**Nucleus Evidence Summary Sheet**

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| **Evidence** | **Study** | **Findings** |
| Evidence 1: Dolly the Sheep | Scientists took the nucleus out of a cell from a sheep with a black face and replaced it with a nucleus from the cell of a sheep with a white face. The cell was planted into the womb of a female sheep. | The baby sheep had a white face. |
| Evidence 2: Glowing Cats | In this study, scientists took the GFP gene from a jellyfish and injected it into a cat’s egg. Then the egg was fertilized and developed into a cat. | The GFP gene injected into the mother cat’s egg caused the baby kitten to be born with the GFP gene. GFP protein was produced in the kitten’s cells. The kitten glowed under UV light just like jellyfish do. |
| Evidence 3: Clawed Frogs | Some clawed frogs give birth to abnormal tadpoles that have many cells without a nucleus. Scientists drew what normal and abnormal tadpoles looked like as they grew to compare them. | Scientists made drawings showing how different the normal and abnormal tadpoles look from each other as they grow older. Also, tadpoles without a nucleus die before becoming frogs. |
| Evidence 4: Website | Someone asked, “What is the function of a nucleus” on an online website. | The answer to this question said that the nucleus is the control center (brain) of the cell and it contains DNA. The cell structures do as they are told by the DNA. |
| Evidence 5: Diabetes  **Normal DRB gene and protein**  **Mutated DRB gene**  **No DRB Protein** | Scientists had a hypothesis that people with Type 1 diabetes have a mutated DRB gene and do not produce the DRB protein. If so, these people would not produce enough insulin, which would cause diabetes. To test this, scientists studied 10 healthy people and 10 people with Type 1 diabetes to see whether or not they had the gene and if they produced the protein. | Out of the 10 people with Type 1 diabetes, scientists found that 8 of them had no DRB gene and produced no DRB protein. Out of the 10 healthy people, scientists found that 9 of them did have the DRB gene and produced the DRB protein. |