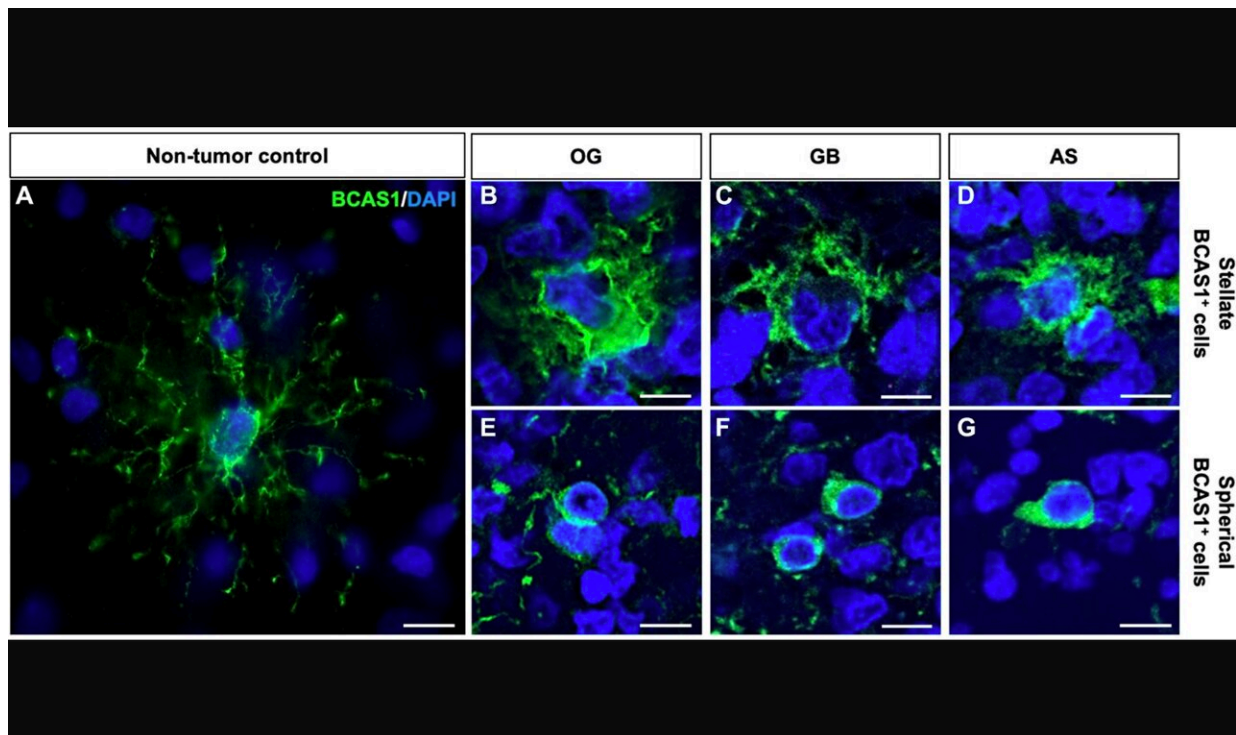


BCAS1 defines a heterogeneous cell population in diffuse glioma patients

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BCAS1⁺ cells in diffuse gliomas are morphologically different from BCAS1⁺ cells in healthy brain tissue. Credit: *Oncotarget* (2024). DOI: 10.18632/oncotarget.28553

A new research paper titled "BCAS1 defines a heterogeneous cell population in diffuse gliomas" has been [published](#) in *Oncotarget*.

Oligodendrocyte precursor markers have become of great interest to identify new diagnostic and therapeutic targets for diffuse gliomas, since state-of-the-art studies point towards immature oligodendrocytes as a possible source of gliomagenesis. Brain-enriched myelin-associated protein 1 (BCAS1) is a novel marker of immature oligodendrocytes and was proposed to contribute to tumorigenesis in non-central nervous system tumors. However, the role of BCAS1 in diffuse [glioma](#) is still underexplored.

In this new study, researchers from the University of Valencia-CIBERNED, Mayo Clinic, Hospital Universitari i Politècnic La Fe, University of Pablo de Olavide, and University of Seville-CSIC analyzed the expression of BCAS1 in different tumor samples from patients with diffuse gliomas (17 oligodendrogliomas; 8 astrocytomas; 60 glioblastomas) and uncovered the molecular and ultrastructural features of BCAS1⁺ cells by immunostaining and [electron microscopy](#).

The researchers state, "Our results show that BCAS1⁺ cells exhibit stellate or spherical morphology with similar ultrastructural features."

Stellate and spherical cells were detected as isolated cells in all studied gliomas. Nevertheless, only [stellate cells](#) were found to be proliferative and formed tightly packed nodules with a highly proliferative rate in oligodendrogliomas. Their findings provide a comprehensive characterization of the BCAS1⁺ cell population within diffuse gliomas. The observed proliferative capacity and distribution of BCAS1⁺ stellate cells—particularly in oligodendrogliomas—highlight BCAS1 as an interesting marker, warranting further investigation into its role in tumor malignancy.

"In [conclusion](#), this insight will shed light on the establishment of BCAS1 as a clinically relevant molecule, serving not only as a diagnostic or prognostic marker but also as a novel therapeutic target for the

development of cutting-edge treatments," the researchers write.

More information: Raquel Morales-Gallel et al, BCAS1 defines a heterogeneous cell population in diffuse gliomas, *Oncotarget* (2024).
[DOI: 10.18632/oncotarget.28553](https://doi.org/10.18632/oncotarget.28553)

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