# C.S.S Form

Enter all the information specified in the various fields.

* Indicates required question

## ARTICLE INFO

1. PMID *

2. Enter article link from https://pubmed.ncbi.nlm.nih.gov/ *

3. Year Published(e.g., 2021) *

## ACTIVATOR PROTEIN or SIGNALING MOLECULE, A

Activator, A is a protein or signaling molecule which initiates a causal association with a Target protein, C

4. Activator A (Provide full name  E.g.,  Tumor necrosis factor alpha) *

5. Activator A acronym (Provide an acronym for the widely used name of the protein. *
E.g.,  Tumor necrosis factor alpha is called TNFa)

6. Activator A UniProt ID: Click on the link https://www.uniprot.org/ and find the      *
UNIPROT ID for the protein and enter here. E.g., Unitprot ID for the Tumor necrosis
factor alpha receptor-1 in MOUSE is P25118 · TNR1A_MOUSE. Choose the
correct species based on the study. If no UniProt ID available, enter N/A

_____

7. Classifier based on primary function of A

*Mark only one oval.*

  ◯ Cytokine

  ◯ Neurotransmitter

  ◯ Chemokine

  ◯ Free Radicals (e.g., NO, ROS etc.)

  ◯ Voltage-Gated Ion Channel

  ◯ Neurotransmitter Receptor

  ◯ Cytokine Receptor

  ◯ Chemokine Receptor

  ◯ Other: _____

8. Activator A cell type or source

*Mark only one oval.*

  ◯ Neuron

  ◯ Microglia

  ◯ Astrocyte

  ◯ Extrinsic application

  ◯ Transgene-based activation

  ◯ Other

  ◯ Not reported

**EFFECTOR PROTEIN or SIGNALING MOLECULE, E**

9. **EFFECTOR E**

(Provide full name e.g., Tumor necrosis factor alpha)

_____

10. **EFFECTOR E acronym** (Provide an acronym for the widely used name of the protein. E.g., Tumor necrosis factor alpha receptor is called TNFR-1)

_____

11. **EFFECTOR E UniProt ID:** Click on the link https://www.uniprot.org/ and find the UNIPROT ID for the protein and enter here. E.g., Unitprot ID for the Tumor necrosis factor alpha receptor-1 in mouse is P25118 · TNR1A_MOUSE.  Choose the correct species based on the study.  If no UniProt ID available, enter N/A

_____

12. Classifier based on primary function of E

*Mark only one oval.*

- ◯ Cytokine
- ◯ Neurotransmitter
- ◯ Chemokine
- ◯ Free Radicals (e.g., NO, ROS etc.)
- ◯ Voltage-Gated Ion Channel
- ◯ Neurotransmitter Receptor
- ◯ Cytokine Receptor
- ◯ Chemokine Receptor
- ◯ Other: _____

13.    EFFECTOR E cell type or source

*Mark only one oval.*

◯ Neuron

◯ Microglia

◯ Astrocyte

◯ Other

◯ Not reported

## TARGET PROTEIN or SIGNALING MOLECULE, T

This is called TARGET, T

14.    TARGET, T
(Provide full name e.g.,  Voltage-Gated Sodium Channel Subunit)

_____

15.    TARGET T   (Provide an acronym for the widely used name of the protein. E.g., Nav1.1). If none reported, enter, N/A

_____

16.    TARGET T UniProt ID: Click on the link https://www.uniprot.org/ and find the UNIPROT ID for the protein and enter here. E.g., Unitprot ID for the Tumor necrosis factor alpha receptor-1 in mouse is P25118 · TNR1A_MOUSE.  Choose the correct species based on the study.

_____

17.    Classifier based on primary function of T

*Mark only one oval.*

- ◯ Cytokine
- ◯ Neurotransmitter
- ◯ Chemokine
- ◯ Free Radicals (e.g., NO, ROS etc.)
- ◯ Voltage-Gated Ion Channel
- ◯ Neurotransmitter Receptor
- ◯ Cytokine Receptor
- ◯ Chemokine Receptor
- ◯ Other: _____

18.    TARGET, T cell type

*Mark only one oval.*

- ◯ Neuron
- ◯ Microglia
- ◯ Astrocyte
- ◯ Other
- ◯ Not reported

## EXPERIMENTAL ASSAY INFO

In the following, you will provide some of the technical details of the approach(es) used to evaluate functional associations

19. Select one or more experimental assay(s)

*Check all that apply.*

- ☐ Primary cell culture
- ☐ Fresh brain tissue
- ☐ Slice preparation
- ☐ Fixed tissue sections
- ☐ Blood or cerebrospinal fluid
- ☐ Cell line derived culture
- ☐ Stem cell derived culture
- ☐ Other: _____

20. Animal Model/Species

*Check all that apply.*

- ☐ Mouse
- ☐ Rat
- ☐ Human
- ☐ Invertebrate
- ☐ Other vertebrate
- ☐ Other

21. Age of the specimen

*Check all that apply.*

- ☐ In vitro cell line or cell culture systems (e.g., for Days in vitro, DIV10-DIV14)
- ☐ Neonatal (e.g., for mouse and rats, P0-P4)
- ☐ Postnatal ( e.g., for mouse and rats, P4-P21)
- ☐ Adult (e.g., for mouse and rat, >P21)
- ☐ Disease end stage (e.g., in animal models of disease or human postmortem periods)
- ☐ Other

22. Is the experimental assay and/or model system based on brain diseases or neurotrauma?

*Mark only one oval.*

- ◯ Yes
- ◯ No

23. Brain Region: Click on the link below and refer to the Allen Brain Atlas to enter the full name and acronym in parentheses for the brain region reported.
https://mouse.brain-map.org/experiment/thumbnails/100048576?image_type=atlas

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## EXPERIMENTAL VALIDATION METHODS INFO

24. Activator A or Effector E Activation Method

*Mark only one oval.*

- ◯ Extrinsic application of A or agonist activation of E (In vivo, in vitro pharmacology)
- ◯ Electrical stimulation of source cell types
- ◯ Transgenetic overexpression/suppression of A or E
- ◯ Other
- ◯ Not reported

25. List experimental method(s) used for **Target Expression** Validation (e.g., Immunocytochemistry etc.; N/A if not present)

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26. List experimental method(s) used to characterize **pleiotropic signaling/function changes** in Target, T (e.g., receptor binding assay, voltage-clamp electrophysiology, etc.; N/A if none)

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27. List experimental method(s) used to characterize **neurophysiological changes** ( Ca2+ recording, Patch-clamp electrophysiology, Extracellular recording etc.; N/A if none)

_____

## FUNCTIONAL EFFECTS

Select the type of functional effects observed on the TARGET protein/signaling molecule. Also select any effects on neurophysiology functions.

28. Functional Effect Type(s)

*Check all that apply.*

|  | Increase | Decrease | No Effect | Not Tested |
|---|---|---|---|---|
| **Neurophysiology - Intrinsic Plasticity (e.g., increase in membrane currents or action potential firing)** | ☐ | ☐ | ☐ | ☐ |
| **Neurophysiology - Structural Plasticity (e.g., Dendritic Remodeling)** | ☐ | ☐ | ☐ | ☐ |
| **Neurophysiology - Synaptic Plasticity** | ☐ | ☐ | ☐ | ☐ |
| **Neurophysiology - Neuroprotection** | ☐ | ☐ | ☐ | ☐ |
| **Neurophysiology - Neurotoxicity** | ☐ | ☐ | ☐ | ☐ |

29. **THIS PRA DOES NOT FIT INCLUSION CRITERIA BECAUSE....**

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Supplementary Material 1 for Vanugopal S (2023) Teaching Scientific Literature Analysis: A Systematic Adoption of Skill-Building Methods to Enrich Research Training for Undergraduate Students. J Undergrad Neurosci Educ 22(1):A74-A81.