SCRIPT CHANGES:

Renamed object 'move_Alt' scripts to just 'move(Object Name)' (i.e. 'moveKinase_Alt' to 'moveKinase'). This change requires renaming of the class inside the script as well.

TimeScale.cs:

line 8 - changed 'maxFFW' to x4 (previously set to x64) – *may be set to whatever you like*

ReceptorLegScript.cs:

Lines 24-25: Disable ATP collider while dropping off a phosphate

Lines 34-35: Enable the ATP collider once phosphate dropped off

Lines 38-43: Change receptor leg tags (referenced in G_ProteinCmdCtrl.cs)

NOTE: EACH PHOSPHATE ATTACHED TO A RECEPTOR IS NOW TAGGED AS "receptorPhosphate"

Line 44 - Added call to IEnumerator co-routine 'Explode'

Lines 47-65 - Added 'Explode' to destroy ATP after dropping phosphate at the receptor

The 'Explode' function requires 'destructionEffect' be initialized to the 'DestructEffect' Particle System prefab IN THE '_ReceptorActiveFinalPhase' CHILD OBJECTS '_InnerReceptorFinalLeft' AND '_InnerReceptorFinalRight' INSPECTOR WINDOW.

- **SCRIPT 'moveG_Protein_Alt' is to be deleted and replaced with 'G_ProteinCmdCtrl' script**
- **SCRIPT 'GTP_CmdCtrl' is to be assigned to the Phosphate object (for now – fills in for GTP until GTP object defined).**

- **Change ATP Settings:** Linear Drag = 5 , Angular Drag = 5

ADD TAGS: *(In addition to the tags established in the ORIGINAL project – the following tags are to be added. Note: Tags are case sensitive. Previous tags starting with a lowercase letter are to be deleted. This is to maintain consistency in the naming of tags):*

Left: This tag is implicitly assigned in scripts 'ReceptorLegScript.cs' , 'GTP_CmdCtrl.cs' and 'G_ProteinCmdCtrl.cs'. It is used to identify a target's position (left or right of a referenced object).

Target: This tag is implicitly assigned in scripts 'GTP_CmdCtrl.cs' and 'G_ProteinCmdCtrl.cs'. It is used to tag objects that are locked onto by a targeting object. This keeps subsequent searches for interactive objects restricted to those objects that are not 'Target'(s) or are 'Targeting'.

Targeting: See Target

ReceptorPhosphate: This tag is implicitly assigned in script 'ReceptorLegScript.cs' to identify a phosphate bound to a receptor leg ready for G-protein to 'dock' with it.

OccupiedReceptor: This tag is implicitly assigned in script 'G_ProteinCmdCtrl.cs' to identify a receptor phosphate currently 'occupied' by a G-protein waiting for a GTP.

G_Protein: Assigned to the G_Protein prefab in its inspector window. Referenced in 'G_ProteinCmdCtrl.cs' for locating G-Protein objects.

DockedG_Protein: This tag is implicitly assigned in script 'G_ProteinCmdCtrl.cs' and referenced in 'GTP_CmdCtrl.cs'. It is used to tag G-proteins that are docked at a receptor waiting for a GTP object to 'dock' with it.

OccupiedG_Protein: This tag is implicitly assigned in script 'GTP_CmdCtrl.cs' to identify a G-protein that has bound to a GTP.

FreeG_Protein: This tag is implicitly assigned in script 'G_ProteinCmdCtrl.cs' to identify a G-protein that has bound to a GTP and 'undocked' from a receptor phosphate.

GTP: Tagged to the PHOSPHATE prefab (temporarily acting as GTP) in the inspector window and referenced in 'GTP_CmdCtrl.cs' to identify a free roaming GTP looking for a 'DockedG_Protein' to target.

DockedGTP: This tag is implicitly assigned in script 'GTP_CmdCtrl.cs'. It is used to identify a GTP that has bound (docked) with 'DockedG_Protein'

GDP: Assigned to the GDP prefab in its inspector window. (Currently not referenced but is tagged for future reference)

Kinase: Assigned to the Kinase prefab in its inspector window. (Currently not referenced but is tagged for future reference)

T_Reg: Assigned to the Transcription Regulator prefab in its inspector window. (Currently not referenced but is tagged for future reference)

Prefab Changes:

G-protein *(Tag G_Protein)*

Position: (0, 0, 0)

Added:

Rigidbody2D

Mass: 0.5
Linear Drag: 5
Angular Drag: 5 *When set to 'Fixed Angle' (as is), this presumably has no effect
Gravity: 0
Fixed Angle: True*
Is Kinematic: False
Interpolate: Interpolate
Sleeping Mode: Start Awake
Collision Detection: Discrete

Box Collider2D

Material: None
Is Trigger: False
Used by Effector: False
Offset: (0 , 0)
Size: (1 , 1)

Script: G_ProteinCmdCtrl.cs

GDP: GDP
childGDP: None
destructionEffect: DestructEffect

Children:

Transporter Outline: position (0, 0, 0)
Transporter Body: position (0, 0, 0)
Transporter Side A: position (-0.63, 0.08, 0)
Transporter Side B: position (0.63, 0.08, 0)

Prefab Changes Continued

GDP (*Tag GDP*)

Position: (0, 0, 0)

Added:

Rigidbody2D

Mass: 0.5
Linear Drag: 5
Angular Drag: 0
Gravity: 0
Fixed Angle: True
Is Kinematic: False
Interpolate: None
Sleeping Mode: Start Awake
Collision Detection: Discrete

Circle Collider2D

Material: None
Is Trigger: False
Used by Effector: False
Offset: (0 , 0)
Radius: 0.3

Script: moveGDP.cs

Max X: 100
Max Y: 100
Min X: -100
Min Y: -100

Children:

Inner Circle Outline: position (0, 0, 0)
Inner Circle Object Body: position (0, 0, 0)

Prefab Changes Continued

Kinase *(Tag Kinase)*

Position: (0, 0, 0)

Rotation: (0, 0, 0)

Added:

Rigidbody2D

- Mass: 0.5
- Linear Drag: 5
- Angular Drag: 0 .05
- Gravity: 0
- Fixed Angle: False
- Is Kinematic: False
- Interpolate: None
- Sleeping Mode: Start Awake
- Collision Detection: Discrete

Polygon Collider2D (must be edited to outline the kinase object)

- Material: None
- Is Trigger: False
- Used by Effector: False
- Offset: (0 , 0)

Script: moveKinase_Alt

- Max X: 100
- Max Y: 100
- Min X: -100
- Min Y: -100

Children:

- Kinase Outline: position (0, 0, 0)

Prefab Changes Continued

Phosphate *(Tag GTP)*

Position: (0, 0, 0)

Added:

Rigidbody2D

- Mass: 0.5
- Linear Drag: 5
- Angular Drag: 0
- Gravity: 0
- Fixed Angle: False
- Is Kinematic: False
- Interpolate: None (Currently – can be changed without affecting functionality)
- Sleeping Mode: Start Awake
- Collision Detection: Discrete

Circle Collider2D

- Material: None
- Is Trigger: False
- Used by Effector: False
- Offset: (0 , 0)
- Radius: 0.3

Script: GTP_CmdCtrl.cs

Children:

- Inner Circle Object Outline: position (0, 0, 0)
- Inner Circle Object Body: position (0, 0, 0)

Prefab Changes Continued

Transcription Regulator *(Tag T-Reg)*

Position: (0, 0, 0)

Rotation: (0, 0, 0)

Added:

Rigidbody2D

- Mass: 1
- Linear Drag: 5
- Angular Drag: 0 .05
- Gravity: 0
- Fixed Angle: False
- Is Kinematic: False
- Interpolate: None
- Sleeping Mode: Start Awake
- Collision Detection: Discrete

Box Collider2D

- Material: None
- Is Trigger: False
- Used by Effector: False
- Offset: (0 , 0)
- Size: (1.1, 1.2)

Script: moveT_Reg_Alt

- Max X: 100
- Max Y: 100
- Min X: -100
- Min Y: -100