

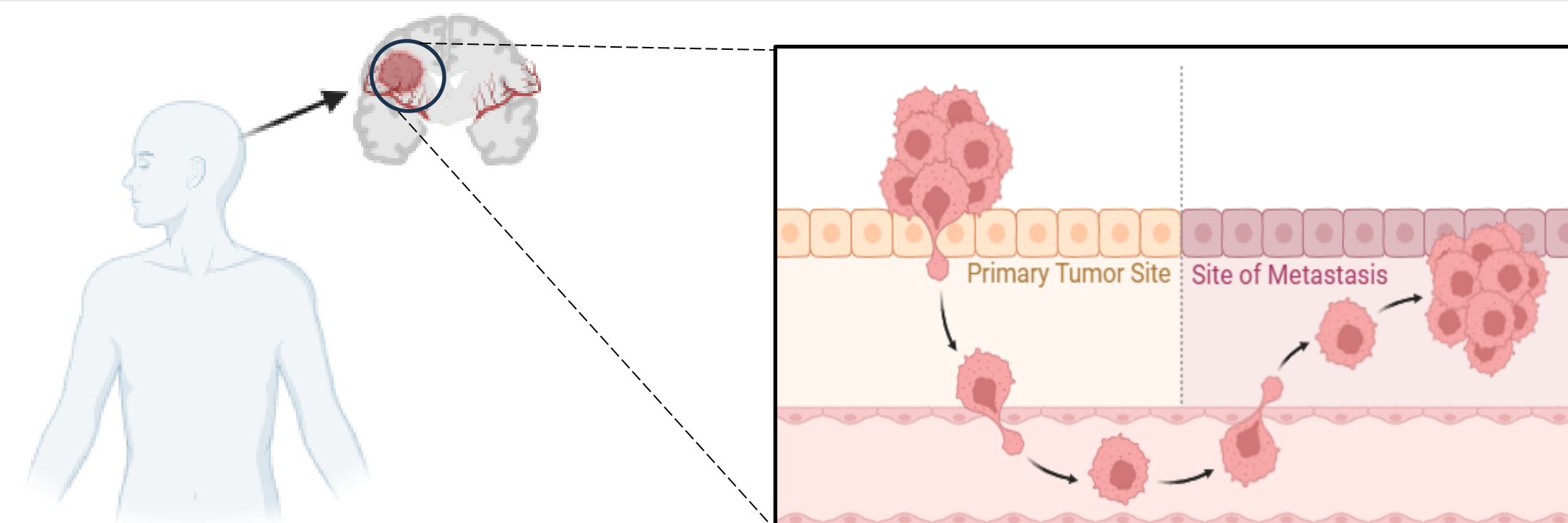
Investigating Potential Cellular Components to Stop the Spread of Cancer



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What is Glioblastoma (GBM) & Why Do We Care?



Glioblastoma (GBM) is a fast-growing and aggressive brain cancer making up 16% of all primary brain cancers. **In rare cases, GBM can spread to the lymphatic system and bone and invade blood vessels.**

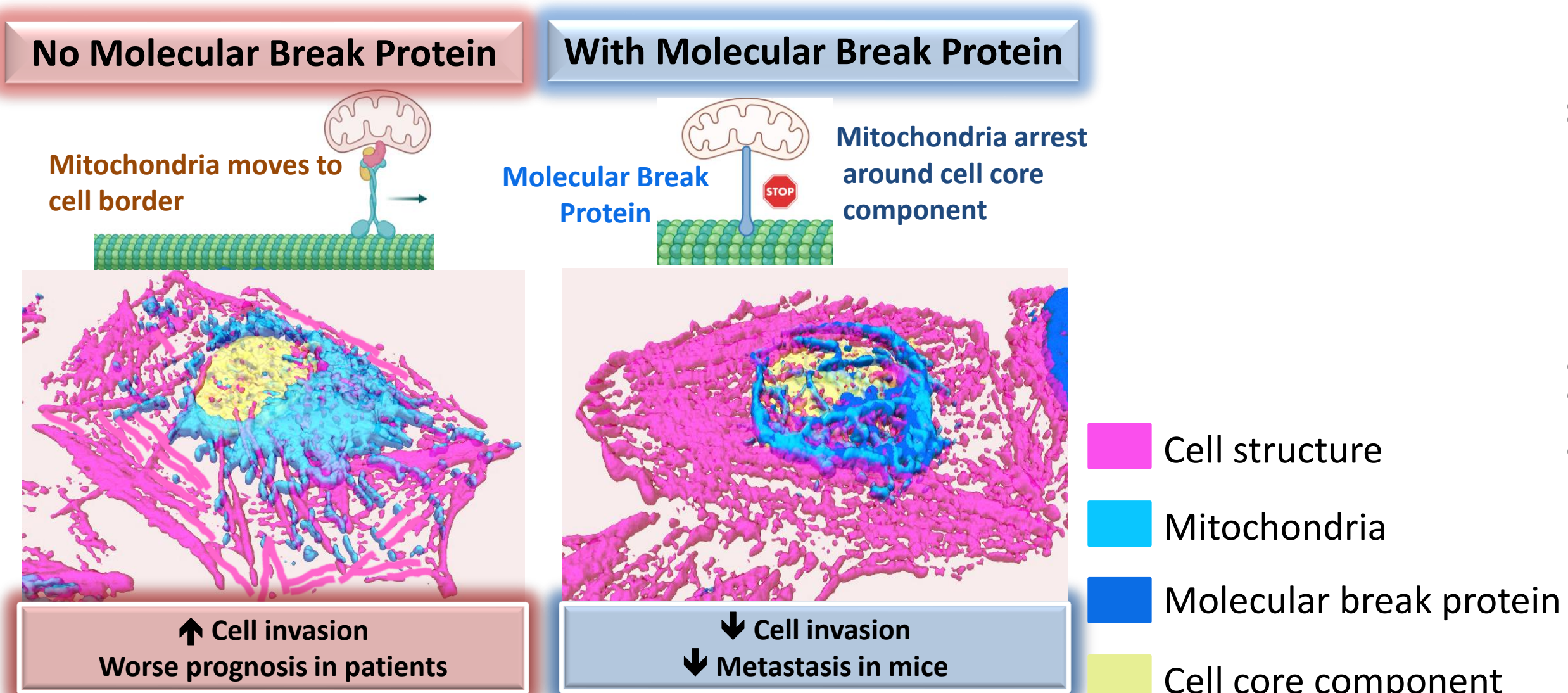
Brain and other nervous system cancer statistics from the American Cancer Society

24,820 estimated new cases in 2025

18,330 estimated deaths in 2025

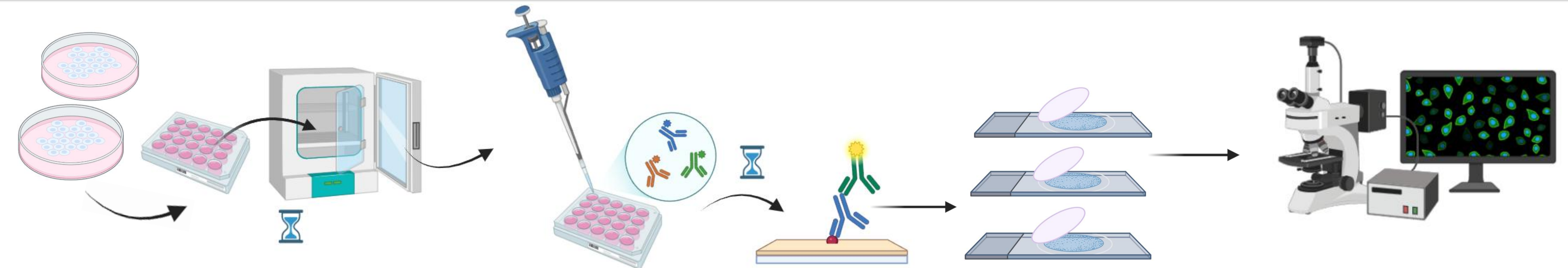
33% survival after 5 years

Role of Mitochondrial Regulation in Cancer



Mitochondria –the powerhouses of the cell– have been shown to mediate the **successful spread of cancers like GBM**. Our lab is interested in **Syntaphilin (SNPH), a mitochondrial-associated molecular break that arrests mitochondrial movement.**

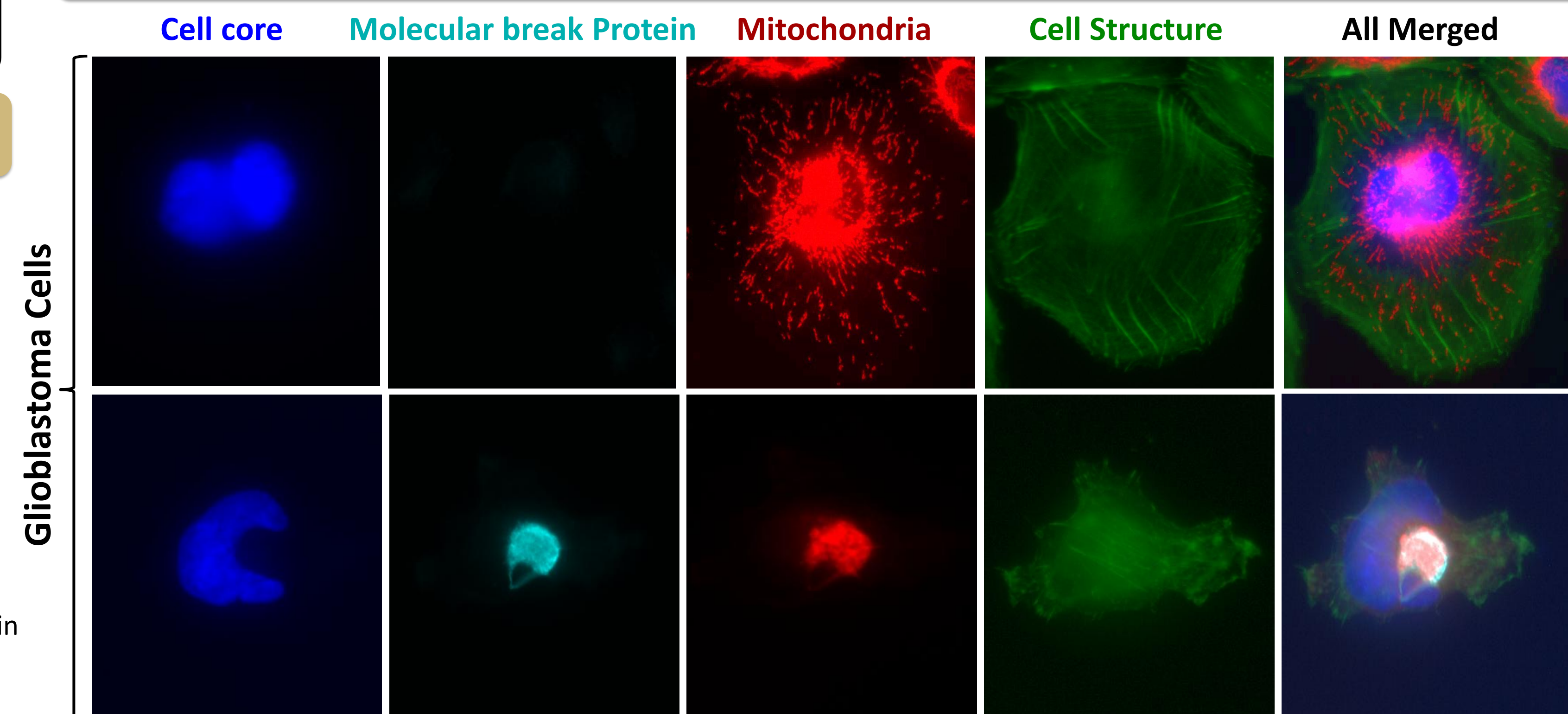
Methods and Goals



Goal: Examine the location of mitochondria in presence and absence of its molecular break; SNPH.

Method: Immuno-fluorescent staining is a technique that allows us to identify the presence of proteins important for cellular function and look at their shape and location within each individual cell by “tagging” them with fluorescence .

What We Have Learned and Future Direction



Without the **Molecular Break Protein**, **Mitochondria** is able to travel to the cell borders more easily, potentially providing immediate energy for cancer cell to start spreading!

Future direction: Investigate how Molecular Break Protein manipulation can affect location of mitochondria

References and acknowledgment

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- Thank you to National Cancer Institute and all of our funding resources