

# Science 9 Research Template

Source #1		
<b>Title of source:</b> Replacement neurons: a simple genetic surprising flexibility of adult cells	<b>Author:</b> Marius Wernig et al.	<b>Publisher:</b> technology review
<b>Date of publication:</b> May-June 2010	<b>Date accessed (by you):</b> 11 April 2019	
<b>URL:</b> <a href="http://gale.com/apps/doc/A226474538?GPS=43riss&amp;xid=77849c18">gale Group.com/apps/doc/A226474538?GPS=43riss&amp;xid=77849c18</a>		
<b>Copy and paste relevant information directly from source:</b> <i>"By making a few simple genetic tweaks, scientist can transform mouse skin cells directly into brain cells without first returning them to their embryonic state required by previous methods."</i> <i>"The researcher could someday offer bad effective way to replace damaged neurons."</i> <i>"the researchers are trying to repeat the process with human cells."</i>	<b>Make "raw" notes (a summary)</b> Scientist have found a way to turn skin cells (from mice) into functioning brain cells. This could one day be a good way to replace damaged brain cells. without the risk of immunity rejection since they would be taking the cells from the individual that would be receiving them back (majority of the time. Though there is the possibility that people will donate stem cells) this could be used in adults with fully developed brains, since they would be taking tissue cells that would remove the challenge of having to take cells from the brain.	

Source #2		
<b>Title of source:</b> New sources and uses for stem cells	<b>Author:</b> J.T	<b>Publisher:</b> science in context
<b>Date of publication:</b> December 2 2000	<b>Date accessed (by you):</b> April 11 2019	
<b>URL:</b> <a href="http://go.galegroup.com/ps/retrieve.do?tabID=T003&amp;resultListType=RESULT_LIST&amp;searchResultsType=SingleTab&amp;searchType=BasicSearchForm&amp;currentPosition=3&amp;docId=GALE%7CA68273699&amp;docType=Brief+article&amp;sort=Relevance&amp;contentSegment=ZXAS-MOD1&amp;prodId=GPS&amp;contentSet=GALE%7CA68273699&amp;searchId=R3&amp;userGroupName=43riss&amp;inPS=true">http://go.galegroup.com/ps/retrieve.do?tabID=T003&amp;resultListType=RESULT_LIST&amp;searchResultsType=SingleTab&amp;searchType=BasicSearchForm&amp;currentPosition=3&amp;docId=GALE%7CA68273699&amp;docType=Brief+article&amp;sort=Relevance&amp;contentSegment=ZXAS-MOD1&amp;prodId=GPS&amp;contentSet=GALE%7CA68273699&amp;searchId=R3&amp;userGroupName=43riss&amp;inPS=true</a>		
<b>Copy and paste relevant information directly from source:</b> <i>"— human skin and scalp tissue may provide a source of neural stem cells."</i> <i>"Scientist once thought that neural stem cells existed only in young developing brains, but compelling evidence has emerged that adult brains also harbor such cells. Researchers even have found that human bone-marrow cells can give rise to neurons. (S.N 9/2/00)"</i> <i>Physicians could use a person's own tissue to grow replacement cells, which patients immune system would tolerate instead of rejecting."</i> <i>"— cells could replace neurons killed by disease."</i>	<b>Make "raw" notes ( a summary):</b> scientist from Montreal discovered that it is possible to turn skin, scalp tissue and bone-marrow into neural stem cells. Previously scientist only knew of neural stem cells in young brains, but new studies show that there are actually stem cells in adult brains, just not in as large amounts. This could help people with a wide variety of brain cell damage, using other places to gather these cells throughout the body.	

Source #3		
<b>Title of source:</b> ted-ed "what are stem cells?"	<b>Author:</b> Craig A. Kohn	<b>Publisher:</b> Ted
<b>Date of publication:</b> 10 September 2013	<b>Date accessed (by you):</b> Wednesday February 7	

URL: <https://m.youtube.com/watch?v=evH0I7Coc54>

**Copy and paste relevant information directly from source:**

*“As we go through our lives each of us will have very different needs for our own health care.”*

*“One way they are doing this [personalizing healthcare] is by researching stem cells.”*

**Make “raw” notes ( a summary):**

There are 3 main types of stem cells, they can become anything in in your body.

- **Tissue-specific stem cells**
  - Muscle
  - Skin
  - Liver
  - Nerve
  - Blood
    - Replace the tissues in your body when they die.
- **Embryonic stem cells**
  - Created from left over stem cells donated embryos, from fertility clinics.
  - These cells are pluripotent
    - Which means they can be grown to become any sort of tissue in the body.
- **Pluripotent stem cells**
  - Skin, fat, liver or other cells,
    - That scientist have changed to behave as **embryonic stem cells**.
    - They can become any sort of cell.
- **What are stem cells**
- They Are a cell that naturally grows in the human body,
  - They do not have a specific job or function
    - Their for they can become all other cells
- Your body uses stem cells to replace cells that are no longer helpful to the human body.
- **Types of stem cells**
  - Tissue-specific stem cells
  - Embryonic stem cells
  - Pluripotent stem cells

#### Source #4

**Title of source:**

*“Dead brain cells get smart”*

**Author:** Nicole dyer

**Publisher:** science world

**Date of publication:** January 22 2001

**Date accessed (by you):** february 7 2019

**URL:**

[http://go.galegroup.com/ps/retrieve.do?tabID=T003&resultListType=RESULT\\_LIST&searchResultsType=SingleTab&searchType=BasicSearchForm&currentPosition=1&docId=GALE%7CA69698654&docType=Brief+article&sort=Relevance&contentSegment=ZXAS-](http://go.galegroup.com/ps/retrieve.do?tabID=T003&resultListType=RESULT_LIST&searchResultsType=SingleTab&searchType=BasicSearchForm&currentPosition=1&docId=GALE%7CA69698654&docType=Brief+article&sort=Relevance&contentSegment=ZXAS-)

[MOD1&prodId=GPS&contentSet=GALE%7CA69698654&searchId=R1&userGroupName=43riss&inPS=true](http://go.galegroup.com/ps/retrieve.do?tabID=T003&resultListType=RESULT_LIST&searchResultsType=SingleTab&searchType=BasicSearchForm&currentPosition=1&docId=GALE%7CA69698654&docType=Brief+article&sort=Relevance&contentSegment=ZXAS-MOD1&prodId=GPS&contentSet=GALE%7CA69698654&searchId=R1&userGroupName=43riss&inPS=true)

**Copy and paste relevant information directly from source:**

*“fresh cells from human cadaver brains, stewed*

**Make “raw” notes ( a summary):**

The scientist took dead brain cells (from fresh cadavers) and turned them into living bran cells. Which can help

them together in a lab dish, then grew them into brain cells — ”  
 “The newest and most promising hope to repair brain damage comes from dead brains!”  
 “The experiment marks a major medical breakthrough— normally the brain doesn’t replenish neurons that die.”

people with problems caused by damaged or missing brain cells. Scientist think that this may be a method to transplant cells to people who need them, and one day this could possibly be a method to help people who have dead brain cells. Since they can “re animate” dead brain cells.

### Source #5

**Title of source:**  
 The Brian my be able to repair itself – with help

**Author:** Joycelyne Bloch

**Publisher:** Ted

**Date of publication:** December 2015

**Date accessed (by you):** April 12 2019

**URL:** <https://m.youtube.com/watch?v=6d6oq0zGGmw>

**Copy and paste relevant information directly from source:**

“— we want to grow cells from these pieces of tissue [ swollen brain tissue ] it’s not an easy task.”  
 “This [ doublecortin – positive cell cultures ] looks exactly the same as a stem cell culture with large green cells surrounding small, immature cells.”

**Make “raw” notes ( a summary):**

Scientist have discovered that the brain contains cells called *Doublecortin- positive cells* they make up 4% of the adult brain. They are a huge part in the development of the brain and they might be able to help repair the brain, with the help of scientist. When scientist examen the cells the cells they discovered that the cells resemble closely stem cell cultures. Since they looked so similar they hope they will react the same way that stem cells to, [ being able to transform into functioning cells to help repair damage.]

(Image from the video of the proses they used)

