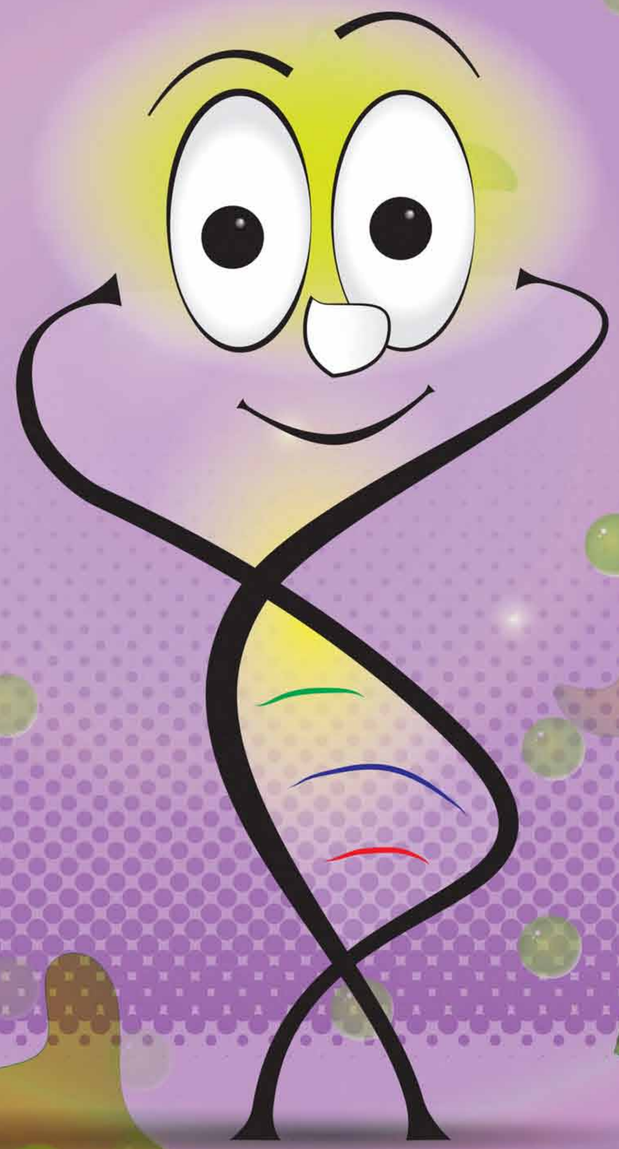
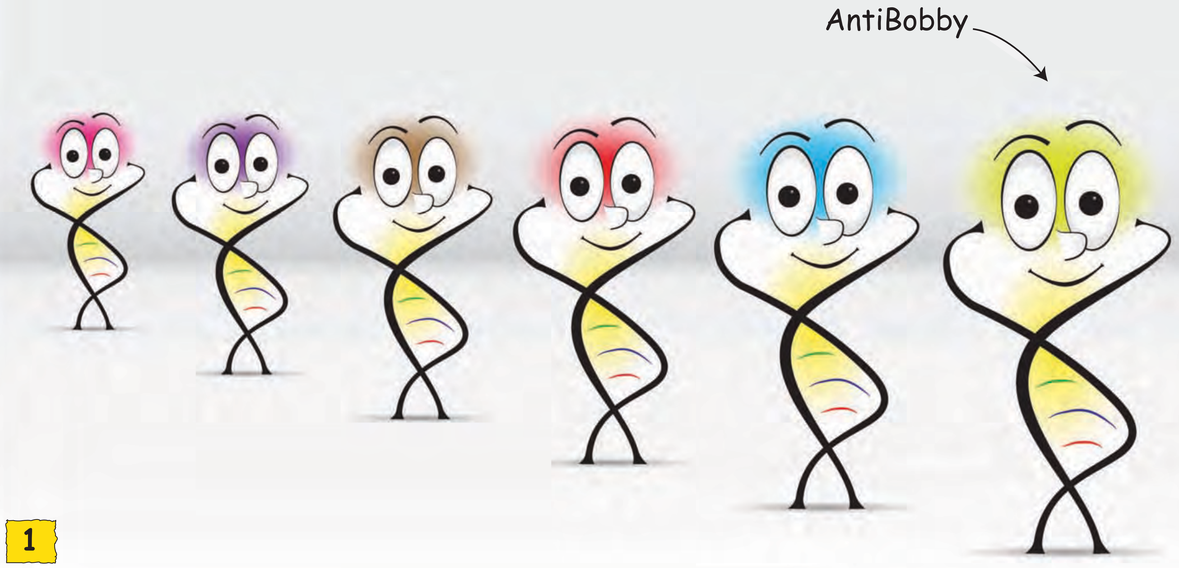
THE ADVENTURES OF ANTIBOBBY

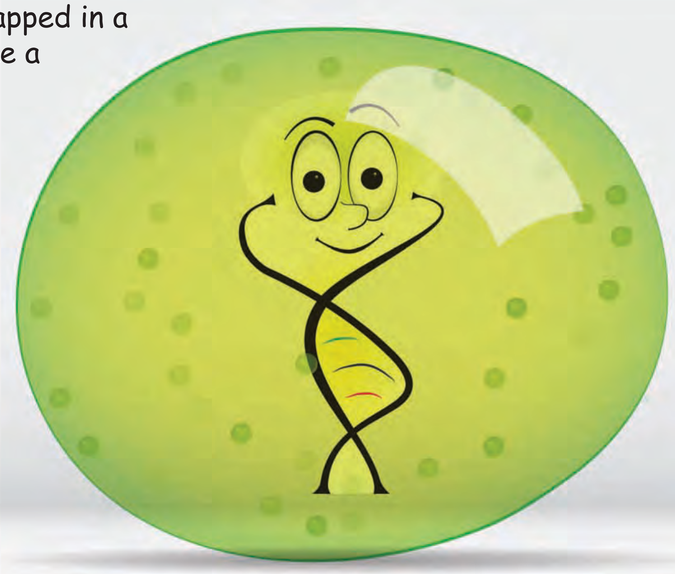


We Start with many **Ideas** or **Variables** of **DNA**



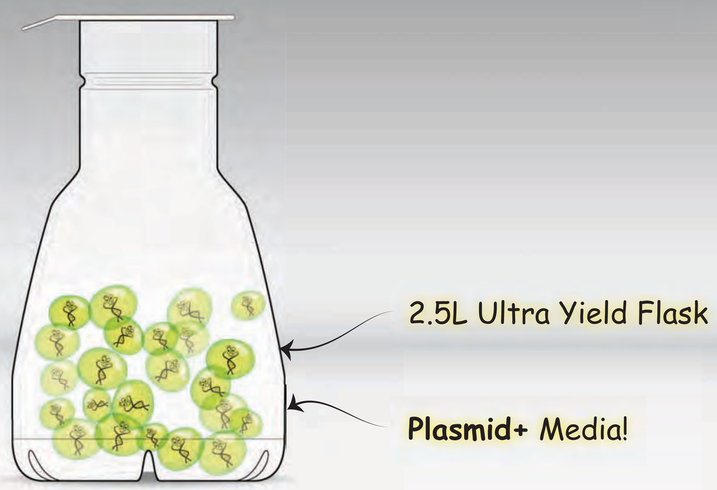
1

Our DNA AntiBobby gets wrapped in a **BLANK Ecoli cell**. Kind of like a **jacket**!



2

AntiBobby is placed into a Thomson **Ultra Yield Flask™** and placed in a shaker. Flask size is determined by the size of their experiment, over a day AntiBobby **grows** many many **clones** of himself.



3

The **clones** of AntiBobby get pushed through a **Mega-Prep®** Column and like a **food** processor it unwraps the **Ecoli jacket** and cleans any impurities, so we have **only** the AntiBobby **DNA**. And thanks to **Thomson** Products we have **LOTS** to work with!

Now we can put **AntiBobby** into a Mammalian or Insect Jacket.

4

What Happens in the Mega-Prep® Column?

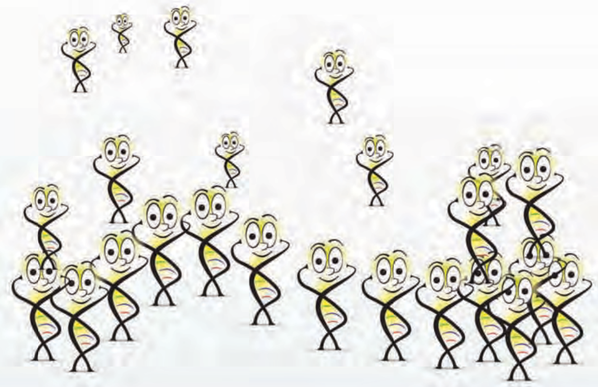
5

Chemicals are added to the Column that break up the jacket around AntiBobby. Now you have AntiBobby and all of the Ecoli jacket pieces.

6

Inside the column the Ecoli jacket pieces get stuck to the column resin. When they push a rinse agent through only AntiBobby exits the column.

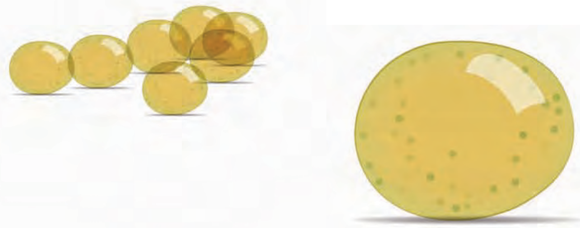
But if we **wanted** AntiBobby in a **Mammalian** or **Insect** cell, why didn't we just **start** the process in the cell **jacket** we **wanted**?



7

Well.. It's based on a principle called **doubling.** You see an Ecoli jacket is thicker walled so we can agitate AntiBobby faster without hurting him. And Ecoli's doubling rate is 2 hours, so every **Two hours** our amount of AntiBobbys doubles.

8

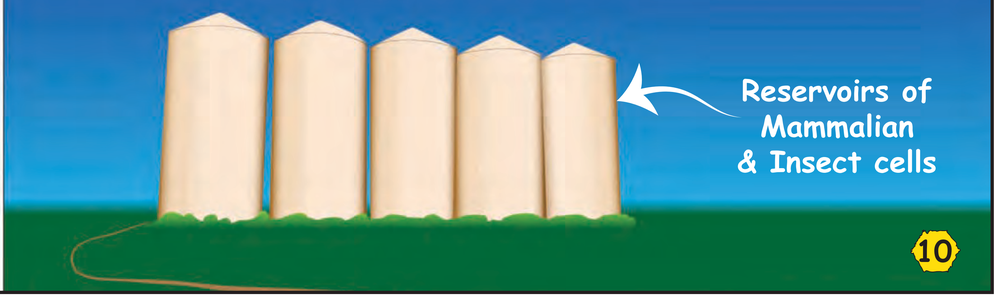


As apposed to our mammalian and insect cell walls that are thinner and so we have to agitate the growth at a **slower rate**. The doubling rate is **24 hours!** So you see that is why we start the process with Ecoli to get a large batch to play with. Then start putting AntiBobby into our Mammalian and insect cells.

But how do we do that?

9

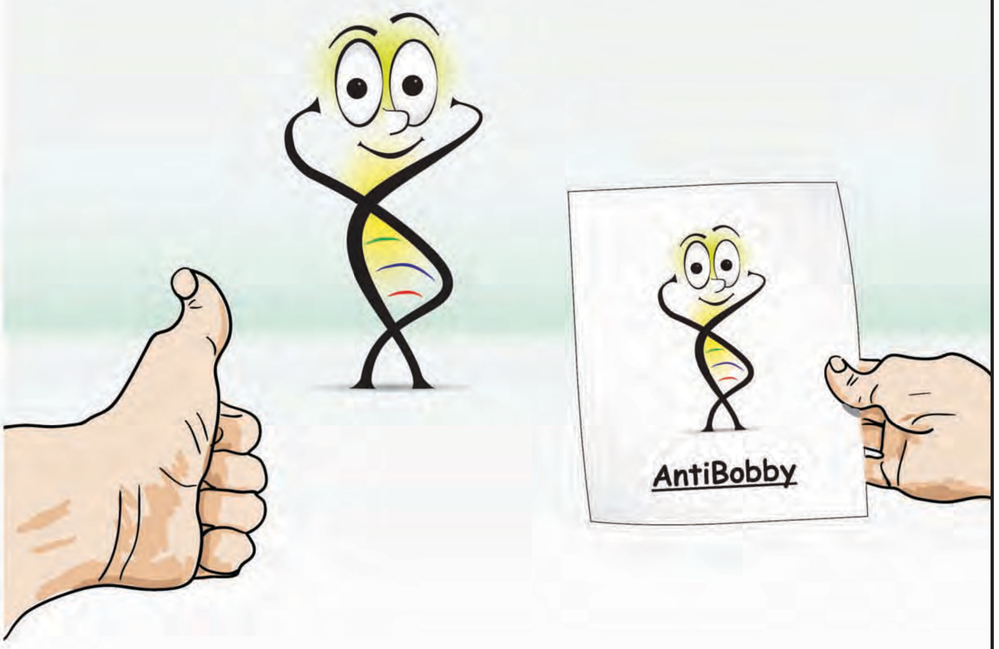
Labs create reservoirs of **BLANK** Mammalian & Insect cells to wrap around only the **BEST** AntiBobbys.



10

To get AntiBobby into a mammalian or insect cell first we need to find the best AntiBobby, To do that we use **Elisa Testing.** Basicaly we put AntiBobby up against a sample and see if he is identical.

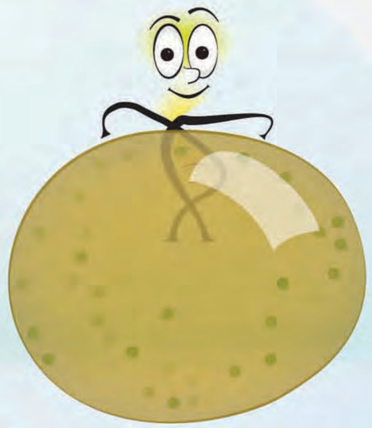
11



Now to get AntiBobby into an insect or mammalian cell!

12

First we coat AntiBobby in **PEI** or **Liptofectin**. This makes AntiBobby invisible to the host cell. This allows AntiBobby to enter the cell and pass all of its security guards to the nucleus.



AntiBobby sneaking into mammalian or insect cell undetected!

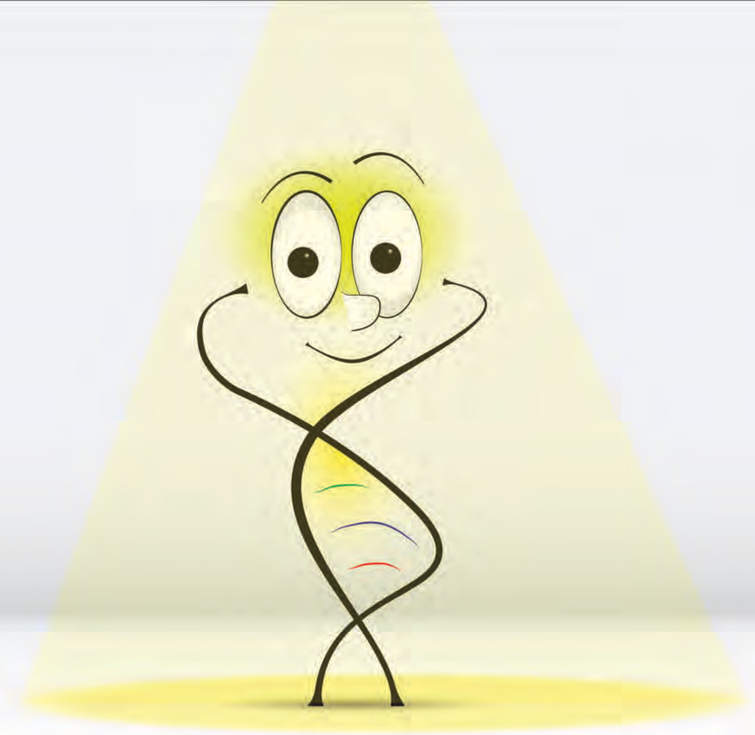
AntiBobby inside mammalian or insect cell and he made it into the nucleus to implant our DNA into the cell.

Now we just have to grow more of these with increasingly larger batches of AntiBobby and use Elisa Testing to determine which batch goes on the the next larger batch.

Every time you **grow** DNA in batches you get some **GOOD batches**, some **BAD ones**, & some are the **BEST** of the **BEST** of the **BEST** in **DNA batches**.

Batches are scored on **concentration of DNA**. We use the **Elisa Testing** to take a look at the batch and determine if it contains our **AntiBobby or not** and how much. Only the **best batches** are used to grow the **next** larger batches.

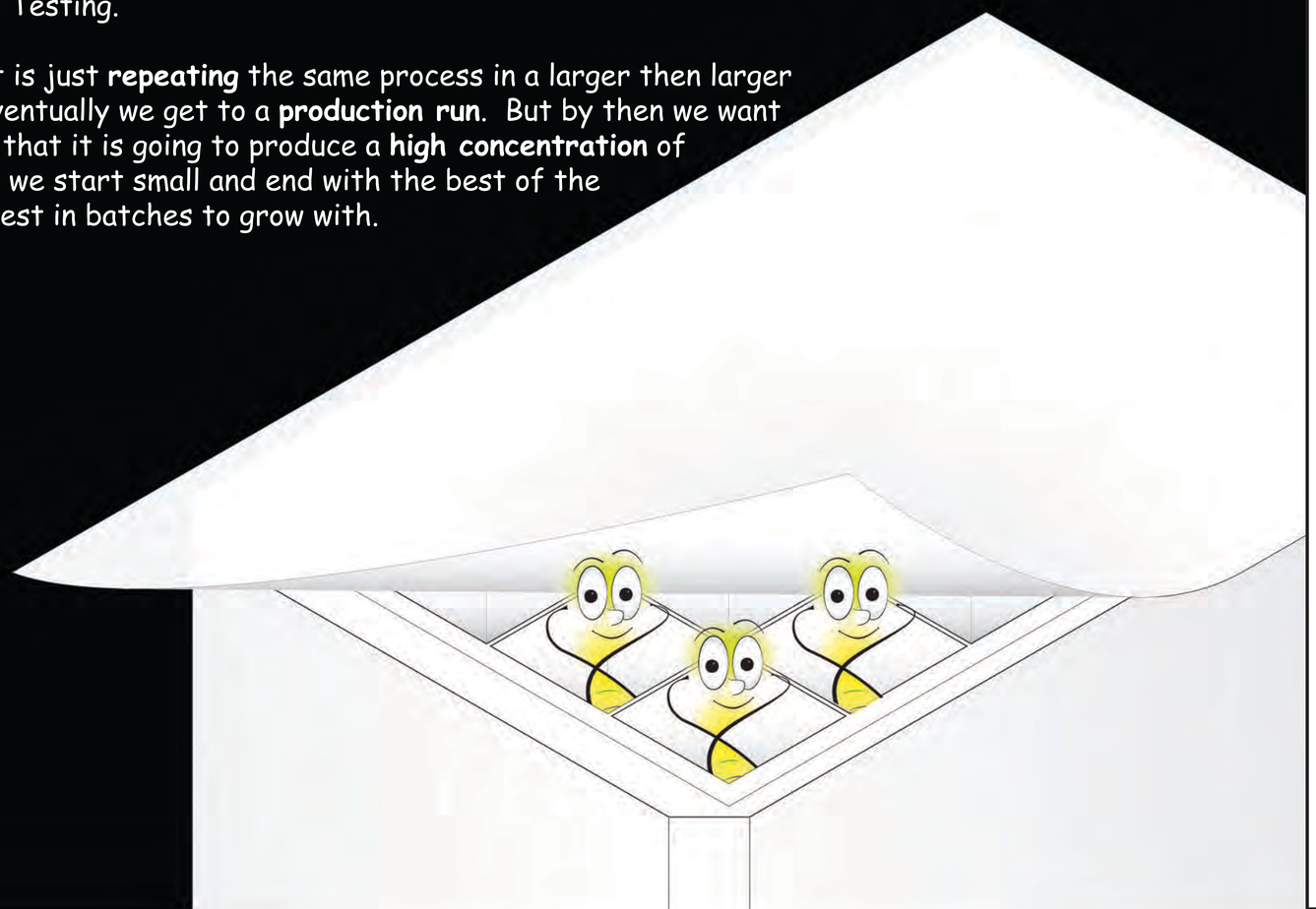
So to get a **final product** of our AntiBobby in a **Mammalian** or **Insect** jacket and **ONLY** have the **BEST** samples we have to start **small**...



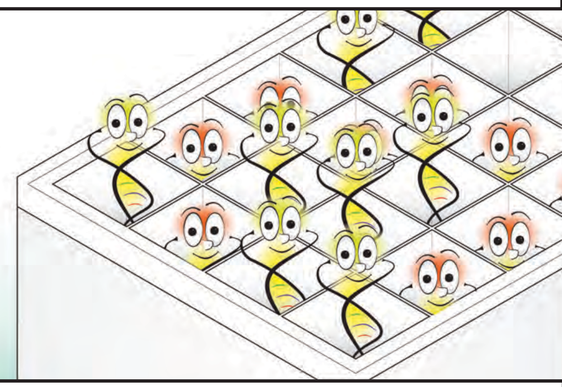
Starting small means using a **Thomson** 24 **(P/N 931565-1X)** or 96 **(P/N 982090) well plate.**

We grow a small batch of AntiBobby in his new mammalian or insect jacket and see which well has the greatest concentration of AntiBobby by using Elisa Testing.

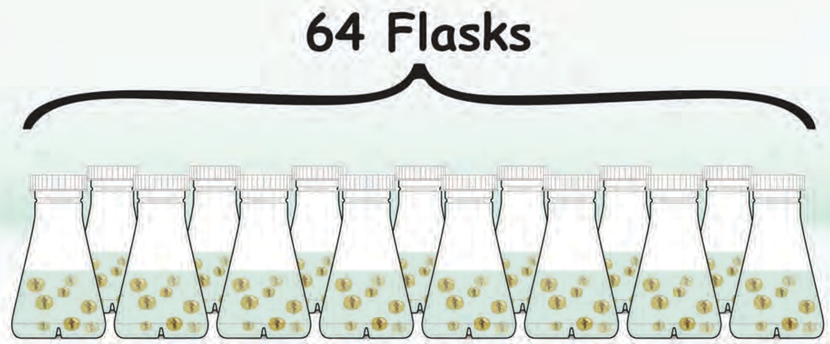
From there it is just **repeating** the same process in a larger then larger container. Eventually we get to a **production run**. But by then we want to make sure that it is going to produce a **high concentration** of **AntiBobby** so we start small and end with the best of the best of the best in batches to grow with.



We take the **BEST** of the **BEST** of the **BEST** from the **Thomson** Well Plate...



...And start the process and grow AntiBobby in **64 Thomson** 125mL **Optimum Growth Flasks™**. Then use **Elisa testing** to determine which flask has the highest concentration of AntiBobby and go larger!



...36X 250ML...

...24X 500ML...

...16X 2.5L...

...PRODUCTION 8 X 5L FLASKS

Next up!
Thomson 250mL Optimum Growth Flasks™ & 36 of them to get a good amount of cells and **Elisa testing** to get to the **next batch...**

...24 x 500mL Thomson Optimum Growth™ Flasks... Elisa Testing... and the Best get sent down the line to...

...16 x 2.5L Thomson Optimum Growth™ Flasks... Elisa Testing...

You're starting to get the idea by now how we get large batches of good AntiBobby aren't you. Well guess what?

We now have 16 x 2.5L Flasks with AntiBobby in mammalian or insect cell jackets and we'll take the best 8 and go to a production run...

PRODUCTION! We have a STRONG strain of AntiBobby in a mammanilan or insect cell and we have 8 x 2.5L Flasks of him.

So production is produced in 8 Thomson 5L Optimum Growth™ Flasks. 2 Flasks = 1 Wave Bag® and you can fit 7 Flasks in an ATR shaker. That means that in one ATR shaker you can produce 17.5L of product instead of the 10L production in a 20L Wave Bag®. If you're keeping track that's an increase in production of 55%!