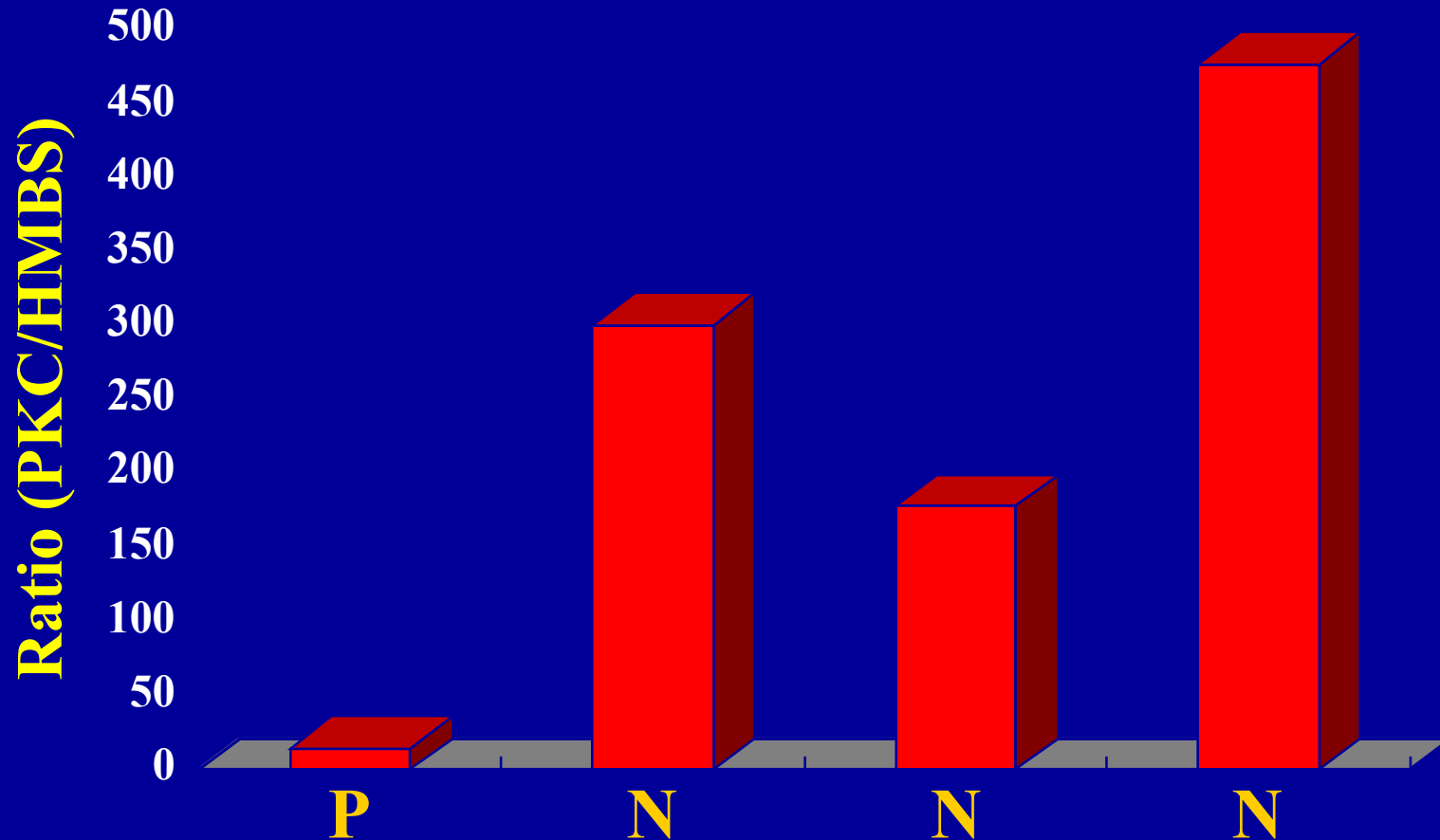
Graphs - Shortcomings

- No Title
- Too many minor gridlines
- Small font
- Choice of colors not great
- Shading of bars unnecessary

PKC- θ mRNA Relative Quantification



PKC- θ mRNA Relative Quantification



Pie Charts

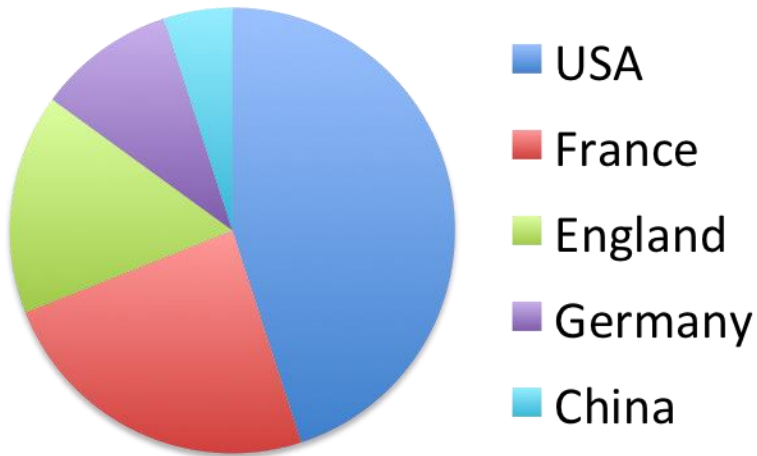
- Use to emphasize the relationship of the parts to the whole
- Choose a single pie or double pie
- Options such as pulled-out slices etc to make your point most effectively

Percent Citations by Country

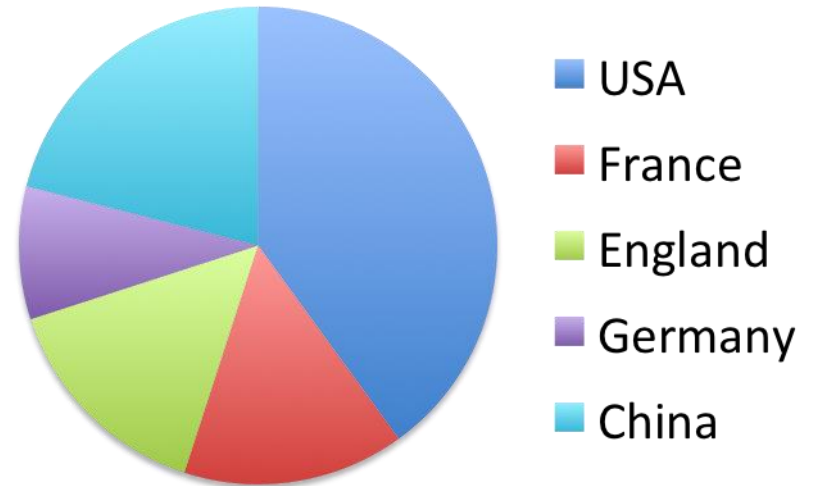
Country	2000	2015
USA	45	40
France	24	15
England	16	15
Germany	10	9
China	5	21

Percent Citations by Country

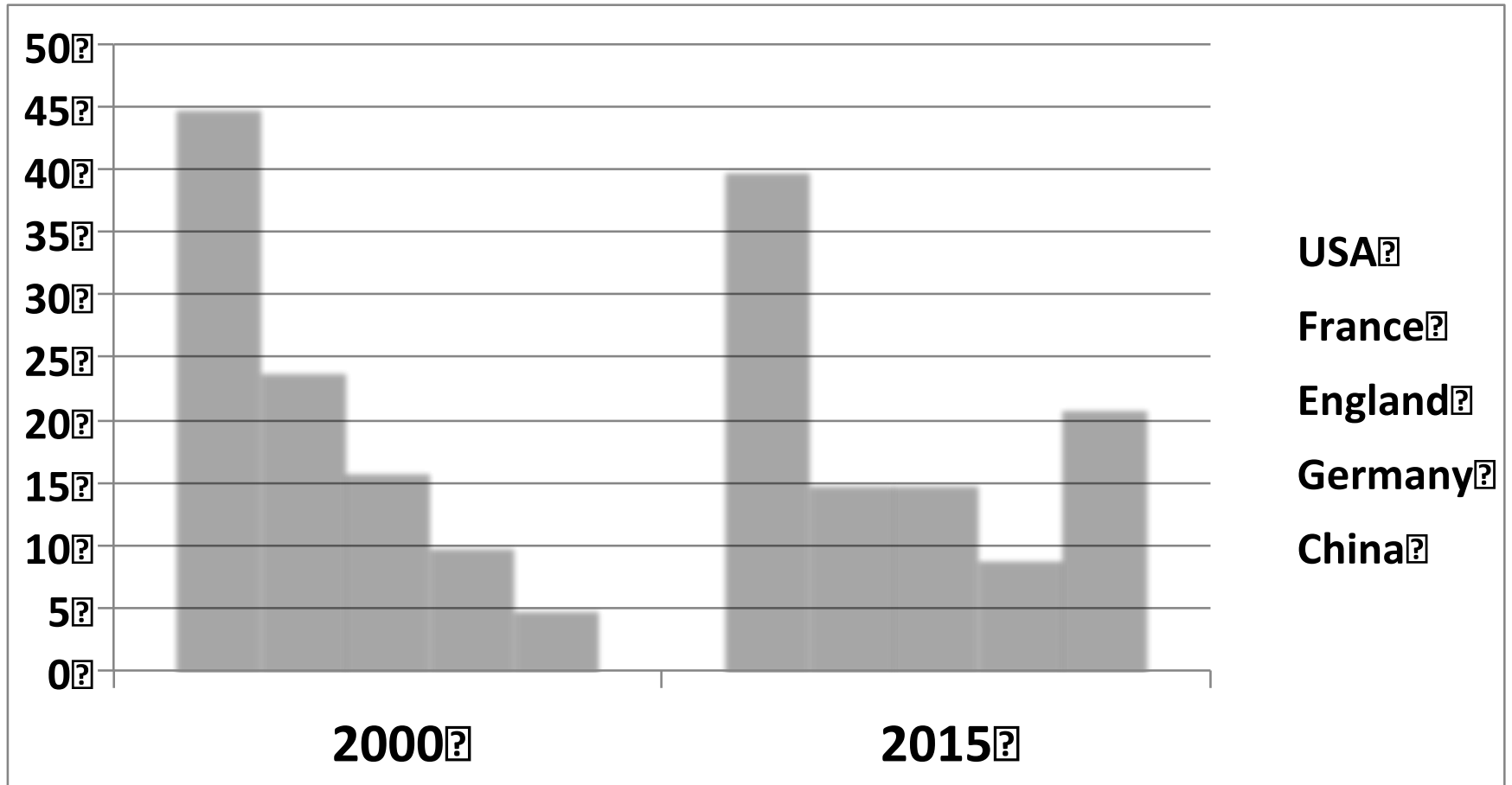
2000



2015



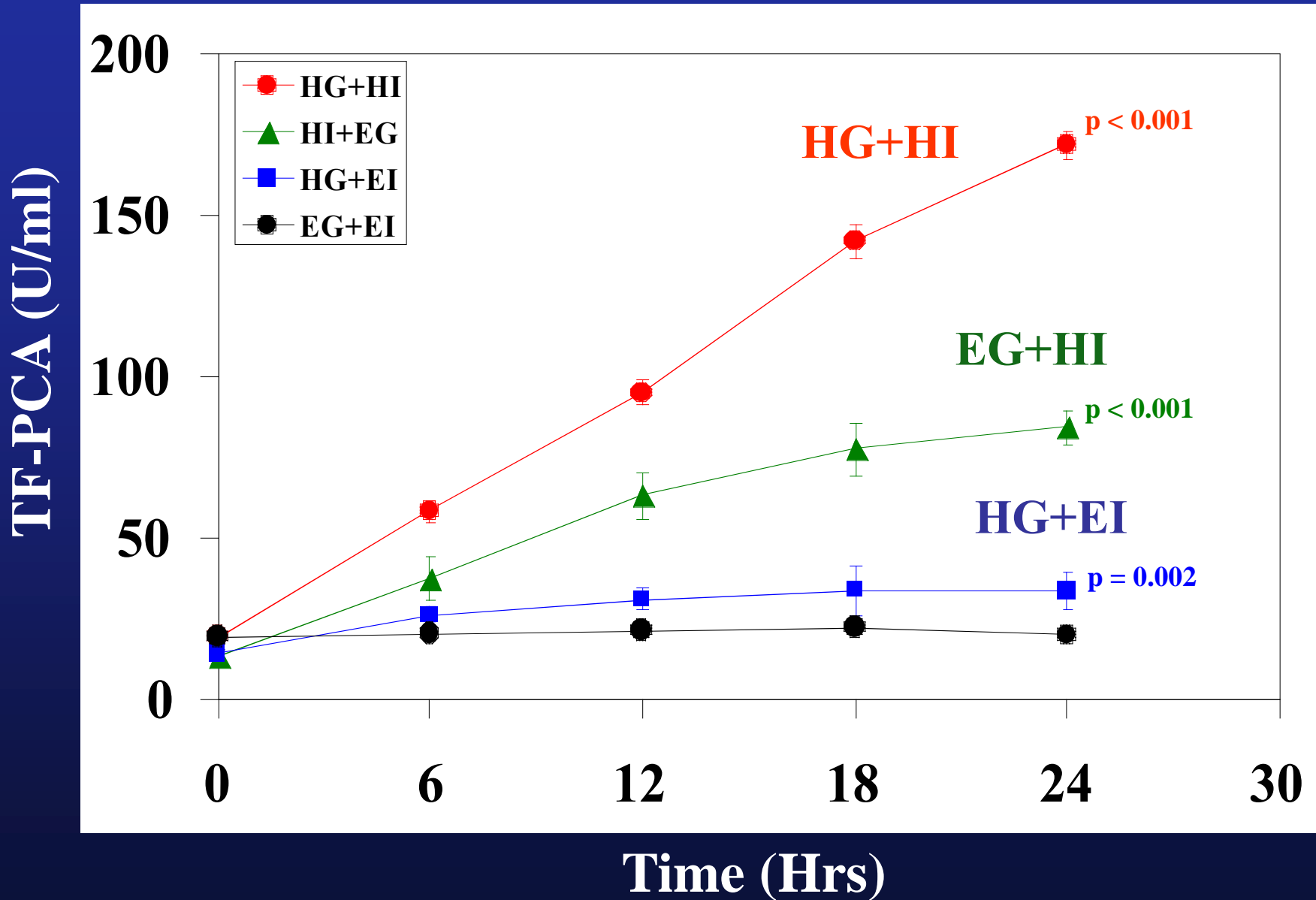
Percent Citations by Country



Line Graphs

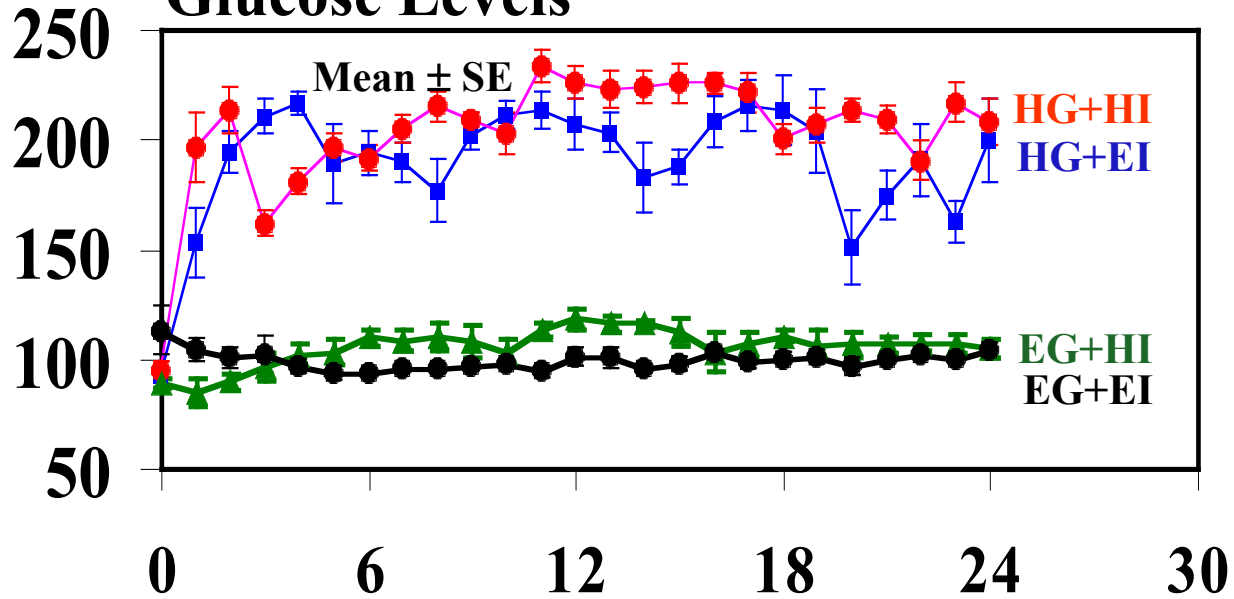
- Use to display trends or continuous data
- Select baseline and scale carefully to enhance effectiveness

Tissue Factor Procoagulant Activity In Whole Blood

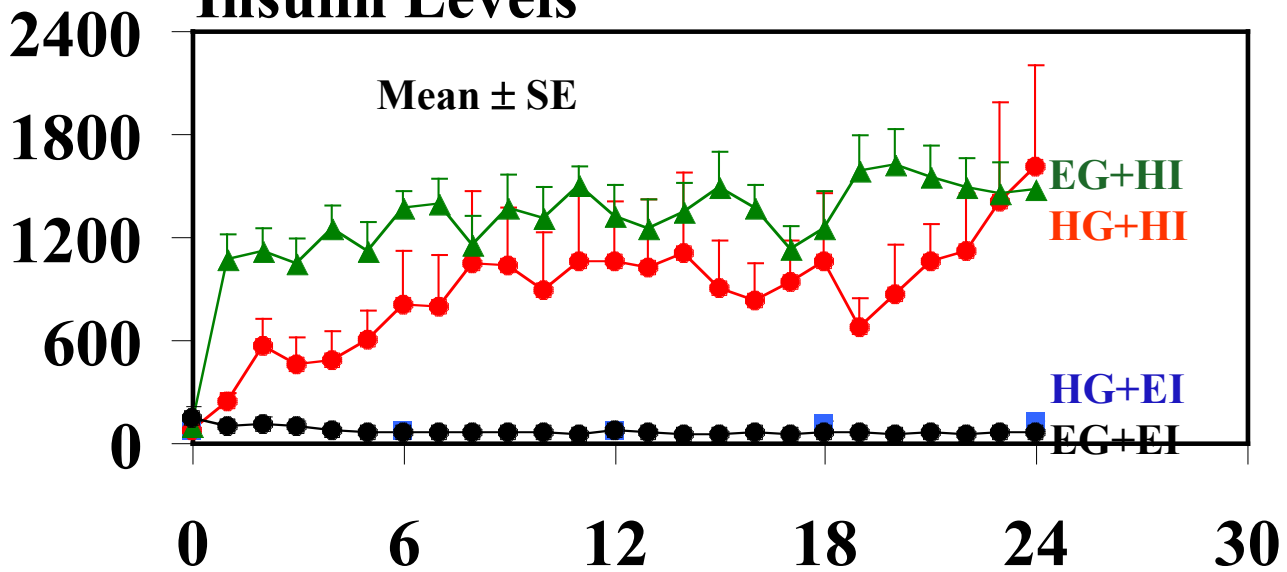


mg/dl
pmol/L

Glucose Levels



Insulin Levels



Time (Hrs)

Preparing the presentation

- Make slides with message in mind
- Spelling mistakes...
- Show it to others before final presentation
- Check all animations and video on right equipment. Nothing like a ...

Preparing the presentation

- Practice, practice,
 - Practice your talk to an audience
 - Time your presentation
 - Be prepared.. technology often fails.. Have backups.

Delivering the talk

- Be enthusiastic! If you aren't why should the audience be?
- Make eye contact with the audience
- Watch for questions. Be prepared to digress or brush off when irrelevant

Delivering the talk

- Use the pointer, if needed
- Know your material well
- Do not read directly from the slides or your notes
- Finish in time

Poster Presentations: Simple Rules

- Define the purpose
- Sell your work in quick tempo...
- Title is Important
- Rules of writing a good paper apply to a poster, too..
- Poster have unique features..
- Layout and format are critical

Poster Presentations: Simple Rules

- Layout and format are critical
- Content is important; keep it concise
- Capitalize on the visual effect: Figures rather than text.

Errens, TC and Bourne, PE. Plos Computational Biology,
May 2007 | Volume 3 | Issue 5 | e102

Poster Title

Researchers'/Presenters' Names
Institution/Organization/Company

Abstract (Click on the text to edit)

Copy and paste your text content here, adjusting the font size to fit.

Take care with fonts.
We suggest "Arial" as a sans-serif font,
or "Times Roman" (not "Times New Roman") for a serif font.

Use the "Symbol" font for Greek characters.

Background

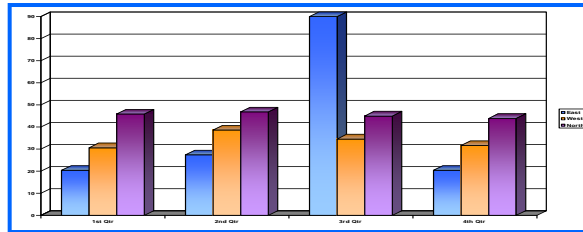
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Objective

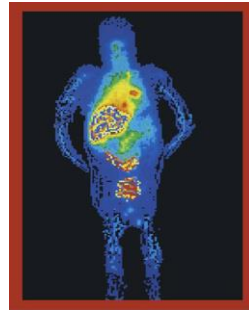
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Materials & Methods

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Results



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adjusting the font size to fit.

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Results (Cont.)

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Summary

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Conclusions

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References

1. Journal Article, *Name of Journal*
2. Journal Article, *Name of Journal*
3. Journal Article, *Name of Journal*
4. Journal Article, *Name of Journal*

Replace
with logo/s and/or QR Code



Toll Like Receptor (TLR)-4 Modulates the Effects of Hyperglycemia and Hyperinsulinemia on Tissue Factor Procoagulant Activity in Blood

Anamika Singh, PhD.¹, Guenther H. Boden, M.D.², and A. Koneti Rao, MD^{1,3}

¹Sol Sherry Thrombosis Research Center, ²Division of Endocrinology, ³Division of Hematology, Department of Medicine, Temple University School of Medicine, Philadelphia, PA, USA



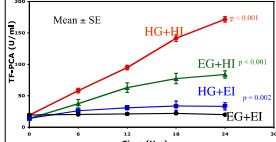
BACKGROUND

Diabetes mellitus (DM) patients have increased incidence of acute vascular events. DM is a procoagulant state. In type 2 DM both hyperglycemia (HG) and hyperinsulinemia (HI) are independently associated with mortality. The relative effects of HG and HI on blood coagulation are important but unknown.

Tissue-factor (TF) is the initiating mechanism for blood coagulation. TF is present in the blood pool; it is functionally active and can activate Factor X. TF activity is elevated in sickle cell anemia, ischemic heart disease, endotoxemia and cancer.

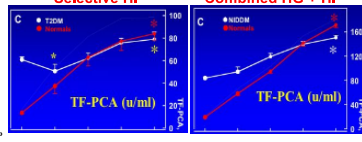
Our infusion studies (24h) in healthy subjects (1) showed that HG, HI, and combined HG+HI, elevated whole blood TF-procoagulant activity (TF-PCA) by 2, 6 and 9 fold, respectively (Fig 1). In T2DM patients, the elevation by HI was 30%, and by HG+HI was 80% (2). But in striking contrast, in T1DM neither HG or HI, nor combined HG+HI for up to 24h increased TF-PCA (3). Rather, TF-PCA levels decreased during HG+HI and selective HG. The mechanisms for these striking differences is unclear. In both T1 and T2DM patients, basal TF-PCA was elevated.

TF-PCA in Normal Subjects



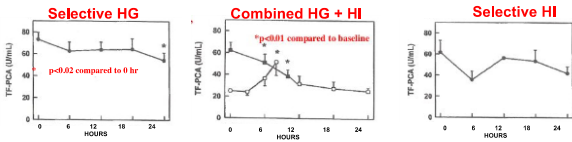
(1) Vaidyula VR et al. Diabetes 2006;55:202-8

TF-PCA in Type 2 Diabetes Mellitus



(2) Boden et al, J Clin Endo Metab 2007,92:4352-8

TF-PCA in Type 1 Diabetes Mellitus



(3) Singh et al, Diab Care 2012, 35: 1322-7

OBJECTIVE

To better understand our observations in non-diabetic and diabetic subjects, we have studied the in vitro effects of high glucose, high insulin and the combination on TF-PCA in blood from healthy subjects.

These were studied under both unstimulated and LPS-stimulated conditions, because DM patients show evidence of platelet/monocyte activation and have elevated plasma LPS levels. Because LPS is a ligand for TLR-4, which activates NF-KB pathway and upregulates TF-PCA, and modulates insulin responses, we postulated that TLR-4 modulates TF-PCA.

METHODS

Whole blood (105 ml) was obtained from 6 healthy subjects (5 males; mean age 34±6.1 yrs, mean ± SE). Added glucose (200 mg/dL HG) alone or insulin alone (1 nM, 10 nM or 100 nM HI) or in combination. Blood was incubated at 37° C for 2 hr and 4 hr in the absence and presence of LPS (1 µg/ml).

Measurements

- TF-PCA was measured in whole blood using a two stage clotting assay using recombinant FVIIa and Factor X (Key et al, Blood 11:4216, 1998).
- FVIIC and FVIII by clotting assays using respective deficient plasmas.
- TLR-4 levels in whole blood membranes by ELISA.

RESULTS

Glucose and Insulin Levels

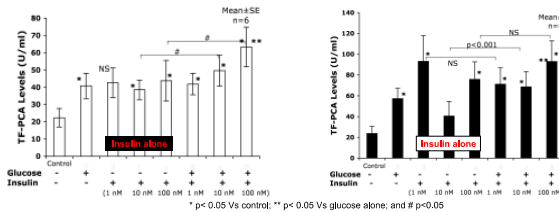
Glucose: Basal glucose level in control samples was 75 ± 4.2 mg/dL, (n=4) By 4 hr it declined to 41±9.7 mg/dL.

Insulin: Basal insulin level in control was 99 ± 24.4 pmol/L, (n=4). It declined to 64 ± 10.1 pmol/L at 4 hr suggesting cell internalization of insulin.

Plasma FVIIC and FVIII

Basal FVIIC and FVIII were 1.12±0.10 (n=4) and 1.60±0.45 u/ml (n=4), respectively. The changes with HG and HI alone were not significant. FVIIC decreased with combined HG+HI in unstimulated samples (1.12±0.10 to 1.01±0.11, p=0.03) at 4 hr; and with combined HG+HI (1 nM) in LPS stimulated samples (1.12±0.10 to 0.99±0.08, p=0.03) at 2 hr, respectively. No changes were noted in FVIII levels.

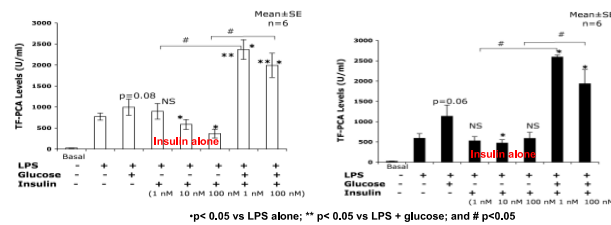
Effect of HG and HI on Whole Blood TF-PCA at 2 and 4 hr



- With added glucose (HG), TF-PCA increased at both 2 hr and 4 hr.
- With insulin (HI), it increased at 2 hr (10 nM, 100 nM) and 4 hr (1 nM, 100 nM)
- Combination of HG+HI (1, 10 or 100 nM) increased TF-PCA at 2 hr and 4 hr. Levels were higher than with glucose alone and insulin alone.

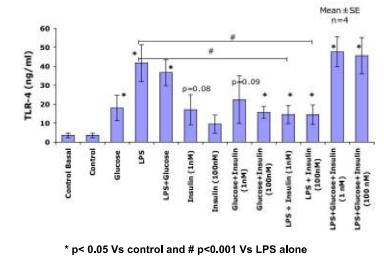
TF-PCA increase with HG, HI and HG+HI is in line with our findings from infusion studies in healthy subjects.

Effect of HG and HI on LPS-Stimulated Whole Blood TF-PCA at 2 and 4 hr

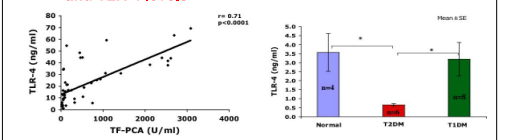


- LPS induced a marked increase in TF-PCA at 2 and 4 hr.
- HG induced a further increase but did not reach statistical significance.
- Insulin alone at 10 nM and 100 nM significantly lowered TF-PCA levels at 2 hr; and at 4 hr with 10 nM insulin.
- This is opposite of the findings in the absence of LPS-stimulation.
- Combination of HG+HI caused a striking increase in TF-PCA over that with LPS alone at both 2 hr and 4 hr. TF-PCA at 2 hr was higher than with glucose or insulin alone; and compared with insulin alone at 4 hr.

Effect of HG and HI on TLR-4 in Unstimulated and LPS-Stimulated Samples at 4 hr



Correlation between TF-PCA and TLR-4 levels



SUMMARY AND CONCLUSIONS

✓In vitro both HG and HI individually as well as in combination increased whole blood TF-PCA in healthy subjects. LPS increased TF-PCA and insulin inhibited this increase.

Thus, there is a differential effect of insulin in unstimulated versus LPS-stimulated conditions, suggesting that activation state of the cells influences insulin effect.

✓In LPS-stimulated samples, combined HG + HI induced the highest TF-PCA levels.

These findings suggest that HG may override the inhibitory effect of insulin in the presence of LPS.

✓TLR-4 levels were increased by glucose and LPS. Insulin inhibited LPS-induced TLR-4 increase. Combined HG+HI markedly increased TLR-4 levels over LPS alone.

✓TF-PCA levels strongly correlated with TLR-4 levels. This suggests that TLR-4 may play a major role in modulating TF-PCA levels.

✓TLR-4 levels were lower in T2DM patients compared to healthy subjects and T1DM patients.

DISCUSSION

■Insulin effect on TF-PCA is dependent on the cellular activation state and HG overrides the insulin inhibitory effect.

■We postulate that differences in TF-PCA responses in our infusion studies between T1DM and T2DM are related to differences in cell activation state in-vivo and in TLR-4 levels.

■In T2DM, but not in T1DM, monocytes and platelets have insulin resistance. This may also account for the differences.

■The mechanisms regulating TF-PCA levels and the prothrombotic state in T1DM and T2DM are distinct and further studies are needed to define the differences.

Replace with logo/s and/or QR Code

Poster Title

Researchers'/Presenters' Names
Institution/Organization/Company

Background

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Aims

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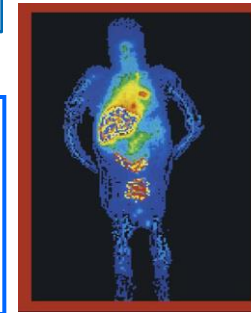
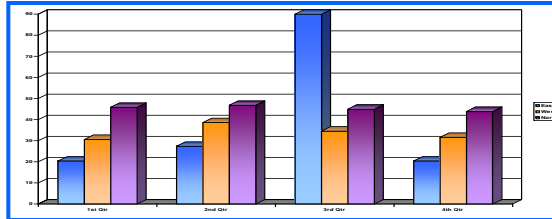
Patients & Methods

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Results

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Discussion

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Conclusions

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References

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4. Journal Article, *Name of Journal*

Contact Information

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References

- Errens, TC and Bourne, PE. Ten Simple Rules for a Good Poster Presentation. Plos Computational Biology, May 2007, Volume 3, Issue 5, e102
- Bourne, PE. Ten Simple Rules for Making Good Oral Presentations. PLoS Computational Biology, April 2007, Volume 3, Issue 4, e77
- Lucia Dettori, Research talk 101, DePaul University 2007

Some of the slides were modified from these resources.



Thank You

2012/AKR