

## Epigenetics

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## DNA Mutations

- DNA mutation = faulty proteins
- Faulty proteins = abnormal cells with uncontrollable division
- Abnormal cells with uncontrollable division = cancer

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## Epigenetic Changes

- Modifications to *mechanisms associated* with DNA that alter gene expression
- NO DNA ALTERATIONS
- Can be reversed



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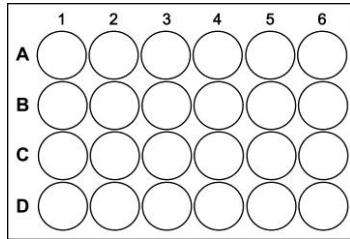
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### DNA Microarray

1<sup>st</sup> step = identify which genes in the cancer cells are working abnormally



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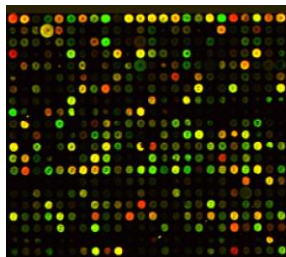
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### DNA Microarray

• Thousands of spots



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### DNA Microarray



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