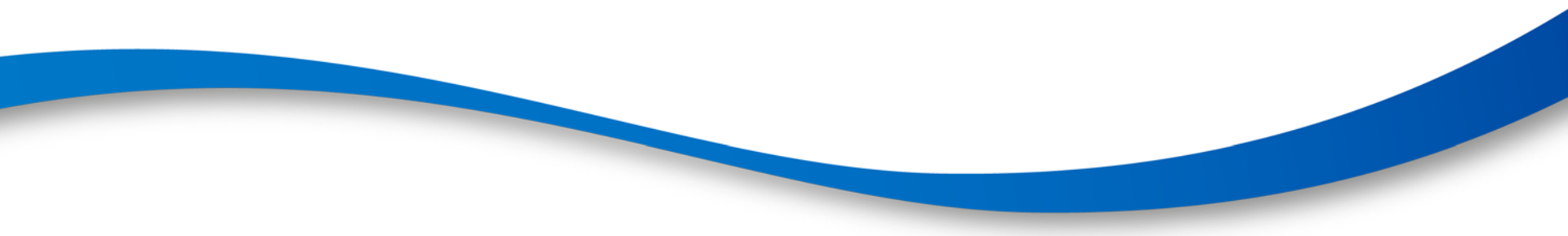


RCI Case Studies.

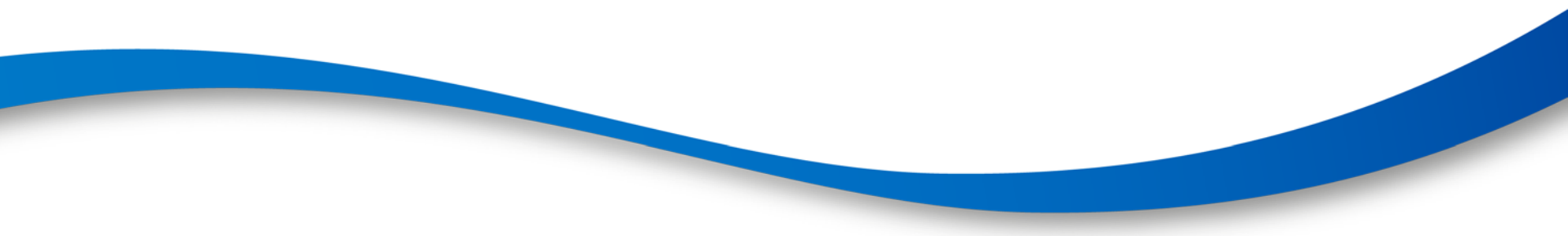
Tracey Tomlinson
Head of Laboratory, RCI Colindale



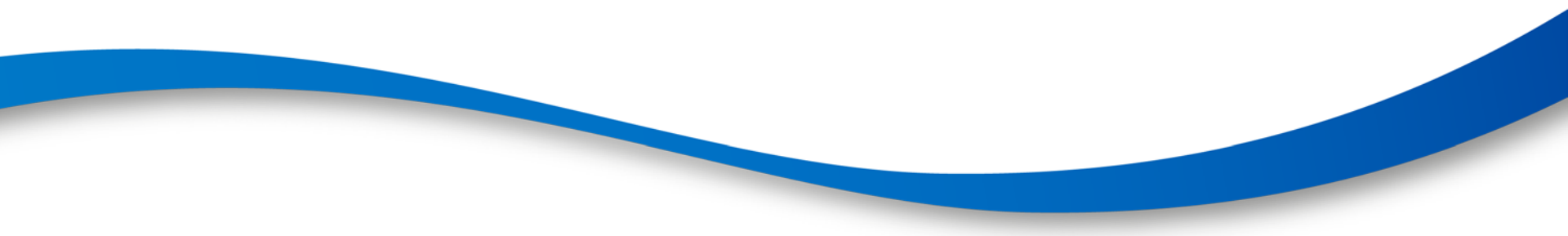
Before we start let's practice.....



What sound does a bee make?

- Moo
 - Quack
 - Woof
 - Buzz
- 

Case Study 1

- **Female, DOB 01/10/1983**
 - **Sickle cell anaemia**
 - **Investigations required – antibody ID and XM**
- 

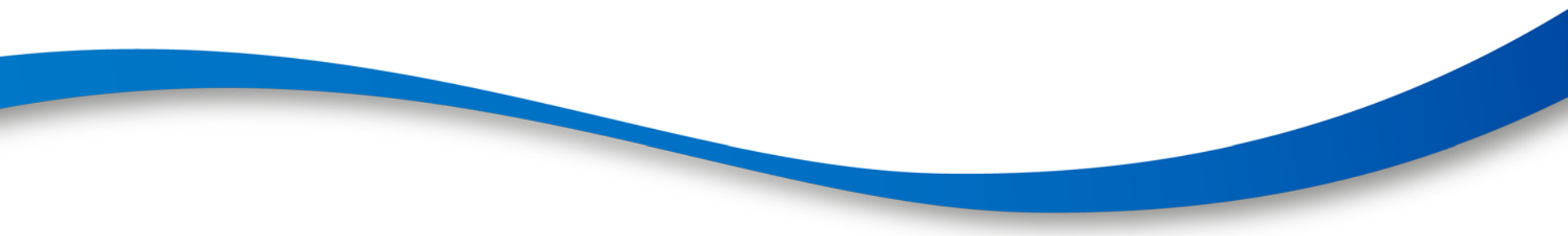
IAT v's NHSBT panel 1

[illegible]

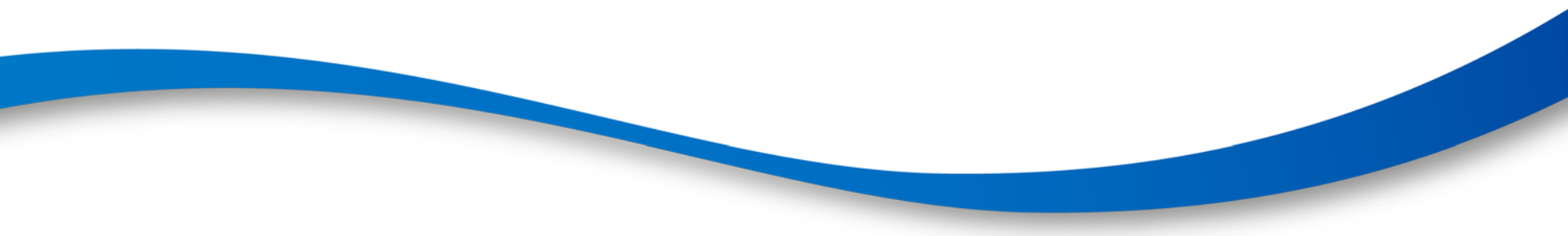
Patient tested against R2R2 panel

[illegible]

What is the antibody?

- Anti-Fya
 - Anti-E
 - Anti-D
 - Anti-c
 - Anti-e
- 

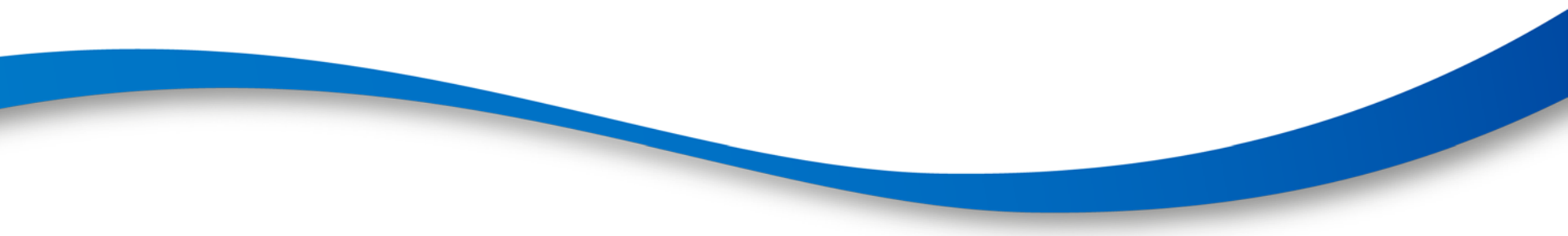
Further results

- O, D negative
 - Phenotype C- c+ E- e+ K- Fy(a-b-) Jk(a+b-) MMss
 - DAT negative
- 

What is the antibody?

- Allo anti-e
 - Allo Anti-E
 - Auto Anti-e
 - Allo Anti-e
- 

HGP

- National haemoglobinopathy project
 - Sickle cell patients are still being immunised to produce antibodies to the Rh system despite the recommendation to give RHK matched blood
 - Sickle cell patients have a higher incidence of immunisation compared to other patient types
 - Aim to produce a database of genotypes
- 

Patient's genotype

D	C	c	E	e
-	-	+	-	Var

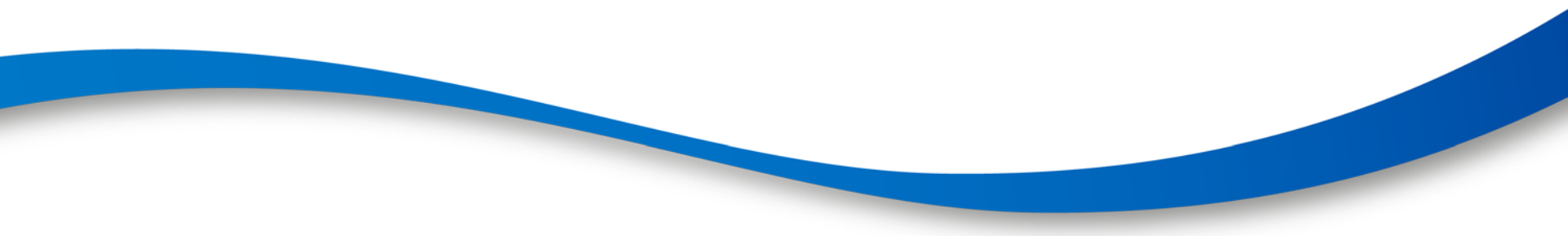
M	N	S	s	P1	K	k	Kp ^a	Kp ^b	Fy ^a	Fy ^b	Jk ^a	Jk ^b
+	-	-	+	+	-	+	+	-	-	-	+	-

What is the antibody?

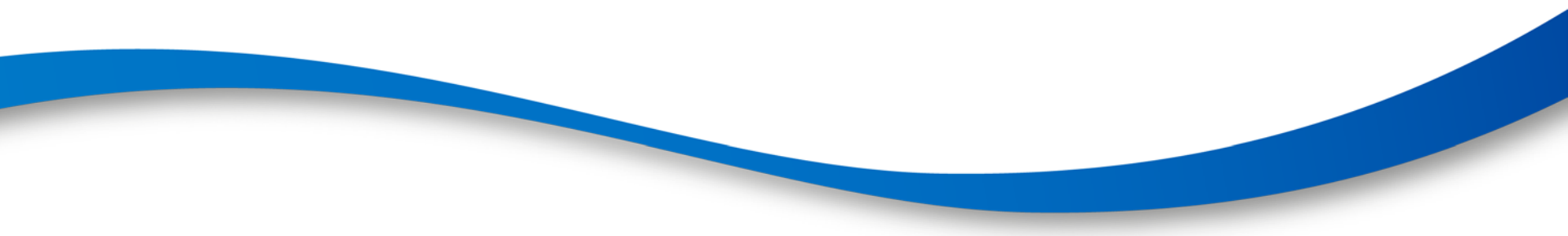
- Allo anti-e
 - Allo Anti-E
 - Auto Anti-e
 - Allo Anti-e
- 

What blood would you select?

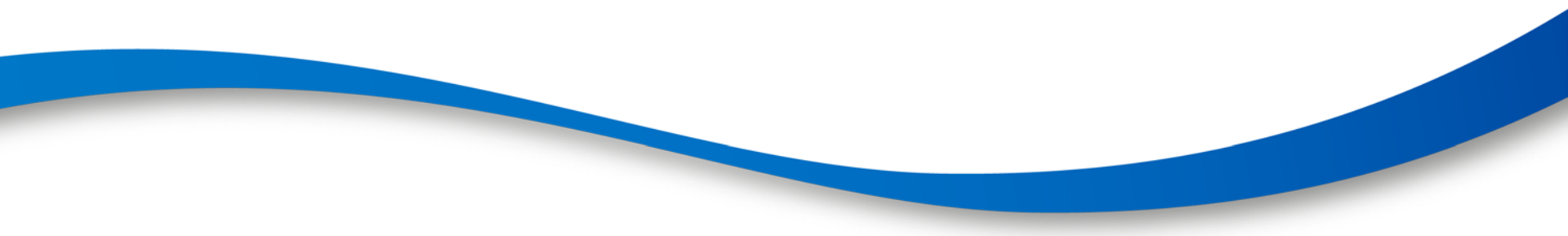
(O, D- C- c+ E- e var, K-)

- O rr K- HbS-
 - O R2R2 K- HbS-
 - O r''r'' K- HbS-
 - O R1R1 K- HbS-
 - O Rh^{null} K- HbS-
- 

Transfusion

- O rr K- HbS- blood given
 - Patient closely monitored
 - Ivlg cover recommended if any problems encountered
- 

Rh variants

- Several patients with variants genes to the RH system have been identified since the advent of the HGP project
 - Little data available on the clinical significant of variants to antigens other than D
 - RHC and RHE variants have a additional complication due to the need to match to the antithetical antigen
- 

Rh variants

Variants	Blood selection
D variant	D negative
C variant	C negative
e variant (in presence of RHE)	e negative if antibody present
e variant (in absence of RHE)	e positive
c variant	??
E variant	??

Case Study 2

- Female, DOB 20/09/1984
 - Pregnant
 - EDD ??
 - Investigations required – antibody ID
- 

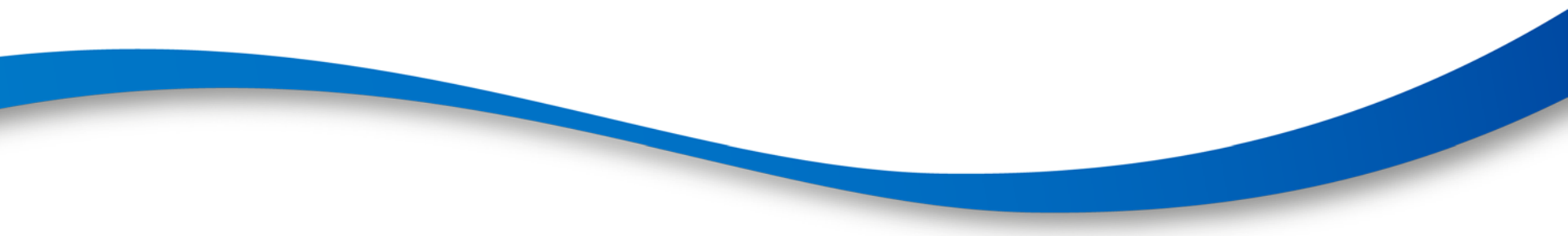
IAT v's NHSBT panel 1

[illegible]

IAT v's NHSBT panel 2

[illegible]

What's the antibody?

- Enzyme pan
 - Non-specific enzyme
 - Anti-c
 - Anti-S
 - Anti-Lea
- 

Are you sure?

- Anti-S
 - IgG
 - Active at 37°C
 - Destroyed by enzyme

Anti-S

- The S antigen is not as easily abolished by papain and ficin as the other MNS antigens
 - Most commercially available enzyme panels are papain treated
 - Some of the S antigen may therefore occasionally survive enzyme treatment
 - Phenomenon described in Human Blood Groups by Geoff Daniels and The Blood Group Antigen Facts Book by Marion Reid
- 