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Correction: ADAPT-3D:accelerated deep adaptable processing of tissue for 3-dimensional fluorescence tissue imaging for research and clinical settings

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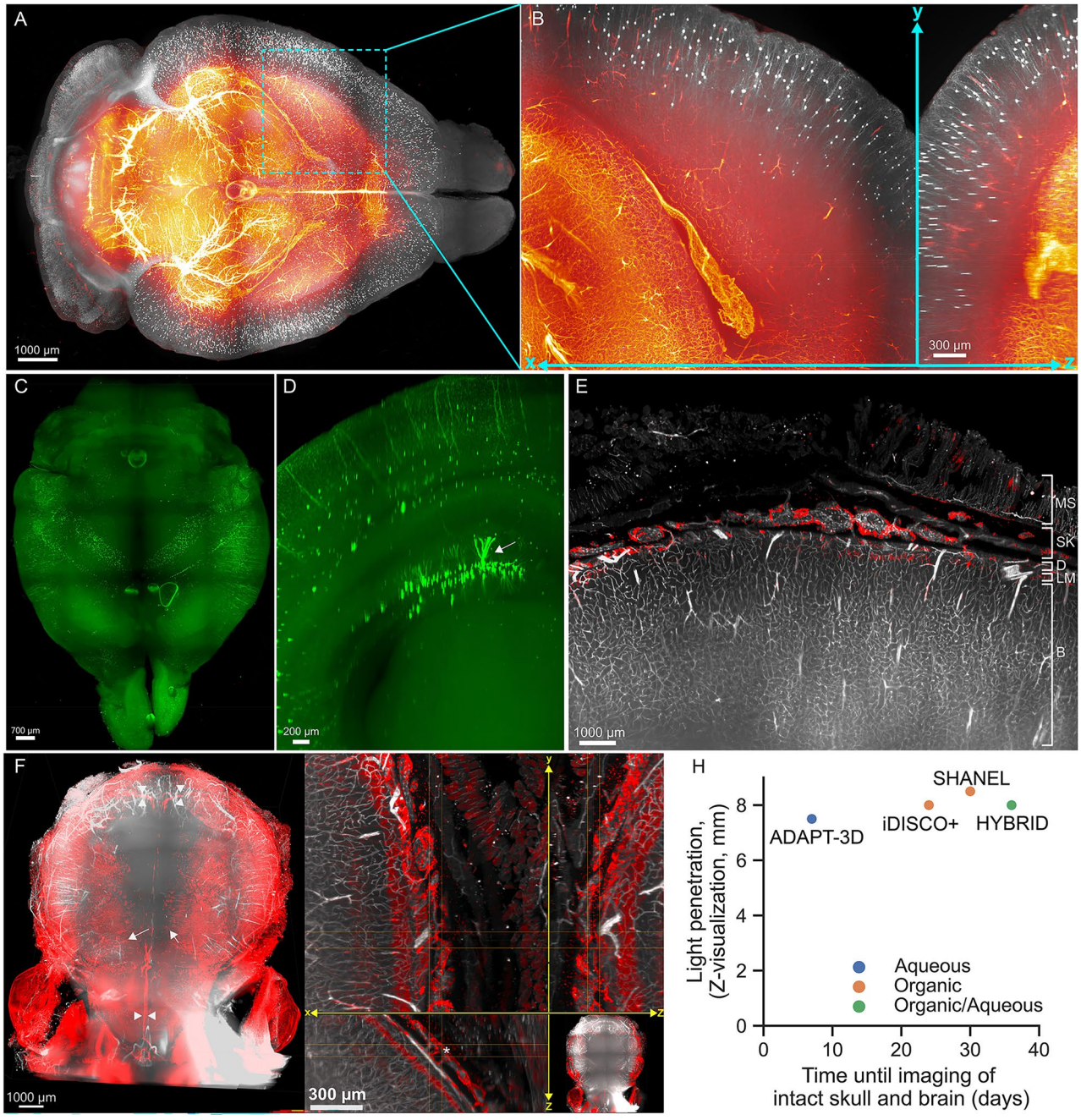
The original version of this Article contained an error in the order of the Figures. Figures 1 and 3 were published as Figure 3 and 1. As a result, the Figure legends were incorrect.

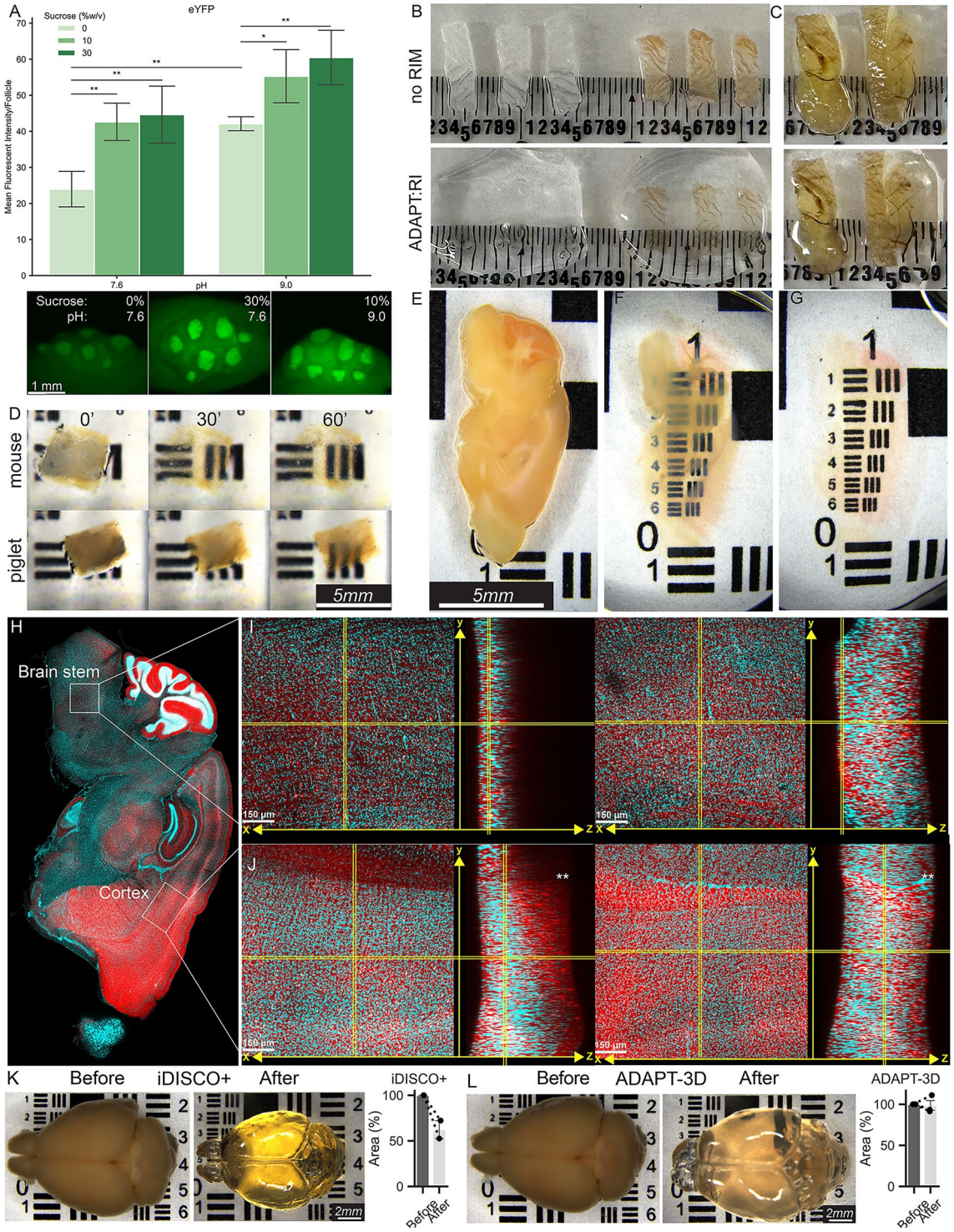
The original Figures 1 and 3 and accompanying legends appear below.

Also, the Supplementary Material 2 in the original article was incomplete. This has been replaced.

The original Article has been corrected.


A
1000 µm
B
y
x
z
300 µm
C
700 µm
D
200 µm
E
MS
SK
D
LM
B
1000 µm
F
1000 µm
y
x
z
*
300 µm
H
SHANEL
iDISCO+
HYBRID
ADAPT-3D
Light penetration, (Z-visualization, mm)
0
2
4
6
8
Aqueous
Organic
Organic/Aqueous
0
10
20
30
40
Time until imaging of intact skull and brain (days)

◀**Fig. 1**. ADAPT-3D tissue processing and refractive index matching render tissues optically transparent without shrinkage. (**A**) Comparison of fluorescent intensities of CD11c-eYFP follicles in Peyer's patches of mouse ileum following different fixative conditions and captured by stereomicroscopy. Indicated are averages ± 1 standard error of mean (n = 4–5 follicles per condition, two-way ANOVA followed by Tukey test, *p-value ≤ 0.05, **p-value ≤ 0.01), average). (**B**) Luminal side of fixed 600 µm thick mouse colons decolorized overnight (left) or left unprocessed (right) shown before (top) and after (bottom) a 60-minute incubation in ADAPT:RI. (**C**) Full thickness [1.5–2 mm] cross sections of fixed human colon untreated (top) or incubated in ADAPT:RI for 10 min (bottom) without decolorization or delipidation. (**D**) Fixed mouse and piglet colon incubated for 60 min in ADAPT:DC, 60 min in ADAPT:PDL (left) and then incubated in ADAPT:RI for 30–60 min. (**E**) Fixed 1-mm brain slice from a $LysM^{Cre}$;$tdTomato^{fl/fl}$ mouse before ADAPT-3D processing. (**F**) The same section after 6 h of ADAPT: DC followed by 5 h of ADAPT:RI but without delipidation or (**G**) another section treated the same except for the addition of a 3-hour incubation in ADAPT:PDL before viewing immersed in ADAPT:RI. (**H**) Tiled confocal image of a single plane from a 1 mm section with a $LysM^{Cre}$;$tdTomato^{fl/fl}$ reporter (red) and nuclei stained with anti-histone antibody (cyan). (**I**) Confocal acquired fluorescent z-stacks of the brain stem and (**J**) cerebral cortex from the 1 mm section shown in F without ADAPT:PDL treatment (left) or from the 1 mm section shown in G with 3 h of ADAPT:PDL treatment (right). (**K**) Before and after top-down stereoscope image of fixed whole mouse brain and corresponding quantification of the brain area for duplicate samples following the iDISCO + method including 4 h of RIM in ethyl cinnamate or (**L**) following ADAPT-3D tissue processing consisting of 48 h ADAPT:DC, 36 h ADAPT:PDL, and 4 h ADAPT:RI. Dashed lines on graph in K and L link paired samples before and after. ** in J indicates the location of the corpus callosum.


A
eYFP
Sucrose (%w/v)
0
10
30
Mean Fluorescent Intensity/Follicle
pH
7.6
9.0
Sucrose: 0%
pH: 7.6
30%
7.6
10%
9.0
1 mm
B
no RIM
ADAPT:RI
C
D
0'
30'
60'
mouse
piglet
5mm
E
F
G
5mm
H
Brain stem
Cortex
I
J
150 µm
K
Before
iDISCO+
After
2mm
iDISCO+
Area (%)
Before
After
L
Before
ADAPT-3D
After
2mm
ADAPT-3D
Area (%)
Before
After

◀**Fig. 3**. Light sheet imaging of the whole mouse brain and of connections at the skull-brain interface visualized using endogenous fluorophores preserved by ADAPT-3D. (**A**) 3D whole-mount projection of the brain from a $ChAT^{Cre}$;$tdTomato^{fl/fl}$ mouse (white) injected retro-orbitally with Lectin-Dylight649 to label vasculature (fire) acquired by light sheet microscopy. (**B**) Extended display near lateral ventricle from (**A**) displaying blood vessels in the core of the brain and preservation of fine neuron dendrites in the cortex. (**C**) 3D whole-mount projection of a brain from a 16-week old mouse expressing CD11c-eYFP which was decolorized, delipidated, and incubated in ADAPT:RI followed by imaging with light sheet microscopy. (**D**) 500-micron coronal maximum intensity projection from whole brain of CD11c-eYFP where white arrow points to a CD11c-positive neuron. (**E**) A 50-micron x-y maximum intensity projection of the brain borders from a light sheet image of the whole skull from a $Lyve1^{CreER}$;$tdTomato^{fl/fl}$ (red) mouse injected i.v. with Lectin-Dylight649 and CD31-AF647 to label blood vessels (white). The layers of the brain borders are annotated with the following abbreviations: muscle [MS], skull [SK], dura mater [D], leptomeninges [LM], and brain parenchyma [B]. (**F**) Dorsal view of the light sheet imaging volume acquired from the whole skull in E where arrowheads point to dural lymphatics and full arrows point to meningeal macrophages. (**G**) Extended display of Lyve1 positive skull channels where the asterisk denotes consecutive skull channels bridging the skull bone marrow and meninges. (**H**) A graphical depiction of the relationship between the depth of light penetration in light sheet images of intact mouse skulls and the corresponding tissue preparation times reported for the different clearing protocols in the literature including the 8-day time frame determined here for ADAPT-3D.

Supplementary Information The online version contains supplementary material available at https://doi.org/10.1038/s41598-025-19773-2.