

|         | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|---------|--------|---------|-----------|----------|--------|----------|--------|
| Week 31 |        |         |           |          | 1      | 2        | 3      |
| Week 32 | 4      | 5       | 6         | 7        | 8      | 9        | 10     |
| Week 33 | 11     | 12      | 13        | 14       | 15     | 16       | 17     |
| Week 34 | 18     | 19      | 20        | 21       | 22     | 23       | 24     |
| Week 35 | 25     | 26      | 27        | 28       | 29     | 30       | 31     |

Draft timeline v1

Draft timeline for Tuesday review; bring printed and digital copies.

- PROPOSAL
- ADMIN

|         | Monday | Tuesday  | Wednesday  | Thursday          | Friday       | Saturday | Sunday |
|---------|--------|--|--|-------------------|--------------|----------|--------|
| Week 40 |        |  | 1<br>Data backup...                              | 2<br>Surgical...  | 3<br>+1 more | 4        | 5      |
| Week 41 | 6      | 7  | 8<br>Complete...                                 | 9<br>Calibrate... | 10           | 11       | 12     |
| Week 42 | 13     | 14<br>Laser system ready<br>Confirm laser and optics meet live imaging requirements.   | 15<br>Rever commission and surgery site booking. | 16                | 17           | 18       | 19     |
| Week 43 | 20     | 21<br>Design AAV vectors   | 22<br>Reserve exam...                            | 23                | 24           | 25       | 26     |
| Week 44 | 27     | 28<br>Draft Specific Aims and Research Strategy<br>Write 1-page Specific Aims and 12-page Research Strategy sections for proposal. | 29   | 30                | 31           |          |        |

|         | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|---------|--------|---------|-----------|----------|--------|----------|--------|
| Week 44 |        |         |           |          |        | 1        | 2      |
| Week 45 | 3      | 4       | 5         | 6        | 7      | 8        | 9      |
| Week 46 | 10     | 11      | 12        | 13       | 14     | 15       | 16     |
| Week 47 | 17     | 18      | 19        | 20       | 21     | 22       | 23     |
| Week 48 | 24     | 25      | 26        | 27       | 28     | 29       | 30     |

|         | Monday   | Tuesday  | Wednesday | Thursday | Friday       | Saturday  | Sunday |
|---------|--|--|-----------|----------|--------------|---|--------|
| Week 49 | 1  | 2  | 3         | 4        | 5            | 6   | 7      |
|         | <b>Finalize proposal draft and formatting</b><br>Complete full proposal document (~13 pages) with proper formatting and submit for review. |  |           |          |              |   |        |
| Week 50 | 8  | 9  | 10        | 11       | 12           | 13  | 14     |
|         | <b>Prepare presentation</b><br>Create slide deck and practice oral exam presentation. Aim for two practice runs with lab members.          |  |           |          |              |   |        |
| Week 51 | 15   | 16   | 17        | 18       | 19           | 20  | 21     |
|         |  |  |           |          | Ph<br>Defend | <b>AAV vectors ready</b><br>Receive AAV vectors;<br>ready for injections. |        |
| Week 52 | 22   | 23   | 24        | 25       | 26           | 27  | 28     |
|         |  | <b>Address committee feedback</b><br>Incorporate committee revisions into proposal and submit signed approval form for final approval. |           |          |              |   |        |
| Week 1  | 29   | 30   | 31        |          |              |   |        |

|        | Monday | Tuesday | Wednesday | Thursday       | Friday | Saturday | Sunday |
|--------|--------|---------|-----------|----------------|--------|----------|--------|
| Week 1 |        |         |           | 1              | 2      | 3        | 4      |
|        |        |         |           | Data backup... |        |          |        |
|        |        |         |           | Maintain...    |        |          |        |
|        |        |         |           | +1 more        |        |          |        |
| Week 2 | 5      | 6       | 7         | 8              | 9      | 10       | 11     |
|        |        |         |           |                |        |          |        |
| Week 3 | 12     | 13      | 14        | 15             | 16     | 17       | 18     |
|        |        |         |           |                |        |          |        |
| Week 4 | 19     | 20      | 21        | 22             | 23     | 24       | 25     |
|        |        |         |           |                |        |          |        |
| Week 5 | 26     | 27      | 28        | 29             | 30     | 31       |        |
|        |        |         |           |                |        |          |        |

|        | Monday | Tuesday | Wednesday | Thursday | Friday  | Saturday | Sunday  |
|--------|--------|---------|-----------|----------|---|----------|---|
| Week 5 |        |         |           |          |   |          | 1<br>Cranial window surgeries (3 mice)<br>Install cranial windows             |
| Week 6 | 2      | 3       | 4         | 5        | 6   | 7        | 8<br>and inject AAV in three pilot mice with staggered timing (1 week apart). |
| Week 7 | 9      | 10      | 11        | 12       | 13  | 14       | 15  |
| Week 8 | 16     | 17      | 18        | 19       | 20  | 21       | 22  |
| Week 9 | 23     | 24      | 25        | 26       | 27<br>Post-operative recovery and monitoring<br>Monitor/medicate mice; maintain analgesia schedule. | 28       |   |

|         | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|---------|--------|---------|-----------|----------|--------|----------|--------|
| Week 9  |        |         |           |          |        |          | 1      |
| Week 10 | 2      | 3       | 4         | 5        | 6      | 7        | 8      |
| Week 11 | 9      | 10      | 11        | 12       | 13     | 14       | 15     |
| Week 12 | 16     | 17      | 18        | 19       | 20     | 21       | 22     |
| Week 13 | 23     | 24      | 25        | 26       | 27     | 28       | 29     |
| Week 14 | 30     | 31      |           |          |        |          |        |

**Pilot imaging sessions (3 mice)**  
Acquire in vivo images for all three mice comparing AAV fluorescence vs traditional dye injection methods.



|         | Monday | Tuesday  | Wednesday  | Thursday   | Friday | Saturday | Sunday   |
|---------|--------|--|--|--|--------|----------|--|
| Week 14 |        |  | 1  | 2  | 3      | 4        | 5  |
|         |        |  | <b>Equipment maintenance log - Q3 2026</b><br>Maintain detailed rig log for any alignment changes and communicate modifications to colleagues. |  |        |          |  |
| Week 15 | 6      | 7  | 8  | 9  | 10     | 11       | 12   |
| Week 16 | 13     | 14   | 15   | 16   | 17     | 18       | 19   |
|         |        |  |  | <b>Pilot datasets complete</b><br>Complete 3 pilot twophoton datasets. |        |          | <div>Draft...</div> <div>Configure...</div> <div>+1 more</div> |
| Week 17 | 20     | 21   | 22   | 23   | 24     | 25       | 26   |
|         |        | <b>Process pilot data</b><br>Perform image registration and SNR analysis. Calculate contrast metrics and refine imaging protocols. |  |  |        |          |  |
| Week 18 | 27     | 28   | 29   | 30   |        |          |  |

|         | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|---------|--------|---------|-----------|----------|--------|----------|--------|
| Week 18 |        |         |           |          | 1      | 2        | 3      |
| Week 19 | 4      | 5       | 6         | 7        | 8      | 9        | 10     |
| Week 20 | 11     | 12      | 13        | 14       | 15     | 16       | 17     |
| Week 21 | 18     | 19      | 20        | 21       | 22     | 23       | 24     |
| Week 22 | 25     | 26      | 27        | 28       | 29     | 30       | 31     |

**Design U-Net architecture and training data**  
Design U-Net architecture for vascular segmentation and prepare training datasets from pilot images.

**Configure LSCI for blood flow measurements**  
Configure LSCI for bloodflow measurements.

**Compare labeling methods**  
Systematically compare imaging depth; SNR; and contrast across different labeling methods (AAV vs dye) in vivo.

**Implement and test segmentation pipeline**  
Implement UNet pipeline; test on pilot data.

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|---------|--------|---------|-----------|----------|--------|----------|--------|
| Week 23 | 1      | 2       | 3         | 4        | 5      | 6        | 7      |
| Week 24 | 8      | 9       | 10        | 11       | 12     | 13       | 14     |
| Week 25 | 15     | 16      | 17        | 18       | 19     | 20       | 21     |
| Week 26 | 22     | 23      | 24        | 25       | 26     | 27       | 28     |
| Week 27 | 29     | 30      |           |          |        |          |        |

**Establish stroke protocol**  
Complete training and IACUC approval for stroke induction method (photothrombosis). Ensure all regulatory approvals are in place.

**Induce stroke**  
Induce stroke in cohort to start Aim 3 imaging.

|         | Monday  | Tuesday   | Wednesday   | Thursday | Friday | Saturday        | Sunday    |
|---------|---|---|---|----------|--------|-----------------|-----------|
| Week 27 |   |   | 1   | 2        | 3      | 4               | 5         |
|         |   |   | <b>Equipment maintenance log - Q4 2026</b><br>Maintain detailed rig log for any alignment changes and communicate modifications to colleagues.        |          |        |                 |           |
| Week 28 | 6   | 7   | 8   | 9        | 10     | 11              | 12        |
|         |   |   | <b>Acute-phase imaging</b><br>Conduct two-photon + LSCI imaging sessions in acute phase (0-1 week post-stroke) to capture immediate vascular changes. |          |        |                 |           |
| Week 29 | 13  | 14  | 15  | 16       | 17     | 18              | 19        |
|         |   | <b>Adapt ML pipeline for stroke data</b><br>Adapt machine learning segmentation pipeline for stroke dataset analysis and vascular feature extraction. |   |          |        |                 | Submit... |
|         |   |   |   |          |        | Enhanced AAV... |           |
| Week 30 | 20  | 21  | 22  | 23       | 24     | 25              | 26        |
|         | <b>Transition-phase imaging</b><br>Transition-phase imaging (24 wks). |   |   |          |        |                 |           |
| Week 31 | 27  | 28  | 29  | 30       | 31     |                 |           |

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|---------|--------|---------|-----------|----------|--------|----------|--------|
| Week 31 |        |         |           |          |        | 1        | 2      |
| Week 32 | 3      | 4       | 5         | 6        | 7      | 8        | 9      |
| Week 33 | 10     | 11      | 12        | 13       | 14     | 15       | 16     |
| Week 34 | 17     | 18      | 19        | 20       | 21     | 22       | 23     |
| Week 35 | 24     | 25      | 26        | 27       | 28     | 29       | 30     |
| Week 36 | 31     |         |           |          |        |          |        |

Stabilization-phase imaging

Conduct imaging sessions in early chronic phase (5-8 weeks post-stroke) to observe vascular remodeling processes.

|         | Monday   | Tuesday                 | Wednesday  | Thursday | Friday | Saturday  | Sunday |
|---------|--|-------------------------|--|----------|--------|---|--------|
| Week 36 |  | 1<br>Annual progress... | 2<br>Maintain...   | 3        | 4      | 5   | 6      |
| Week 37 | 7  | 8                       | 9  | 10       | 11     | 12  | 13     |
| Week 38 | 14   | 15                      | 16<br>Extended chronic imaging<br>Extended chronic imaging (~12 wks) | 17       | 18     | 19  | 20     |
| Week 39 | 21<br>Stroke data complete<br>Completion of all planned longitudinal imaging sessions for stroke | 22                      | 23   | 24       | 25     | 26<br>Integrate flow data<br>Integrate LSCI flow with twophoton data. | 27     |
| Week 40 | 28   | 29                      | 30   |          |        |   |        |

|         | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|---------|--------|---------|-----------|----------|--------|----------|--------|
| Week 40 |        |         |           | 1        | 2      | 3        | 4      |
| Week 41 | 5      | 6       | 7         | 8        | 9      | 10       | 11     |
| Week 42 | 12     | 13      | 14        | 15       | 16     | 17       | 18     |
| Week 43 | 19     | 20      | 21        | 22       | 23     | 24       | 25     |
| Week 44 | 26     | 27      | 28        | 29       | 30     | 31       |        |

**Equipment maintenance log - Q1 2027**  
Maintain detailed rig log for any alignment changes and communicate modifications to colleagues.

**Analyze neurovascular coupling**  
Quantify microvascular network changes and neurovascular coupling dynamics from post-stroke imaging data.

|         | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|---------|--------|---------|-----------|----------|--------|----------|--------|
| Week 44 |        |         |           |          |        |          | 1      |
| Week 45 | 2      | 3       | 4         | 5        | 6      | 7        | 8      |
| Week 46 | 9      | 10      | 11        | 12       | 13     | 14       | 15     |
| Week 47 | 16     | 17      | 18        | 19       | 20     | 21       | 22     |
| Week 48 | 23     | 24      | 25        | 26       | 27     | 28       | 29     |
| Week 49 | 30     |         |           |          |        |          |        |



|         | Monday | Tuesday | Wednesday | Thursday        | Friday | Saturday | Sunday |
|---------|--------|---------|-----------|-----------------|--------|----------|--------|
| Week 49 |        | 1       | 2         | 3               | 4      | 5        | 6      |
| Week 50 | 7      | 8       | 9         | 10              | 11     | 12       | 13     |
|         |        |         |           | Prepare...      |        |          |        |
|         |        |         |           | Draft second... |        |          |        |
| Week 51 | 14     | 15      | 16        | 17              | 18     | 19       | 20     |
|         |        |         |           |                 |        | Draft... |        |
|         |        |         |           |                 |        | PhD...   |        |
|         |        |         |           |                 |        | +1 more  |        |
| Week 52 | 21     | 22      | 23        | 24              | 25     | 26       | 27     |
| Week 53 | 28     | 29      | 30        | 31              |        |          |        |

|         | Monday | Tuesday | Wednesday | Thursday | Friday                    | Saturday                 | Sunday |
|---------|--------|---------|-----------|----------|---------------------------|--------------------------|--------|
| Week 53 |        |         |           |          | 1 <div>Apply for...</div> | 2 <div>Maintain...</div> | 3      |
| Week 1  | 4      | 5       | 6         | 7        | 8 <div>+1 more</div>      | 9                        | 10     |
| Week 2  | 11     | 12      | 13        | 14       | 15                        | 16                       | 17     |
| Week 3  | 18     | 19      | 20        | 21       | 22                        | 23                       | 24     |
| Week 4  | 25     | 26      | 27        | 28       | 29                        | 30                       | 31     |

|        | Monday | Tuesday | Wednesday        | Thursday | Friday | Saturday | Sunday |
|--------|--------|---------|------------------|----------|--------|----------|--------|
| Week 5 | 1      | 2       | 3                | 4        | 5      | 6        | 7      |
|        |        |         | Draft Methods... |          |        |          |        |
|        |        |         | Draft...         |          |        |          |        |
| Week 6 | 8      | 9       | 10               | 11       | 12     | 13       | 14     |
|        |        |         |                  |          |        |          |        |
| Week 7 | 15     | 16      | 17               | 18       | 19     | 20       | 21     |
|        |        |         |                  |          |        |          |        |
| Week 8 | 22     | 23      | 24               | 25       | 26     | 27       | 28     |
|        |        |         |                  |          |        |          |        |

|         | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|---------|--------|---------|-----------|----------|--------|----------|--------|
| Week 9  | 1      | 2       | 3         | 4        | 5      | 6        | 7      |
| Week 10 | 8      | 9       | 10        | 11       | 12     | 13       | 14     |
| Week 11 | 15     | 16      | 17        | 18       | 19     | 20       | 21     |
| Week 12 | 22     | 23      | 24        | 25       | 26     | 27       | 28     |
| Week 13 | 29     | 30      | 31        |          |        |          |        |

|         | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|---------|--------|---------|-----------|----------|--------|----------|--------|
| Week 13 |        |         |           | 1        | 2      | 3        | 4      |
| Week 14 | 5      | 6       | 7         | 8        | 9      | 10       | 11     |
| Week 15 | 12     | 13      | 14        | 15       | 16     | 17       | 18     |
| Week 16 | 19     | 20      | 21        | 22       | 23     | 24       | 25     |
| Week 17 | 26     | 27      | 28        | 29       | 30     |          |        |

**Equipment maintenance log - Q3 2027**  
Maintain detailed rig log for any alignment changes and communicate modifications to colleagues.

|         | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|---------|--------|---------|-----------|----------|--------|----------|--------|
| Week 17 |        |         |           |          |        | 1        | 2      |
| Week 18 | 3      | 4       | 5         | 6        | 7      | 8        | 9      |
| Week 19 | 10     | 11      | 12        | 13       | 14     | 15       | 16     |
| Week 20 | 17     | 18      | 19        | 20       | 21     | 22       | 23     |
| Week 21 | 24     | 25      | 26        | 27       | 28     | 29       | 30     |
| Week 22 | 31     |         |           |          |        |          |        |

|         | Monday | Tuesday               | Wednesday        | Thursday | Friday | Saturday  | Sunday |
|---------|--------|-----------------------|------------------|----------|--------|---|--------|
| Week 22 |        | 1<br>Request final... | 2<br>Maintain... | 3        | 4      | 5   | 6      |
| Week 23 | 7      | 8                     | 9                | 10       | 11     | 12  | 13     |
| Week 24 | 14     | 15                    | 16               | 17       | 18     | 19<br>Dissertation draft complete<br>Complete PhD dissertation draft compiled and ready for committee review. | 20     |
| Week 25 | 21     | 22                    | 23               | 24       | 25     | 26  | 27     |
| Week 26 | 28     | 29                    | 30               |          |        |   |        |

|         | Monday | Tuesday | Wednesday   | Thursday   | Friday | Saturday  | Sunday |
|---------|--------|---------|---|--|--------|---|--------|
| Week 26 |        |         |   | 1  | 2      | 3   | 4      |
|         |        |         |   | <b>Equipment maintenance log - Q4 2027</b><br>Maintain detailed rig log for any alignment changes and communicate modifications to colleagues. |        |   |        |
| Week 27 | 5      | 6       | 7   | 8  | 9      | 10  | 11     |
| Week 28 | 12     | 13      | 14  | 15   | 16     | 17  | 18     |
|         |        |         |   |  |        | <b>PhD Defense</b><br>Defend dissertation in oral exam. |        |
| Week 29 | 19     | 20      | 21  | 22   | 23     | 24  | 25     |
|         |        |         | <b>Revise dissertation</b><br>Incorporate committee feedback and revisions after defense. Obtain final approval signatures. |  |        |   |        |
| Week 30 | 26     | 27      | 28  | 29   | 30     | 31  |        |



|         | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|---------|--------|---------|-----------|----------|--------|----------|--------|
| Week 30 |        |         |           |          |        |          | 1      |
| Week 31 | 2      | 3       | 4         | 5        | 6      | 7        | 8      |
| Week 32 | 9      | 10      | 11        | 12       | 13     | 14       | 15     |
| Week 33 | 16     | 17      | 18        | 19       | 20     | 21       | 22     |
| Week 34 | 23     | 24      | 25        | 26       | 27     | 28       | 29     |
| Week 35 | 30     | 31      |           |          |        |          |        |

**Submit dissertation**

Upload approved dissertation PDF and submit all required forms to Graduate School by deadline.