2025 | Q3 | August | July | September

	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

Align seed laser
Achieve 30 mW output in fiber core (pre-pump configuration) for stable laser operation.

● PROPOSAL ● LASER

2025 | Q3 | September

August | October

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 36	1	2	3	4	5	6	7
Week 37	8	9	10	11	12	13	14
Week 38	15	16	17	18	19	20	21
Week 39	22	23	24	25	26	27	28
Week 40	29	30					

Define propos
Identify committee membe
schedule oral exam date.

Align a
Restore amplified out
vious benchmark p

Annual...

Confirm exam date
MILESTONE: Oral exam date scheduled. Must send final proposal to committee 2 weeks prior to exam.

File committee forms
Complete and submit all required committee forms for proposal defense.

Prepare Program of Work
Develop detailed Program of Work

Reserve exam room
Book and confirm exam room

Submit final paperwork
Submit all completed paperwork to graduate office and confirm exam scheduling.

PROPOSAL ADMIN LASER

2025 | Q4 | October — September | November

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 40			1 **Check pulse compression** Verify 200 fs pulse duration and record specifications in equipment log.	2	3	4 **Calibrate microscope** Align imaging system using USAF target for optimal resolution before in vivo experiments.	5
Week 41	6	7 **Laser system ready** MILESTONE: Laser output and imaging optics meet all requirements for live animal imaging.	8	9	10 **Plan imaging cohort** Plan ~3 pilot mice cohort with IACUC protocol confirmation and surgery slot booking.	11	12
Week 42	13	14	15 **Design AAV vectors** Design and order AAV-mScarlet (vascular) and jRGECO1b (neuronal) vectors. Finalize constructs and submit production orders to core facility.	16	17	18	19
Week 43	20 **Complete proposal draft** Write full proposal document (~13 pages) including all aims and research strategy for committee review.	21	22	23	24	25	26
Week 44	27	28	29	30	31		

● PROPOSAL ● ADMIN ● IMAGING ● LASER

	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

2025 | Q4 | December November

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

Send proposal to committee
MILESTONE: Email proposal to committee 2 weeks before exam date (satisfies pre-exam requirement).

AAV vectors ready
MILESTONE: AAV vectors received from core facility. Ready for in vivo animal injections to begin expression studies.

● PROPOSAL ● IMAGING

2026 | Q1 | January February

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 1				1	2	3	4
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	

Prepare presentation
Create slide deck and practice oral exam presentation. Aim for two practice runs with lab members.

● PROPOSAL ● IMAGING

2026 | Q1 | February

January | March

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 5							1 **Cranial window surgery #1** Install cranial window
Week 6	2	3 **Ph** Qualify sertatio with	4	5 **Po** Monitor and medi imaging during r	6 **Address committee feedback** Incorporate committee revisions into proposal and submit signed approval form for final approval.	7	8 timeline for
Week 7	9	10	11	12	13	14	15 **Cranial window surgery #2** Install cranial window
Week 8	16	17	18 **Post-op recovery #2** Monitor and medicate Mouse #2 after surgery. Maintain analgesia schedule during recovery.	19	20	21	22 (staggered one week after #1).
Week 9	23	24 **Cranial window surgery #3** Install cranial window and inject AAV in third pilot mouse (further staggered timing).	25	26	27 **Post-op recovery #3** Monitor and medicate Mouse #3 after surgery. Complete recovery period before imaging.	28	

● PROPOSAL ● IMAGING

2026 | Q1 | March

February | April

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 9							1 **Pilot imaging session #1** Acquire in vivo images for Mouse #1 comparing AAV fluorescence vs traditional dye injection methods.
Week 10	2	3	4 **Pilot imaging session #2** Acquire in vivo images for Mouse #2 under dual-label vs dye conditions for comparison.	5	6	7	8
Week 11	9	10	11	12	13 **Pilot imaging session #3** Acquire in vivo images for Mouse #3. Complete final pilot dataset for Aim 1 validation.	14	15
Week 12	16 **Pilot datasets complete** MILESTONE: Three pilot two-photon imaging datasets acquired for Aim 1 validation and proposal figures.	17	18	19 **Process pilot data** Perform image registration and SNR analysis. Calculate contrast metrics and refine imaging protocols.	20	21	22
Week 13	23	24	25	26	27	28	29
Week 14	30	31					

● IMAGING

2026 | Q2 | April

March | May

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

Draft...

Develop...

Optimize...

+1 more

● IMAGING ● PUBLICATION

2026 | Q2 | May

April | June

	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

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

● IMAGING ● PUBLICATION

2026 | Q2 | June

May | July

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
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
Perform stroke induction surgeries on experimental animal cohort to initiate Aim 3 longitudinal imaging study.

Submit methodology paper
Submit Aim 1 imaging methodology paper to journal for peer review and publication consideration.

Acute-phase imaging
Conduct two-photon + LSCI imaging sessions in acute phase (0-1 week post-stroke) to capture immediate vascular changes.

Refine ML pipeline
Adapt and improve machine learning segmentation pipeline for stroke dataset analysis and vascular feature detection.

● IMAGING ● PUBLICATION

2026 | Q3 | July

June | August

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

Enhanced...

Transition-phas...

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

● IMAGING

2026 | Q3 | August

July | September

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
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						

Extended chronic imaging
Conduct imaging at ~12 weeks post-stroke (if needed) to capture long-term vascular remodeling and recovery patterns.

Stroke data complete
MILESTONE: Completion of all planned longitudinal imaging sessions for stroke study (Aim 3).

● IMAGING

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 36		1	2 Complete y partment	3	4	5	6
Week 37	7	8	9	10	11	12	13
Week 38	14	15	16	17	18	19	20
Week 39	21	22	23	24	25	26	27
Week 40	28	29	30				

Integrate flow data
Combine LSCI blood flow metrics with two-photon structural/functional data for comprehensive vascular analysis.

● ADMIN ● IMAGING

	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	

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

● IMAGING

	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						

Draft second...

Prepare...

● IMAGING ● PUBLICATION

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

PhD Dissertation & Defense
Complete dissertation write-up; final defense; and all graduation requirements by Summer 2027.

Draft Introduction

Submit second...

● DISSERTATION ● PUBLICATION

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 53					1	2	3
Week 1	4	5	6	7	8	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

Draft Aim 1 chapter
Write chapter detailing Aim 1 (AAV imaging) methods; experiments; and results for dissertation.

Draft Aim 2 chapter
Write chapter detailing Aim 2 (dual-color imaging platform) methods and results for dissertation.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 5	1	2	3	4	5	6	7
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

Draft Aim 3 chapter
Write chapter detailing Aim 3 (stroke model imaging study) methods; data; and findings for dissertation.

● DISSERTATION

	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				

Draft Conclusions
Write final dissertation chapter summarizing findings; implications; and future research directions.

	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		

● DISSERTATION

	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						

● DISSERTATION

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

Dissertation draft complete
MILESTONE: Complete PhD dissertation draft compiled and ready for committee review.

● DISSERTATION

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

PhD Defense
Defend PhD dissertation in oral exam with committee (must occur 2 weeks before final submission deadline).

Revise dissertation
Incorporate committee feedback and revisions after defense. Obtain final approval signatures.

	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.

● DISSERTATION