BioRube Bot

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Test 1: Mitogen Pathfinding

- Description - A simple test to see if the newly randomized targeting system for the mitogen works.

- Pass Requirements - Mitogen demonstrate the ability to track to random targets.

- Fail Condition - All Mitogen are only able to track to one target, Mitogen does not respond.

- Setup - In the play space on level 1 place two left receptors on cell membrane then place multiple mitogen outside the membrane and see if they all take the same course or take different courses.

- Expected Results - Pass

- Days spent trying to solve - 2

- Actual Result - Pass

Test 2: ATP Pathfinding

- Description - A simple test to see if the newly randomized targeting system for the ATP works.

- Pass Requirements - ATP demonstrate the ability to track to random targets.

- Fail Condition - All ATP are only able to track to one target, ATP does not respond.

- Setup - In the play space on level 1 place 2 left receptors and 2 right receptors on the main cell membrane then place 2 mitogen outside the membrane then place multiple ATP within the cell membrand and see if they all take the same course or take different courses.

- Expected Results - Pass

- Days spent trying to solve - 1

- Actual Result - Pass

Test 3: Mitogen specific crash

- Description - A test to see if specific placements of mitogen such as right under a left receptor or placement of G-protein coupled receptor after mitogen crashes the game.

- Pass Requirements - Game continues with no errors for both situations.

- Fail Condition - Game crashes.

- Setup left-receptor - place a left receptor then place a mitogen underneath.

- Setup G-Protein - place a mitogen in the game area then place a G-Protein coupled receptor.

- Expected Results - Pass.

- Days spent trying to solve - 1

- Actual Result - Pass.

- What was the cause - out of range error on mitogen.

Test 4: Trimeric G-Protein Visual Bug

- Description - A test to see if the preview of the Trimeric G-Protein accurately reflects its actual drop location and make sure the actual drop location is correct.

- Pass Requirements - The preview matched with the placement and the placement is correct.

- Fail Condition - The preview does not match placement or placement is incorrect.

- Setup - open level 2 and click and drag the trimeric G-Protein

observe its location then let go of the mouse. observe the current location to make sure it was placed correctly.

- Expected Results - Pass.

- Days spent trying to solve - 0 (Right after Cyclase)

- Actual Result - Pass.

- What was the cause - error in sizing of the sprite.

Test 5: Cyclase Visual Bug

- Description - A test to see if the preview of the Cyclase accurately reflects its actual drop location and make sure the actual drop location is correct.

- Pass Requirements - The preview matched with the placement and the placement is correct.

- Fail Condition - The preview does not match placement or placement is incorrect.

- Setup - open level 2 and click and drag the cyclase observe its location then let go of the mouse. observe the current location to make sure it was placed correctly.

- Expected Results - Pass.

- Days Spent trying to solve - 3

- Actual Result - Pass.

- What was the cause - error in sizing of the sprite.

Test 6: cAMP collision

- Description - A test to see if a cAMP object collision registers and the cAMP is blocked from crossing collision.

- Pass Requirements - cAMP cannot cross through collision and still works as a trigger.

- Fail Condition - The cAMP either crosses collision or does not act as a trigger.

- Setup - open level 2 place G-Protein coupled Receptor, Cyclase, and Trimeric G-Protein on the cell membrane then place a Mitogen outside the membrane and place a GTP, and 4 ATP inside the membrane then place 2 inhibited kinase one inside cell membrane one outside. observe if the created cAMP from cyclase interact with the kinase inside the membrane and cannot reach the kinase outside.

- Expected Results - Pass.

- Days spent trying to solve - 7

- Actual Result - Pass.

- What was the cause - IsTrigger collision does not count as a collider.

- Solution - 2 circle colliders one as isTrigger the other as a normal collider.

Test 7: ATP release from inactive cyclase

- Description - A test to see if an ATP will release a cyclase as its target after it becomes inactive.

- Pass Requirements - ATP start roaming after cyclase becomes inactive

- Fail Condition - ATP continue tracking cyclase

- Setup - open level 2 place G-Protein coupled Receptor, Cyclase, and Trimeric G-Protein on the cell membrane then place a Mitogen outside the membrane and place a GTP inside the membrane and an ATP outside the membrane.

- Expected Results - Pass.

- Days spent trying to solve - 0

- Actual Result - Pass.

- What was the cause - No check to see if cyclase was inactive as well as cyclase inaccurately reflecting its state.

Test 8: ATP Re-Activate if Cyclase becomes inactive during transformation to cAMP

- Description - A test to see if a cyclase will release all ATP if the cyclase goes inactive during transformation.

- Pass Requirements - ATP become green again and start roaming after cyclase becomes inactive

- Fail Condition - ATP remain red or ATP remain inactive unable to move.

- Setup - open level 2 place G-Protein coupled Receptor, Cyclase, and Trimeric G-Protein on the cell membrane then place a Mitogen outside the membrane and place a GTP inside the membrane and ATP inside the membrane at the Cyclase until the Cyclase becomes inactive.

- Expected Results - Pass.

- Days spent trying to solve - 0

- Actual Result - Pass.

- What was the cause - No check to revert ATP to green and active if cyclase becomes inactive.

Test 9: Menu item collision

- Description - A test to see menu objects still had collision.

- Pass Requirements - Anything can pass through any menu object.

- Fail Condition - Menu Objects display collision

- Setup level 1 - place a left receptor then put a mitogen on top of each menu object and observe if it can leave.

- Setup level 2 - place a G-Protein Coupled Receptor then put a mitogen on top of each menu object and observe if it can leave.

- Expected Results - Pass.

- Days spent trying to solve - 2

- Actual Result - Pass.

- What was the cause - Menu objects used normal collision and had IsTrigger set to false.

- Solution - Set all Menu object colliders IsTrigger to true.

Test 10: Snapping objects only placed when snapping

- Description - A test to check if any object that snaps to a cell membrane can only be placed on the membrane.

- **Pass Requirements - Any object that does not snap can be placed anywhere and any object that does can ONLY be placed if it is snapping.**

- **Fail Condition - Non-Snapping objects unable to be placed anywhere or Snapping objects able to be placed outside of snapping or Snapping objects are not able to be placed if snapping.**

- **Setup- open level 2 place a mitogen inside the cell membrane then place one outside, then attempt to place any snapping object inside the cell membrane where it is not snapping, then place it where it is snapping and observe the results.**

- **Expected Results - Pass.**

- **Days spent trying to solve - 1**

- **Actual Result - Pass.**

- **What was the cause - No check to see if it was snapping or not**

- **Solution - Make a flag to keep track of snappable objects that is checked against if the object is snappable.**