



How do scientists at the Jurassic World "Hammond Creation Lab"—depicted in this still-shot from the film—do their work? Where do they get the DNA—from four different dinosaurs—to use in creating their new "attraction," called *Indominus rex*?

We learn how it all works from Jurassic World's official website:

A new Age of Dinosaurs starts here at the Hammond Creation Lab. In our state of the art facilities, the world's greatest living paleontologists work to extract, sequence and assemble the DNA necessary to bring dinosaurs from the Jurassic era to Jurassic World.

Except, of course, that isn't technically correct—at least, insofar as *Indominus rex* is concerned. The DNA which scientists use, to create *I. rex*, comes mostly from the <u>Cretaceous era</u> (not the <u>Jurassic era</u>). But ... in a fictional world ... we won't let science get in the way of a good story!

Moving on ... <u>how does extraction work</u>? The dinosaur-containing DNA comes from insects who have been <u>trapped in amber</u> for millions of years:

The blood of Jurassic-era mosquitoes trapped eternally in amber contains the dinosaur DNA our scientists need to begin recreating living dinosaurs. Talk about your fossil fuel!

In other words ... dinosaur-contributing DNA will come not from the dinosaurs themselves (who have long-since disappeared from the face of the Earth), but from their blood which is still available in the amber (or shaletrapped mosquitoes).

After retrieving dinosaur DNA from the blood of ancient mosquitoes, the <u>Hammond-lab scientists</u> begin the sequencing process:

Using sophisticated DNA sequencers, our scientists analyze the DNA sample to map the entire dinosaur genome, arranging millions of pieces of genetic code into dinosaur chromosomes.

Once the sequencing is completed, people in the Hammond lab begin their assembly process:

Because dino DNA is millions of years old, there are usually gaps in the [genetic] code. Our paleogeneticists use DNA from related species, such as birds and crocodiles, to fill in the missing sequences.

OK ... but what if that process goes awry? Or ... what if those brilliant scientists guess wrong about what to use for the missing sequences?

In any event ... the <u>next step</u> in the Hammond-Creation-Lab process is to get the DNA into some appropriate eggs. Right ... eggs ... since fossilized evidence tells us all about dinosaur eggs:

The dinosaur DNA is inserted into eggs that allow a baby dinosaur to quickly grow to maturity. The eggs are monitored and kept at conditions that simulate their mother's nest until they're ready for the nursery.

Perhaps everyone is holding their breath to see what's really going to come out of those eggs! But, in the nursery, the eggs are properly tended until the babies emerge:

Life will always find a way. And when it's time, a baby dinosaur will break through the shell and emerge into the world. Then it's off to the species-unique nursery for some early maternal TLC [tender love and care] by our dinosaur behaviorists.

Right ... good luck with that! How can you be sure these creatures aren't really wild-at-heart?

Credits:

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Media Stream



Mosquito Trapped in Amber

This amber-trapped mosquito is likely from the <u>Early Miocene epoch</u>. If so, it is between 23 million to 16 million years old.

It was found in the Northern Cordillera area of the Dominican Republic.

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