

GO 'volcano' – anaplastic astrocytomas

–log₁₀ adjusted p-value

1.5

1.0

morphogenesis

blast activation

ptum development

negative regulation of monoatomic ion transmembrane transport

negative regulation of monoatomic ion transport

negative regulation of hydrolase activity

negative regulation of transporter activity

negative regulation of ion transmembrane transporter activity

collagen fibril organization

collagen metabolic process

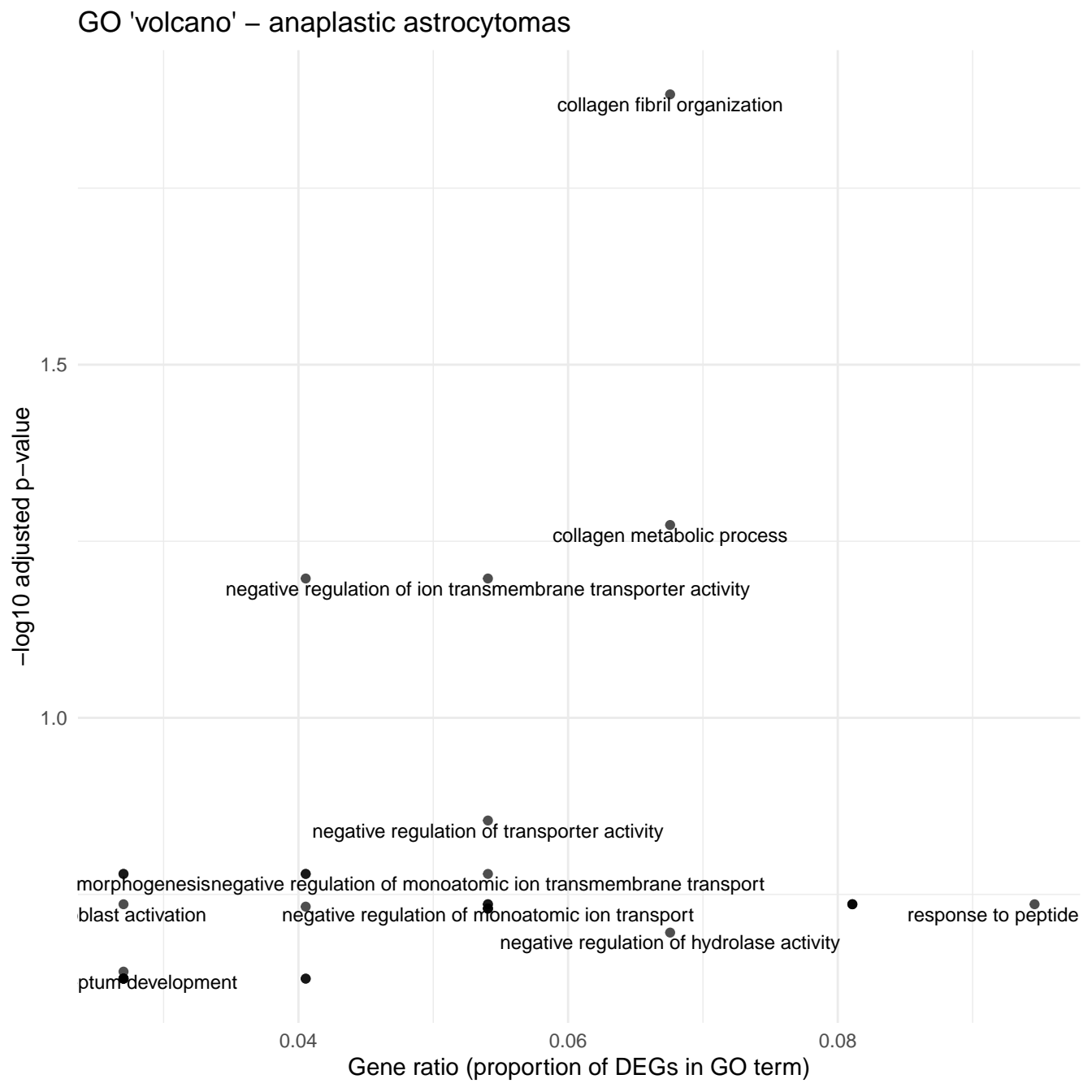
response to peptide

0.04

0.06

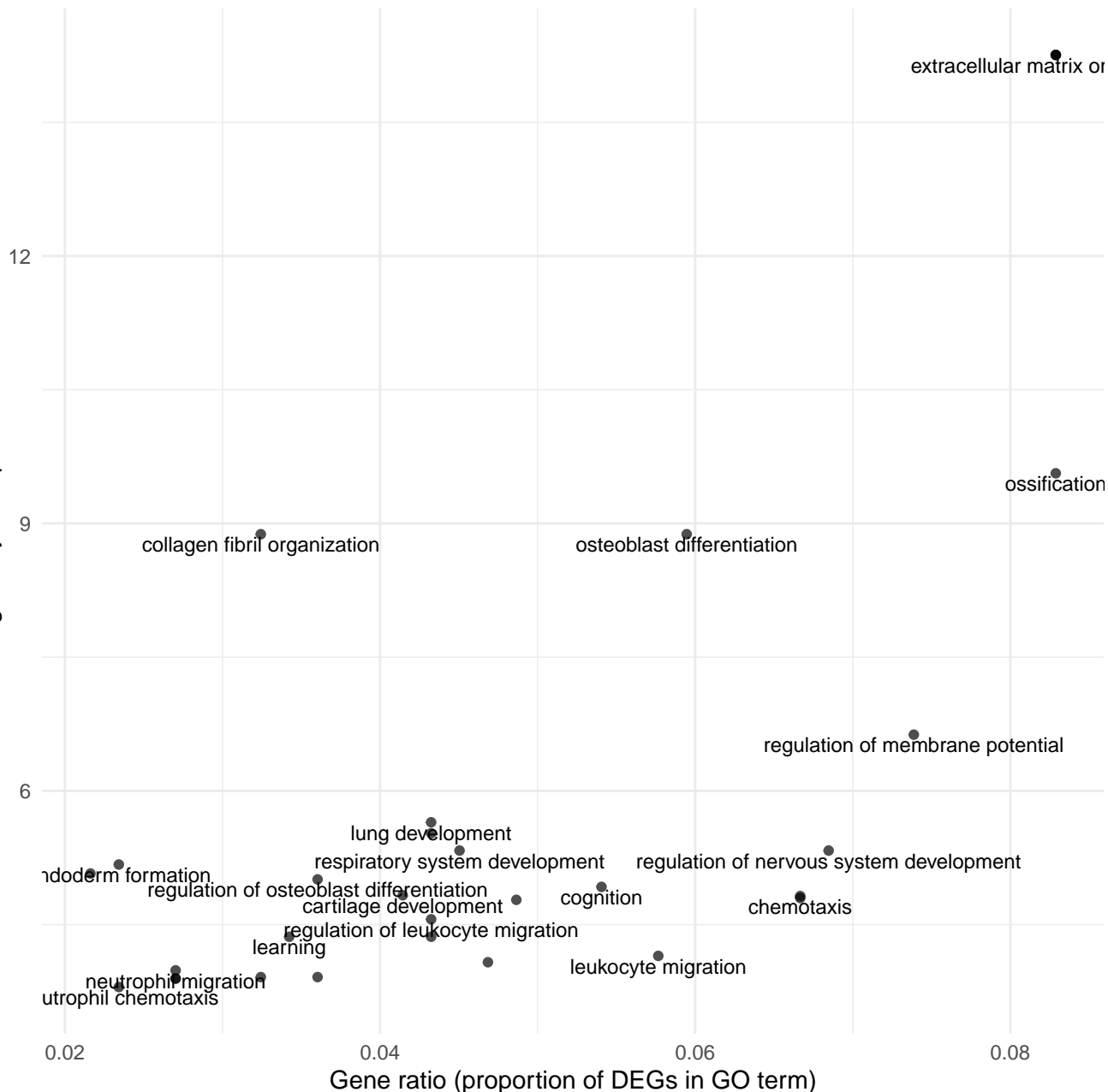
0.08

Gene ratio (proportion of DEGs in GO term)

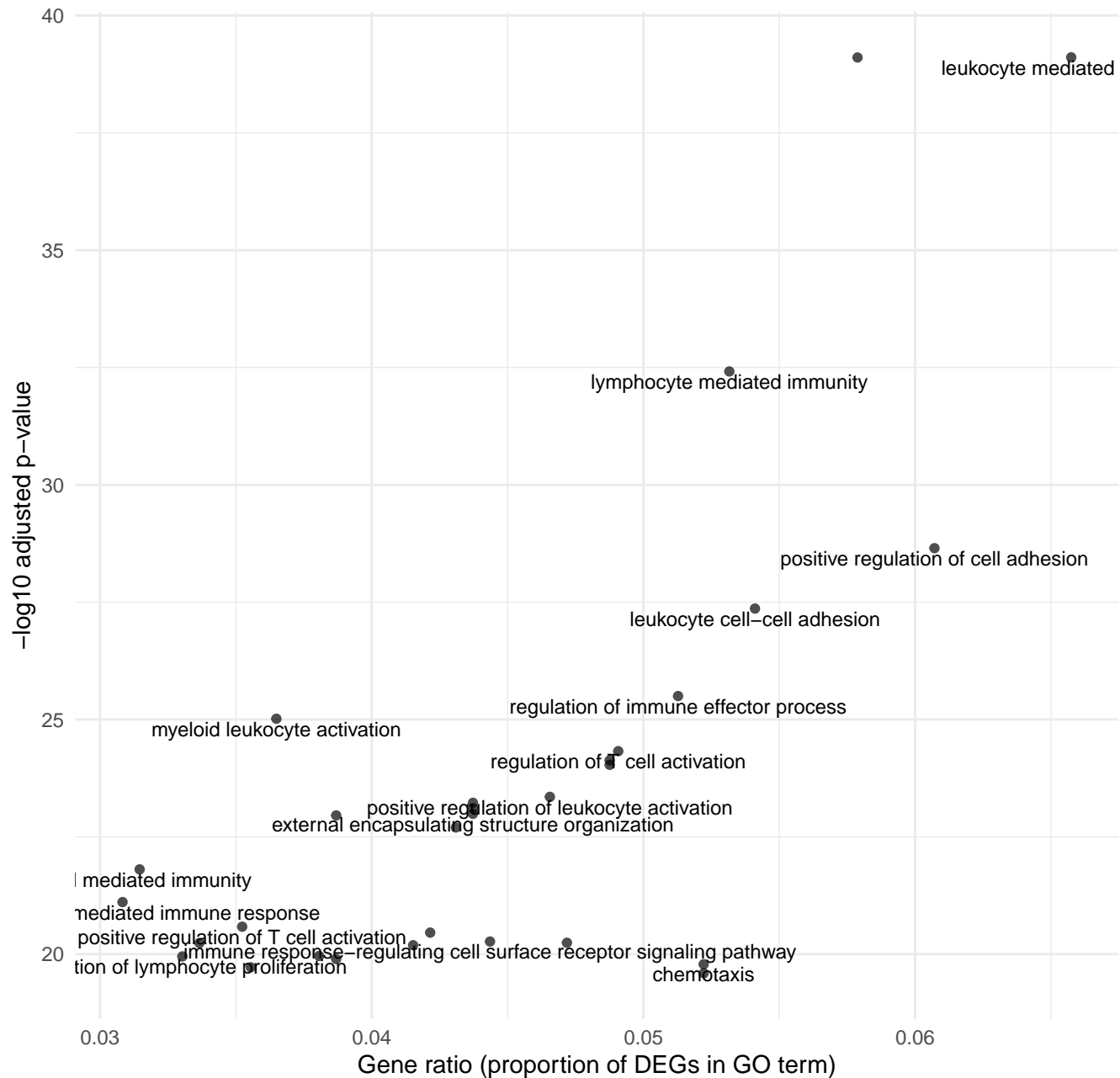


GO 'volcano' – anaplastic oligodendroastrocytomas

–log₁₀ adjusted p-value



GO 'volcano' – anaplastic oligodendrogliomas



GO 'volcano' – astrocytomas

–log₁₀ adjusted p-value

25

20

15

10

Gene ratio (proportion of DEGs in GO term)

0.02

0.03

0.04

0.05

extracellular matrix organization

chemotaxis

leukocyte migration

regulation of angiogenesis

ossification

leukocyte mediated immun

wound healing

cell chemotaxis

embryonic organ development

signal release

pattern specification process

positive regulation of inflammatory response

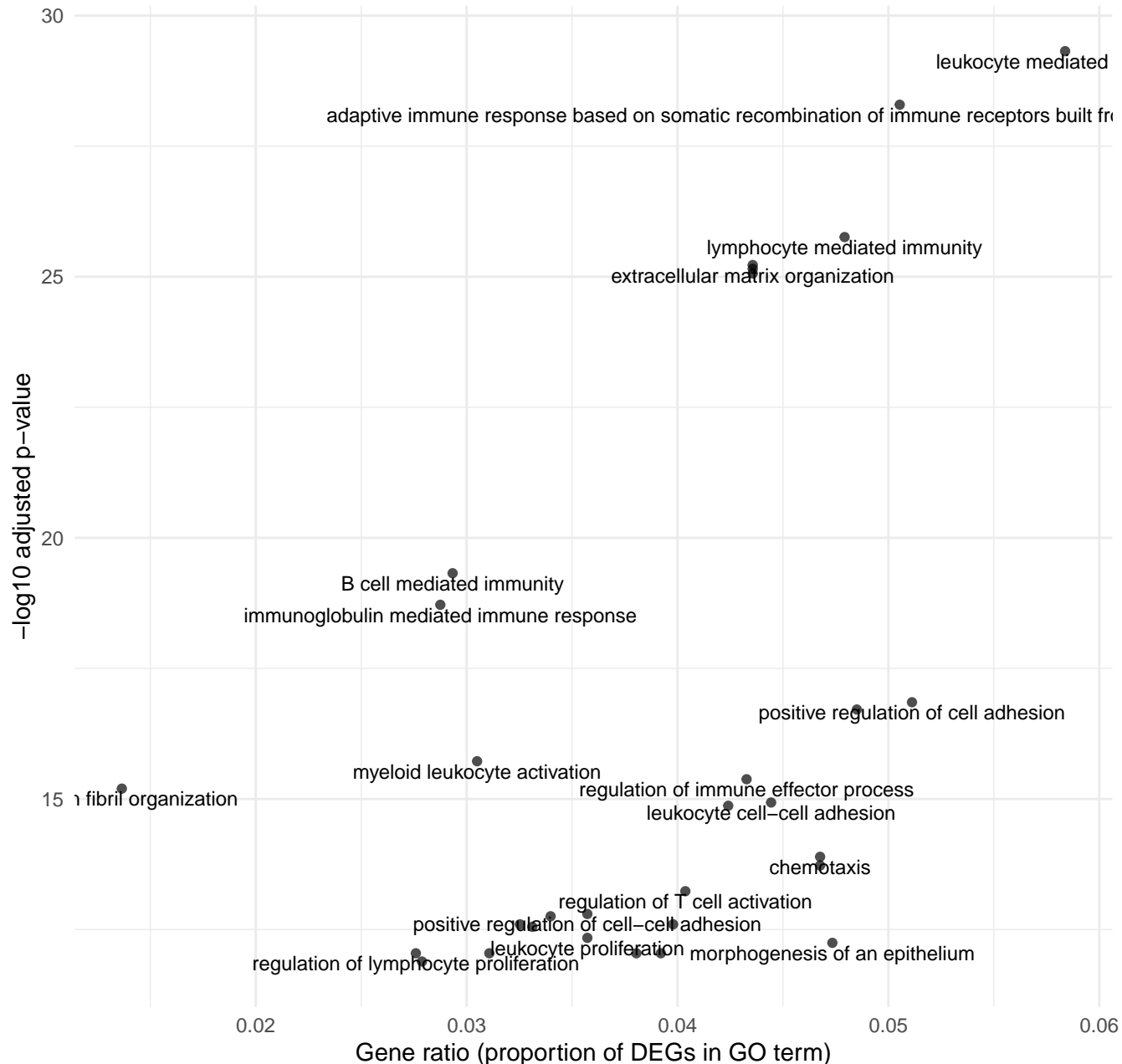
ERK1 and ERK2 cascade

granulocyte chemotaxis

granulocyte migration

adaptive immune response based on somatic recombination of immune receptors built from imm

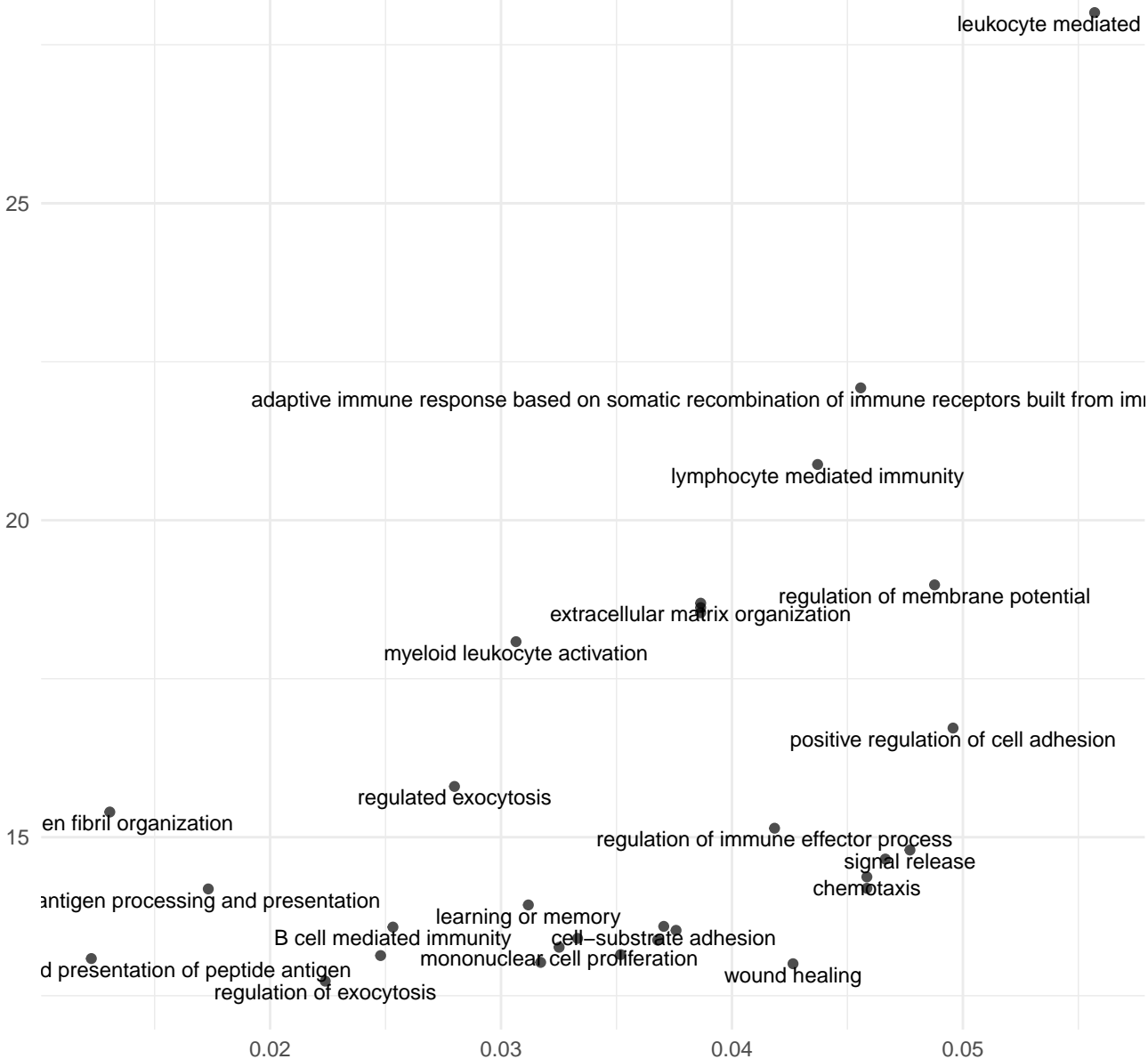
GO 'volcano' – oligodendroastrocytomas



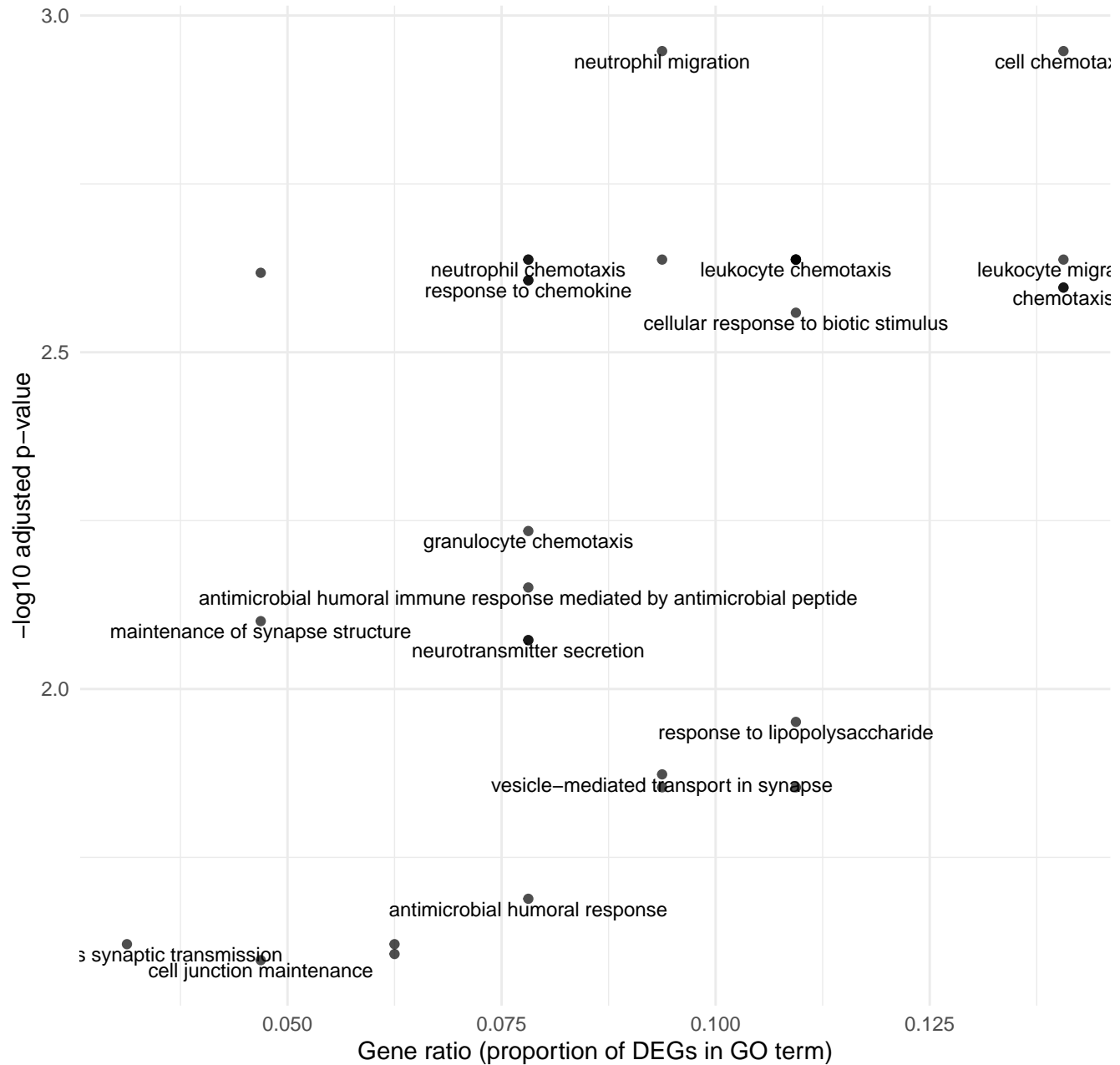
GO 'volcano' – oligodendrogliomas

-log₁₀ adjusted p-value

Gene ratio (proportion of DEGs in GO term)



GO 'volcano' – recurrent anaplastic astrocytomas



GO 'volcano' – recurrent anaplastic oligodendroastrocytomas

–log₁₀ adjusted p-value

24

20

16

extracellular matrix organization

leukocyte mediated

adaptive immune response based on somatic recombination of immune receptors built from

leukocyte migration

taxis

regulation of immune effector process

negative regulation of cell adhesion

leukocyte cell–cell adhesion

granulocyte migration

leukocyte chemotaxis

antigen processing and presentation

regulation of leukocyte migration

mononuclear cell proliferation

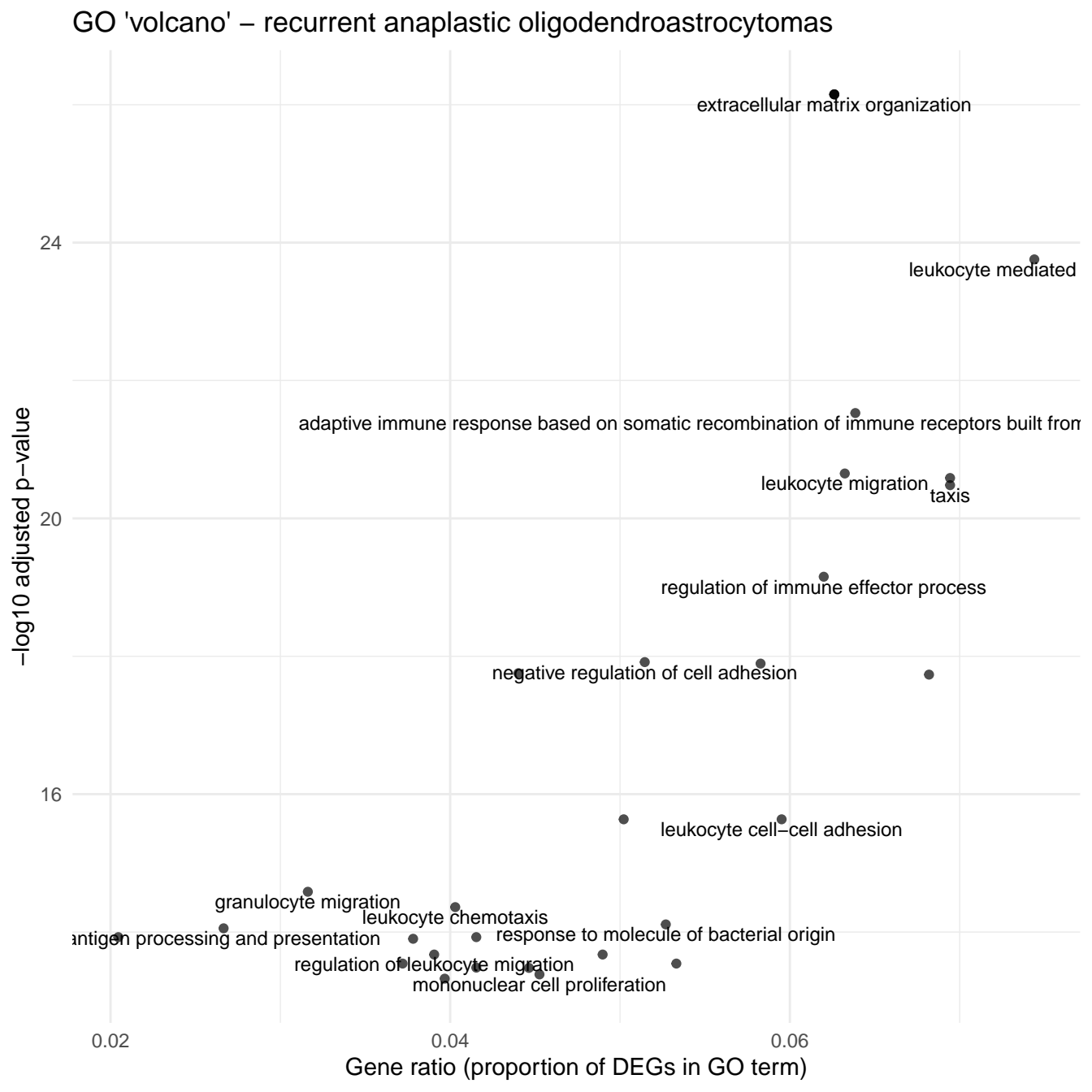
response to molecule of bacterial origin

0.02

0.04

0.06

Gene ratio (proportion of DEGs in GO term)



GO 'volcano' – recurrent anaplastic oligodendrogliomas

–log₁₀ adjusted p-value

10

5

regulation of flagellated sperm motility
biosynthetic process
lipid biosynthetic process

0.05

0.10

0.15

0.20

Gene ratio (proportion of DEGs in GO term)

antibacterial humoral response

antimicrobial humoral response

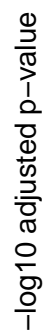
defense response to bacterium

detection of chemical stimulus involved in sensory perception of smell

detection of chemical stimulus involved in sensory perception of smell

detection of chemical stimulus involved in sensory perception of smell

GO 'volcano' – recurrent astrocytomas



extracellular matrix orga

collagen fibril organization

ossification

cell-substrate adhesion

osteoblast differentiation

positive regulation of phosphatidylinositol 3-kinase/protein kinase B signal transduction

nal cell differentiation

positive regulation of MAPK cascade

- morphogenesis of an epithelium

	Health	Social	Economic	Environmental	Cultural
Health	●				
Social		●			
Economic			●		
Environmental				●	
Cultural					●

- regulation of angiogenesis

ndoderm development
grin-mediated signaling pathway

response to hypoxi

Gene ratio (proportion of DEGs in GO term)

GO 'volcano' – recurrent Glioblastomas

–log₁₀ adjusted p-value

–phase response

positive regulation of angiogenesis

0.050

0.075

0.100

0.125

0.150

Gene ratio (proportion of DEGs in GO term)

chemokine-mediated signaling pathway

5

4

3

2

antimicrobial humoral immune response mediated by antimicrobial peptide

cell chemotaxis

killing of cells of another organism

neutrophil migration

antimicrobial humoral response

chemotaxis

humoral immune response

leukocyte chemotaxis

cellular response to biotic stimulus

leukocyte migration

response to lipopolysaccharide

response to molecule of bacterial origin

GO 'volcano' – recurrent oligodendroastrocytomas

–log₁₀ adjusted p-value

0.02

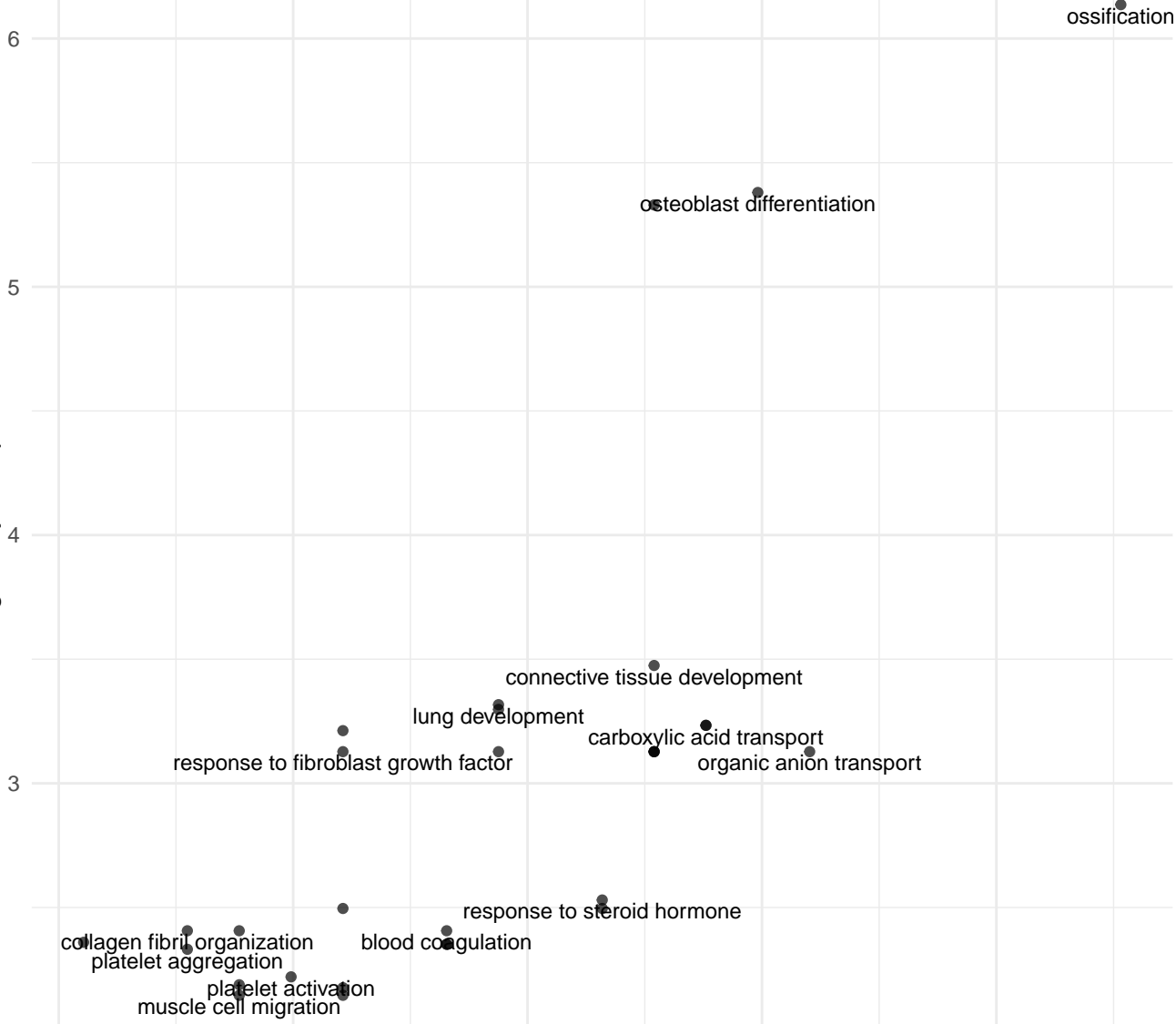
0.04

0.06

0.08

0.10

Gene ratio (proportion of DEGs in GO term)



GO 'volcano' – secondary Glioblastomas

–log₁₀ adjusted p-value

