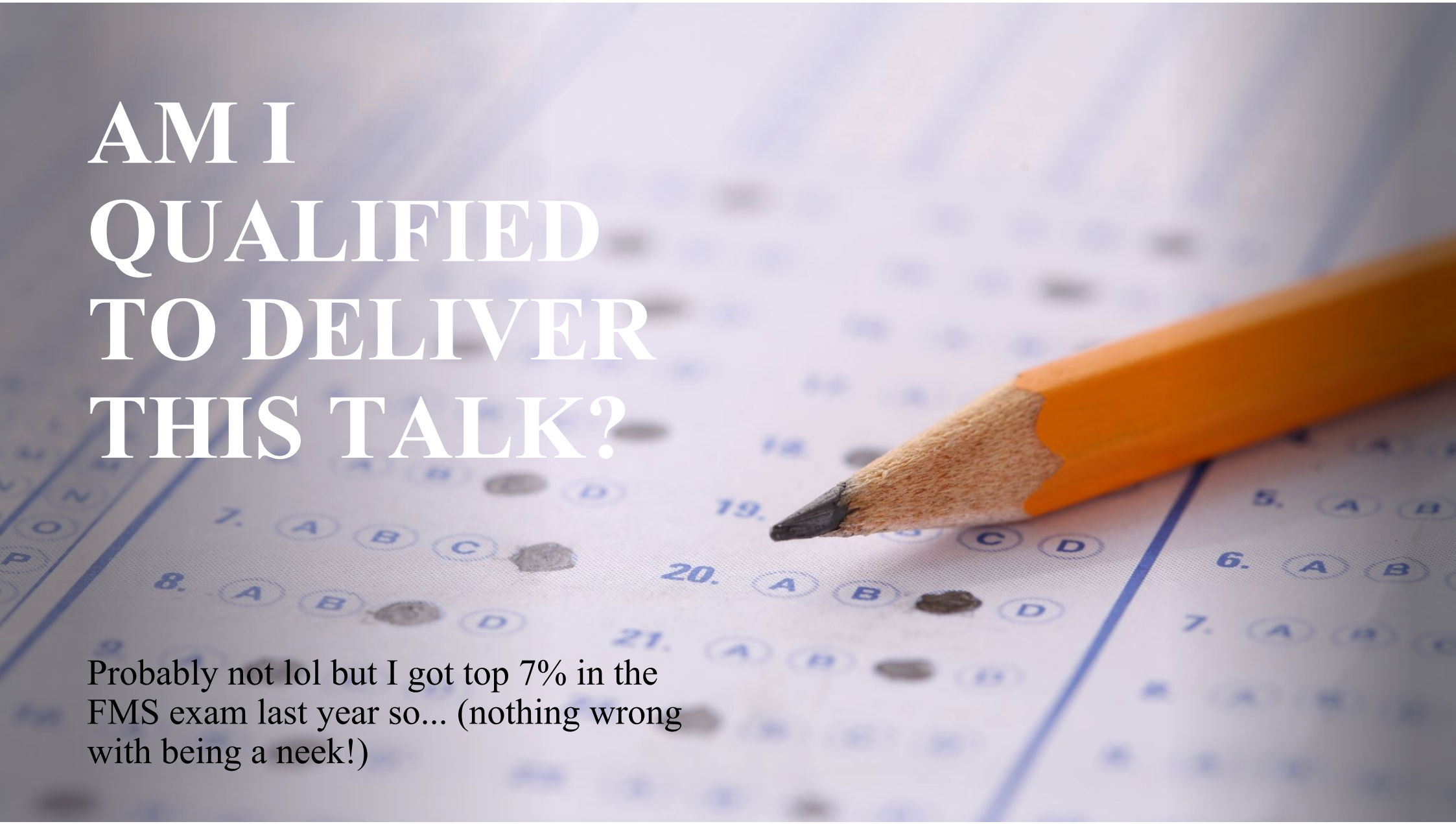
STAGE ONE GKTEACH FMS - CBS

Jack Eaves – MSA Social Media Officer

To be cringe is to be free


AM I
QUALIFIED
TO DELIVER
THIS TALK?
Probably not lol but I got top 7% in the FMS exam last year so... (nothing wrong with being a neek!)

Easy?

Hard?

EMDP - how have you found it as one of your main modules?

WHAT ARE YOUR THOUGHTS ON CBS?

A100 - how have you found it compared to anatomy?

If no one says anything I will start picking on people I am not nice

What is CBS and why do you need to know it?

You're all probably very aware about what CBS actually is

It forms the basis of your "basic science" knowledge that you will need to know to practice as a doctor

What do you actually need to know?

STUART KNIGHT IS A G - HIS LECTURES ARE THE BEST THAT YOU'LL GET IN FIRST YEAR (AND PROBABLY THE BEST YOU'LL GET AT KING'S)

EVERYTHING IN THE LECTURES (INCLUDING THE CASE BASE DISCUSSIONS IN HIS SLIDES), WORKSHOPS AND TUTORIALS ARE ALL IMPORTANT - AND ALL HAVE HIGH CHANCES OF COMING UP IN THE EXAM

EVERY SINGLE THING WRITTEN DOWN IN HIS LECTURES IS LIKELY TO COME UP - IT IS ALL VERY IMPORTANT - THERE IS A QUESTION ASKED FROM EVERY LECTURE, AT LEAST ONE CBD, ONE WORKSHOP AND ONE TUTORIAL

THE STRUCTURE OF EVERY AMINO ACID (FROM RECOGNITION)

NUMERACY AND CONVERSION

What don't you need to know

The ins and outs of scientific formulae - enzyme kinetics are a beast and you don't need to know every single thing about it (but you should know the equations and what the letters mean) - but you won't be expected to rearrange the equations

Application - a lot of the content is similar to biology A Level in the way that it is rote memorisation

How to write sentences - ALL of the exams this year are multiple choice (one answer from five options)

Anything from extra reading – the FMS exam is specifically written by Stuart + the exam team directly from the lecture slides

How hard is the FMS exam?

- Is it "tricky" but not very difficult
- As long as you revise properly and actually learn the content – you **will** be fine
- If you're stressing about passing then you probably will pass
- Some people do fail the exam - there is a resit before year 2 starts so you have a second chance (but your mark is capped to the pass mark) but if you fail this its likely you'll have to resit the whole year and *all* modules
- CBS makes up around a third of the content in the exam
  - BUT! There are only 50 questions so every mark counts
  - (last year was 25 marks for NAM, 16 for CBS and 9 for MCG)
- The pass mark was 22 (44%) last year - if you girl math it that's 10 marks for guessing every answer, so you only need to get 12 answers right


ANY
BURNING
QUESTIONS?

MULTIPLE CHOICE QUESTIONS!!!!!!!!!!!!!!!!!!!!!
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A 24 year old patient presents to a dermatologist with the chief complaint of a flare up regarding his osteogenesis imperfecta. This is a condition in which collagen doesn't form properly. What is the normal structure of the protein collagen?

1. Serine - lysine - leucine in a left handed helix

1. Serine - lysine - leucine in a right handed helix

1. Glycine - proline - hydroxyproline in a left handed helix

1. Glycine - proline - hydroxyproline in a right handed helix

1. Leucine - lysine – serine in a left handed helix

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A 3 year old patient is admitted to St Thomas A&E with increased respiratory rate, excruciating pain in her extremities, diaphoresis and nausea. The on call paediatric registrar diagnoses her with a sickle cell crisis. What causes patients to have sickle shaped cells?

1. Genetics as she has sickle cell or sickle cell trait
2. Substitution of a hydrophilic glutamine to a hydrophobic valine
3. Substitution of one amino acid to another – a missense mutation
4. Substitution of a hydrophilic glutamic acid to a hydrophobic valine
5. Substitution of any hydrophilic amino acid into a hydrophobic amino acid in the sickle cell determining region

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A 76 year old patient goes to her GP as she recently had a fall at home. Her only relevant past medical history is a congenital lysosomal storage disease. What is used to target proteins to lysosomes and where is this done?

1. Tagged with mannose-6-phosphate in the golgi

1. Tagged with mannose-6-phosphate in the RER

1. Tagged with lysosomal targeting protein after translation

1. Tagged with serine-lysine-leucine at the C-terminus

1. All cytoplasmic proteins are sent to lysosomes

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1. All cytoplasmic proteins are targeted to lysosomes as long as they don't have other instructions

A molecular cell genetics fellow is researching the effects of catabolic enzymes to find which drugs can be used to combat vascular dementia. What is Kcat?

1. The only way to measure efficiency of an enzyme
2. The number of substrate molecules converted into product in a unit of time by a single enzyme molecule, when the enzyme is saturated with substrate
3. The minimum number of enzyme molecules needed to convert all substrate molecules into product molecules in one second
4. The catabolism constant for catabolic enzymes
5. A measure of enzyme efficiency when not at standard conditions

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A patient presents with an actin protein deficiency, which means that he has multiple systemic issues. Which of these is not a function of actin?

1. Muscle contraction

1. Mechanical support

1. Maintain cell shape

1. Cell movement

1. Cell homeostasis

A patient presents with an actin protein deficiency, which means that he has multiple systemic issues. Which of these is not a function of actin?

1. Muscle contraction

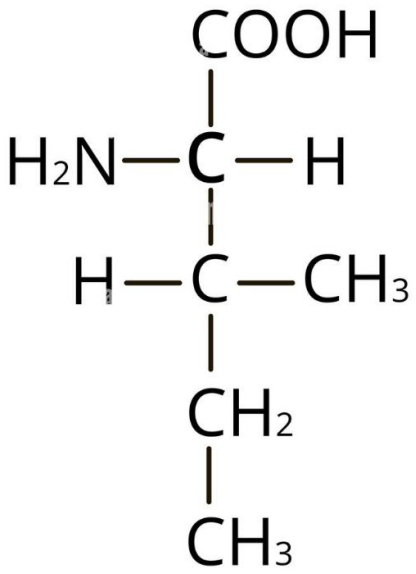
1. Mechanical support

1. Maintain cell shape

1. Cell movement

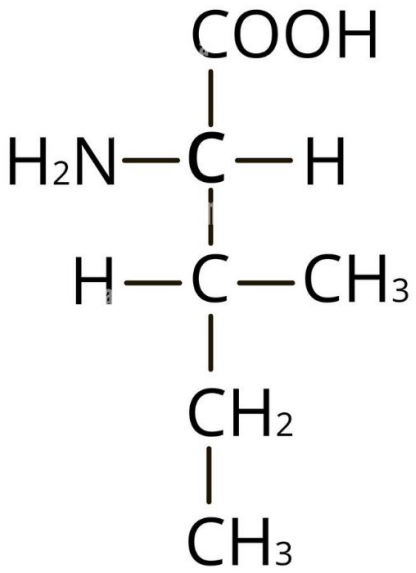
1. Cell homeostasis (although it does have a role in protein homeostasis)

What is this amino acid



1. Valine
1. Isoleucine
1. Glutamic acid
1. Proline
1. Leucine

What is this amino acid



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THANKS
:3