

Slide 10

- DNA → RNA (transcription)
- RNA → proteins (translation)

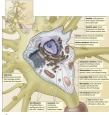
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Cell body/soma (perikaryon, intracellular, cytosol)

- 2) Membrane
- 3) Nucleus - where genetic information is located
- 4) Cytoplasm has organelles (little organs)
 - a) Mitochondria (energy)
 - b) Microtubules (transport) MAP
 - c) Microfilaments and Neurofilaments (intermediate)
 - d) Ribosomes (ribonucleic acid - RNA)
 - e) Endoplasmic reticulum (protein products assembled)

RER indicates lots of products to secrete

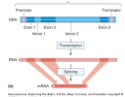
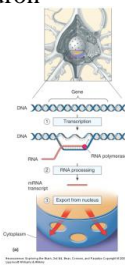
- f) Golgi body apparatus (processing proteins - export products)
- g) Lysosomes (enzymes that break down waste)



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The Prototypical Neuron

- The Soma
 - Gene expression
 - Protein synthesis
 - RNA splicing
 - Molecular biology



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The Prototypical Neuron

- The Axon
 - Axoplasmic transport
 - Anterograde (soma to terminal) vs. Retrograde (terminal to soma) transport

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Transport

fast - 100mm/day
slow - 1-10mm/day

anterograde
legs- kinesin

retrograde
'legs'-dynein

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colchicine - crocus (col-chi-seen)

Microtubules

Treats gout
(anti-inflammatory)

also transport related
HRP horseradish peroxidase
viruses

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