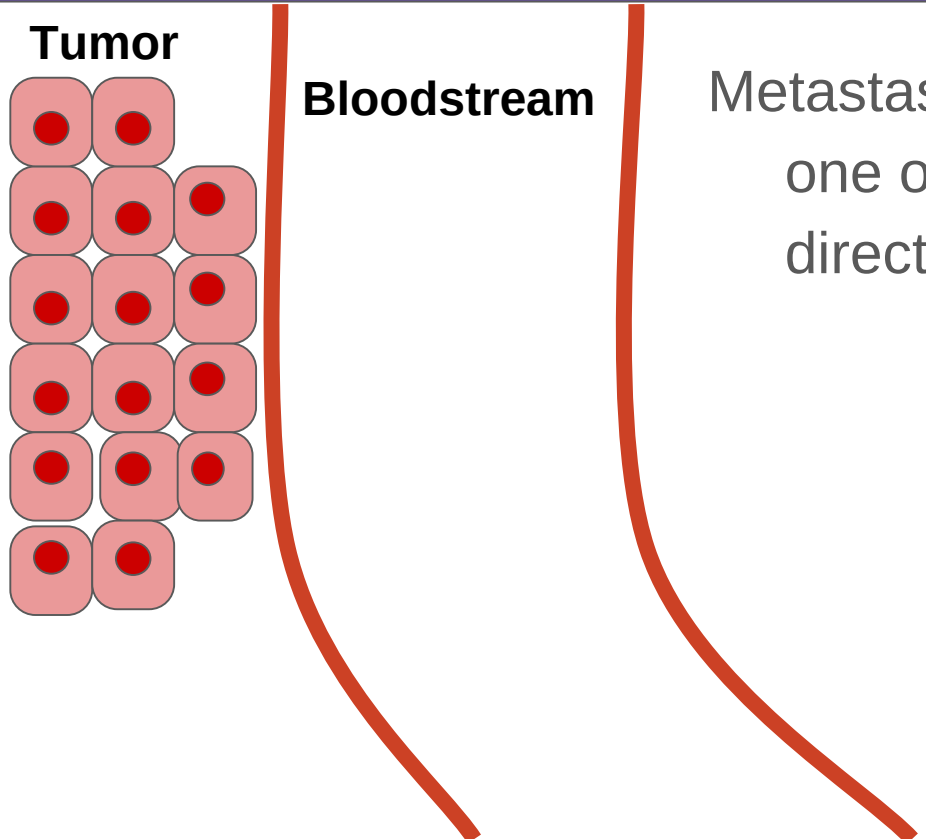
Examine the Effect of WDR5B on Cell Adhesion in Cancer Metastasis

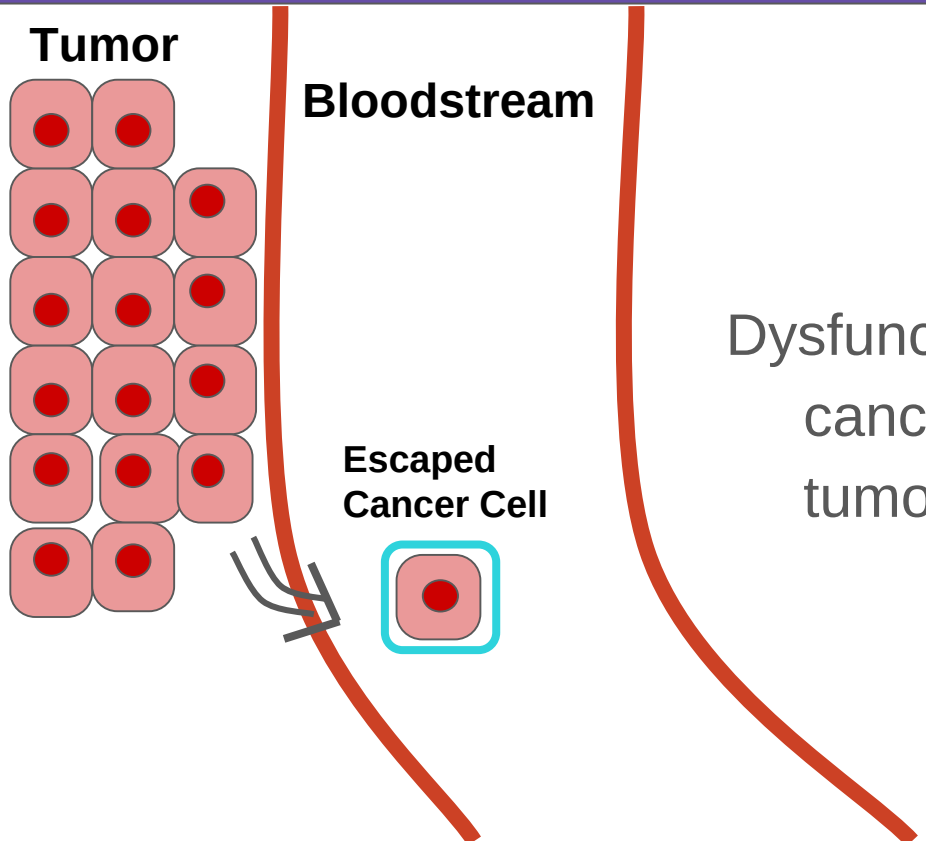
Van Hsieh, Biology Major, UCSB
Professor Zach Ma (MCDB)
Cancer Research Coordination Committee

Cell Adhesion Plays an Important Role in Cancer Metastasis



Metastasis is the spread of cancer from one organ to another organ that is not directly touching it

Cell Adhesion Plays an Important Role in Cancer Metastasis



Dysfunction in cell adhesion allows cancer cells to escape the primary tumor

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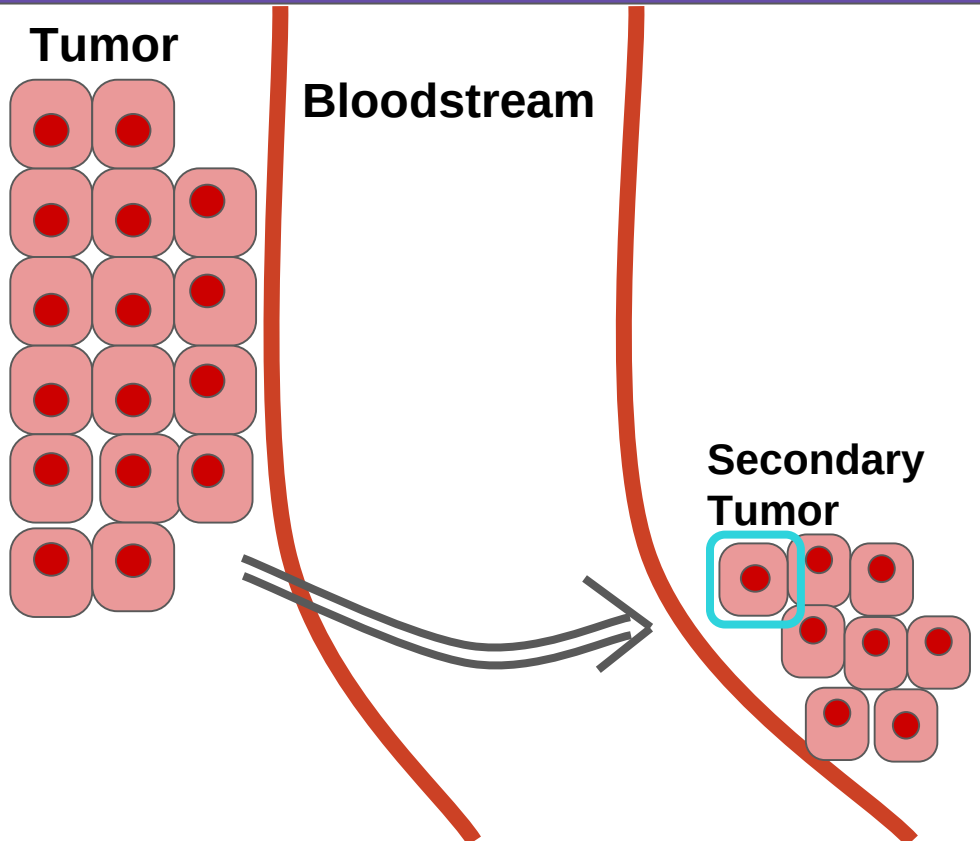
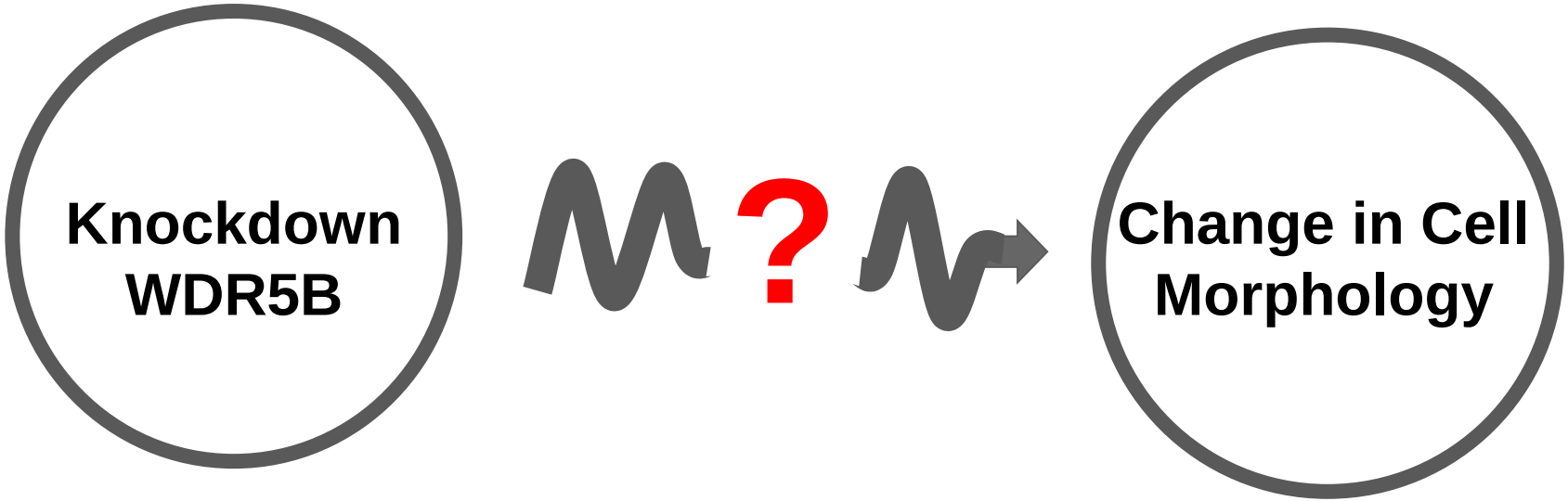


Escaped cancer cells travel through circulatory system causing cancer to metastasize

To Determine What Effects WDR5B has on Cell Adhesion



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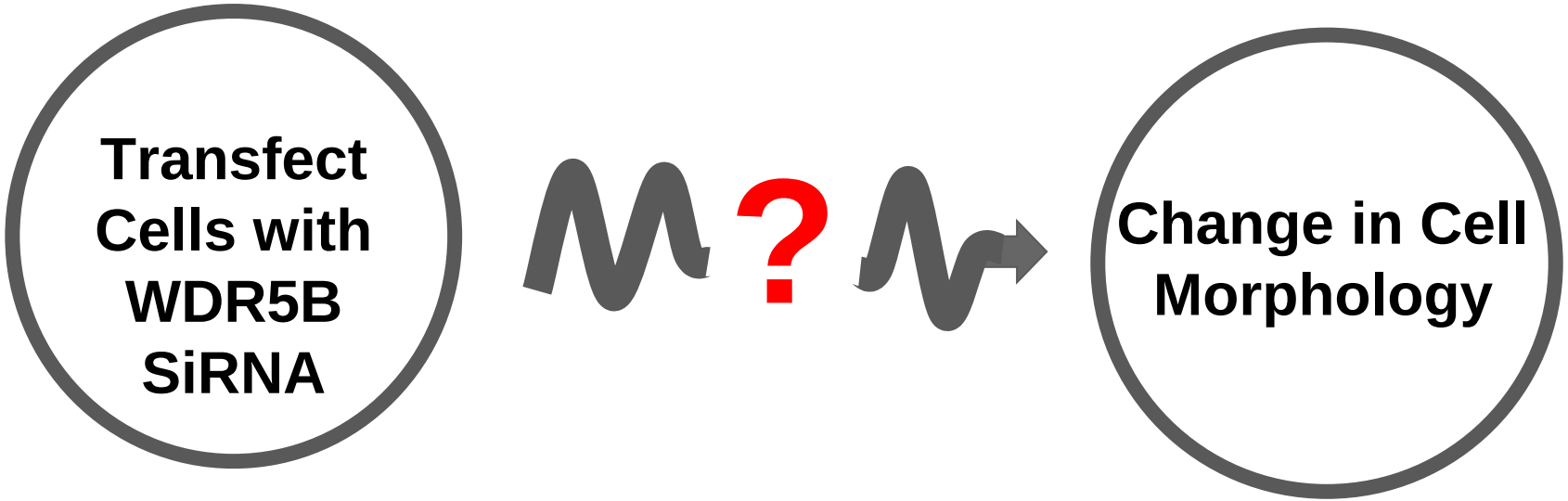

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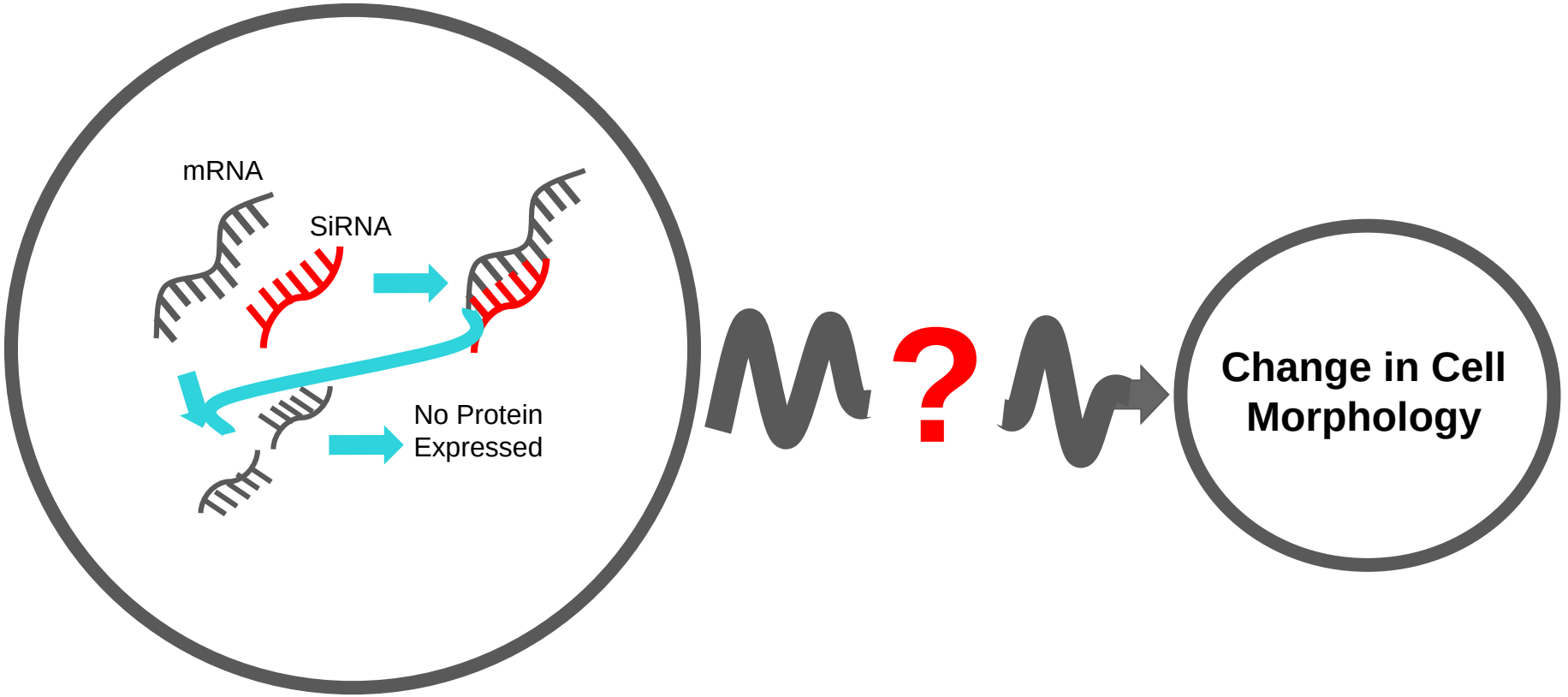

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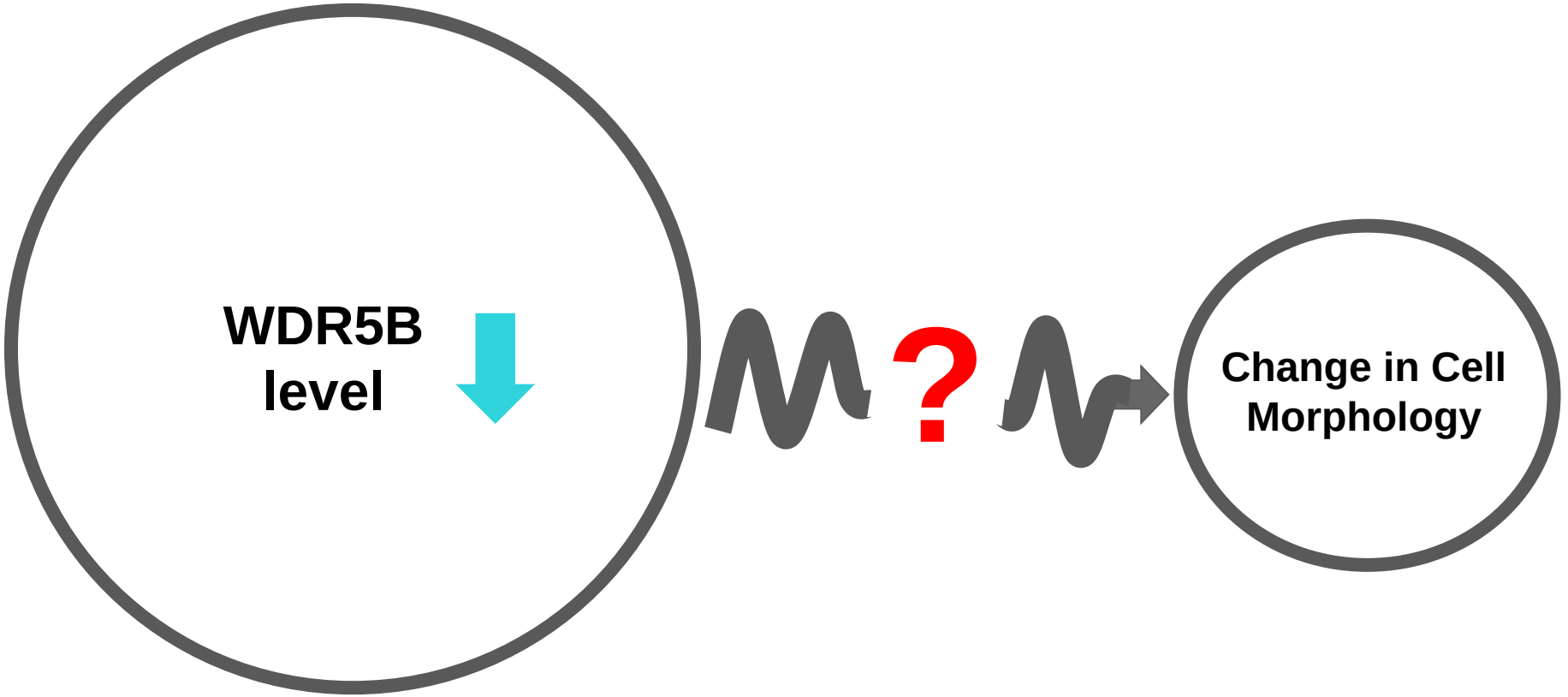

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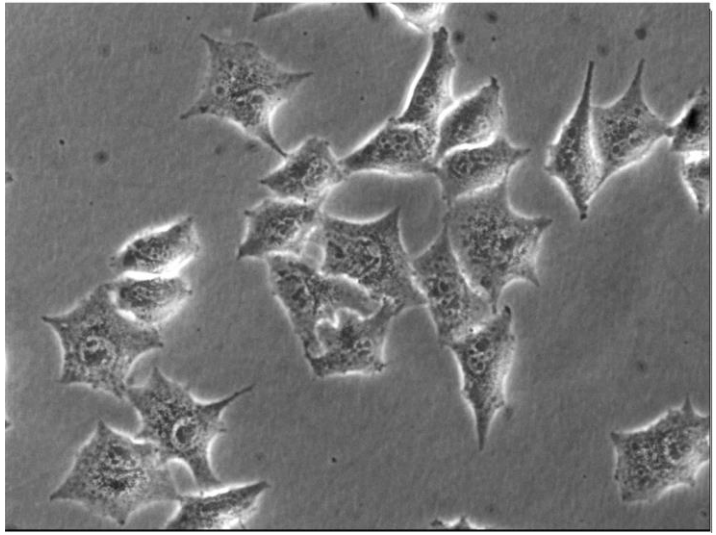
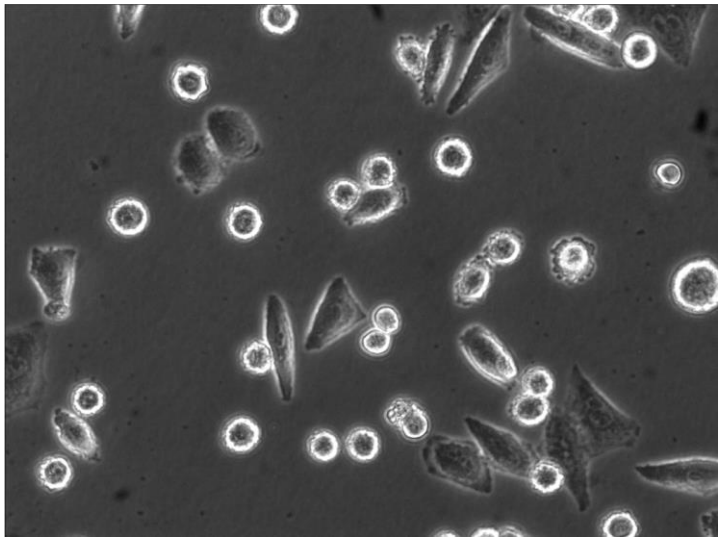


Knockdown WDR5B



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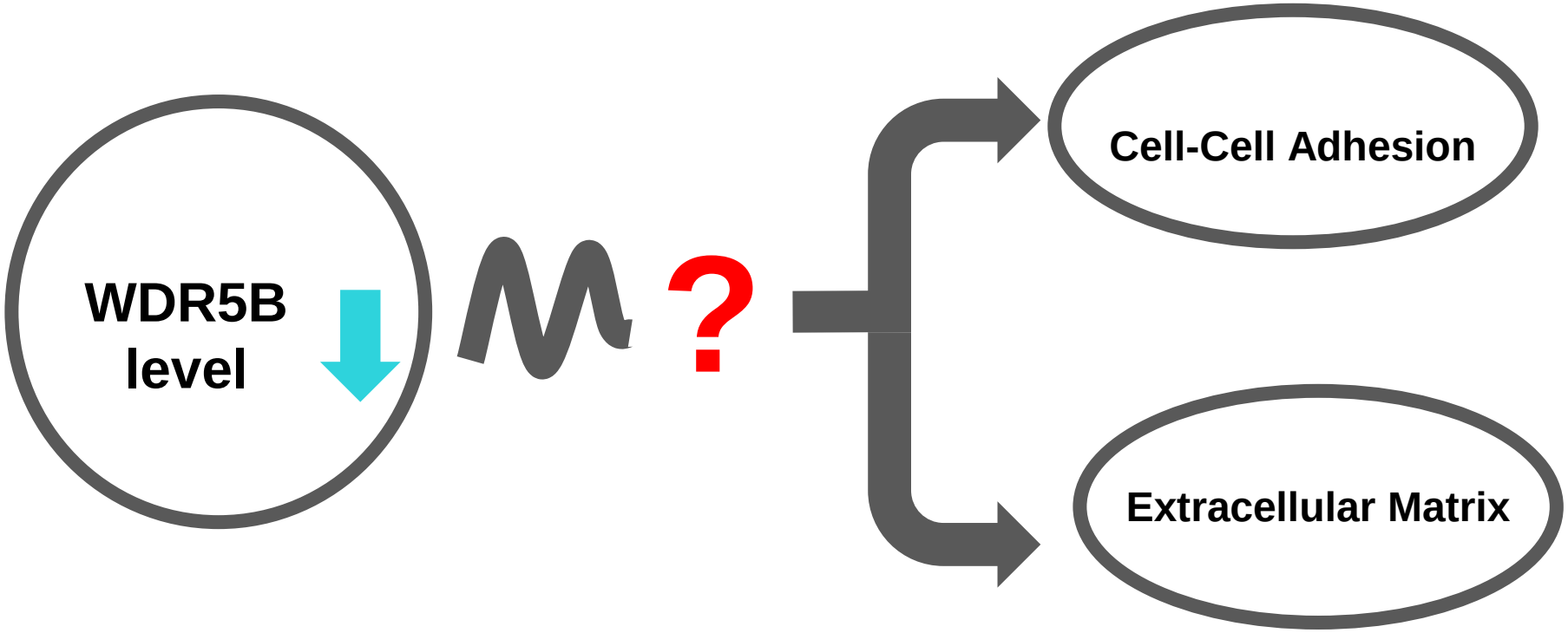

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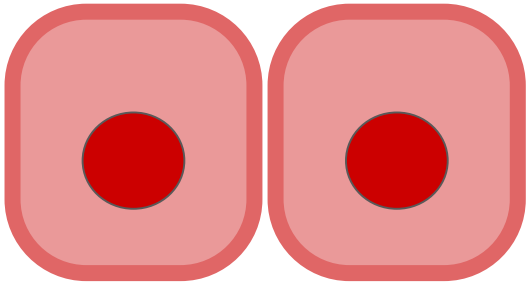

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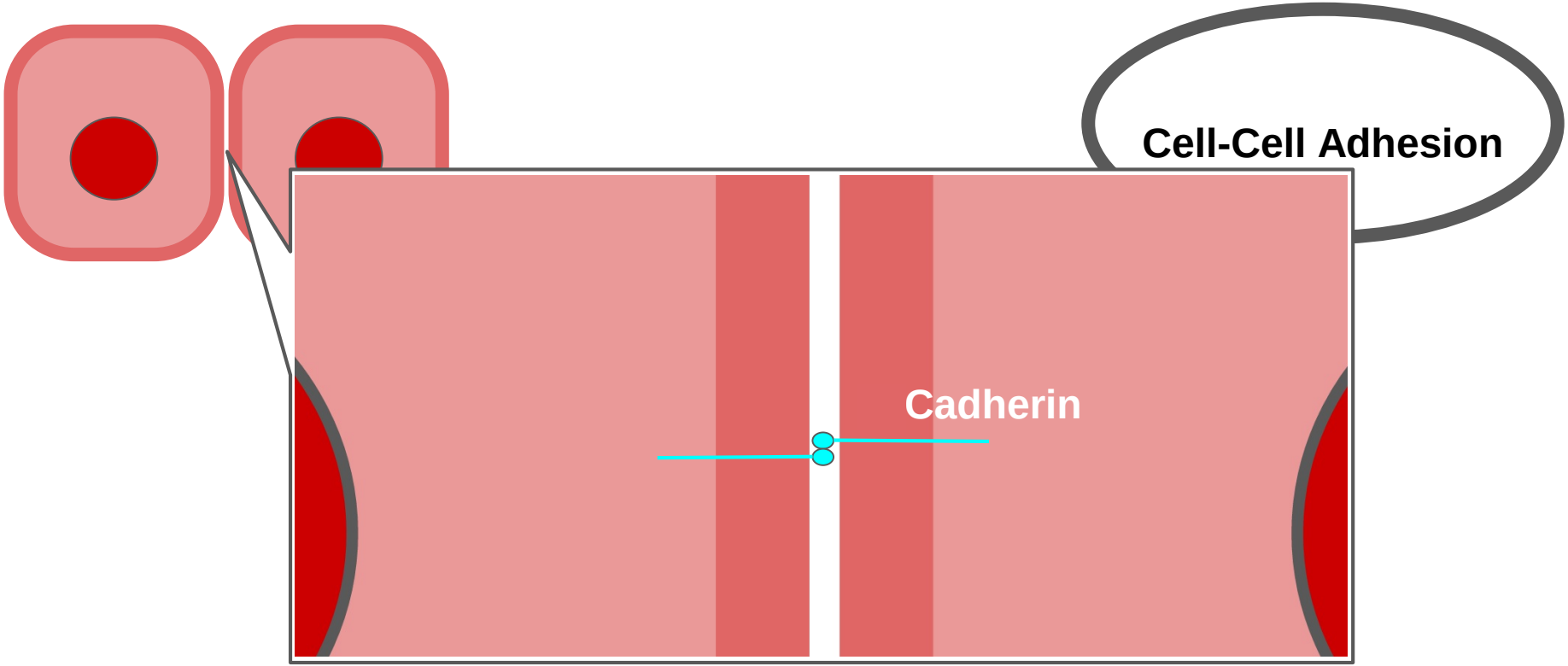

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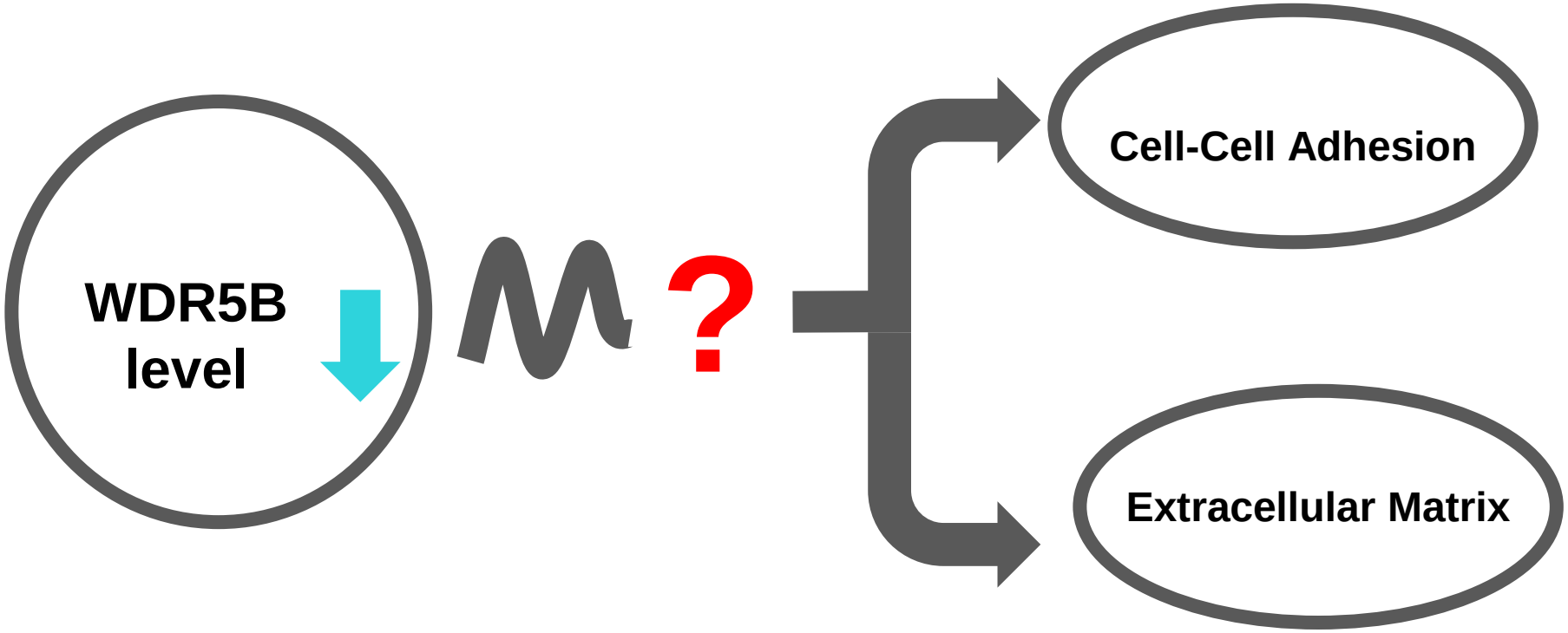
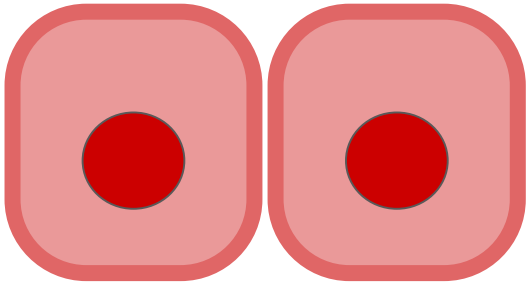


Goal: Determine the Mechanism that WDR5B affect cell adhesion



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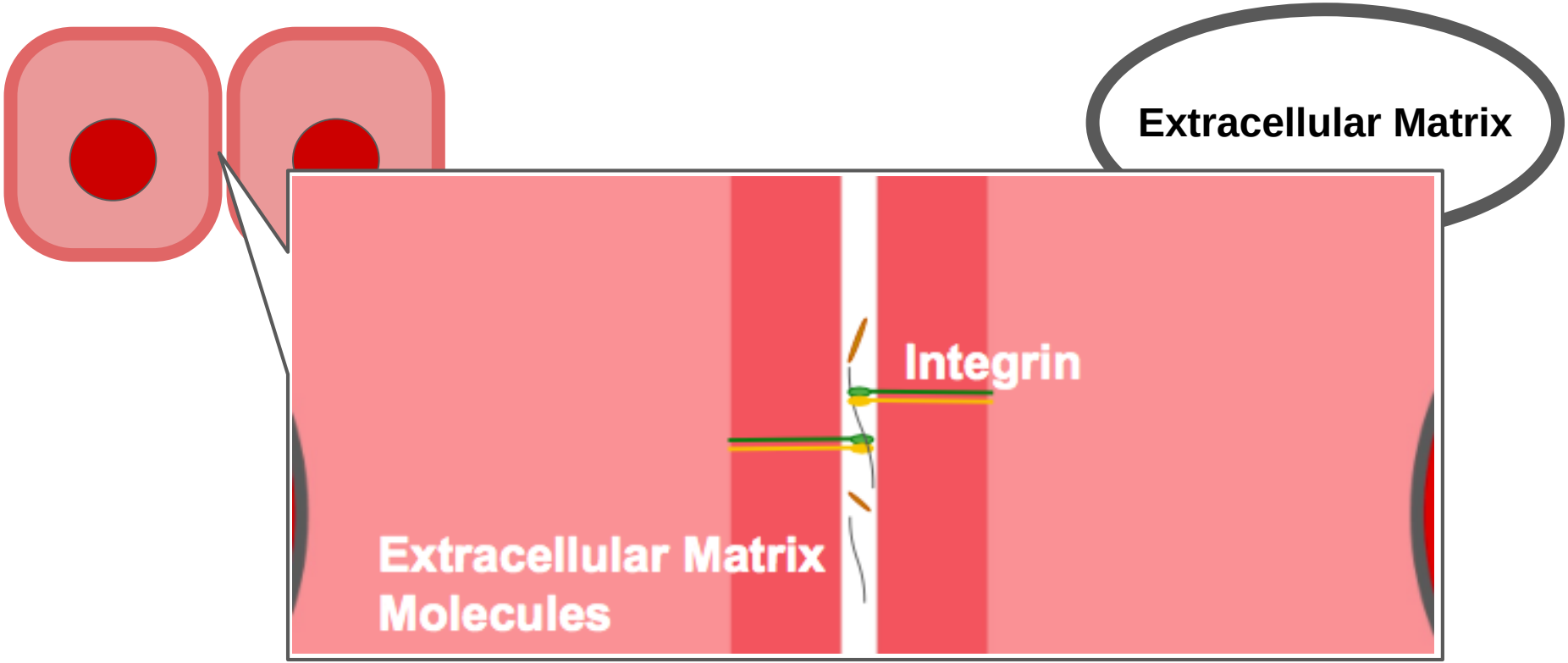

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Test out Change in Protein Level with Western Blot

3 main steps in Western Blot:

1) SDS-PAGE
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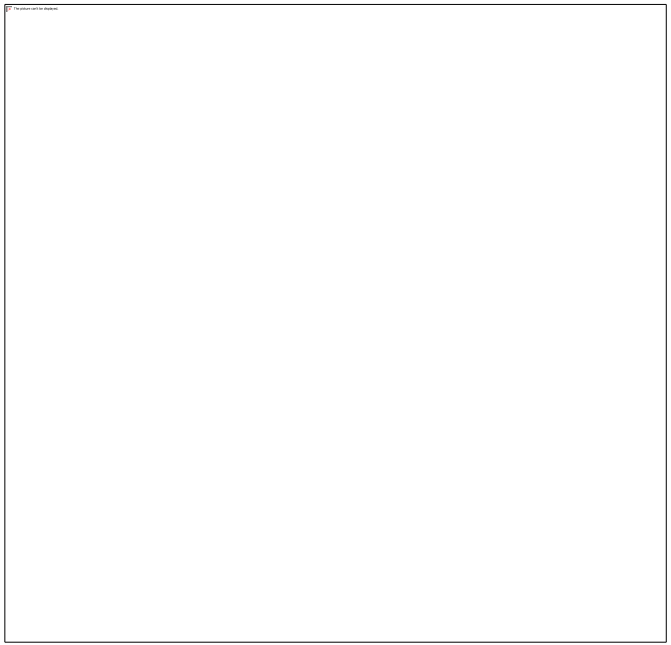

Sodium Dodecyl Sulfate- Polyacrylamide

Gel Electrophoresis (SDS-PAGE)

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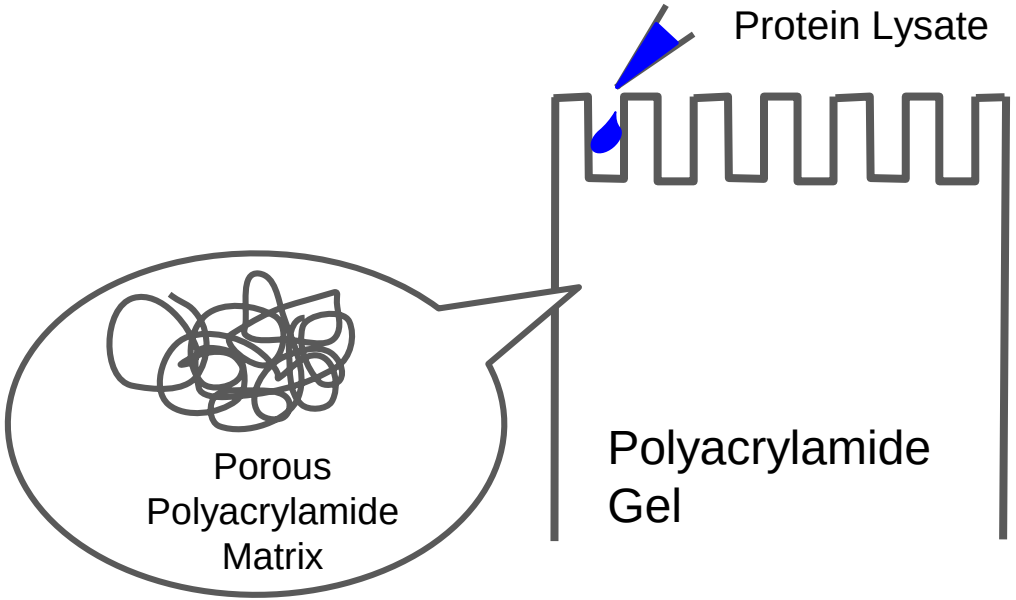

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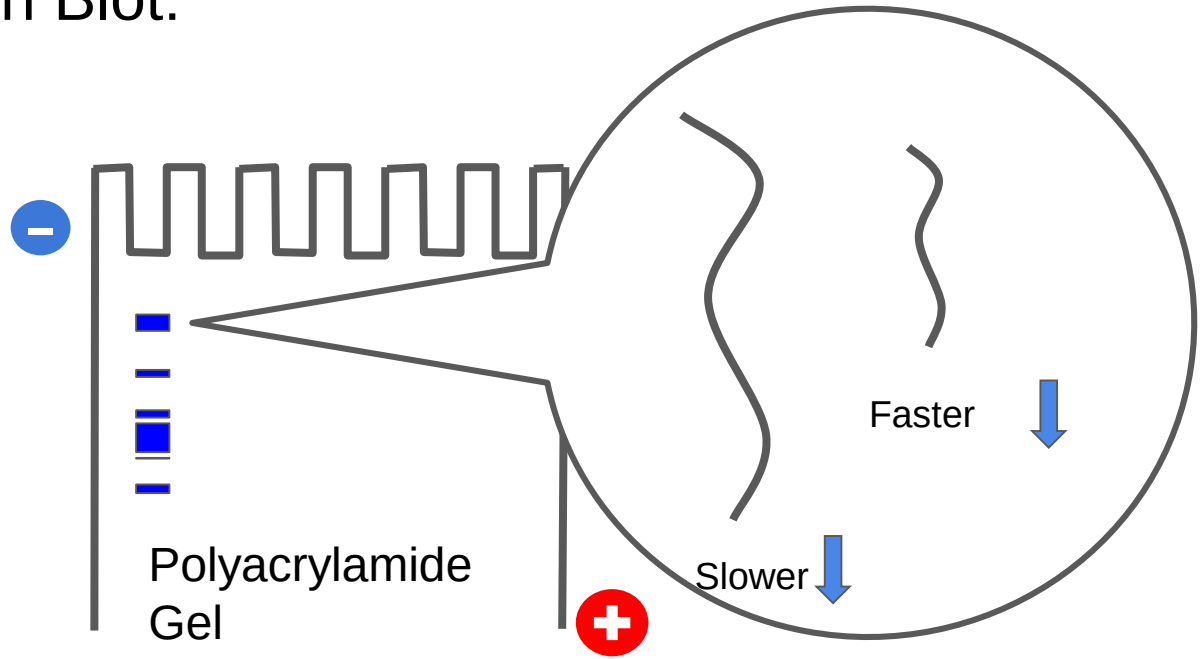

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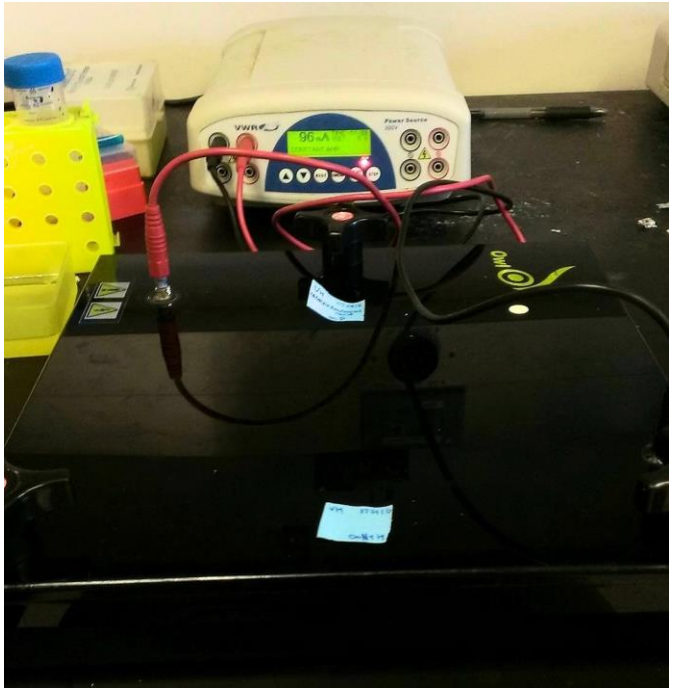

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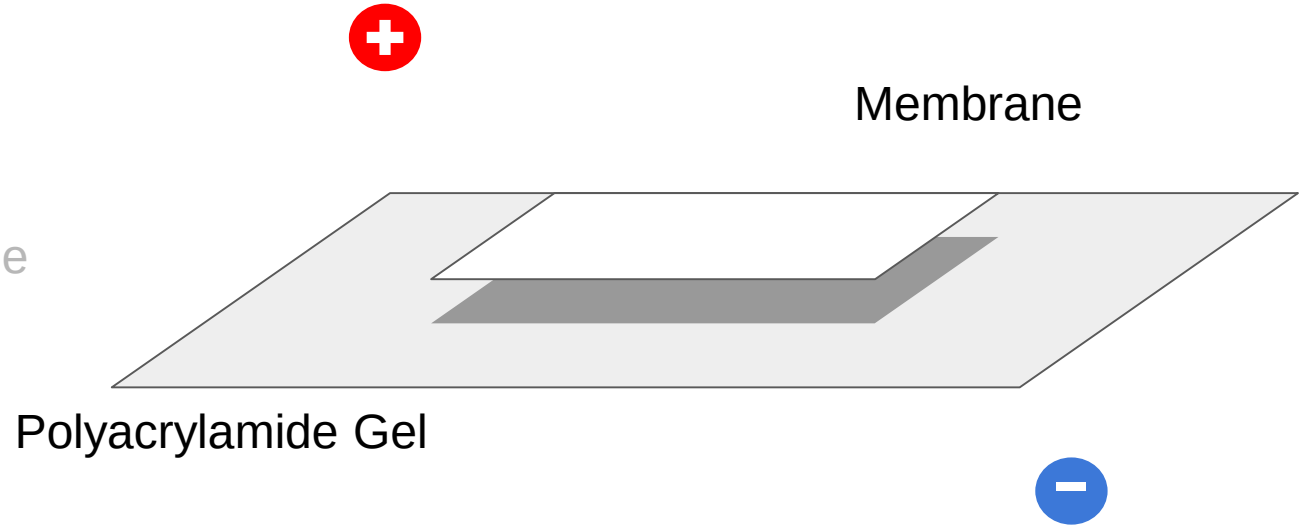

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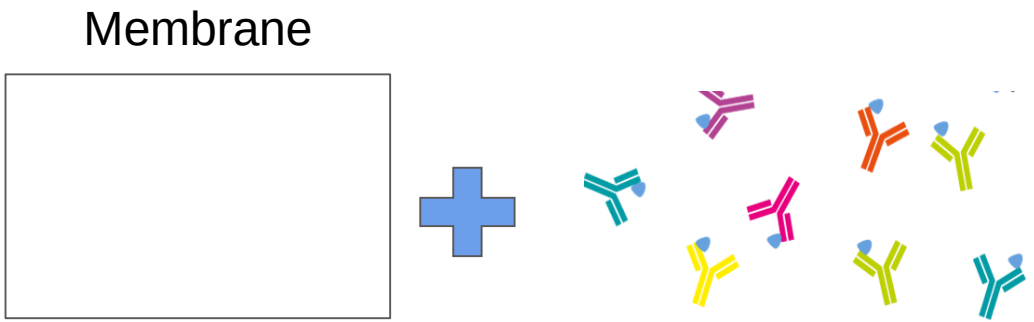

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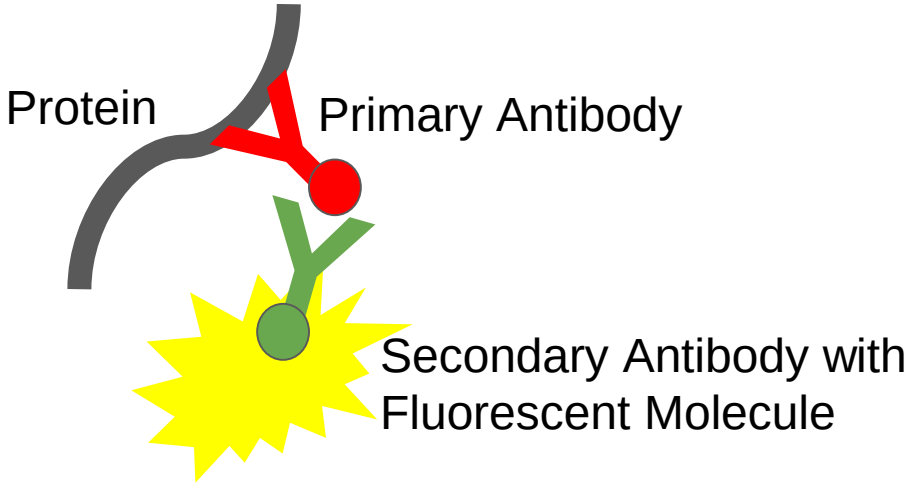

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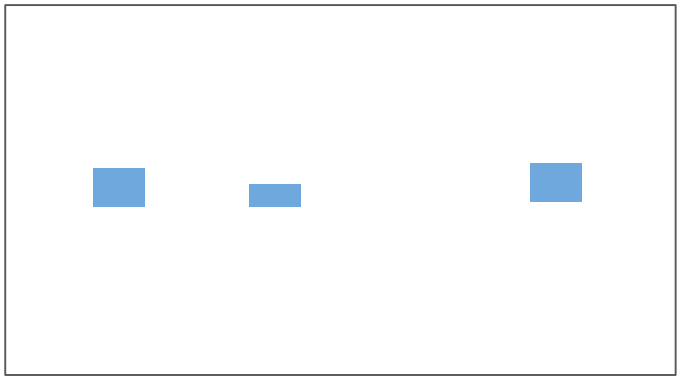

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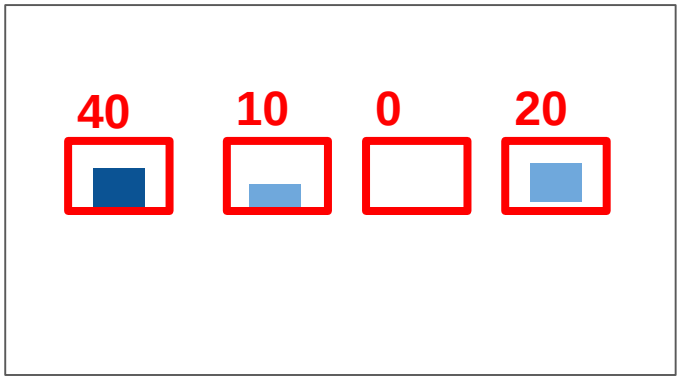
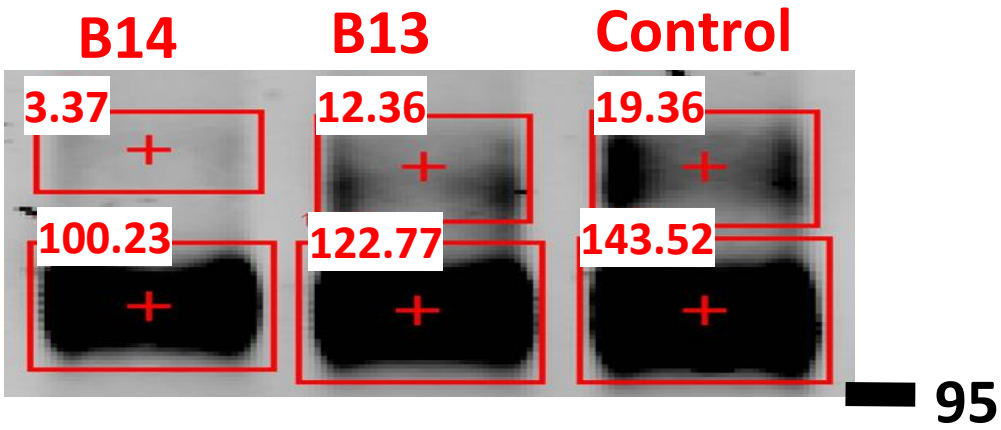
Quantify with computer program



Preliminary Data: Decrease in Integrin and Mature Integrin Level

INTB1



Probe with integrin antibody

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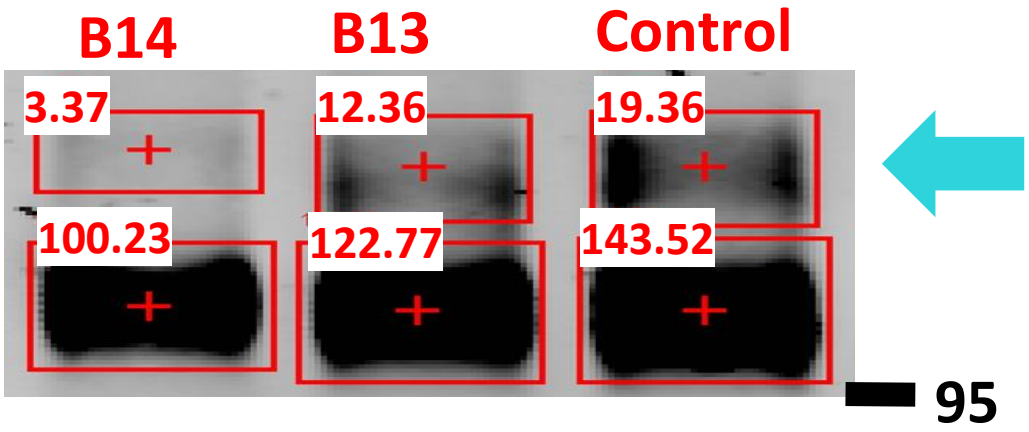
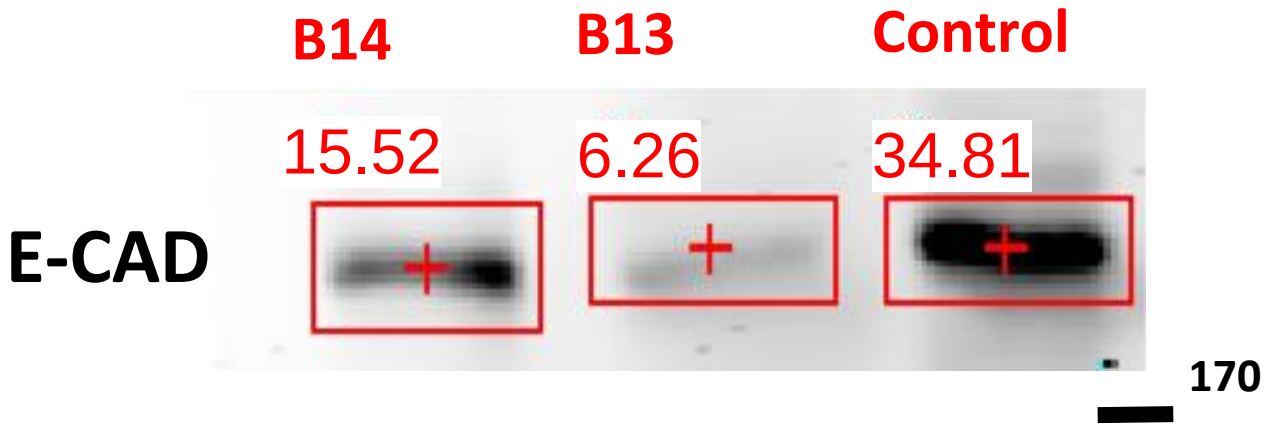


Probe with integrin antibody

Preliminary Data: Decrease in Cadherin Level



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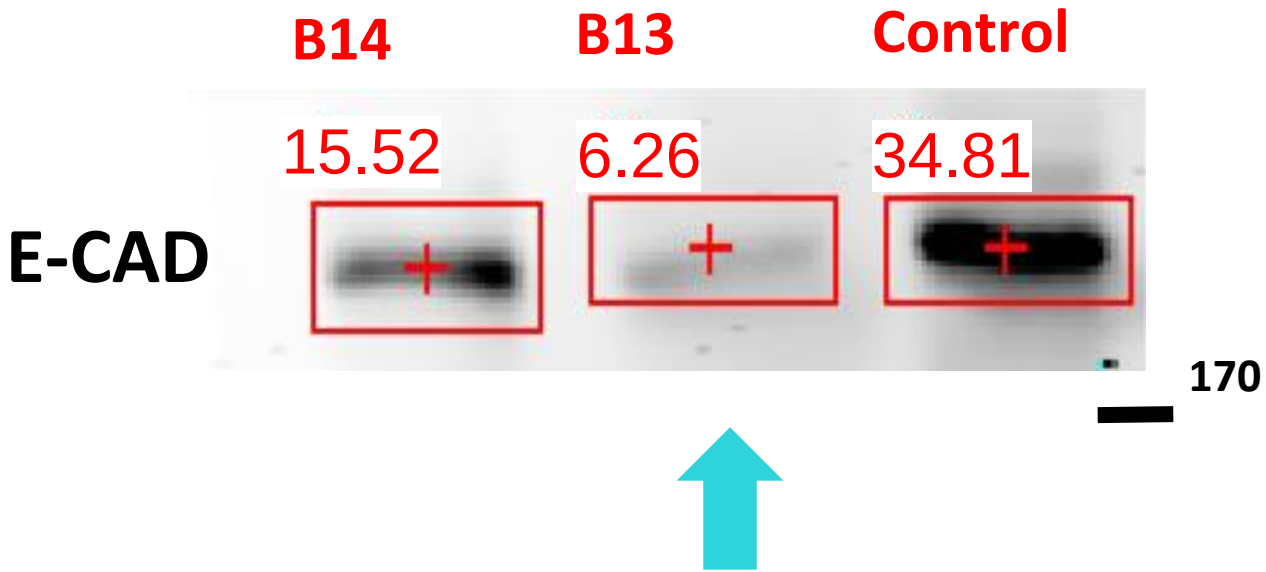

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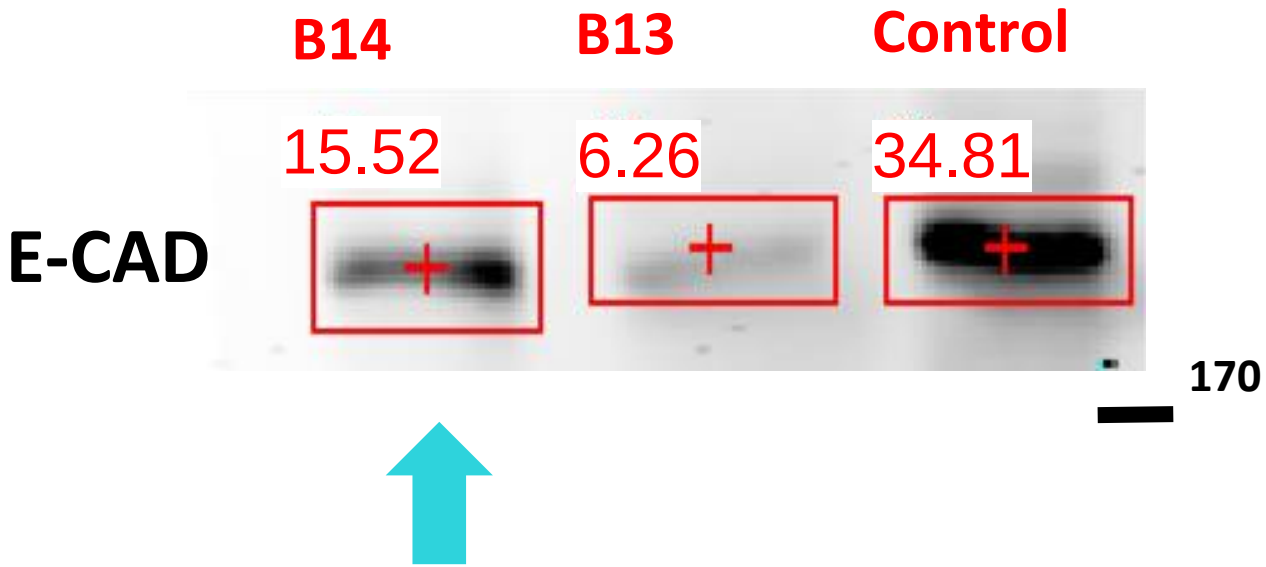
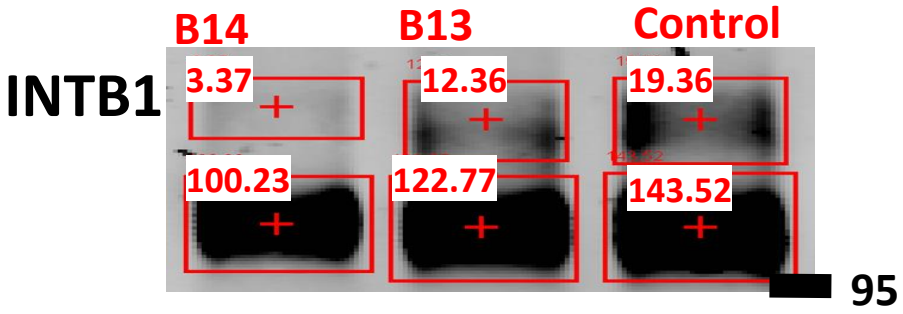
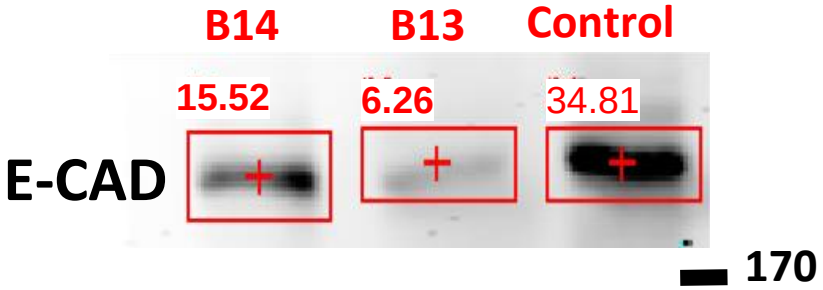


Conclusion and Future Direction





Further investigate cadherin

Further investigate downstream pathway protein for integrin

Acknowledgement