

	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.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 36	1 Identify committee members and schedule oral exam date.	2 Identify committee members and schedule oral exam date.	3 Define proposal.	4 Align amplifier.	5 Align amplifier.	6 Align amplifier.	7 Align amplifier.
Week 37	8 Confirm...	9 Check pulse...	10 Check pulse...	11 Check pulse...	12 Check pulse...	13 Check pulse...	14 Check pulse...
Week 38	15 Laser system ready MILESTONE	16 Laser system ready MILESTONE	17 Laser system ready MILESTONE	18 Laser system ready MILESTONE	19 Laser system ready MILESTONE	20 Laser system ready MILESTONE	21 Laser system ready MILESTONE
Week 39	22 Laser output and imaging optics meet all requirements for live animal imaging.	23 Laser output and imaging optics meet all requirements for live animal imaging.	24 Laser output and imaging optics meet all requirements for live animal imaging.	25 Laser output and imaging optics meet all requirements for live animal imaging.	26 Laser output and imaging optics meet all requirements for live animal imaging.	27 Laser output and imaging optics meet all requirements for live animal imaging.	28 Laser output and imaging optics meet all requirements for live animal imaging.
Week 40	29 Laser output and imaging optics meet all requirements for live animal imaging.	30 Laser output and imaging optics meet all requirements for live animal imaging.					

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

Complete proposal draft
Write full proposal document (~13 pages) including all aims and research strategy for committee review.

	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 com-
mittee
MILESTONE
Email
proposal
to
committee
2 weeks
before
exam date
(satisfies
pre-exam
require-
ment).

	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.

AAV vectors ready
MILESTONE
AAV vectors received

injections to begin
expression studies.

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

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

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 5							1 Cranial window surgery #1 Install cranial window
Week 6	2	3	4 Post-op recovery #1 Monitor and medicate Mouse #1 after surgery. No imaging during recovery period to allow healing.	5	6	7	8 Cranial window surgery #2 Install cranial window
Week 7	9	10	11 Post-op recovery #2 Monitor and medicate Mouse #2 after surgery. Maintain analgesia schedule during recovery.	12	13	14	15 Cranial window surgery #3 Install cranial window
Week 8	16	17	18 Post-op recovery #3 Monitor and medicate Mouse #3 after surgery. Complete recovery period before imaging.	19	20	21	22 Pilot imaging session #1 Acquire in vivo images for Mouse #1 comparing AAV fluorescence vs traditional dye injection methods.
Week 9	23	24	25	26	27	28	

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 9							<div>1</div> <div>Pilot imaging...</div> <div>Order enhanced AAV</div>
Week 10	<div>2</div>	<div>3</div>	<div>4</div>	<div>5</div>	<div>6</div>	<div>7</div>	<div>8</div> <div>Pilot imaging session #3</div> <div>Acquire in vivo images</div>
Week 11	<div>9</div>	<div>10</div>	<div>11</div> <div>Pilot...</div>	<div>12</div>	<div>13</div> <div>Process pilot data</div>	<div>14</div>	<div>15</div> <div>Optimize imaging systems</div> <div>Tune microscope optics for dual</div>
Week 12	<div>16</div>	<div>17</div> <div>Develop U-Net pipeline</div> <div>Begin developing automated image segmentation pipeline using U-Net architecture for vascular features.</div>	<div>18</div>	<div>19</div>	<div>20</div>	<div>21</div>	<div>22</div> <div>configure LSCI for blood flow measurements.</div>
Week 13	<div>23</div>	<div>24</div>	<div>25</div>	<div>26</div>	<div>27</div>	<div>28</div>	<div>29</div>
Week 14	<div>30</div>	<div>31</div>					

	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			

	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

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 23	1	2	3	4	5	6	7
	Submit technology paper for review and publication.		Establish stroke protocol. Complete training and IACUC approval for stroke induction method (photothrombosis). Ensure all regulatory approvals are in place.				
Week 24	8	9	10	11	12	13	14
	Induce stroke. Perform stroke induction surgeries on experimental animal cohort to initiate Aim 3 longitudinal imaging study.						
Week 25	15	16	17	18	19	20	21
	Acute-phase... Refine ML pipeline						
Week 26	22	23	24	25	26	27	28
Week 27	29	30					

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 27			<div>1</div> <div>Enhanced...</div>	<div>2</div> <div>Transition phas...</div>	<div>3</div>	<div>4</div>	<div>5</div>
Week 28	<div>6</div>	<div>7</div>	<div>8</div>	<div>9</div>	<div>10</div>	<div>11</div>	<div>12</div>
Week 29	<div>13</div>	<div>14</div>	<div>15</div>	<div>16</div>	<div>17</div>	<div>18</div>	<div>19</div>
Week 30	<div>20</div>	<div>21</div>	<div>22</div>	<div>23</div>	<div>24</div>	<div>25</div>	<div>26</div>
Week 31	<div>27</div>	<div>28</div>	<div>29</div>	<div>30</div> <div>Stabilization-phase imaging Conduct imaging sessions in early chronic phase (5-8 weeks post-stroke) to observe vascular remodeling processes.</div>	<div>31</div>		

	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).

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

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 40				1	2	3	4
				Analyze neurovascular coupling Quantify microvascular network changes and neurovascular coupling dynamics from post-stroke imaging data.			
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	

	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
	Draft second...						
	Prepare...						
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
		PhD Dissertation & Defense Complete dissertation write-up; final defense; and all graduation requirements by Summer 2027.					
Week 50	7	8	9	10	11	12	13
Week 51	14	15	16	17	18	19	20
		Draft Introduction					
		Submit second...					
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	2	3
					Draft Aim 1 chapter Write chapter detailing Aim 1 (AAV imaging) methods; experiments; and results for dissertation.		
Week 1	4	5	6	7	8	9	10
Week 2	11	12	13	14	15	16	17
					Draft Aim 2 chapter Write chapter detailing Aim 2 (dual-color imaging platform) methods and results for dissertation.		
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 <div>Write chapter detailing Aim 3 (stroke model</div>	2 <div>imaging study)</div>	3 <div>methods; data; and findings for</div>	4 <div>dissertation.</div>	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

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 9	1	2	3	4	5	6	7
	Draft Conclusions Write final dissertation chapter summarizing findings; implications; and future research directions.						
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		

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

	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				

	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.