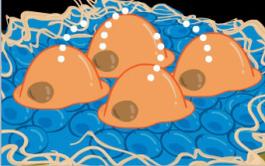
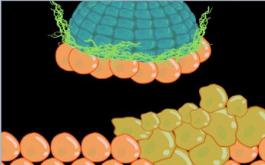


GO GO STEM CELLS

Key

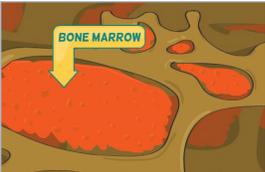
An Introduction to the Stem Cell Niche

	<p>What is a stem cell niche?</p>	<p><i>microenvironments that protect and maintain stem cells inside</i></p>
	<p>How does the niche control stem cell differentiation?</p>	<p><i>They supply signals that keep the stem cells from differentiating until they are called into action.</i></p>
	<p>What can happen if the niche doesn't function properly?</p>	<p><i>cancer</i></p>

Brain Cell Niche

	<p>What two types of cells did the stem cells differentiate into?</p>	<p><i>neurons and glial cells</i></p>
	<p>What are functions of the newly differentiated cells?</p>	<p><i>neuron: send and receive signals, glial: support cells for the brain</i></p>

Blood Cell Niche

	<p>Newly differentiated red blood cells from this niche produce hemoglobin. What is hemoglobin?</p>	<p><i>a protein that carries oxygen to tissues in your body</i></p>
	<p>How long will the red blood cell live in the bloodstream before a new one takes its place?</p>	<p><i>about 4 months</i></p>

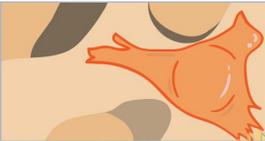
GO GO STEM CELLS

Key

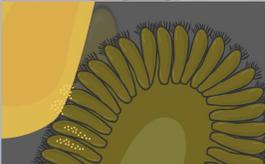
Hair Follicle Cell Niche

	<p>What type of cell did the stem cell differentiate into?</p>	<p><i>hair follicle cell</i></p>
	<p>What other types of cells can stem cells from this niche become?</p>	<p><i>skin and oil gland cells</i></p>

Bone Cell Niche

	<p>When do stem cells in this niche receive a lot of signals?</p>	<p><i>during childhood and adolescence, a period of dramatic bone growth</i></p>
	<p>How do osteoblasts from this niche build and repair bones?</p>	<p><i>by secreting a special kind of extracellular matrix</i></p>

Intestinal Cell Niche

	<p>What type of cell did the stem cell differentiate into?</p>	<p><i>nutrient-absorbing cell</i></p>
	<p>What is the function of the newly differentiated cell?</p>	<p><i>absorbing nutrients from food passing through the gut</i></p>

FUNDING

Supported by a Science Education Partnership Award (SEPA) [No. 1 R25 RR16291-01] from the National Center for Research Resources, a component of the National Institutes of Health, Department of Health and Human Services. The contents provided here are solely the responsibility of the authors and do not necessarily represent the official views of NCRR or NIH.

