Role of Threonines in the *Arabidopsis thaliana* Somatic Embryogenesis Receptor Kinase 1 Activation Loop in Phosphorylation*

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**Figure 4.**
Green arrows: sharp vertical lines suggestive of splicing.
Red boxes: In Figure 4B, lanes 1 and 2 look unexpectedly similar to lanes 5 and 6, albeit shown at a different magnification.
Concern about Figure 3: Cyan boxes: Panels a (AtSERK1-YFP) and d (EGFRex-AtSERK1kin-YFP) appear to be showing the same specimens, albeit rotated 180 degrees and with slightly different green/red ratios. These photos are not completely identical but perhaps are two photos taken from the same specimen at different time points. Yet, the two panels are presented as different constructs.
Green boxes: Figure 4a (protoplasts transfected with LZ and the series of LRR truncated constructs AtSERK1deltaLZ-YFP) and Figure 7a (protoplast cotransfected with AtSERK1-YFP/CFP) appear to be showing the same photos. It appears that these photos represent different constructs. They are labeled differently but not sure if this duplication is appropriate or not.
Real-time imaging of TRAIL-induced apoptosis of glioma tumors in vivo

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Green boxes: The top two panels overlap, but represent different constructs.
Yellow boxes: The bottom two panels overlap, but represent different constructs.
In Vivo Imaging of HIV Protease Activity in Amplicon Vector-transduced Gliomas

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Green boxes: The right panel in 2004’s Figure 2A (right) overlaps with both top panels in Figure 1b in the 2003 paper (left), but appears to be representing a different experiment (firefly luciferase – luciferin in 2003 vs. HIV protease in 2004).
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Pink boxes: The green panel in 2004 Figure 2A (right) is identical to Figure 3b in the 2003 paper (left), but appears to be representing a different experiment (firefly luciferase – luciferin in 2003 vs. HIV protease in 2004).
Red boxes:
The non-infected panel in Figure 3A looks identical to the HSV-1PR infected panel in Figure 6B.
Orange boxes:
Three panels in the bottom row of Figure 4A look identical if the image brightness is adjusted to bring out the background. The bottom right image has been rotated 180 degrees.
Figure 6.
Red and blue boxes: Both higher-magnification panels B and D match lower-magnification panel A, even though they represent different cells from differently transduced mice.
Subcellular Localization and Oligomerization of the Arabidopsis thaliana Somatic Embryogenesis Receptor Kinase 1 Protein

Khalid Shah, Theodorus W. J. Gadella Jr, Harrie van Erp, Valérie Hecht and Sacco C. de Vries*

Pink boxes: Figure 1A of the 2008 paper shows the same panel as Figure 3d (or 3a) of the 2001 paper. It is not clear if these represent the same construct or experiment. Perhaps this is an appropriate duplication.
In Figure 1B, the Stem cells / Fluc-DsRed2 and Rluc-DsRed2 panels appear to overlap. These are presented as different constructs in Figure 1A.
Figure 4: Pink boxes: Panels F (Day 4) and H (Day 6) look remarkably similar. It is unlikely that the mouse was put in the exact same position two days later. The bioluminescence signals are different.
Figure 6d. Green boxes: Two panels representing different animal groups and time points look more similar than expected, albeit stretched and cropped differently.
Supplemental Figure 5. Red boxes: Two beta-gal panels representing different animal groups look identical.
Boxes of the same color highlight bands that appear to have been used in both papers, suggesting that lanes were copy/pasted. In both papers, the p-PERK lanes that look duplicated represent the Vehicle, so these might be the same experiments, but the GAPDH lanes do not represent the same experiments.

Part of these issues have been raised on PubPeer by 'Peer 1' on July 2016.
Pink boxes: Panels in Figure 2e (Fluc) and Suppl Figure 6 (S-TRAIL) look unexpectedly similar, while the labels suggest these are different experiments.
Cyan boxes: The UW429+hMSC-GFP panel in Figure 2d looks remarkably similar to the hMSC-S-TRAIL panel in Figure 2e, albeit stretched differently.

Figure 2. UW426 MB cells are sensitive to stem cell-delivered
Green arrow: The tubulin blot appears to have a differential splice, i.e., a splice not visible in the corresponding position in the cleaved PARP blot.
Purple boxes: Two panels in Figures 1J and 3E, respectively, look the same but appear to be representing different co-cultures.

Figure 1J: 'Photomicrographs showing cocultured hNSC (I) and mNSC (J) expressing ENb2 (green) and LN229 GBM cells (red)'

Figure 3E: 'FLuc-mCherry expressing GBM cells (LN229, U87, and Gli36) cocultured with mouse NSC expressing GFP (control), ENb2, or ENb2-TRAIL'
Blue boxes: Panels C and I in Figure 4 overlap, albeit with different aspect ratios, but appear to be representing different co-cultures.

'(C–E) Photomicrographs show presence of NSC (green) within U87-mCherry-Fluc tumors (Red).'</p>

'(F–K) Photomicrographs of H&E stained and fluorescence microscopy analyzed sections of the brain of GBM-bearing mice treated with NSC-GFP (F and I)'

Fig. 4. In vivo efficacy of Enb2 and Enb2-TRAIL secreting NSC on GBM volumes. (A) Tumor volumes measured by FLuc bioluminescence imaging signal intensity of nude mice bearing U87-mCherry-Fluc intracranial tumors and injected with Cetuximab (1 mg per mouse d−1) or vehicle daily for 1 wk. (B) Tumor volumes of nude mice bearing established intracranial U87-mCherry-Fluc tumors treated with NSC expressing GFP, Enb2, or Enb2-TRAIL. (C–E) Photomicrographs show presence of NSC (green) within U87-mCherry-Fluc tumors (Red). (F–K) Photomicrographs of H&E stained and fluorescence microscopy analyzed sections of the brain of GBM-bearing mice treated with NSC-GFP (F and I), NSC-Enb2 (G and J), and NSC-Enb2-TRAIL (H and K) showing the changes in tumor volumes and mCherry+ tumor cells. (L–O) Photomicrographs (L–N) and plot (O) showing the extent of cleaved caspase-3 staining (blue) in brain sections of NSC-GFP (L), NSC-Enb2 (M), and NSC-Enb2-TRAIL (N) treated mice. Plot shows the number of cleaved caspase-3 cells in different treatment groups (O). (Original magnification: 20x). (P) Kaplan–Meier survival curves of mice bearing established tumors and implanted with NSC expressing GFP, Enb2, or Enb2-TRAIL intratumorally (n = 5 per group). For A and B, data were represented as mean ± SEM, and * denotes P < 0.05, Student’s t test. For P, * denotes P < 0.05 as compared Enb2 and control groups, log-rank test.
Figure 5: Cyan boxes highlight an overlap observed between panels H and I, which are labeled differently.
Figure 5A: Red boxes highlight that the Day 0 and Day 4 mice look unexpectedly similar to each other. The bioluminescence signal is slightly different, but positions of gut air bubble and legs look very similar.
Supplemental Figure 2E:
Blue boxes highlight that the Day 3 and Day 4 mice look unexpectedly similar to each other. The bioluminescence signal also looks the same. The scale bar on the right is missing.
Red boxes: Two lanes in the LN229 tubulin blot appear to overlap with two lanes in the U251 tubulin blot. The two lanes represent different time points and cell lines.
Pale-red boxes:
The LN229 tubulin blot in Figure 2a (established glioblastoma cell lines) looks the same as the tubulin blot in Figure 3C (human brain microvascular endothelial cells, HBMVEC).
Supplemental Figure 4.
Pink boxes: The two mouse luminescence photos above the Day 14 bars appear to show the same animal, albeit stretched differently. The top photo shows the two images in more detail. The photos are representing differently treated animals, i.e., GBM4-Fmc vs. GBM40FmC+MSC-GFP, respectively.
ImageTwin found that the +gel panels in Figure 3A look identical to the PBS panels in Figure 3F. The labels suggest these are different experiments. Are they?
The Control (PBS) panels in Figures 4g (GSC23mC implant) and 5d (GSC31 implant) overlap. The experimental schemas in Figures 4d and 5a suggest these are different experiments.
Close up view of the problem noted on the previous slide. Also note that the mCherry signal is different between both figures and that the Merge image in Figure 4g does not match the mCherry red signal.
Supplementary Figure 2:
* Pink boxes: The grey GSC23 1.0 MOI and the GSC64 1.0 MOI panels look unexpectedly identical. The mCherry red panels look different (as expected).
* Cyan and green boxes highlight an expected and appropriate set of identical panels (these are not a problem).
Panels in Figure 4E and 5F of this paper appear to show the same tissue sample, albeit 90 degree rotated and at different magnifications. The labels suggest these are different experiments.
Bio-specific molecule against EGFR and death receptors simultaneously targets proliferation and death pathways in tumors

Yanqi Zhu1,2, Nicole Bassoff1, Clemens Reinshagen1,2,3, Deepak Bhara2,4,5, Michal O. Nowicki1, Sean E. Lawler1, Jérémie Roux1,6 & Khalid Shah1,2,4,5,7

Figure 2C

Purple and yellow boxes highlight blots used in two different papers, representing different cell lines and experiments.
Blue and red boxes highlight figure panels used in two different papers from the same research group, but the different labels suggest these were different experiments.
Figure 1H:
Pink boxes: The photos of the mice at 21 and 24 days look more similar than expected, although the luminescence patterns differ.
Figure 2A and B:
Red boxes: In the bottom row, three of the six panels appear to be showing the same photo, i.e. the one belonging to the EB panel. Image made lighter to bring out the background.
Figure 5C:
Orange boxes: The TRTK and TRTK+GCV panels appear to show the same specimen.
Figure 3:
* Red boxes: one of the Sham Brain MRI photos seems identical to a Day 9 Tumor Brain MRI photo, albeit stretched differently.
* Yellow, pink, and cyan boxes: Three sets of Day 19 and Day 21 MRI photos look unexpectedly similar.
Supplemental Figure 4:
* Green boxes: One of the Gli36d/Scramble panels looks the same as a Gli36d/Anti-miR-21 panel.
Supplemental Figure 1D:
* Pink boxes:
The 005 and Mut3 panels look identical, while they are presented as differently transduced cell lines. In addition, the data in Figure 1F show significantly different measurements.
Red boxes: For both the DR5 and H3 blots, the A172-S and A172-R lanes in Figure 4A look identical to the A172-S gNT-1 and gDR5-1 lanes in Figure 4F.
Figure 6B: The red signals in the MSC-GFP/A172-S and MSC-GFP/A172-R panels look identical. The green signals are different.
Figure 6E: Cyan boxes: The d3/A172-R/GFP and the d7/A172-R/TRAIL panels look identical.
Red boxes highlight a figure panel in the 2022 paper (right) that looks identical to a higher-resolution panel found in a 2010 paper (left) from a different group of researchers, where it represents tissue from a different patient, stained with a different antibody.
Analysis of Death Receptor 5 and Caspase-8 Expression in Primary and Metastatic Head and Neck Squamous Cell Carcinoma and Their Prognostic Impact

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Green boxes highlight a figure panel in the 2022 paper (right) that looks identical to a higher-resolution panel found in a 2010 paper (left) from a different group of researchers, where it represents tissue from a different patient, stained with a different antibody.
microRNA-7 upregulates death receptor 5 and primes resistant brain tumors to caspase-mediated apoptosis

Yellow boxes highlight a panel in Figure 1f in the 2022 paper (right) that looks identical to a higher-resolution panel found in a 2018 paper (left) from the same group of researchers. The different labels suggest that the panels represent different experiments.
Pink boxes highlight a panel in Figure 1f in the 2022 paper (right) that looks identical to a higher-resolution panel found on the website of Fisher Scientific, a vendor selling antibodies. https://www.fishersci.com/shop/products/mouse-rat-butyrylcholinesterase-bche-antibody-r-d-systems/AF9024SP

The different labels (BCHE antibody vs. DR5) suggest that the panels represent different experiments.
A therapeutic cancer vaccine against GL261 murine glioma
Mark S. Kindy1, Jin Yu1, Hong Zhu1, Michael T. Smith1 and Sebastiano Gattoni-Celli1*2

Target receptor identification and subsequent treatment of resected brain tumors with encapsulated and engineered allogeneic stem cells
Deepak Bhara1,2,3, Sung-Hugh Cho1,2, Pim van de Donk1,2, David Hope1,2, Kiki Gertszki1,3, Anina Kunnemann1,3, Jasneet Khali1,2, Esther Revi Lechtich1,2, Clemens Reishagen1,2,2, Victoria Leon1,2, Nabil Nasse1,2, Venkatesh B1, Cheng Feng1,2, Hongbin Li1,2, Yu Shike Zheng4,6, Steven H. Lieber1,2, Neil Vanderz1,2, Waldem Brazil1,2, Pablo Valdes Quevedo5,2, Alexander Goloby1,2, Naima Bours4,6, Anna Pelagino1,2, Ralf Mertens1,2, Brain Fury1,2, Stelios Smirnakis1,2, Alan Loew1,2, Brock Reeves2, Arthur Hilf1,2, E. Antonio Chiocca1,2, Glenn Prestwich1,11,13, Hiroaki Wakisaka1,2,12,13, Gerhard Bauer1,2, & Khalid Shehadi1,2,13,14

Blue boxes highlight a panel in Figure 1f in the 2022 paper (right) that looks identical to a higher-resolution panel found in a 2016 paper (left) from the same group of researchers. The different labels suggest that the panels represent different experiments (e.g., mouse vs. patients).
Orange boxes highlight a panel in Supplemental Figure 2a in the 2022 paper (right) that looks identical to a higher-resolution panel found on the website of a vendor selling stem cells (left).

https://sciencellonline.com/human-bone-marrow-derived-mesenchymal-stem-cells/
Purple boxes highlight a panel in Supplemental Figure 2a in the 2022 paper (right) that looks identical to a higher-resolution panel found on the website of a vendor selling stem cells (left).

https://sciencellonline.com/human-bone-marrow-derived-mesenchymal-stem-cells/
Purple and teal boxes highlight panels in Supplemental Figure 4b in the 2022 paper (right) that look identical to higher-resolution panels found in a 2019 paper (left) from a different group of researchers. Both panels appear to be showing different experiments.
Cyan, orange, red, and blue boxes highlight panels in Supplemental Figure 4b in the 2022 paper (right) that look identical to higher-resolution panels found in a 2016 paper (left) from a different group of researchers. The 2016 paper appears to be showing different experiments than the 2022 paper.
Brown boxes highlight a panel in Supplemental Figure 4b in the 2022 paper (right) that looks identical to higher-resolution panels found in a 2016 paper (left) from a different group of researchers.

Figure 6: Comparison of H&E staining (a) and reconstructed sections of 3D SRXPCT (b) of mice brains.
Comparison of naturally aging and D-galactose induced aging model in beagle dogs

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Green boxes highlight a panel in Supplemental Figure 4b in the 2022 paper (right) that looks identical to a higher-resolution panel found in a 2017 paper (left) from a different group of researchers.
Target receptor identification and subsequent treatment of resected brain tumors with encapsulated and engineered allogeneic stem cells

Deepak Bhersa1,2,11 Sung-Huh Choa1,2,3 Pim van de Donck3, David Hope1,2,3,7, Kiki Gantz3,7, Anna Kunnummall1,7, Jaseet Khalsa5,7, Esther Revi Leichtb1,2, Clemens Reinshagen1,2,7, Victoria Leal1,2,7, Nabil Nissel1,2, Wenyua Lin3,6, Cheng Feng3, Hongbin Li1,7, Yu Shike Zheng4,5, Steven H. Liang5,7, Neel Vasdev5, Waldi Tem Essaye5, Pablo Valdes Quevedo5, Alexandra Golby2, Noima Banour5, Anna Palegina5, Raza Aald3, Brian Foy5,6, Stasios Smirnakis5,6, Alarice Lowe1,2, Brock Reeves3, Arthur Hittera5,7, E. Antonio Chiocca5, Glenn Prestwich11,11, Hiroaki Wakimoto1,2,11, Gerhard Bauer7,9, Khalid Shu8,9,10

Figure 4, detail

Blue boxes highlight a panel in Supplemental Figure 4b in the 2022 paper (right) that looks identical to a higher-resolution panel found in a 2018 paper (left) from a different group of researchers.
Green boxes highlight two panels in Supplemental Figure 5a in the 2022 paper that look identical, even though they appear to show different time points and experimental treatments.
Pink boxes highlight two panels in Figure 3f that appear to show the same animal and luminescence pattern.
Yellow and orange boxes highlight two sets of panels in Figure 5d that appear to show the same animal and luminescence pattern.
Cyan boxes highlight two sets of panels in Figure 2B that appear to show the same photos.
Supplemental Figure 1C:
Orange boxes: Two panel in the GBM18/Week 3 row appear to show the same mouse
Pink boxes: Two panel in the GBM18/Week 5 row appear to show the same mouse