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Project Timeline

PhD Research Calendar

Timeline Period: August 29, 2025 – August 15, 2027

Total Duration: 716 days

Total Tasks: 63 tasks

Months Covered: 25 months

August 2025

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

• timeline v1
• Initial proposa...

• timeline v1
• Initial proposa...

0.1 Task Details for August 2025

- **timeline v1** (08/29 - 08/31)
Create initial project timeline for Tuesday review with Andy. Bring both

printed and digital copies to meeting.

- **Initial proposal skeleton** (08/29 - 08/31)
Develop 1-page Specific Aims and detailed outline following BME format requirements for PhD proposal.
- ◇ **Submit proposal outline** (08/31 - 08/31)
MILESTONE: Send initial proposal draft to advisor for review before Monday deadline.
- **Align seed laser** (08/30 - 09/03)
Achieve $\geq 30\text{mW}$ output in fiber core (pre-pump configuration) for stable laser operation.

September 2025

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
	• Expand	• Define	• Define	• Define	• Define	• Expand
7	• Expand	• Expand	• Expand	• Expand	• Expand	• Expand
8	Align amplifier	Expand proposal	Expand proposal	Expand proposal	Expand proposal	Align amplifier
9	• Expand	• Expand	• Expand	• Expand	• Expand	• Pro-
10	• Expand	• Expand	• Expand	• Expand	• Expand	• Pro-
11	• Expand	• Expand	• Expand	• Expand	• Expand	• Pro-
12	• Expand	• Expand	• Expand	• Expand	• Expand	• Pro-
13	• Expand	• Expand	• Expand	• Expand	• Expand	• Pro-
14	Align amplifier	Align amplifier	Align amplifier	Check com...	Confirm date	exam p...
15	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-
16	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-
17	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-
18	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-
19	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-
20	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-
21	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-
22	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-
23	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-
24	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-
25	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-
26	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-
27	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-
28	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-
29	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-
30	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-	• Pro-
	exam p...	exam p...	exam p...	exam p...	exam p...	exam p...

0.2 Task Details for September 2025

- **Define proposal committee** (09/02 - 09/05)
Identify committee members; confirm availability; and schedule oral exam date. Reserve room for exam.
- **Expand proposal draft** (09/01 - 09/12)

Develop 12-page Research Strategy section from outline following BME proposal guidelines.

- ◇ **Confirm exam date** (09/12 - 09/12)
MILESTONE: Oral exam date scheduled. Must send final proposal to committee ≥ 2 weeks prior to exam.
- **Align seed laser** (08/30 - 09/03)
Achieve ≥ 30 mW output in fiber core (pre-pump configuration) for stable laser operation.
- **Align amplifier** (09/03 - 09/10)
Restore amplified output to ≥ 130 mW (previous benchmark performance level).
- **Check pulse compression** (09/10 - 09/12)
Verify ≤ 200 fs pulse duration and record specifications in equipment log.
- ◇ **Calibrate microscope** (09/12 - 09/12)
Align imaging system using USAF target for optimal resolution before in vivo experiments.
- ◇ **Laser system ready** (09/12 - 09/12)
MILESTONE: Laser output and imaging optics meet all requirements for live animal imaging.
- **Plan imaging cohort** (09/01 - 09/05)
Plan ~3 pilot mice cohort with IACUC protocol confirmation and surgery slot booking.

- **Annual progress review** (09/01 - 09/07)
Complete yearly graduate student progress report (department form) due early September.
- **Proposal exam paperwork** (09/12 - 10/15)
File committee forms; Program of Work; and confirm exam room logistics for proposal defense.

October 2025

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

0.3 Task Details for October 2025

- **Proposal exam paperwork** (09/12 - 10/15)
File committee forms; Program of Work; and confirm exam room logistics for proposal defense.
- **Design AAV vectors** (10/01 - 10/15)
Design and order AAV-mScarlet (vascular) and jRGECO1b (neuronal) vectors. Finalize constructs and submit production orders to core facility.

November 2025

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

0.4 Task Details for November 2025

- **proposal draft** (11/15 - 12/15)
Write full proposal document (~13 pages) including all aims and research strategy for committee review.

December 2025

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1 • proposal draft	2 • proposal draft	3 • proposal draft	4 • proposal draft	5 • proposal draft	6 • proposal draft
7 • proposal draft	8 • proposal draft	9 • proposal draft	10 • proposal draft	11 • proposal draft	12 • proposal draft	13 • proposal draft
14 • proposal draft	15 • proposal draft	16 ◊ Send proposal	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

0.5 Task Details for December 2025

- **proposal draft** (11/15 - 12/15)
Write full proposal document (~13 pages) including all aims and research strategy for committee review.
- ◊ **Send proposal to committee** (12/16 - 12/16)
MILESTONE: Email proposal to committee $\$ \geq \$2weeksbeforeexamdate(satisfiespre-examrequirement)$.

January 2026

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
• Prepare presentation...	• Prepare presentation...	• Prepare presentation...	• Prepare presentation...	• Prepare presentation...	• Prepare presentation...	• Prepare presentation...
11	12	13	14	15	16	17
• Prepare presentation...	• Prepare presentation...	• Prepare presentation...	• Prepare presentation...	◊ AAV vectors ready	• Prepare presentation...	• Prepare presentation...
18	19	20	21	22	23	24
• Prepare presentation...		◊ PhD Proposal	• Address commitment...	• Prepare presentation... • Address commitment...	• Address commitment...	• Address commitment...
25	26	27	28	29	30	31
• Address commitment...	• Address commitment...	• Address commitment...	• Address commitment...			

0.6 Task Details for January 2026

- ◊ **AAV vectors ready** (01/15 - 01/15)
MILESTONE: AAV vectors received from core facility. Ready for in vivo animal injections to begin expression studies.
- **Prepare presentation** (01/04 - 01/18)

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

◇ **PhD Proposal Exam** (01/20 - 01/20)

Qualifying Exam: Defend dissertation proposal in oral exam with committee members.

● **Address committee feedback** (01/21 - 01/28)

Incorporate committee revisions into proposal and submit signed approval form for final approval.

February 2026

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 ◊ Cranial window	2 ● Post-op	3 ● Post-op	4 ● Post-op	5 ● Post-op	6	7
8 ◊ Cranial window	9 ● Post-op	10 ● Post-op	11 ● Post-op	12 ● Post-op	13	14
15 ◊ Cranial window	16 ● Post-op	17 ● Post-op	18 ● Post-op	19 ● Post-op	20	21
22 ● Pilot imaging S...	23 ● Pilot imaging S...	24	25	26	27	28

0.7 Task Details for February 2026

- ◊ **Cranial window surgery #1** (02/01 - 02/01)
Install cranial window and inject AAV in first pilot mouse. Begin expression timeline for vascular labeling.
- **Post-op recovery #1** (02/02 - 02/05)

Monitor and medicate Mouse #1 after surgery. No imaging during recovery period to allow healing.

- ◇ **Cranial window surgery #2** (02/08 - 02/08)
Install cranial window and inject AAV in second pilot mouse (staggered one week after #1).
- **Post-op recovery #2** (02/09 - 02/12)
Monitor and medicate Mouse #2 after surgery. Maintain analgesia schedule during recovery.
- ◇ **Cranial window surgery #3** (02/15 - 02/15)
Install cranial window and inject AAV in third pilot mouse (further staggered timing).
- **Post-op recovery #3** (02/16 - 02/19)
Monitor and medicate Mouse #3 after surgery. Complete recovery period before imaging.
- **Pilot imaging session #1** (02/22 - 02/23)
Acquire in vivo images for Mouse #1 comparing AAV fluorescence vs traditional dye injection methods.

March 2026

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 • Pilot Imaging	2 • Pilot Imaging	3 • Order enhanced AAV	4 • Order enhanced AAV	5 • Order enhanced AAV	6 • Order enhanced AAV	7 • Order enhanced AAV
8 • Order enhanced AAV Imaging	9 • Order enhanced AAV Imaging	10 • Pilot Imaging	11 • Process pilot data	12 • Process pilot data	13 • Process pilot data	14 • Process pilot data
15 • Order enhanced AAV Imaging	16 • Order enhanced AAV Imaging	17 • Process pilot data • Develop	18 • Order enhanced AAV Imaging	19 • Order enhanced AAV Imaging	20 • Order enhanced AAV Imaging	21 • Order enhanced AAV Imaging
22 • Develop pilot data • Develop	23 • Develop pilot data • Develop	24 • Develop pilot data • Develop	25 • Develop pilot data • Develop	26 • Develop pilot data • Develop	27 • Develop pilot data • Develop	28 • Develop pilot data • Develop
29 • Opti- mize ima- gin... • Develop	30 • Opti- mize ima- gin... • Develop	31 • Opti- mize ima- gin... • Develop				

0.8 Task Details for March 2026

- **Pilot imaging session #2** (03/01 - 03/02)
Acquire in vivo images for Mouse #2 under dual-label vs dye conditions for comparison.

- **Pilot imaging session #3** (03/08 - 03/09)
Acquire in vivo images for Mouse #3. Complete final pilot dataset for Aim 1 validation.
- ◇ **Pilot datasets complete** (03/10 - 03/10)
MILESTONE: Three pilot two-photon imaging datasets acquired for Aim 1 validation and proposal figures.
- **Process pilot data** (03/10 - 03/15)
Perform image registration and SNR analysis. Calculate contrast metrics and refine imaging protocols.
- **Develop U-Net pipeline** (03/15 - 04/01)
Begin developing automated image segmentation pipeline using U-Net architecture for vascular features.
- **Optimize imaging systems** (03/15 - 04/30)
Tune microscope optics for dual-channel two-photon imaging and configure LSCI for blood flow measurements.
- **Order enhanced AAV** (03/01 - 05/01)
Design and order enhanced-expression AAV with tissue-specific enhancer for improved dual-label imaging (Aim 2).

April 2026

Sun	Mon	Tue	Wed	Thu	Fri	Sat
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			• Develop	• Opti-	• Opti-	• Opti-
5	6	7	8	9	10	11
• Opti-	• Opti-	• Opti-	• Opti-	• Opti-	• Opti-	• Opti-
12	13	14	15	16	17	18
• Opti-	• Opti-	• Opti-	• Opti-	• Opti-	• Opti-	• Opti-
19	20	21	22	23	24	25
• Opti-	• Opti-	• Opti-	• Opti-	• Opti-	• Opti-	• Opti-
26	27	28	29	30		
• Opti-	• Opti-	• Opti-	• Opti-	• Opti-		
• Order	• Order	• Order	• Order	• Order		
enhanced	enhanced	enhanced	enhanced	enhanced		
AAV	AAV	AAV	AAV	AAV		

0.9 Task Details for April 2026

- **Develop U-Net pipeline** (03/15 - 04/01)
Begin developing automated image segmentation pipeline using U-Net architecture for vascular features.

- **Optimize imaging systems** (03/15 - 04/30)
Tune microscope optics for dual-channel two-photon imaging and configure LSCI for blood flow measurements.
- **Order enhanced AAV** (03/01 - 05/01)
Design and order enhanced-expression AAV with tissue-specific enhancer for improved dual-label imaging (Aim 2).
- **Compare labeling methods** (04/30 - 05/31)
Systematically compare imaging depth; SNR; and contrast across different labeling methods (AAV vs dye) in vivo.
- **methodology paper** (04/01 - 05/31)
Write manuscript on AAV-based vascular imaging methodology and pilot results from Aim 1 studies.

May 2026

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
					• Order	• Com-
3	4	5	6	7	8	9
• Com-	• Com-	• Com-	• Com-	• Com-	enhanced AV Com- pare la- belin...	method- ology pa- perCom-
10	11	12	13	14	15	16
method- ology pa- perCom-	method- ology pa- perCom-	method- ology pa- perCom-	method- ology pa- perCom-	method- ology pa- perCom-	method- ology pa- perCom-	method- ology pa- perCom-
17	18	19	20	21	22	23
method- ology pa- perCom-	method- ology pa- perCom-	method- ology pa- perCom-	method- ology pa- perCom-	method- ology pa- perCom-	method- ology pa- perCom-	method- ology pa- perCom-
24	25	26	27	28	29	30
method- ology pa- perCom-	method- ology pa- perCom-	method- ology pa- perCom-	method- ology pa- perCom-	method- ology pa- perCom-	method- ology pa- perCom-	method- ology pa- perCom-
31	• method- ology pa- per	• method- ology pa- per	• method- ology pa- per	• method- ology pa- per	• method- ology pa- per	• method- ology pa- per
• method- ology pa- per						

0.10 Task Details for May 2026

- **Order enhanced AAV** (03/01 - 05/01)
Design and order enhanced-expression AAV with tissue-specific enhancer for improved dual-label imaging (Aim 2).
- **Compare labeling methods** (04/30 - 05/31)
Systematically compare imaging depth; SNR; and contrast across different labeling methods (AAV vs dye) in vivo.
- **methodology paper** (04/01 - 05/31)
Write manuscript on AAV-based vascular imaging methodology and pilot results from Aim 1 studies.
- **Establish stroke protocol** (05/31 - 06/05)
Complete training and IACUC approval for stroke induction method (photothrombosis). Ensure all regulatory approvals are in place.

June 2026

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
	◊ Submit methodology...	● Es-troch...	● Es-troch...	● Es-troch...	● Es-troch...	● Induce stroke
7	8	9	10	11	12	13
● Induce stroke	● Es-troch...	● Induce stroke	● Induce stroke			
14	15	16	17	18	19	20
	● Acute-phase	● Acute-phase	● Re-fine ML pipeline	● Re-fine ML pipeline	● Re-fine ML pipeline	● Re-fine ML pipeline
21	22	23	24	25	26	27
● Re-fine ML pipeline	● Re-fine ML pipeline	● Re-fine ML pipeline	● Re-fine ML pipeline	● Re-fine ML pipeline	● Re-fine ML pipeline	● Re-fine ML pipeline
28	29	30				
● Re-fine ML pipeline	● Re-fine ML pipeline	● Re-fine ML pipeline				

0.11 Task Details for June 2026

- ◊ **Submit methodology paper** (06/01 - 06/01)
Submit Aim 1 imaging methodology paper to journal for peer review and publication consideration.
- **Establish stroke protocol** (05/31 - 06/05)

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

- **Induce stroke** (06/06 - 06/10)
Perform stroke induction surgeries on experimental animal cohort to initiate Aim 3 longitudinal imaging study.
- **Acute-phase imaging** (06/15 - 06/16)
Conduct two-photon + LSCI imaging sessions in acute phase (0-1 week post-stroke) to capture immediate vascular changes.
- **Refine ML pipeline** (06/15 - 08/31)
Adapt and improve machine learning segmentation pipeline for stroke dataset analysis and vascular feature detection.

July 2026

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

0.12 Task Details for July 2026

- ◇ **Enhanced AAV delivered** (07/01 - 07/01)
MILESTONE: Enhanced AAV vector received and ready for in vivo testing to continue Aim 2 studies.

- **Transition-phase imaging** (07/01 - 07/02)
Conduct imaging sessions during subacute transition phase (2-4 weeks post-stroke) to capture evolving vascular dynamics.
- **Stabilization-phase imaging** (07/30 - 07/31)
Conduct imaging sessions in early chronic phase (5-8 weeks post-stroke) to observe vascular remodeling processes.
- **Refine ML pipeline** (06/15 - 08/31)
Adapt and improve machine learning segmentation pipeline for stroke dataset analysis and vascular feature detection.

August 2026

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1 • Re- fine ML pipeline
2 • Re- fine ML pipeline	3 • Re- fine ML pipeline	4 • Re- fine ML pipeline	5 • Re- fine ML pipeline	6 • Re- fine ML pipeline	7 • Re- fine ML pipeline	8 • Re- fine ML pipeline
9 • Re- fine ML pipeline	10 • Re- fine ML pipeline	11 • Re- fine ML pipeline	12 • Re- fine ML pipeline	13 • Re- fine ML pipeline	14 • Re- fine ML pipeline	15 • Re- fine ML pipeline
16 • Re- fine ML pipeline	17 • Re- fine ML pipeline	18 • Re- fine ML pipeline	19 • Re- fine ML pipeline	20 • Re- fine ML pipeline	21 • Re- fine ML pipeline	22 • Re- fine ML pipeline
23 • Re- fine ML pipeline	24 • Re- fine ML pipeline	25 • Ex- tended chroni... • Re- fine ML pipeline	26 • Ex- tended chroni... • Re- fine ML pipeline	27 • Re- fine ML pipeline	28 • Re- fine ML pipeline	29 • Re- fine ML pipeline
30 • Re- fine ML pipeline	31 • Re- fine ML pipeline ◊ Stroke data com...					

0.13 Task Details for August 2026

- **Extended chronic imaging** (08/25 - 08/26)
Conduct imaging at ~12 weeks post-stroke (if needed) to capture long-term vascular remodeling and recovery patterns.
- **Refine ML pipeline** (06/15 - 08/31)
Adapt and improve machine learning segmentation pipeline for stroke dataset analysis and vascular feature detection.
- ◇ **Stroke data complete** (08/31 - 08/31)
MILESTONE: Completion of all planned longitudinal imaging sessions for stroke study (Aim 3).

September 2026

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
		• Inte-	• Inte-	• Inte-	• Inte-	• Inte-
6	7	8	9	10	11	12
• Inte-	• Inte-	Annual progress.	Annual progress.	Annual progress.	Annual progress.	Annual progress.
13	14	15	16	17	18	19
Annual progress.	Annual progress.	• Inte-	• Inte-	• Inte-	• Inte-	• Inte-
20	21	22	23	24	25	26
• Inte-	• Inte-	• Inte-	• Inte-	• Inte-	• Inte-	• Inte-
27	28	29	30			
• Inte-	• Inte-	• Inte-	• Inte-			

0.14 Task Details for September 2026

- **Integrate flow data** (09/01 - 09/30)
Combine LSCI blood flow metrics with two-photon structural/functional data for comprehensive vascular analysis.
- **Annual progress review** (09/01 - 09/07)

Complete yearly graduate student progress review (department form)
with advisor due early September.

October 2026

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
				• Analyze	• Analyze	• Analyze
4	5	6	7	8	9	10
• Analyze	• Analyze	• Analyze	• Analyze	• Analyze	• Analyze	• Analyze
11	12	13	14	15	16	17
• Analyze	• Analyze	• Analyze	• Analyze	• Analyze	• Analyze	• Analyze
18	19	20	21	22	23	24
• Analyze	• Analyze	• Analyze	• Analyze	• Analyze	• Analyze	• Analyze
25	26	27	28	29	30	31
• Analyze	• Analyze	• Analyze	• Analyze	• Analyze	• Analyze	• Analyze

0.15 Task Details for October 2026

- **Analyze neurovascular coupling** (10/01 - 11/15)
Quantify microvascular network changes and neurovascular coupling dynamics from post-stroke imaging data.

November 2026

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

0.16 Task Details for November 2026

- **Analyze neurovascular coupling** (10/01 - 11/15)
Quantify microvascular network changes and neurovascular coupling dynamics from post-stroke imaging data.
- **Prepare conference presentation** (11/15 - 12/01)

Create talk/poster for conference presentation (SPIE or neuroscience meeting) showcasing Year 5-6 research results.

- **second manuscript** (11/15 - 11/30)
Write second research paper covering dual-color imaging platform and initial stroke study findings (Aim 2/3).

December 2026

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 • Prepare conference...	2 • PhD	3 • PhD	4 • PhD	5 • PhD
6 • PhD	7 • PhD	8 • PhD • PhD	9 • PhD	10 • PhD	11 • PhD	12 • PhD
13 • PhD	14 • PhD	15 • Submit	16 • PhD	17 • PhD	18 • PhD	19 • PhD
20 • PhD	21 • PhD	22 • PhD • PhD	23 • PhD	24 • PhD	25 • PhD	26 • PhD
27 • PhD	28 • PhD	29 • PhD	30 • PhD	31 • PhD		

0.17 Task Details for December 2026

- **Prepare conference presentation** (11/15 - 12/01)
Create talk/poster for conference presentation (SPIE or neuroscience meeting) showcasing Year 5-6 research results.

- ◇ **Submit second manuscript** (12/15 - 12/15)
Submit second major manuscript (Aim 2/3 results) to journal for peer review and publication consideration.
- **PhD Dissertation & Defense** (12/01 - 08/15)
Complete dissertation write-up; final defense; and all graduation requirements by Summer 2027.
- **Introduction** (12/15 - 01/31)
Write dissertation Introduction chapter including literature review and study rationale for PhD thesis.

January 2027

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
					• PhD	• PhD
3	4	5	6	7	8	9
• PhD	• PhD	• PhD	• PhD	• PhD	Intro- duction • PhD	Intro- duction • PhD
10	11	12	13	14	15	16
Intro- duction • PhD	Intro- duction • PhD	Intro- duction • PhD	Intro- duction • PhD	Intro- duction • PhD	Intro- duction • PhD	Intro- duction • PhD
17	18	19	20	21	22	23
Intro- duction • PhD	Intro- duction • PhD	Intro- duction • PhD	Intro- duction • PhD	Intro- duction • PhD	Intro- duction • PhD	Intro- duction • PhD
24	25	26	27	28	29	30
Intro- duction • PhD	Intro- duction • PhD	Intro- duction • PhD	Intro- duction • PhD	Intro- duction • PhD	Intro- duction • PhD	Intro- duction • PhD
31	tatio... • Intro- duction	tatio... • Intro- duction	tatio... • Intro- duction	tatio... • Intro- duction	tatio... • Intro- duction	tatio... • Intro- duction
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0.18 Task Details for January 2027

- **PhD Dissertation & Defense** (12/01 - 08/15)
Complete dissertation write-up; final defense; and all graduation require-

ments by Summer 2027.

- **Introduction** (12/15 - 01/31)
Write dissertation Introduction chapter including literature review and study rationale for PhD thesis.
- **Aim 1 chapter** (01/01 - 02/28)
Write chapter detailing Aim 1 (AAV imaging) methods; experiments; and results for dissertation.
- **Aim 2 chapter** (01/15 - 03/31)
Write chapter detailing Aim 2 (dual-color imaging platform) methods and results for dissertation.

February 2027

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1 • PhD	2 • PhD	3 • PhD	4 • PhD	5 • PhD	6 • PhD
7 • PhD	8 tatio... • Aim 1 chapter • PhD	9 tatio... • Aim 1 chapter • PhD	10 tatio... • Aim 1 chapter • PhD	11 tatio... • Aim 1 chapter • PhD	12 tatio... • Aim 1 chapter • PhD	13 tatio... • Aim 1 chapter • PhD
14 tatio... • Aim 1 chapter • PhD	15 tatio... • Aim 1 chapter • PhD	16 tatio... • Aim 1 chapter • PhD	17 tatio... • Aim 1 chapter • PhD	18 tatio... • Aim 1 chapter • PhD	19 tatio... • Aim 1 chapter • PhD	20 tatio... • Aim 1 chapter • PhD
21 tatio... • Aim 1 chapter • PhD	22 tatio... • Aim 1 chapter • PhD	23 tatio... • Aim 1 chapter • PhD	24 tatio... • Aim 1 chapter • PhD	25 tatio... • Aim 1 chapter • PhD	26 tatio... • Aim 1 chapter • PhD	27 tatio... • Aim 1 chapter • PhD
28 tatio... • Aim 1 chapter • PhD	tatio... • Aim 1 chapter	tatio... • Aim 1 chapter	tatio... • Aim 1 chapter	tatio... • Aim 1 chapter	tatio... • Aim 1 chapter	tatio... • Aim 1 chapter

0.19 Task Details for February 2027

- **PhD Dissertation & Defense** (12/01 - 08/15)
Complete dissertation write-up; final defense; and all graduation requirements by Summer 2027.

- **Aim 1 chapter** (01/01 - 02/28)
Write chapter detailing Aim 1 (AAV imaging) methods; experiments; and results for dissertation.
- **Aim 2 chapter** (01/15 - 03/31)
Write chapter detailing Aim 2 (dual-color imaging platform) methods and results for dissertation.
- **Aim 3 chapter** (02/01 - 04/15)
Write chapter detailing Aim 3 (stroke model imaging study) methods; data; and findings for dissertation.

March 2027

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1 • PhD	2 • PhD	3 • PhD	4 • PhD	5 • PhD	6 • PhD
7 • PhD	8 tatio... • Aim 2 chapter • PhD	9 tatio... • Aim 2 chapter • PhD	10 tatio... • Aim 2 chapter • PhD	11 tatio... • Aim 2 chapter • PhD	12 tatio... • Aim 2 chapter • PhD	13 tatio... • Aim 2 chapter • PhD
14 tatio... • Aim 2 chapter • PhD	15 tatio... • Aim 2 chapter • PhD	16 tatio... • Aim 2 chapter • PhD	17 tatio... • Aim 2 chapter • PhD	18 tatio... • Aim 2 chapter • PhD	19 tatio... • Aim 2 chapter • PhD	20 tatio... • Aim 2 chapter • PhD
21 tatio... • Aim 2 chapter • PhD	22 tatio... • Aim 2 chapter • PhD	23 tatio... • Aim 2 chapter • PhD	24 tatio... • Aim 2 chapter • PhD	25 tatio... • Aim 2 chapter • PhD	26 tatio... • Aim 2 chapter • PhD	27 tatio... • Aim 2 chapter • PhD
28 tatio... • Aim 2 chapter • PhD	29 tatio... • Aim 2 chapter • PhD	30 tatio... • Aim 2 chapter • PhD	31 tatio... • Aim 2 chapter • PhD			

0.20 Task Details for March 2027

- **PhD Dissertation & Defense** (12/01 - 08/15)
Complete dissertation write-up; final defense; and all graduation requirements by Summer 2027.

- **Aim 2 chapter** (01/15 - 03/31)
Write chapter detailing Aim 2 (dual-color imaging platform) methods and results for dissertation.
- **Aim 3 chapter** (02/01 - 04/15)
Write chapter detailing Aim 3 (stroke model imaging study) methods; data; and findings for dissertation.
- **Conclusions** (03/01 - 04/30)
Write final dissertation chapter summarizing findings; implications; and future research directions.

April 2027

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
				• PhD	• PhD	• PhD
4	5	6	7	8	9	10
• PhD	• PhD	• PhD	• PhD	PhD... aim 3 chapter • PhD	PhD... aim 3 chapter • PhD	PhD... aim 3 chapter • PhD
11	12	13	14	15	16	17
tatio... chapter • PhD	tatio... chapter • PhD	tatio... chapter • PhD	tatio... chapter • PhD	tatio... chapter • PhD	tatio... chapter • PhD	tatio... chapter • PhD
18	19	20	21	22	23	24
tatio... chapter • PhD	tatio... chapter • PhD	tatio... chapter • PhD	tatio... chapter • PhD	tatio... chapter • PhD	tatio... conclu- sions • PhD	tatio... conclu- sions • PhD
25	26	27	28	29	30	
tatio... conclu- sions • PhD	tatio... conclu- sions • PhD	tatio... conclu- sions • PhD	tatio... conclu- sions • PhD	tatio... conclu- sions • PhD	tatio... conclu- sions • PhD	tatio... conclu- sions • PhD

0.21 Task Details for April 2027

- **PhD Dissertation & Defense** (12/01 - 08/15)
Complete dissertation write-up; final defense; and all graduation requirements by Summer 2027.

- **Aim 3 chapter** (02/01 - 04/15)
Write chapter detailing Aim 3 (stroke model imaging study) methods; data; and findings for dissertation.
- **Conclusions** (03/01 - 04/30)
Write final dissertation chapter summarizing findings; implications; and future research directions.

May 2027

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1 • PhD
2 • PhD	3 • PhD	4 • PhD	5 • PhD	6 • PhD	7 • PhD	8 Dissertation dr... • PhD
9 • PhD	10 • PhD	11 • PhD	12 • PhD	13 • PhD	14 • PhD	15 • PhD
16 • PhD	17 • PhD	18 • PhD	19 • PhD	20 • PhD	21 • PhD	22 • PhD
23 • PhD	24 • PhD	25 • PhD	26 • PhD	27 • PhD	28 • PhD	29 • PhD
30 • PhD Dissertation...	31 • PhD Dissertation...					

0.22 Task Details for May 2027

- **PhD Dissertation & Defense** (12/01 - 08/15)
Complete dissertation write-up; final defense; and all graduation requirements by Summer 2027.

- ◇ **Dissertation draft complete** (05/01 - 05/01)

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

June 2027

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 • PhD Dissoc tatio...	2 • PhD Dissoc tatio...	3 • PhD Dissoc tatio...	4 • PhD Dissoc tatio...	5 • PhD Dissoc tatio...
6 • PhD Dissoc tatio...	7 • PhD Dissoc tatio...	8 • PhD Dissoc tatio...	9 • PhD Dissoc tatio...	10 • PhD Dissoc tatio...	11 • PhD Dissoc tatio...	12 • PhD Dissoc tatio...
13 • PhD Dissoc tatio...	14 • PhD Dissoc tatio...	15 • PhD Dissoc tatio...	16 • PhD Dissoc tatio...	17 • PhD Dissoc tatio...	18 • PhD Dissoc tatio...	19 • PhD Dissoc tatio...
20 • PhD Dissoc tatio...	21 • PhD Dissoc tatio...	22 • PhD Dissoc tatio...	23 • PhD Dissoc tatio...	24 • PhD Dissoc tatio...	25 • PhD Dissoc tatio...	26 • PhD Dissoc tatio...
27 • PhD Dissoc tatio...	28 • PhD Dissoc tatio...	29 • PhD Dissoc tatio...	30 • PhD Dissoc tatio...			

0.23 Task Details for June 2027

- **PhD Dissertation & Defense** (12/01 - 08/15)
Complete dissertation write-up; final defense; and all graduation requirements by Summer 2027.

July 2027

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 • PhD	2 • PhD	3 • PhD
4 • PhD	5 • PhD	6 • PhD	7 • PhD	8 • PhD	9 • PhD	10 • PhD
11 • PhD	12 • PhD	13 • PhD	14 • PhD	15 • PhD	16 • PhD	17 • PhD
18 • PhD	19 • PhD	20 • PhD	21 • PhD	22 • PhD	23 • PhD	24 • PhD
25 • PhD	26 • PhD	27 • PhD	28 • PhD	29 • PhD	30 • PhD	31 • PhD

0.24 Task Details for July 2027

- **PhD Dissertation & Defense** (12/01 - 08/15)
Complete dissertation write-up; final defense; and all graduation requirements by Summer 2027.

- ◇ **PhD Defense** (07/15 - 07/15)
Defend PhD dissertation in oral exam with committee (must occur \geq 2 weeks before final submission deadline).
- **Revise dissertation** (07/16 - 07/31)
Incorporate committee feedback and revisions after defense. Obtain final approval signatures.

August 2027

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 • PhD	2 • PhD	3 • PhD	4 • PhD	5 • PhD	6 • PhD	7 • PhD
8 submit disserta... • PhD	9 • PhD	10 • PhD	11 • PhD	12 • PhD	13 • PhD	14 • PhD
15 • PhD	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

0.25 Task Details for August 2027

- **PhD Dissertation & Defense** (12/01 - 08/15)
Complete dissertation write-up; final defense; and all graduation requirements by Summer 2027.
- ◇ **Submit dissertation** (08/01 - 08/01)

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

1 Legend

1.1 Task Categories

- PROPOSAL - Research proposals and dissertation work
- LASER - Laser alignment and experimental work
- EXPERIMENTAL - Imaging, surgery, and data collection
- PUBLICATION - Manuscripts and presentations
- ADMINISTRATIVE - Forms, applications, and reviews
- ACCOUNTABILITY - Meetings and responsibilities
- SERVICE - SPIE chapter and other service activities

1.2 Task Information

Dependencies Tasks that must be completed before this task

Description Additional details and context for each task

Milestones Tasks with same start and due date (marked with diamond shapes)