A PRODUCTION BY:

VICTORIA ZAKRZEWSKI
PRODUCER

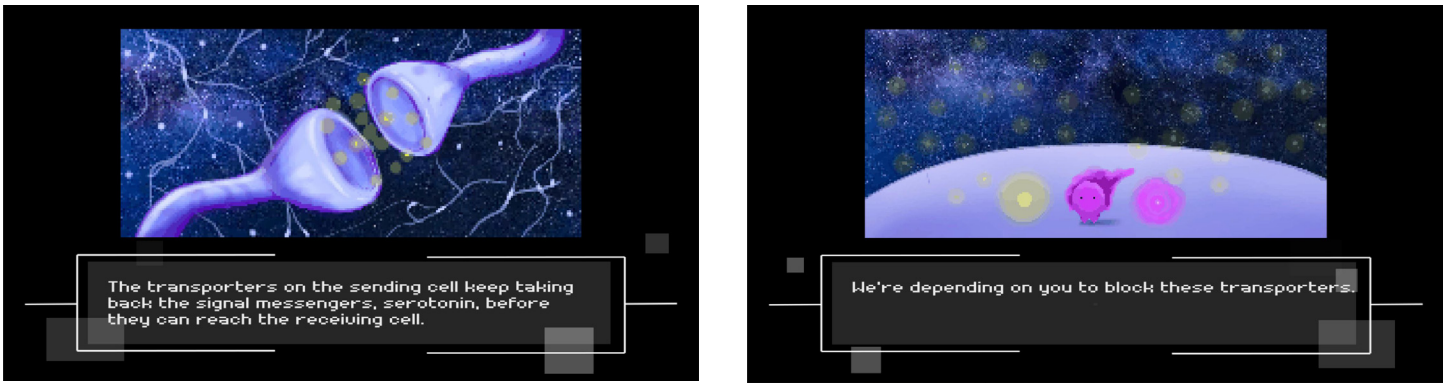
MORGAN MARSHALL
ART DIRECTOR

RACHEL POLI
ART DIRECTOR

SARAH GARCIA-PAVA
PROGRAMMER

GAME OVERVIEW

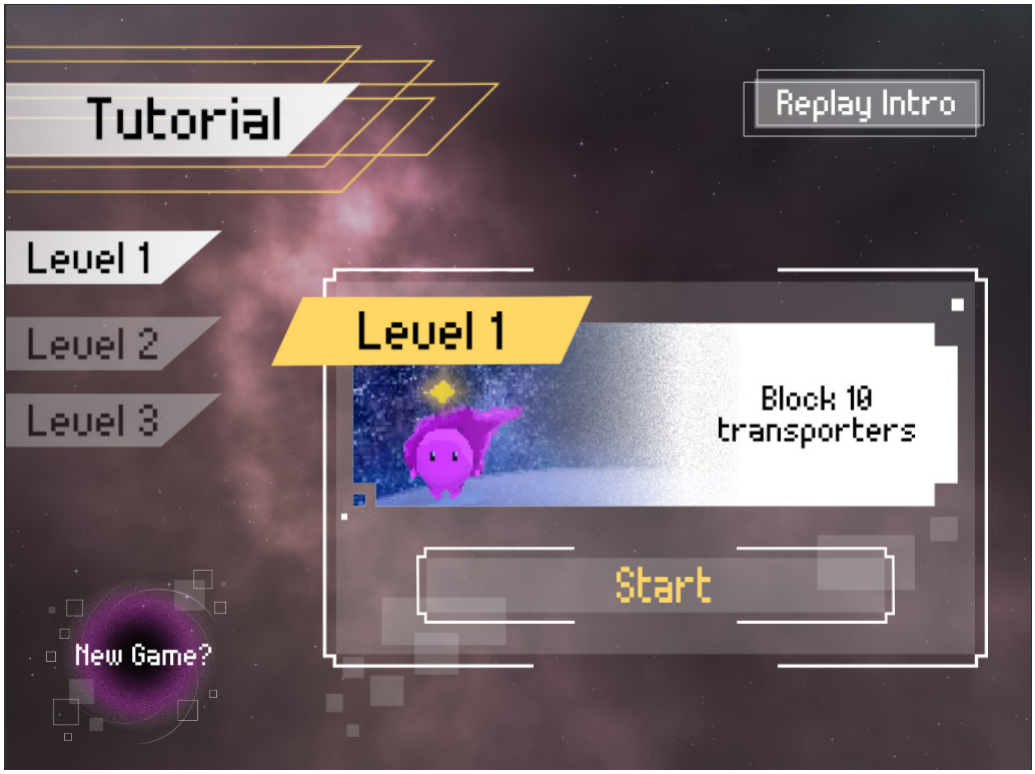
Operation SSRI is set on a post-synaptic cell of a depressed human. The player takes on the role of a personified antidepressant being. Upon entering the game and watching the introductory animation, the player learns that the transporters on the sending cell keep taking back the signal messengers, serotonin, before they can reach the receiving cell, resulting in depression in the human host. The player is tasked with collecting SSRI antidepressant orbs that have been released into their human home, and blasting them at transporters in order to block them from taking back more serotonin.



2 screenshots from the introductory animation.

GAME GOALS AND MECHANICS

Following the introductory animation, which establishes the storyline of the game, the main menu screen appears. This is where the player can select a level of difficulty. The Tutorial and Level 1 are instantly available, but Levels 2 and 3 are blocked until completion of Levels 1 and 2, respectively. The game mechanics are scaffolded in a step-by-step tutorial.



A screenshot from the UI scene. Note that Levels 2 and 3 are locked for the novice player.

GAME GOALS AND MECHANICS (cont.)

The goal of each level is to block the assigned number of receptors before time runs out. In level 1, this number is 10; in level 2 this number is 15; in level 3 this number is 20. In order to accomplish this task, the player must first collect SSRI orbs. The player can carry up to 4 orbs at a time, but must have at least one orb in their inventory in order to "blast" them at the transporter. Both visual cues (circle in inventory filling up) and auditory cues (collection sound) signal successful orb pickup. Visual cues signal successful blockage of a transporter (the transporter turns black, and serotonin reuptake of that transporter is stopped).

An active transporter, still reuptaking serotonins.

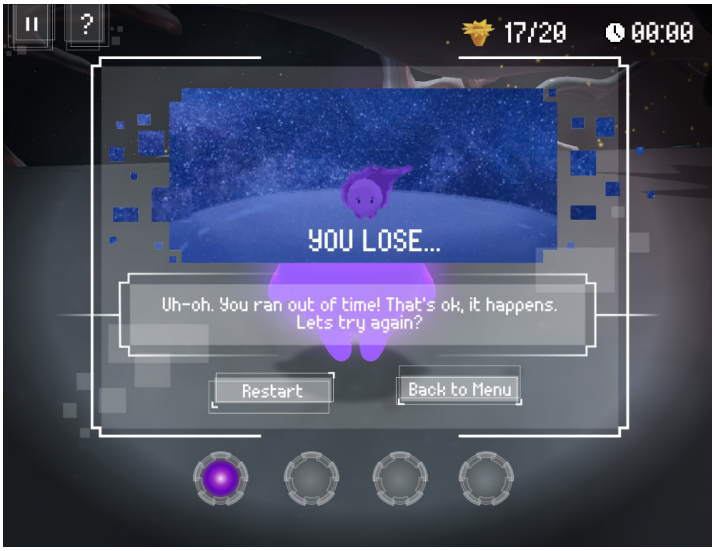
A deactivated transporter, no longer reuptaking serotonins.

An active transporter, still reuptaking serotonins.

A screen shot from game play in Level 1.

Upon successful blockage of the required number of transporters, the player passes that level. When the player begins running out of time, a vignette begins to appear and spread on to the screen. In the case of running out of time, the player loses that level and is encouraged to try again.

A screen shot showing the vignette.



A screen shot showing the loss screen.

AUDIENCE

This game is intended for an educated lay audience. This game is best suited for someone who is familiar with the basics of cell biology/neuroscience, such as an undergraduate biology student, or a student interested in pursuing a career in health care.

LEARNING GOALS

PRIMARY

- In one mechanism of depression, transporters on the presynaptic cell reuptake the signal messengers serotonin, limiting signaling to the next cell.
- An SSRI antidepressant functions by blocking transporters on the presynaptic cell.
- Blocking transporters on the presynaptic cell can help the serotonins pass the signal to the next cell.

SECONDARY

- Time plays a role in the effectiveness of antidepressant use.