



# ASP Logbook

## Upcoming Deadlines:

- Results (Apr. 14)
- Analysis/ Conc (May 1)
- **Sci. Fair (Mar. 11)**
- Final Paper (May 30)

## Quick Links:

- Paper Pile - <https://app.paperpile.com/my-library/all>
- CYSF Portal <https://platform.cysf.org/project/edit/basic-project-info/>
- Notes doc in case Notion is stupid [Past Month Notes](#)
- Papers Pt2 <https://onedrive.live.com/?id=...>

## Monthly Plan

Aa Name	ASP	Date	Priority	Status	Tags
<a href="#">ASP</a>		@September 4, 2024 12:50 PM		Not started	Class
<a href="#">ASP</a>		@September 6, 2024 8:15 AM		Not started	Class
<a href="#">ASP</a>		@September 10, 2024 10:50 AM		Not started	Class
<a href="#">Update Dr. Kerba</a>		@September 6, 2024		Not started	
<a href="#">Indv ASP Meeting</a>		@September 12, 2024		Not started	Class Meeting
<a href="#">Update Dr. Kerba</a>		@September 13, 2024		Not started	
<a href="#">Draft intro of RP</a>		@September 26, 2024		Not started	
<a href="#">Phone call w/ Dr. Kerba</a>		@September 14, 2024		Not started	
<a href="#">Indv ASP meeting</a>		@September 24, 2024		Not started	
<a href="#">https://platform.cysf.org/project/edit/basic-project-info/</a>		@September 17, 2024		Not started	
<a href="#">★Research Proposal due</a>		@October 31, 2024	High	In progress	Deadline
<a href="#">Finish first draft of RP</a>		@October 2, 2024		Not started	
<a href="#">send in CV/q2</a>		@September 18, 2024	High	Done	
<a href="#">Call w/ Kerba</a>		@September 26, 2024		Not started	
<a href="#">Speech Tournament (no time)</a>		@September 27, 2024		Not started	
<a href="#">Thanksgiving (no school)</a>		@October 14, 2024		Not started	

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Aa Name	≡ ASP	📅 Date	🕒 Priority	⚙ Status	🏷 Tags
<u>Polish introduction</u>		@September 27, 2024	Medium	In progress	Deadline
<u>Work day</u>		@September 29, 2024		Not started	
<u>Cochrane for CRC</u>		@September 30, 2024		Not started	
<u>In-person TBCC meeting w/ Dr. Kerba</u>		@August 30, 2024		Not started	
<u>Speech Tournament (no time)</u>		@October 18, 2024		Not started	
<u>Send RP draft to Dr. Kerba/Dr. Garica</u>		@October 5, 2024		Not started	
<u>Cochrane for CRC</u>		@October 8, 2024		Not started	
🌟 <u>RP Oral Presentation</u>		@November 8, 2024	High	Not started	
<u>Speech Tournament (no time)</u>		@November 1, 2024		Not started	
<u>Speech Tournament (no time)</u>		@November 2, 2024		Not started	
<u>Speech Tournament (no time)</u>		@November 29, 2024 → November 30, 2024		Not started	
<u>Work Day (catch up)</u>		@October 19, 2024		Not started	
<u>Work Day (catch up)</u>		@October 20, 2024		Not started	
<u>Remembrance Day - No School</u>		@November 11, 2024		Not started	
<u>Oral Presentations - limited meetings</u>		@November 6, 2024 → November 8, 2024		Not started	
<u>Oral Presentations - No meetings</u>		@November 13, 2024		Not started	
<u>Oct. Logbook due</u>		@October 31, 2024	Low	Not started	
<u>Parents Return</u>		@November 23, 2024		Not started	
<u>Work Day</u>		@October 27, 2024		Not started	
<u>Finalize presentation</u>		@November 7, 2024		Not started	
<u>Debate Coaching</u>		@November 13, 2024 3:30 PM		Not started	
<u>Parents leave - no in pers (can't get around)</u>		@November 10, 2024		Not started	
<u>Dr. Kerba busy - move</u>		@October 28, 2024		Not started	
<u>Less time (Debate coaching/Brady's Birthday)</u>		@October 30, 2024		Not started	
<u>Speech Tournament</u>		@December 7, 2024			

Aa Name	☰ ASP	📅 Date	🕒 Priority	🕒 Status	🏷 Tags
				Not started	
<u>Winter Break - No School (available to do research).</u>		@December 23, 2024 → January 5, 2025		Not started	
<u>RP Refinement Work Day.</u>		@October 30, 2024		Not started	
<u>Marks Lock!</u>		@November 22, 2024		Not started	
<u>Work on RPP</u>		@November 3, 2024		Not started	
<u>Call w/ Dr. Kerba</u>		@November 3, 2024		Not started	
<u>ASP</u>		@January 6, 2025 10:00 AM		Not started	
<u>ASP</u>		@January 8, 2025 12:15 PM		Not started	
<u>Midterms (Exam Break).</u>		@January 10, 2025 → January 20, 2025		Not started	
<u>Start studying</u>		@January 1, 2025		Not started	
<u>Family Day Long Weekend</u>		@February 14, 2025 → February 17, 2025		Not started	
<u>Speech Provs</u>		@February 1, 2025		Not started	
<u>Call w/ Dr. Kerba</u>		@November 17, 2024		Not started	
<u>Meet Mr. Vaska</u>		@November 22, 2024		Not started	
<u>Marcus leaving</u>		@December 21, 2024		Not started	
<u>Meeting w/ Dr. Kerba</u>		@December 5, 2024		Not started	
<u>Meeting w/ Dr. Kerba</u>		@December 17, 2024		Not started	
<u>Marcus returns</u>		@January 21, 2025		Not started	
<u>ASP skipped (P.Breakfast).</u>		@December 3, 2024		Not started	
<u>Update Dr. Kerba w/ Feb Calendar</u>		@December 1, 2024		Not started	
<u>Indv ASP Meeting</u>		@December 11, 2024		Not started	
🌟 <u>FP Intro due</u>		@January 30, 2025		Not started	
<u>Received papers pt1</u>		@December 2, 2024		Not started	
<u>Alex's Birthday</u>		@December 14, 2024		Not started	
<u>Busy week - less time</u>		@December 8, 2024			

Aa Name	≡ ASP	📅 Date	🕒 Priority	⚙ Status	🏷 Tags
				Not started	
<u>Physics</u>		@January 10, 2025		Not started	
<u>ELA Pt A</u>		@January 13, 2025		Not started	
<u>GH Pt A</u>		@January 14, 2025		Not started	
<u>Chem</u>		@January 16, 2025		Not started	
<u>Math</u>		@January 17, 2025		Not started	
<u>GH Pt B</u>		@January 20, 2025		Not started	
<u>ELA Pt B + Bio</u>		@January 15, 2025		Not started	
<u>Finish Papers Pt2</u>		@February 7, 2025	High	Done	Deadline
<u>Shadowing</u>		@February 14, 2025		Not started	
<u>Debate Tournament</u>		@January 25, 2025		Not started	
<u>Trivia tournament</u>		@February 8, 2025		Not started	
<u>Debate Tournament</u>		@February 13, 2025		Not started	
<u>Debate Tournament</u>		@February 22, 2025		Not started	
🌟Science Fair🌟		@March 11, 2025		Not started	
<u>Data collection finished (for presentation).</u>		@February 26, 2025		Not started	
<u>Results/Analysis Turnitin due</u>		@March 3, 2025		Not started	
<u>Methods due</u>		@February 21, 2025		Done	
<u>Meeting w/ Dr. Kerba</u>		@January 30, 2025		Not started	
<u>Spain Trip (not available).</u>		@March 14, 2025 → March 29, 2025		Not started	
<u>Results</u>		@April 14, 2025		Not started	
<u>Fill out shadowing forms</u>		@February 3, 2025		Not started	
<u>Trivia Tournament</u>		@March 1, 2025		Not started	
<u>Start working on scoring system</u>		@February 5, 2025		Not started	
<u>Fill out job shadow application pt2</u>		@February 6, 2025		Done	
<u>Slides for OP</u>		@February 24, 2025			



Aa Name	ASP	Date	Priority	Status	Tags
				Not started	
<u>Finish scoring system</u>		@February 8, 2025		Not started	
<u>CYSF Portal finished (if cities).</u>		@March 13, 2025		Not started	
<u>Data collection CYSF finished</u>		@March 2, 2025		Not started	
<u>Print Poster</u>		@March 8, 2025		Not started	
<u>Spring Break (available).</u>		@March 30, 2025 → April 6, 2025		Not started	
<u>Start writing sections</u>		@February 28, 2025		Not started	
<u>Debate Provincials</u>		@April 5, 2025		Not started	
<u>CYSF portal finished for SF</u>		@March 9, 2025		Not started	
<u>RFTT Provincials</u>		@April 12, 2025		Not started	
<u>Oral Presentation</u>		@February 27, 2025		Not started	
<u>ASP</u>		@September 12, 2024 12:30 PM → 1:50 PM		Not started	Class
<u>ASP</u>		@September 30, 2024 12:30 PM → 1:50 PM		Not started	Class
<u>ASP</u>		@September 16, 2024 8:15 AM		Not started	Class
<u>ASP</u>		@September 24, 2024 8:15 AM		Not started	Class
<u>ASP</u>		@September 18, 2024 10:50 AM		Not started	Class
<u>ASP</u>		@September 26, 2024 10:50 AM		Not started	Class
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<u>Update Dr. Kerba</u>		@September 28, 2024		Not started	
<u>Update Dr. Kerba</u>		@September 20, 2024		Not started	
<u>Indv ASP Meeting</u>		@October 17, 2024		Not started	
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<u>ASP</u>		@April 24, 2025 10:00 AM		Not started	
<u>ASP</u>		@April 18, 2025 12:15 PM		Not started	

#### Daily Checklist

- ☐ Reply to emails
- ☐ Read papers
- ☐ CYSF portal entry (needs to be done by 21 for cities but 13 b/c of Spain trip)
- ☐ Daily notes entry
- ☐ Plan next class

#### Priorities:









- ☒ ~~Finish Papers Pt2 (Feb 7)~~
- ☒ ~~Establish scoring system~~
- ☒ ~~Get papers — may request more~~
- ☒ ~~Slides~~
- ☒ ~~Poster — find somewhere to print (probably Staples)~~

#### Plan

- ☒ ~~Feb 3-9 — Papers Pt2/scoring system-dev~~
- ☒ ~~10-16 — writing~~
- ☒ ~~17-23 — scoring/reading~~
- ☒ ~~24-2 — reading/scoring for additional data, presentation drafting/presenting~~
- ☒ ~~3-10 — Writing poster things finalize for SF — printing poster~~
- ☐ Post SF: CYSF portal if I get in

### ▼ Background Research

- ☒ = Done, ☒ = In-progress
- Most BGR for final paper likely to come from papers pulled by Marcus

- ▼  What is Cancer - NCI  
["What is Cancer?" - NCI - Sept. 6, Oct 15](#)
- ▼  Metastatic Cancer: When Cancer Spreads - NCI  
[Metastatic Cancer: When Cancer Spreads - NCI - Sept. 10](#)
- ▼  The Genetics of Cancer - NCI  
[The Genetics of Cancer - NCI - Sept. 10/12](#)
- ▼  Genomic characterization of squamous lung cell cancers  
[Genomic characterization of squamous lung cell cancers - Sept 26](#)
- ▼ Lung Squamous Cell Carcinoma Study  
<https://www.cancer.gov/ccg/research/structural-genomics/tcga/studied-cancers/lung-squamous-cell-carcinoma-study>
- ▼ Non-Small Cell Lung Cancer Treatment - NCI  
[Non-Small Cell Lung Cancer Treatment - NCI](#)
- ▼ Complications of intraoperative radiotherapy and adjuvant chemotherapy in patients with lung cancer (Related articles) - Pubmed  
<https://pubmed.ncbi.nlm.nih.gov/12926224/>
- ▼  Stage 3 Lung Cancer - Cancer Research UK  
[Stage 3 Lung Cancer - Cancer Research UK - Sept 18-21](#)
- ▼ Targeted and Immunotherapy treatment for lung cancer - Cancer Research UK  
[Targeted and Immunotherapy Treatment for Lung Cancer - Sept. 24 Oct 4](#)
- ▼ Immunotherapy to treat cancer - TED on Youtube  
[Hacking our immune cells to fight cancer](#)
- ▼ LC stats  
[LC stats - Sept. 26-30](#)
- ▼  Durvalumab after Chemoradiotherapy in Stage III Non-Small-Cell Lung Cancer - New England Journal of Medicine  
[Durvalumab after Chemoradiotherapy in Stage III Non-Small-Cell Lung Cancer - Oct. 4, Nov 27, 29](#)
- ▼  Smoking and Lung Cancer (Abstract) - International Journal of Epidemiology, Bronchial Carcinoma - Pubmed (used for introduction in RP)  
[Smoking and Lung Cancer - International Journal of Epidemiology, PubMed. Oct 10](#)
- ▼ Stage III NSCLC Overview - NCBI  
[Stage III NSCLC Overview Treatment Options - NCBI - Oct. 15-19](#)
- ▼ Immunotherapy: The future of cancer treatments - NCBI  
[Immunotherapy: The future of cancer treatments](#)
- ▼  Early palliative care of NSCLC in the context of immunotherapy

Early palliative care of NSCLC in the context of immunotherapy - NCBI - Nov 25, 27

- ▼ Non-small cell lung cancer: current treatment and future advances

NSCLC: current treatment/future advances

- ▼ **Paperpile List** (what each paper was used for)

Paperpile Sources List w/ Uses

## ▼ **Methods/Planning/Data Analysis**

- New section, put in Feb 5 for scoring system and eventual paper scoring
- ▼ Scoring System (Feb 5 - efficacy, 7 - cost effectiveness)

Scoring System Brain Dump

- ▼ Data analysis

Liu - Breathing Exercises (Feb 20)

Milbury - Yoga

Phillips - Diet (Review) - using for papers

Polanski - Diet

Sun - Mind/Body exercise (Feb 20)

Tantipaiboonwong - Diet (Perilla seed oil - fatty acid supplement) (Feb 21/4)

Cheung - Exercises RCT (Feb 23)

Lei - Exercise (Feb 23)

Avancini - Exercise/Phys Activity

Chabowski - Diet (Feb 23) (not useful in scoring)

Baldwin - Diet (Feb 23)

van der Meij - Diet - Fatty Acid Supplements (Feb 25)

- ▼ Table of Results (rough planning)

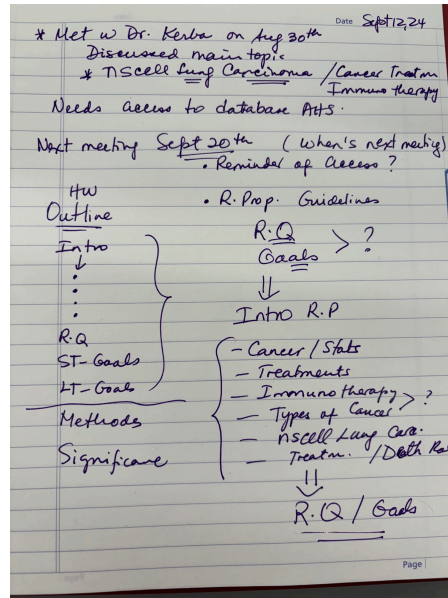
Results Table

## ▼ **Meeting notes**

- ▼ August 30 - In-person meeting at TBCC w/ Dr. Kerba
  - Explanation of how cancer develops (DNA gets damaged and the proteins no longer copy the correct/original DNA sequences. New sequences that get copied cause problems for the cell ie excessive division. New cells (cancer) has broken receptors(?) that allow them to be detected by T cells or B cells) - receptors are what allow T and B cells to bind/kill)
  - Project relating to stage 3, non-small cell lung cancer (carcinoma or squamous(?)). Looking for ways to get more patients to be able to live through cancer treatment to immunotherapy. Current process: chemo + radiation → immunotherapy
  - Long-term: Aiming to increase lifespan, better quality of life
  - For next meeting/hw:

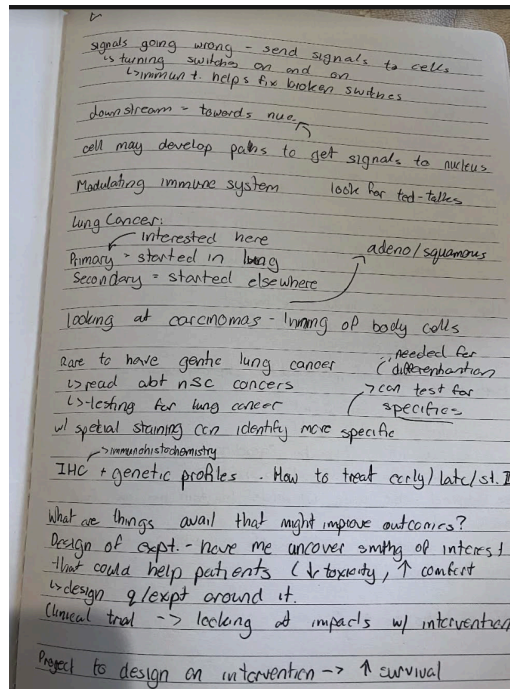
- read on cancer (what, how, why)
- Read on lung cancer specifically
- read on current treatments for cancer
- read on current studies/practices for spec cancer

▼ September 12 - Individual Meeting w/ Dr. Garcia



- Outlined deadlines looking forward
  - Research question + goals with project
  - Research proposal
    - Due Oct 15, written for Oct 1 for editing?
    - Draft intro outline (hopefully by 18?)
- Priorities for next week(ish)
  - **Research question/goal**
  - Draft of introduction

▼ September 14 - Call w/ Dr. Kerba

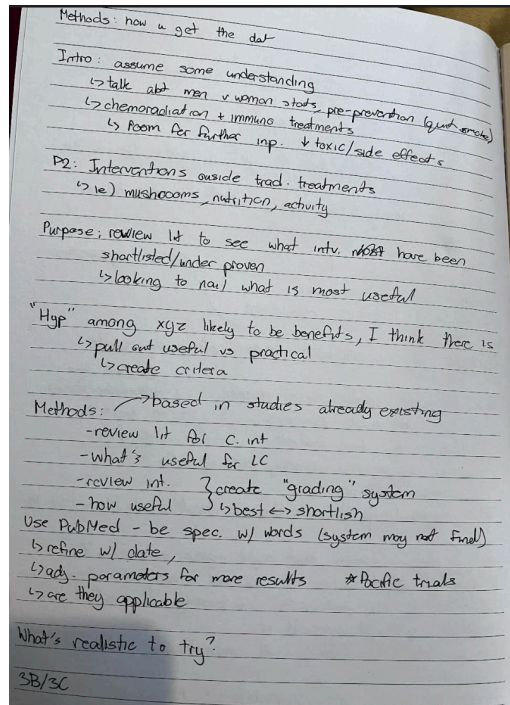


▼ September 24 - Individual Meeting w/ Dr. Garcia

- Outlined priorities for RP
  - Get more spec. understanding of cell signaling/immunotherapy
  - Continue getting CRC/student research thing set up
  - Figure out methodology
  - Draft intro for RP by end of week

▼ September 26 - Call w/ Dr. Kerba





▼ October 17 - Individual meeting w/ Dr. Garcia

- Possibility of new project if can't get access to AHS stuff
  - Dr. Garcia plans to send email to Dr. Kerba regarding what to do abt AHS access + if a project change will be needed
    - B/c of moving to a new building, will I still be able to meet in-pers?
- Set up more freq. meetings with Dr. Kerba, should have check ins roughly each week-2 weeks
- Have draft of RP intro/question/goals sent to Dr. Kerba for accuracy by weekend
  - In same email, get more detail on methods b/c need more depth
  - Focus in on depth of RP, currently shallow

▼ October 25- Call w/ Dr. Kerba about RP

1. General Summary - RP not too bad, some refinement in intro/methods/significance. Not looking great for UofC pathway, likely to also need police check → might end up using Alex's account if really necessary but not likely to be. No risks for ethics/sig risk → good to submit. Have meeting on Sunday (maybe) to refine things (busy Monday b/c moving to the new building so maybe just text to go over)
- RP notes
    - ☒ title - instead of current → novel for (...) that may positively impact pt treatment outcomes (can go more in depth)
    - Ref Amer Lc society
    - Elevated risk of LC - 22x baseline risk from smokers (find ref point)
    - go visit for info on lc book (if time)
    - ☒ ORIGINATE in epithelial
    - ☒ don't need to describe what cancer is
    - ☒ current treatment → cornerstone of treatment = surgery, when surgery not possible, treatments that consist of a combo of systemic therapy + radiation therapy. spec therapies for spec things (not super imp,

~1-2 lines)

- ☒ Staging of LC - follows TMe? protocol - define!!
    - in st3 cancer, canc has spread to lymph nodes → talk abt staging
      - move into treatments (standard = chemoradio → immunotherapy) look at pacific study chemoradio + immuno for BGR
      - <https://ascopubs.org/doi/10.1200/JCO.21.01308>
  - ☒ Don't need IS paragraph
  - ☒ Chemoradio have outcomes that don't cure everyone
  - ☒ Patients can't always complete full treatment → pot to improve outcomes by levelling novel therapies that have been desc in lit for cancer
  - dietary int, phys activity, supplements, technology (electromag fields to treat lc)
  - Not been studied in S3LC → not not effectively studied
  - ☒ Primary/secondary not st and lt
  - peer reviewed lit over last xyz years (to refine and limit excess data)
  - narrow down search - can help w/ Dr. Kerba
  - ☒ LT goals - designing trial which may use selected int to improve on outcomes of s3lc
  - turkey tail mushrooms - look into it (we don't use it here, how much of a diff can it have)
  - find list of 10 things that show results (pos or neg)
    - somebody needs to have found smthg already, probly not for lc → find out how to group things
  - ☒ for methods: can't give ahs electronic access but can go to library to do a search at ahs. Searching lit for factors to grade them based on standards that are acceptable to us (feasible, price (cost effective), etc). Move into selection, can look into all of this, what already has lit for other cancers?
  - ☒ Sig: if u can leve smthg that already exist to imp outcomes that are poor, then pot to help lots of ppl even if small
  - enhancing treatment, minimizing toxicity
  - diet is a big thing but hard to control → how do u look after that
  - adjunct interventions
  - can't run study on everything, narrow things down
- ▼ October 29 - Individual meeting w/ Dr. Garcia
- Go over RP and comments
    - don't need to be so so wordy!!
      - not GH writing, I can actually use the word it
    - Get Dr. Kerba's input on methods, question
      - Methods: Need more depth in methods → how can what I'm doing be translated into a graphic? Graphics vs text
    - Submit RP on 31 but can un-submit to fix methods if Dr. Kerba is v busy and can't get back to me in time
  - General
    - Email Dr. Kerba
      - Going to library for info
        - How often will i need to go?

- Going to be difficult to go in Nov (parents/brother gone, aunt/uncle busy or also out of town, grandparents have a questionable sense of direction)
  - Can possibly go with Audrey/Coco if they go in → would need to confirm w/ Dr. Kerba on availability/permissions
  - Also possibly go with Dr. Garcia during lunch/after school

▼ November 3 - Call w/ Dr. Kerba on methodology

methods

- search rev terms/exclus crit
- look at alex;s paper for examples
- <https://pmc.ncbi.nlm.nih.gov/articles/PMC11083084/>
- waht year range - 20 yrs?
- looking to inc all types of cancer
- PRISMA?
- how to do a review? look at guideleines
- not doing review to publish→ the review to select int
- what levels of evidence
- look 2.3/2.4 of paper/figures
- get rid of dup records
- assess for eligibility
- look to grade/reivew and use to select a spec intervention to make clinical trial
- rotation within smthg smaller than 5days no need for crc
  - once clinical t established, can shadow for 5 days
  - design study
- for cysf: serch/grading of info
  - second part is for future
- work in getting stuff done
- once rp done, register project
  - after rp before search
  - don't do sys review of smthg being done
  - in the uk prospero - prospective reigster of sys review
  - <https://www.crd.york.ac.uk/prospero/#searchadvanced>
  - using keywords to find out wht's being studied
  - overview of system reviews already being done/did (2018) (may overlap be careful and see if need to change project slightly) - may have gotten stuck bc taking long time
  - make sure project is diff
  - [https://www.crd.york.ac.uk/prospero/display\\_record.php?RecordID=171666](https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=171666) - search this one on pubmed - possibly not updated on prospero
  - outside of trad chinese med, not much
  - search w/ terms - pulls up things
  - don't be that open-ended - pull up non-relev

- work w/ librarian
- don't have to say in prop that working with ahs library to pull things
- evaluate evidence
- to grade/shortlist possibly useful already existing int
- can pull tables
- rq shld be ok w/ his edits
- be open w/ int - to not restrict what int can be
  - can be smthg w/ meditation, medication, tech
  - paper swill be spec with what demographic/responding variable
    - as reviewer, will assign importance to what - explain why ranking what
    - high grades = more likely to be used
    - if good study grade high, vice versa
    - need to be explicit
- need to drop by cancer center sometime to get search from librarian
- will provide the ppaers
- will need excel spreadsheet
- managable number of papers
- may need to narrow down scope
- can arrange smthg over zoom w/ librarian if can't get places
- ▼ November 17 - Call w/ Dr. Kerba on deadlines
  - Markus Vaska for knowledge stuff
  - set up smthg w/ him to set up pulling lit
  - pretty broad 1st search - how many hits before/after excl crit
  - info science - still important (1st part), next steps (clin trial)
    - in btwn = waht we found (eg. agents that are promising - looking at bio)
  - primary and how it relates to xyz (not our project)
  - going to get info dump in dec - mid dec
    - pull abst/papers by myself
    - check prev registered stuff
    - make pers criteria of what's imp to project
    - ~1 hr per paper (maybe abt 20 papers) - need
  - set up e-meeting w/ markus
    - already has base framework
  - neighbour died (possibly cut short meeintg - nvm)
  - D.K will talk to markus
  - access doesn't matter rn
  - in feb: bring in to maybe shadow
    - if a day in feb where available for either half or full day to go in

- maybe on PD day in feb 14
- send list of when available
- go in to meet people, see where stuff in
- dep on how things work out → maybe see clinical trial nad bounce around
- deadlines:
  - mid dec - info searching received
    - use to populate columns that are important (methods goals)
    - once done, disc + conc flow easily b/c of gained knowledge
  - feb - bulk of project?
    - important month
  - disc + conc = analysis of int studied → placebo, sham
- reference pacific study - standard of care
  - alex's paper for methods
  - shortlist papers and draw concs
- work comes after pulling papers and establishing crit for papers
- random study (y/n)
- create colls that make sense to diff papers
  - gauge rel importance of int
- 
- ▼ November 22 - Zoom Meeting w/ Dr. Kerba and Mr. Vaska (Introduction)
  - project looking at comp med for lc
  - what type of intervention? need to clarify!!
  - search filters created by u of a for synonyms
    - need to be more spec to use
  - types of searches
  - lit review - representaive sample - find a few key articles that address q to lead to further follow up investigation
    - lc side: do a spec stage (st3)
    - super importnat to figure out waht kind of intervention
      - does it havea currative intent??
  - able to get stuff to before dec 21 (going away)
  - have to be creative b/c no ahs email - ok b/c marcus has ahs access
  - <https://docs.google.com/document/d/10uqJeFSIbdtUhZ79VwxenvhE807qj1Yv222daNReDS0/edit?tab=t.0>
  - when writing report - ref management?
    - told using paperpile
    - lots of sim things
    - need to double check (obvi)
  - schedules line up kinda nicely
  - away monday/tuesday → mid-next week will be able to plan out search/waht it entails

- able to start search before 20 (will be able to address q's before 21)
- use his expertise/skills w/ dr. kerba's knowledge to get project going
- very exploratory - finding balance btwn what's manageable and what's best rep
- gave tent dates (dec for lit rev, may for final paper)
- life planning chat! (experience)
- thinning supplements/herbal products
- how to deal w/ other lang lit?
  - turkey tail mushroom - routinely used in japan/china
- dr. kerba sending marcus doc
- not sure fs abt date range (open ended-ish ~25 years)
- going to have scope of all lc stages for now
- search filter catching a lot of other interventions
- complementary vs alternative medicine
  - comp may inc alt? but may not
- read iterative? back and forth on what to read
- when fina list, heavy reading - all the lit, abstracts
- figure out how to categorize papers
- marcus try to find things by mid dec
- while reading: take note of frequent notes (eg saying vitamins alot) - update marcus
- 
- ▼ November 25 - Check-In w/ Dr. Garcia
  - Overview of LTP (spec on WB/Jan/Feb)
    - Ideally finishing all papers by the time Marcus gets back
  - Important to keep on track → be speedy when get the papers
  - Communication w/ Dr. Kerba
    - When receive papers, check in to make sure reading for right things before going completely off topic/annotating unimportant stuff
  - Rough plan:
    - mid Dec - mid Jan: reading pulled papers for the review
    - Feb: analysis of the papers (looking at trends, hypothesizing, etc)
- ▼ December 5 - Meeting w/ Dr. Kerba on starting going through papers
  - Paper manuscript published by uni of iowa - study looking at high dose vitamin c for metastatic pancreatic cancer patients - seemed to do really well
    - may be good? - tell marcus abt vitamin c
    - Kinda looking for something similar - something random to put into LC
  - May just look at the abstracts to get general idea - too much to do gen. cancers
    - Take out metaanalysis or systematic rev
  - INSANE growth in # of papers available
    - Condense the years to last 15 for smaller scope, look at S3 and LC specifically, english only

- For my reading: Keep open mind on how to organize what is being read
  - Themes, ideas → group them to analyze
  - For next part: when characterizing the quality of studies, intervention, feasibility, applicability, → majority of work for the project
- Make chart of criteria of what comes up (eg the intervention, feasibility, applicability, etc) (make a table to make pre-grades for quality of papers) → create series of columns to evaluate intervention based on methods criteria
  - Eg. GTE paper - focus on liver therefore not super useful for cancer, dose not known, may not improve survival, science hasn't been studied in ppl yet - **pulling data out of paper rather than reading** - when not useful, move on
- Just look through abstracts to get gen ideas to decide what's worth to go in depth into
- Be efficient so that work can be done → get done what's necessary, skip what isn't
- Flag papers that are informative to discussion
- Piri paper probably pretty useful - how the int might impact choice etc
- Make shortlist based on what could be useful if
  - What can I pull that's useful? don't get caught up on details (use intro, conc, abstract - how are they organizing)
- Table of contents can be useful for sections - look at headers to have best understanding of where to start
- When get list of papers, can use tables and scoring system to score independently and talk abt it \*NOT WHOLE PAPER\* JUST ABSTRACT
  - Make work smaller/more relevant
- Jan - how want to score? Need to figure out, become mini content expert on st3 lc + also lc
- Feb = grouping the data + identifying more promising intervention if implemented
- End goal is kinda like vitamin c study (sent by text)
- Pull things from paper to beef up intro
- **Work on the tables first and then go to papers**
- Could go through abt 100-200 abstracts as a max
- May branch of the GI stuff to not miss anything

Organizing the mess of notes (Dec 8):

- Don't read the full papers initially, make criteria first then comb through abstracts to get general idea - if no abstracts use intro/conc → use table of cont (if provided) to get specifics and skip unimportant
- Move on from unimportant papers (if not relevant not worth reading) - make priority list/shortlist - keep in mind this is only part 1 of papers
- Take note of important things while reading papers - use for intro of FP
- 

#### ▼ December 11 - Individual meeting w/ Dr. Garcia

- Good process rn (sort through data → classify)
- Know when to stop so that can analyze data properly
- for SF - VERY important how presenting data/methods
  - Why do things work? Why don't things work? What can be improved? What's not considered? What pitfalls/faults in the studies?
  - Be simple enough without missing details - be detailed about important things

- What's focus of the project
- Have appropriate timeline to organize/score/analyze
- For SF - have "concrete" int that's going to work - don't be wishy washy but identify where might have missed and why
- Probably won't be able to analyze all 300+ papers, important to organize quickly and then make scoring system for enough time to analyze
- For Dec 17 meeting - important to plan what's going on during WB/after
  - Also set up post WB meeting - what got done, what needs to get done, make sure comm about midterms and need to study
  - Get better idea of scoring system - are we weighing things heavier than others (other than efficacy)
  - Ideally get through 150 papers for WB/January
- 
- ▼ December 17 - Meeting w/ Dr. Kerba on WB/January planning
  - connect later in the week
  - Family day for shadowing
    - PD day
  - Maybe just read the titles for gauging if need to read that paper
  - Could possibly get through all titles in a weekend if going by titles
    - If likely or not to be info (look at paragraph summary)
    - Look at intervention key words (eg. medication, diet, probiotics, etc)
    - Look at specific vs general
    - Interested in treatment not reducing risk
    - Be able to read critically and apply relevance to project
    - "Helps w/ pain + emotional concerns"
    - Group papers together - eg 10 items on clinical intervention, 50 on vitamin intervention, 10 n/a, 20 herbal medication w/ 10 describing in depth
      - connect things then pull
      - Look at 4
    - conclusions\*\*
    - Look at type (article, review, trial, overview), intervention (clinical,
      - \*\*DO NOT WANT OVERVIEW
      - Want randomized study w/ details
      - need to pull or not
      - to do deeper dive, need to be selective
- 
- ▼ December 19 - Individual meeting w/ Dr. Garcia
  - Quick check in - what WB plan is (Get through ~.5 of the papers minimum)
  - Forgot to take notes/record what happened (sorry)
- ▼ January 28 - Individual meeting w/ Dr. Garcia
  - Planning next weeks



- Need a clear idea of what's going to happen each week - time is a concern rn
- Establish scoring system ☆
  - In meeting w/ Dr. Kerba on Thursday
  - Test on sample of papers before being used for whole project?
- Lit. rev
  - Maybe do a sample of all 300 papers/categories (eg. TCM, activity, etc)
    - Worth or not?
    - Possibly have graph of distributions of manipulated
  - How many papers going into the review?
    - 25?
  - A little behind on prelim steps of project, have finished by first week Feb (hard deadline, stop pushing later)
- Shadowing
  - Good for having clear idea of what LT goals can be - how it works out after the review
  - For SF: Can outline how in LT can emulate what saw while shadowing
- ▼ January 30 - Meeting w/ Dr. Kerba on progress/schedule
  - CT things:
    - Prbably a quieter day - possibly shadowing multiple ppl
    - Ability to sit in on variety of things
    - Get sense of what happens in CTs
    - 5th floor - green elevators (SW corner, if walk through front door go left - volunteers can help) - prbably away w/o connections
      - Inside vs outside core (kinda middle courtyard - keep wall to the right) - walk north to closed door to say CT - should be unlocked
        - on left door to receptionist area - go there (introduce self and say meeting Lorraine Johnson) @8 - 8:30
        - w/o security: can do it up to 5 times
        - when doing SF presentation: Rw exposure to help out
  - Finish all abstracts by first week of feb
  - roughly same time: finish scoring system
  - Take graph suggestion from dr garcia
    - pi chart to rep
    - bars of absolute numbers of abstracts that fall into diff categories + proportion of each that got selected
  - multiple problems:
    - Ic is bad, limited. standard treatments kinda meh dont want to miss op to further study ints that can be of benefit that have been overlooked → this study
    - more focused on comp meds → how to best select those w. highest success potential (those to use in a ct)
    - criteria diff depending on problem
    - lots of cams (intro) and how to select those
  - Methods
    - what's been going on

- Last step:
    - translating work into ct \*\*
  - use lang that best encapsulates what's going on
    - practical but abstract project
  - 5 week plan
    - see block on calendar
  - Can use AI tools to ask questions and see how compares to own criteria → interest, not project based
    - This criteria valid bc used before, objectively makes sense (face validity)
    - Confirmatory validity → establish own and then compare to other
      - use to judge own criteria
      - look up scientific validity - types (external, scientific)
        - some may not apply
        - used to justify why criteria is what it is \*\*
    - After doing own validity crit, can use AI to confirm
      - Find system that can come up with a similar criteria therefore good
      - use scientific ai, not chat gpt
    - Paper abt sci ai on pub med
    - Potential roles of large language models in SR and MAs to expedite various steps (distinguish btwn genuine/false content)
      - Paper (by fluke) similar to ai concept - look at citation from nature
    - Put on backburner (after lit review)
    - Can put in same criteria to pull abstracts to compare to what's pulled by AI
      - then compare to what got pulled by Marcus with AI
        - overlap, garbage papers, exist??
        - thing of interest that brings a new direction to project - cutting edge, not really possible rn (how to speed up the process of research)
          - innovation in the thinking not the execution
  - How many papers for the review
    - Use however ends up with (no hard number)
      - I judge what is meeting quality metrics - judge by quality
    - Either going to do breathing exercises or exercise
      - Then apply criteria to whittle down
    - Things of interest
  - TAQ polymerase for reading dna strand
    - similar idea to what can happen with ai
  - Maybe a Wed or Thursday
- ▼ February 21 - Individual meeting w/ Dr. Garica
- Data analysis done by weekend

- Recommendations for each setup + what else to inc + should be exc - part of results w/ hypothesis/improvements
  - how/why not done
- graphics for words for quicks visuals
  - balance btwn text and graphics
    - adv on graphics from Dr Kerba
- poster/op - send on weekend for feedback

## ▼ Daily Notes September

### ▼ September 4

- Class - Intro into research/papers
  - Logbook expectations (organization, content, schedule)
  - Approximate deadlines for upcoming assignments (R.P/R. Q)

### ▼ September 6

- Class
  - Worked on background research - what is cancer? - NCI (pls note notes on papers are linked under each paper)
    - Made notes on article from NCI (what, how, why - similar to conv. w/ Kerba but more in-depth)
    - Broad overview of types and terminology (primarily related to causation/treatment)
    -
- For next class
  - Research carcinomas/squamous cancers

### ▼ September 10

- Class
  - Replied to Dr. Kerba's email - setting up another meeting (Sept. 20)
  - Change from prev notes: changed researching carcinomas/squamous cancers to reading on metastatic cancer and genetics (for better background understanding)
  - Background Research: Read on metastatic cancer
    - How cancer spreads and current treatment
  - Background Research: Started reading on genetics associated with cancer
    - How do genetics impact cancer probability?
    -
- For next class
  - Find articles/papers on carcinomas/sarcomas/squamous cancers

### ▼ September 12

- Class
  - BGR: Finished reading/notetaking on genetics of cancer article
  - BGR: Found articles
    - Non-Small Cell Lung Cancer Treatment - NCI
    - Genomic characterization of squamous lung cell cancers

- Lung Squamous Cell Carcinoma Study
  - BGR: Start reading Nature Medical Journal for genomic characterization of SQCC (squamous cell cancer)
- Indv Meeting:
  - Discussed priorities for project/meetings
    - R.Q/goals
    - Talk abt R.P - short-term/long-term goals
    - How to structure R.P intro
      - Cancer- stats, what is it?
      - Types and treatments
      - Non-small cell lung cancer (NSCLC)
- Next class:
  - Finish 2 papers/articles for BGR (ideally relating to NSCLC)
  - Start planning intro (using Dr. Garcia's notes)
- ▼ September 14
  - Call with Dr. Kerba
    - Talking points:
      - RESEARCH Q/PROPOSAL
      - methods
      - clarifying on short hands/do i need to know them
      - talk abt what ive learned so far
      - send over research guidelines
      - ask abt project (study, experiment, etc)
    - Possibly no meeting on 20th (only if needed for clarifying etc)
    - From Dr. Kerba:
      - Plans to send over papers on immunotherapy/current treatments
      - Working on access to AHS data/remote login
- ▼ September 16
  - Class
    - Science fair chat
      - submissions/ethics
    - Paper pile tutorial
      - Build library
      - Should be citing in AMA (American Medical Association)
    - Citations
      - Should be using AMA (biomed/health sci) or APA (general science)
      - Use Purdue Owl for citation guide/checking citation
    - RP
      - Variables/Hypothesis

- If study: no need for variables/hypothesis
- If experiment: necessary to include variables/hypothesis
- If innovation: no need for variables/hypothesis
- RQ/Goals
  - Can have multiple short/long term goals
  - Short term goals: as specific as possible, narrow in scope
  - Long term goals: things to accomplish after project finishes, what you contribute to field of study w/ project. Can be broad in scope
  - RQ should be as spec as possible
  - Not held to RP, only to outline project/significance (convince ppl to give money)
- Introduction (Lit. Review/BGR)
  - Leads to RQ
  - Eg.
    - cancer/stats
    - type of cancer
    - treatments (general, spec)
    - why? (controversy, lack of data)
    - ∴/That's why RQ....
  - Should lead to believing RQ is important to be answered
  - Can be multiple paragraphs/have subheadings
- Methods
  - Why are you using xyz method? What does it help you understand abt your question? How do the methods u use answer your question?
  - Database/dataset analysis, microscopy, setup study, etc
    - usually leads to stats/statistical analysis
  - Doesn't need to be fully understood for RP, must be understood by April/May
- General advice on not being stupid
  - Send drafts to Dr. Garcia (with time for edits) if wanting help
    - Will give spec edits and suggestions
  - Can use AI to summarize papers (not advised but available if really necessary)
  - Go into meetings prepared (questions, what's been worked on, etc)
  - Be careful with paraphrasing from papers/articles
  -
- ▼ September 17
  - Started writing CV - will ask for look over before sending in
    - Have sent in by 18th for quicker processing period
- ▼ September 18
 

Class

  - Work Time

- Sent in CV/q2 response
  - Question 2: What will she be doing?
  - I will be conducting research for my Applied Science Project class, a program aimed to allow keen students to explore other disciplines of science that are otherwise not offered in high school. I plan to read papers on treatments of Stage III non-small cell lung carcinomas as well as the effects of immunotherapies and interventions on the cancer itself as well as the quality of life of patients.
- BGR: Stage 3 lung cancer
- ▼ September 20
 

Class

  - BGR:
    - Finished S3 article
      - 3A, 3B, 3C types + TNM system + treatments
    - Found article on immunotherapy
  - Todo:
    - get CRC, immu record, fill out forms (get parental help, send in asap-whenver crc comes)
    - draft intro
- ▼ September 24
 

Class

  - Emailed Kerba w/ update
    - ✓ Apologize for delay, talk abt why it's taking longer than expected
    - ✓ Update on what working on this week (research prop. Draft)
    - ✓ Ask abt methods for RP
    - ✓ Mention soft deadlines to meet on RP (ie first draft, first edits)
  - Looked into immunotherapy for S3
    - BGR: Targeted and immuno t for LC
    - Found tedtalk
  - Indv meeting
    - Refer to meeting notes Sept 24
  - Todo:
    - First draft RP
- ▼ September 26
 

Class

  - Draft RP intro/find stats
    - Wrote about types of LC that will be studied/current treatments for adeno/sqcc
      - reading comp. genomic characterization paper for stats/more on sqcc
      - looking at immunotherapy more in depth

Call w/ Dr. Kerba

  - Talked abt methods/how project is conducted
  - Set soft deadlines for end of week (not followed, speech ran really late/saturday got busy)

- Read paper he sent (on phone)

#### ▼ September 29

At home

- Working on RP - aim to have intro/objectives finished, questions/goals started
  - ended up writing everywhere
- Updated calendar
  - classes, time blocks
  - added daily notes section of october

#### ▼ September 30

Class

Email Kerba w. schedule

Write RP - objectives, methods

wrote - significance, question, intro parts

- On citation from Dr. Garcia
  - If said by Dr. Kerba, need to find rep. source

### ▼ Daily Notes October

#### ▼ October 1

- Onboarding updates: Cochrane RCMP said no :(
  - Asked via phone call
  - Emailed Ms. Evans, keeping Dr. Kerba updated
    - Emailed abt what to do now that can't get crc, can it be skipped?

#### ▼ October 2

Class

- Should:
  - start figuring out citations (paper pile)
  - continue writing RP (start polishing, get feedback)
  - check for reply from Ms. Evans
- Notes:
  - Logbook - Sept. = practice (formative)
    - Make sure schedule has plan for classes (specific)
    - Daily notes should indicate everything has done
      - Link papers that were read daily (with DN)
  - By this week - RQ, goals, introduction MUST be solid + written
  - Introduction
    - Broader field of study → narrower aspects → RQ
      - Make clear why topic is being studied → make RQ important
      - Don't go into minutiae of field
    - Check in with mentor on regular basis for editing
    - Important to be careful in citing sources

- Cite primary sources, not secondary
- Methods
  - Talk abt variables/hypothesis before methods IF relevant
  - Ok if not super solid bcuz new to what's going on
    - understood if less detailed
- Significance
  - What is your project contributing to the field? What do we find out from the project?
  - Try and be specific in contribution
- General writing advice
  - Cite as you are writing
  - Check in as often as possible/wanted
- Don't be stupid advice
  - Don't procrastinate
  - Check in often
  - Ask for help when needed
- Emails/Communication:
  - Ms. Evans replied
    - Waiting on reply to see if CRC can get excused
  - Sent updating email to Dr. Kerba
    - Updated on CRC/onboarding
    - Talk about deadlines
  - For Friday, ask how should send proposal drafts - ggl docs, word, etc

#### ▼ October 4

##### Class

- Notion logbook
  - Have obvi sections. Daily notes should reflect everything u read. As much detail as possible
  - Calendar entries: make 1 entry w/ all tasks or use task list feature as check list. Check off completed tasks
- Continue drafting RP - objectives and intro (part on interventions/immunology)
- Once Sept. Logbook grade entered, will move daily notes out in order to save space. Currently finding difficulties in attaching ggl doc to notion b/c of account perms. If get locked out before grade entered, will send daily notes in doc via email and troubleshoot doc perms. on Tuesday (class). Don't plan on upgrading plan b/c do not have \$250 of disposable income

#### ▼ October 8

Class - Was sick (no work) → plan to make up during the weekend b/c this week is busy in terms of tests/quizzes

#### ▼ October 10

##### Class

- Paperpile works!! (Re-signed into ggl account after restarting laptop) → shouldn't be more issues?
- Worked on RP - implementing edits that Dr. Garcia suggested
- EVERYTHING is behind paywalls (why)



- Todo
  - ☐ Ask Dr. Kerba about methods (more in-depth)
  - ☐ See if he's had a chance to look over RP
  - ☐ Review edits Dr. Garcia made

#### ▼ October 15

##### Class

- General Chat
  - Are you signed up on CYSF portal/on GC?
  - Email mentors - when was the last time?
    - Send drafts, questions
    - Set up meetings if needed
  - Oral presentations
    - **RP** due date moved to Oct 31 (drop dead deadline, can submit earlier)
      - Make sure reference list matches with what is in RP (don't cite anything that isn't in the RP explicitly)
    - OP Nov. 4-8
      - 10 min presentation with 1 min grace, 5 min questions
        - questions asked by classmates, contributes to participation mark)
        - don't ask questions about motivation for project, ask based on what was presented on (supposed to help presenter identify where gaps were in presented info)
      - Roughly 10-15 slides - about 1 min/slide
      - Rubric on GC, don't forget about it (use it and don't be stupid)
  - Don't forget about logbook
    - Monthly eval includes schedule for next month!
    - November should be well planned out
    - About 14 weeks to have everything done (now to March)
  - CYSF Portal - add to tasks
    - Finish basic project info etc
- Class Work
  - Rewriting RP intro to better suit what Dr. Garcia suggested/edited
  - <https://docs.google.com/document/d/1lJvAfm8r04lIDmSCxZKI-0QYptQPSWCyqSPn99Jpd0/edit> (RP new doc, less garbage one)

##### RP drafting/mind dump

- To-do
  - Basic CYSF info on project - have done by end of the week
  - Be careful of ethics! (ask Dr. Kerba)

#### ▼ October 17

##### Sci fair meeting

- March 11th - in school science fair (15 projects total go to CYSF)

- Tri-fold (provided, very large) or poster (make yourself) - make it at home by ourselves + online platform completed
- Online platform stuff
  - Basic project info - complete ASAP
  - Be very careful about ethics forms - must be completed by everyone
    - Brief description of project, indicate if working with data/human/animal cells (be very clear ie No human or animal cells will be used in this project, only data from xyz will be used)
      - If working with living stuff, "xyz will be used in xyz way. It will be conducted under UofC being mentored by xyz under code 123456" put mentor contact info and name
        - If not directly involved, be clear that using data but not conducting the info
  - Significant Risk - only filled out if there is a significant risk

#### Class

- Science fair early requirements chat - basic info and ethics + sig risk (maybe)
- Emailed Dr. Kerba about police check
  - Looking for work-around, no possible way to get the check as of right now
- Worked on introduction (treatments)
  - Primarily read/annotated article in paper pile (see Stage III nslc treatment overview paper) and applied what was prominent into RP
  - Was writing on spec. treatments that are available, scrapped those paragraphs b/c not relevant (less to show for this day because of this)
- Individual meeting w/ Dr. Garcia - refer to mtg notes Oct 17

#### ▼ October 19

##### Weekend work day

- CYSF Portal
  - Filled out basic information, started working through ethics. Plan to get clarification that ethics has been filled out appropriately + not significant risk in class
- RP
  - <https://docs.google.com/document/d/1lJvAfm8r04lIDmSCxZKI-0QYptQPSWCyqSPn99Jpd0/edit> (see version history for more in-depth of what was worked on - difficult to show without taking up pages for edits)
  - Finished section about current treatments (chemo/radio/surgery)
  - Wrote immunotherapy/immune system paragraphs, question, methods
  - Started writing interventions paragraph
- Start filling in calendar for Nov. (coming up fast)
  - Started thinking on how to plan for presentation (start of nov) around speeches for national qualifiers (end of nov)
- BGR
  - Found article on immunotherapy - used as primary evidence/data in immunotherapy/immune system paragraph
    - Plan to find more info on immunotherapy efficacy to better support interventions paragraph
  - Found paper on diet and immunotherapy
    - relates to RQ and interventions Dr. Kerba talked about

▼ October 20

Weekend Work

- RP
  - Finished (sorta) interventions paragraph
  - Wrote/Added all other sections (other than references) to RP
  - Sent out draft to Dr. Kerba to have him look at it when he gets a chance

▼ October 21

Class

- Oral Presentation chat/examples
  - 10 min pres. 5 min q's (1 min grace)
  - 1. BGR, 2. RQ, 3. Goals, (3.5 Hypothesis and variables), 4. Methodology, 5. Significance
    - Best understanding should be in BGR - be clear on why studying
    - How does RQ relate to BGR
    - Significance NEEDS your contribution to the field (impacts) + why is the research needed - heavy weighting
      - Sep. category in content, don't skimp here
    - For variables/hypothesis - can have confounding variables + reasoning for hypothesis
  - Graphics needed - graphics over text (be selective - good quality)
    - Need to enhance message not distract
    - BIG text
    - If using graph, make sure axes labels can be seen
    - Make sure you cite graphics from papers
      - "Taken from "xyz" by ABC"
  - Don't be robotic but be rehearsed
    - Don't read off of cue cards - can have but don't read
    - Have good flow in presentation
    - Edit yourself - don't cram long pres. into small pres.
      - Critical vs Detail
  - Presentation slides
    - LONG title (slide 1) - next slide should explain title slide
    - 1st/2nd slide would have "punchline"
      - clear explanation that's very quick. What do you want to see with your study?
    - ~3-4 slides of BGR, ~1 slide RQ and goals, ~3 slides for variables, hypothesis, methods, ~1 slide for significance
    - Methods: not a list of steps. show progression to answer through graphics
  - Don't be cutesy in the presentation - don't embellish for funzies
- BioRender - find figures to make own diagrams (very useful)

▼ October 23

Class

- CYSF Stuff (ethics, sig risk) - Can't continue without
  - This project does not require the use of human/animal etc participants. This project will only use data.
  - If using: This project is supervised by (Names), dept #/email/phone number
    - If using, be v. specific about how the cells/ppl/animals are being used. What is your involvement? (eg. Animal handling will be done by xyz people in the lab.). put lab ethics code in desc of project
  - CYSF stuff done by end of Oct.
- RP Drafts chat
  - Methods: You might not understand how/what you're doing but need to be able to link procedures/RQ.
    - Need details, not general overview
      - Eg. if looking for spec. thing, HOW are you seeing? staining cells? binding to smthg to make fluorescent?
    - Can't be general, what SPECIFICALLY are you doing? Why are you doing it? How do the results of the procedures help answer your RQ?
      - Eg. Gene sequencing of xyz → bioinformatic to find SNP → BLAST technique to get xyz
    - Methods written in future tense (Going to be doing the experiments, not now)
    - No personal pronouns
    - Methods: what will happen, not what could/might. Assume everything will work out
  - References
    - PUT EVERYTHING IN PAPERPILE
- Work
  - Waiting for Dr. Kerba to reply, RP sent Sunday night. Sent to Dr. Garcia today (forgot to press share on the weekend)
  - Start references page
    - Added everything into paperpile - made doc to make clear what each source was used for
    - Had to troubleshoot paperpile, took excessive amounts of time
    - Figuring out Word
- Set up meeting dates for going over RP
  - Friday for initial (either 3:30 or 4:30)

#### ▼ October 25

##### Class

- General info on presentations/November
  - Oral presentations - date changed (Nov 6 → Nov 8). Nov 6-13
    - Won't be able to do meetings consistently during these classes
      - Minimum of 4 presentations to be present for/asking questions
    - Logbook should include presentations that were listened to - notes, questions
  - Presentation
    - Don't bother the mentors that much, find a balance btwn getting help and independent work
  - Won't be lots of chances for indv meetings w/ Dr. Garcia in Nov (presentations)
  - Submit slides when presentation day (ideally going to have done by 4th to be ready to practice and refine)
- RP

- Size 12, 1.5-double spaced
- Formatting
  - At top of 1st page:
    - Title → RP/Date → ASP → Authors, Introduction, etc
  - Title Page:
    - "Working title" → Research Proposal/Date → ASP → Your Name → Mentors
  - Can have objectives w/ bullet points, numbered list, sentences
  - Variables can't be described in paragraph w/o type of variable
  - Title → Intro → RQ → Goals → (Hypothesis/Variables) → Methodology → Significance
    - Biggest methodology mistake: Listed as steps, needs to be written as paragraph
- Work Time
  - Finish citations for RP, make titlepage
    - Finding rep sources for some of the things Dr. Kerba said
- Call w/ Dr. Kerba
  - Go over RP (biggest priority)
  - Get some info on ethics/sig risk - not huge priority, can be done over text
  - If go uofc, might get same response on police
  - RP pretty solid??
  - (General Summary) - see meeting notes for RP specific stuff
    - RP not too bad, some refinement in intro/methods/significance. Not looking great for UofC pathway, likely to also need police check → might end up using Alex's account if really necessary but not likely to be. No risks for ethics/sig risk → good to submit. Have meeting on Sunday (maybe) to refine things (busy Monday b/c moving to the new building so maybe just text to go over)

#### ▼ October 27

##### Weekend Work

- To-do (see tasks in calendar block) - Going out at noon - need to get stuff done early!!!
  - Clean up RP based on what Dr. Kerba said in mtg on Friday (see mtg notes oct 25 or gen summary in oct 25 daily notes)
    - Most important = methods, significance, intro cleanup/adding
    - New RQ, more specific
    - take out pers notes if not needed, highlight if needed to remember
      - Done, everything taken out (hopefully) b/c finished RP
  - Submit all CYSF project info (just hit submit button, no ethical prblms or sig risk)
  - Update Dr. Garcia on what should be read (as a priority vs detailing) - be clear abt ggl docs or Word (choose one!!!)
    - Chose word - easier for paperpile/sending to Dr. Kerba

##### For class

- Check references, correct format?
- Relatively on track rn, doing ok! so can calm down a lil

#### ▼ October 29

## Class

- Citations
  - Always inc dois and urls
  - references on its own page
  - watch punctuation and superscript
- Science Fair
  - Check for updates with cysf platform (ethics, etc)
  - Check platforms at least 2x a week
- General:
  - Logbook due next class!!
    - Plan out Nov
  - RP due Thurs (be aware!!)
- Work:
  - Implemented edits made by Dr. Garica
  - Indv meeting with Dr. Garcia - see mtg notes Oct 29

## ▼ October 30

### RP Refinement Day

- Texted Dr. Kerba about getting more in depth on methods - mtg possibly on next Thursday at lunch or after school

## ▼ October 31

### Class

- Work time for RP, RPP, logbook
- Make sure references match in-text citations (citations are driving me insane!!!)
- RP Work
  - Spent long time trying to find source for where NSCLC originates - can't seem to find
  - Looking for origin cell articles:
    - <https://pmc.ncbi.nlm.nih.gov/articles/PMC5712844/>
    - <https://journals.biologists.com/dev/article/131/17/4299/42329/Rb-family-proteins-differentially-regulate>
    - <https://pmc.ncbi.nlm.nih.gov/articles/PMC4470698/>
  - Tent deadline for methods (resubmitting RP) -Thursday the 7th (based on Dr. Kerba's ability to meet more than anything)

### At home

- Refined citations, checked grammar
- Waiting on Dr. Kerba's thoughts for question/methods → be pushy but not annoying

October done!!

## ▼ Daily Notes November

### ▼ November 3

#### Weekend work day

- Call w/ Dr. Kerba (see mtg notes Nov 3 for specifics/detailed)

- Discussed methods → look at Alex's paper for example of what to do (eg. date range, exclusion criteria)
  - Registering project of PROSPERO (uk website for research to make sure no overlap) - will do in coming weeks w/ help of Dr. Kerba
  - AHS library stuff → find a time to go meet librarian and ask for search of key terms/papers → can send papers through pdf etc
    - May need to meet over zoom b/c parents in Japan and can't get to TBCC/new building
  - CYSF
    - Ethics approved!!
  - RP
    - Need to implement edits made by Dr. Kerba → most are accept or decline (mostly wording changes or clarity)
    - Re-writing methodology section of RP
      - See mtg notes Nov 3 for specific things that should be changed/added
    - Brain dump for methods (part 1) (drafting, will be written out in paragraph form in RP) → **How do my methods differentiate from my goals????**
      - What I know is going on:
        - pull lit abt cancer interventions
        - analyze pulled lit for trends and stuff around goals of efficacy quality of life, etc
        - using this data identify an intervention that is most likely to be impactful for NSCLC treatment
        - sources pulled by AHS librarians - date range of 20 yrs
        - excluding non English, opinion, etc (not papers or official stuff)
        - look at PRISMA guidelines for help on being specific and in depth
        - **how a systematic review leads to the identification of interventions**
        -
      - This project will be conducted by doing a systematic review of literature. The review will be conducted to identify a novel intervention that can be implemented into the NSCLC standard of care.
      - Key terms that will be searched include cancer interventions, stage III lung cancer, novel interventions (need help here)
      - Exclusion criteria of the review are non-English papers, non-peer-reviewed papers, commentaries, and other reviews. Duplications of information will also be excluded.
      - Literature from the past twenty years (January 2004 to December 2024) will be utilized in this project. Literature will be acquired from AHS databases, PubMed databases and papers, and published studies. This project will be facilitated by knowledge specialists at AHS.
      - All types of cancer will be included in the search for interventions. Should this be too broad of a scope and not manageable to thoroughly analyze in the timeframe of November 2024 to February/March 2025, the review will instead focus on lung cancer interventions.
      - Literature will be analyzed for trends relating to improving patient survival, increasing the ability of patients to complete prescribed treatments, or improvement in the quality of life of the patient. Interventions that display these trends will then be identified
    - Methods brain dump pt2 → how
      - (Added in Nov 4) Not planned out via brain dump, straight into RP
- ▼ November 4

## Class

- Logbook discussion
  - Make tasks as specific as possible
  - If you don't know what to do for tasks
    - Read paper xyz (be clear what paper)
    - CYSF portal xyz (what part of it)
    - Plan tentative dates for meetings
- Oral Presentations
  - Which are you going to listen to, when are you going to work on stuff? Don't have to listen to all!
- CYSF
  - Approved ethics, no need sig risk
- Long term planning w/ mentor
  - What is happening in each month? (in gen terms → not EVERY meeting but deadlines to be done project on time)
- Future classes
  - Literature review some time early December
  - Midterms Jan 10-20
  - March 11 - School Science fair (poster completed, etc)
    - Work backwards, what needs to be done for this to be feasible?
  - May - Final paper
- Work
  - RP - Methodology - Took points from yesterday and made into paragraph form
    - This project will focus primarily on stages 3B and 3C of NSCLC. It will concentrate on patients who have already undergone initial treatments of chemotherapy/radiotherapy and are anticipated to undergo immunotherapy to achieve remission of the cancer.  
This project will be conducted by doing a systematic review of literature. The review will be conducted to identify a novel intervention that can be implemented into the NSCLC standard of care. Literature from the past twenty years (January 2004 to December 2024) will be utilized in this project. Literature will be acquired from AHS databases, PubMed databases and papers, and published studies. This project will be facilitated by knowledge specialists at AHS. All types of cancer will be included in the search for interventions. Should this be too broad of a scope and not manageable to thoroughly analyze in the timeframe of November 2024 to February/March 2025, the review will instead focus on lung cancer interventions. Key terms that will be searched include cancer interventions, stage III lung cancer, and novel interventions (need help here). Exclusion criteria of the review are non-English papers, non-peer-reviewed papers, commentaries, and other reviews. Duplications of information will also be excluded. Literature will be analyzed for trends relating to improving patient survival, increasing the ability of patients to complete prescribed treatments, or improvement in the quality of life of the patient. Interventions that display these trends will then be identified.  
To allow for the most efficient analysis of these interventions, they will be graded by a metric of efficacy, availability, cost effectiveness, and feasibility. Efficacy will be assessed through observed changes in improving patient survival, increasing the ability of patients to complete prescribed treatments, or improvement in the quality of life of the patient. Availability will be assessed through how difficult the intervention is to obtain. Cost effectiveness will be assessed by ordering the interventions from least to most expensive. Feasibility will be assessed by the simplicity of receiving



the intervention. Taking all these metrics into account, a grading system will be established. Interventions that were previously identified during the systematic review will be scored according to this system. Once the interventions have been graded, a final hypothesis will be created that evaluates the possibility of the most impactful interventions.

- RPP - Slides

- Made presentation on google slides
  - [https://docs.google.com/presentation/d/1uNQSxLdTDxhj30Mc\\_4zvt2LBZtnqjUU7r3ARSXEo6Mc/ecusp=sharing](https://docs.google.com/presentation/d/1uNQSxLdTDxhj30Mc_4zvt2LBZtnqjUU7r3ARSXEo6Mc/ecusp=sharing)
- For methods
  - Use biorender for graphics
  - May not be direct graphics for methods but show on timeline rather than just words w/ relev images
- Made introduction slide/started planning what goes on each slide
  - BGR 1: Stage 3 NSCLC
  - BGR 2: Current treatments/pitfalls
  - Question: Copy directly from RP
  - Objectives: Numbered list of primary
  - Objectives 2: Numbered list of secondary (if too crowded on O1)
  - Methods: Timeline of what needs to be done for smthg else to be done
  - Significance: Small contribution vs large contribution

▼ November 6

Class

- Presentations start but didn't listen to any so that could work on RPP
- RPP
  - [https://docs.google.com/presentation/d/1uNQSxLdTDxhj30Mc\\_4zvt2LBZtnqjUU7r3ARSXEo6Mc/edit#slide](https://docs.google.com/presentation/d/1uNQSxLdTDxhj30Mc_4zvt2LBZtnqjUU7r3ARSXEo6Mc/edit#slide)
  - Finished BGR slides, goals, question
  - Started significance flow chart on canva
  - Started planning what needs to be said for graphics to make sense

▼ November 7

At home work

- Todo
  - Finish RPP slides!!! (biggest priority)
    - Photos, significance, methods
    - Go over presentation
- Finished RPP!
  - [https://docs.google.com/presentation/d/1uNQSxLdTDxhj30Mc\\_4zvt2LBZtnqjUU7r3ARSXEo6Mc/edit#slide=id](https://docs.google.com/presentation/d/1uNQSxLdTDxhj30Mc_4zvt2LBZtnqjUU7r3ARSXEo6Mc/edit#slide=id)

▼ November 8

Class

- Listening to RPP

RPP Notes

- Presented RPP

#### ▼ November 13

##### Class

- Get your stuff together chat
  - Connect w/ mentors → they aren't going to chase after you
    - mentor evals
  - We are driving the project → set timelines
  - Actually use logbook notes (what are we doing??)
  - Use paperpile properly
    - double check sources in PP
    - should be writing and citing at the same time
    - can't trust PP to be perfect → need to check stuff
- Final RPP on Tuesday, make sure enough proposals listened to
- RPP (Audrey, Antara, Arth)

##### RPP Notes

#### ▼ November 15

##### Class

- Emailed Dr. Kerba -setting up long term plan
- Read parts of Durv. paper - got confused and had to look into monoclonal antibodies
  - (Article for understanding) <https://www.mayoclinic.org/diseases-conditions/cancer/in-depth/monoclonal-antibody/art-20047808#:~:text=What is a monoclonal antibody,wanted%2C such as cancer cells.>
- 

#### ▼ November 19

##### Class

- Populated calendar w/ dates in January
  - Started populating till Feb (have tent dates from speech/debate tournaments)
- Listened the Merrit/Maddux RPP

##### RPP Notes

- Chat
  - Need to have fuller understanding of what's going on with methodology
    - don't be scared of your mentors, ask the hard questions
  - RP is precursor for all other papers for this class
    - take the comments seriously
    - don't repeat errors if they've been corrected
    - stop screwing up references!!
      - AMA superscripts connected to ref list
        - paperpile can usually fix your mistakes but u should be checking
      - APA has alphabetical list for references

- you NEED DOIs and URLs
  - there's a checkmark to do it for you
- it's getting annoying — listen to what's going on and actually do the work of checking
- References won't be marked as lightly in the future
  - need multiple, rep sources
- RPP
  - get punchlines! it's boring to listen
- Mentor communication
  - should be meeting weekly!!! (need to improve on this)
  - get going on the actual project
  - be independent but ask for help
- Get started on the actual project
  - timelines, deadlines
  - November crunch time!!
    - get organized!!! be ready and get stuff done
- Don't be stupid chat
  - actually ask??? won't get clowned on
    - can show the most garbage thing in the world and it's ok
    - follow up on feedback b/c it's dumb not to
- CYSF
  - work on it gradually, kinda lengthy
    - have the core ideas of each section, can be changed later
- To do
  - Plan next classes/Dec.
  - Email Dr. Kerba w/ dates (+February calendar, shouldn't be anything super imp that can't be missed)

#### At home

- Got in contact w/ librarian (Marcus Vaska)
  - Sent in reply with times that I can meet virtually

#### ▼ November 21

##### Class

- Didn't get much done this class, had important math test
- Plan to do work on Fri/weekend

#### ▼ November 22

##### Meeting Marcus/Dr. Kerba

- General introduction meeting + establishing timelines
  - For class: lit review (find out date), sci fair, etc
  - From them: Marcus leaving 21 - need to pull info before - back on 21
- Outlining specifics of the project
  - Representative sample (what I'm doing)

- What kind of intervention is it? - thinking herbal subs/supplements
- See Nov. 22 Meeting notes - Zoom Meeting w/ Dr. Kerba and Mr. Vaska (Introduction)

#### ▼ November 25

##### Class

- Planning timelines
  - Rn: independent reading until Marcus can pull papers
- Communicate w/ mentors btwn WB and midterms
  - Plan to send Feb. calendar on Monday - when more certain abt schedule w/ speech tournament
  - Meetings planned for Dec. 5/17
    - 5: Make sure understand what to do when papers pulled
    - 17: Make plans ish for WB/Jan, confirm on track
- Quick meeting w/ Dr. Garcia
  - Outlining LT plan
    - mid Dec-mid Jan → reading papers that got pulled by Marcus
      - Have finished by the time that Marcus gets back
      - Should talk w/ Dr. Kerba when I get papers (what should I be looking for specifically, know generally but specifics)
    - Feb - analysis of the pulled data
- Go through RP comments to fix for final paper

#### ▼ November 27

##### Class

- Email from Marcus (how the search is going, I don't think there's anything for me to do on that end)
- Continuing reading Early palliative care paper
  - Finished today - not most useful paper for project specifics but good for BGR in immunotherapy

[EPC article w annotations.pdf](#)

- Continued annotating durv. paper (forgot about this last week)
- Should find more articles abt PD-L1/PD-1 - lots of talk in papers that I read recently

#### ▼ November 29

##### Class

- Continued reading/Finished durv. paper
  - Annotated in paperpile (will attach final w/ annotations when done, gets messy when not finished + computer storage may be problematic)

[Durv paper w annotations.pdf](#)

- Finished plan for Dec. classes
- Received email from Marcus/Dr. Kerba - will need to meet tog. to discuss more in-depth of review

- Maybe use Dec 5 date that was OG planned for meeting w/ Dr. Kerba
- Emailed back abt a meeting - not sure if can copy other ppl, will ask
- Used some of class time to prepare for speech tournament this weekend
  - Will be more productive on weekend/next week b/c important tournament

## ▼ Daily Notes December

### ▼ December 3

Class skipped due to President's Breakfast

### ▼ December 5

Class

- Chat
  - Intro section of FP - Jan 31
    - Due 10 days after midterms, start looking at it now
    - If gaps in intro, keep reading. Use RP suggestions/intro
    - Watch flow/depth of writing
  - Methods section of FP - Feb 19
    - Needs to be extremely technical and thorough
    - Take notes from mentor (in logbook) and use for methods
      - May want to split new methods section in logbook for easier finding
    - Watch language - if talking abt equipment, describe the equipment (eg. model and manufacturer, place of origin) - same applies for reagents (eg. for antibodies: (company from where thing was bought, headquarters location)) - for software's (software (version of software))
    - Write in past perfect or present perfect
    - No personal pronouns (inc collectives)
  - OPs in Feb, start thinking abt posters
    - Don't be like Alex w/ poster
    - Need to fully understand project before
    - PLS check in w/ Dr. Garcia before presentations - what's changeable, unclear, useless
    - Don't be a speech nerd, different to present w/ poster than slides so
  - For future meetings
    - Planning for future should take 5-10 min per meeting
      - Deadlines, buffers, changes
    - Updates and clarification on what's going on
- Independent Work
  - Sorting through paperpile to try and organize review papers from gen lit
- Meeting w/ Dr. Kerba
  - Planning of how to go through all the papers
  - Some planning of dates - will talk more in depth on Dec 17 when better idea of how long it takes for me to read a paper/when have more? papers
  - See mtg notes Dec 5 for more details

### ▼ December 9

#### Class

- Created Excel spreadsheet for quick categorizing - see calendar block for more details

Paper Organizer.xlsx

- Read abstracts of Morrison, Pirri, Experiences Pon (?)
- Started reading Chu but ended up moving on b/c no abstract
- Started reading von Borsel introduction (no abstract but interesting)

#### ▼ December 11

##### Class

- Received papers pt2
  - A lot more results this time - get more efficient at getting through
- Emailed Marcus/Dr. Kerba abt current progress, Dec 17 meeting
- Should have meeting w/ mentor before break and after WB - plan what's going on during WB and after (by Jan 3-9), after midterms
- Finished von Borsol intro/RQ - probably look at conc
- Logbooks collected at end of January - make sure still updating will still get marks for Dec and Jan
- LTP - organize papers by disease → organ → intervention type → score
- You're always behind (womp womp)
- Send out Feb schedule (today - confirmed ish so can finally send out)
- Considered summer program letters
- SF
  - LTP - give time to process results - understand data and simplify it for someone who isn't an expert

#### ▼ December 13

##### Class

- Send email w/ Feb. calendar to Dr. Kerba for shadowing
- Used majority of class to prep for physics/math tests that are upcoming
  - will make up during WB

#### ▼ December 17

##### Meeting

- See mtg notes - how to get through papers, plan for WB

##### Class

- Sorted through first 3 papers of 300
- <https://onedrive.live.com/?wdOrigin=OWA%2EATT%2ESXS&wdPreviousSession=d71dcd52%2Dcd6d%2D6047%2D89ff%2D891de195dea3>

#### ▼ December 19

##### Class

- Cookies!
- Brief meeting on what plan for WB/general plan for January

- See mtg notes Dec 19 - Indv meeting
- Working through next ~10 papers
  - Mostly reviews or meta-analyses - will reconfirm which are most useful after going through more
- Card games (was tired and not focused)

## ▼ Winter Break

- <https://onedrive.live.com/?wdOrigin=OWA%2EATT%2ESXS&wdPreviousSession=d71dcd52%2Dcd6d%2D6047%2D89ff%2D891de195dea3&cid=...> - Papers

Papers Part 2.xlsx

- December 28
  - 1 paper (Huang)
- December 29
  - Next 3 papers (Jia - Liu K)
- January 2
  - Next 5 papers (Liu S - Sun)
    - Lost a couple papers (forgot what days they were sorted - some time between Dec. 17 and Dec. 28)
    - Found 1st paper that's explicitly about interventions - if don't find many, ask Dr. Kerba what I should do/doing wrong
  - Plan January calendar for next logbook check
  - Paper sorting (Tadsuan - You)
- January 4
  - More paper sorting (Yuan - Chen J) (Currently done ~36 papers)

## ▼ Daily Notes January

### ▼ January 6

#### Class

- Chat
  - Keep in touch w/ mentors - school/midterms, update on work that's been done/needed to do
    - Should set up next meeting
    - Check-in today
  - Logbooks collected at the end of the month - Dec + Jan
  - Intro paper due at end of month
    - 4 classes to get finished after midterms → start working beforehand
  - If need to see Dr. Garcia email
  - CYSF portal
    - Make sure to check every once in a while
- Work Time
  - Paper sorting (Cheng - Shen = ~18)

- <https://onedrive.live.com/?wdOrigin=OWA%2EATT%2ESXS&wdPreviousSession=d71dcd52%2Dcd6d%2D6047%2D89ff%2D891de1>
  - Stopped at ~10:40
- Physics studying
- ▼ January 8
  - Class
    - Midterm studying
- ▼ January 17
  - At-home work
    - 2 papers (Sun - Voorn)
    - Moving "soft" deadline of finishing papers to end of next week - was too busy with midterms to work on any
      - Ideally getting all papers sorted by 25th
    - Plan to send updating email/text to Dr. Kerba after GH exam
- ▼ January 20
  - At home work
    - <https://onedrive.live.com/?wdOrigin=OWA%2EATT%2ESXS&wdPreviousSession=d71dcd52%2Dcd6d%2D6047%2D89ff%2D891de195d>
      - Set pace of ~50 abstracts a day if wanting to finish by the 25 (possibly unrealistic)
    - Abstract sorting:
      - Wang J (1) - Wang S = 3 papers
      - Wang X - Wu = 5 papers
      -
- ▼ January 21
  - At home work
    - Messaged Dr. Kerba
      - Update on what's happening/schedule
      - Plans to go over progress next week
    - Sorting abstracts
      - Xia
- ▼ January 22
  - Class
    - Chat
      - Plan out remaining time to Science Fair (6 weeks)
        - Reconnecting w/ mentor, set up times to meet with mentor
        - Next 6 weeks to get project done
        - Put in a lot of time to ASP (no more time to dilly dally)
        - LOCK IN on ASP
        - Don't focus on writing the intro, get data analyzed first
        - Submit lit review into turnitin/CYSF portal



- Start entering info into CYSF portal (takes a while)
  - Portal not used for school science fair (March 11) but needs to be done by March 21
- Poster > Portal, nobody looks at portal for school SF → give some extra effort if selected for cities
- CYSF = April 10-12
- Understand methodology thoroughly
- Explain technically and simply
- copy and paste into portal from writing (don't be fancy)
- Easiest to shorten BGR on trifold b/c can explain orally
- Intro
  - Finish intro w/ RQ, hypothesis and goals at end of intro
  - after intro, straight into methods/variables. not separated
- Poster vs Power point
  - Consider advantages vs disadvantages
  - Content will be similar
  - Show Dr. Garcia before finalizing poster
  - Presenting end of February (21- March 3)
- HAVE TO be done with data by Feb 21
- Worst Case: No data
  - Will need to explain on what happens next and implications
  - Give future directions
  - SF big on changes/improvements (how to fix, critical analysis of work)
    - Weighted heavily
    - How to redesign study knowing what known now
- Show how BG relates to what's being studied
- Actually answer your question
- Graphs should have error bars
- Review rubric before finalizing presentation (drop a lot of hints for various categories)
- End presentation on the relevance of your project
- Intro
  - Don't need to send to mentors bc already got feedback from RP
    - Fix based on prev feedback
- Work Time
  - Sorting abstracts: Xu - Allemailem (5)
  - Sorting abstracts: Alshairi - Du (2)
- At-home Work
  - Sorting abstracts: Evangeliou - Lu (10)
- ▼ January 23
  - SF meeting

- Have to excuse selves for science fair (when closer)
- Posters (if wanting trifold - provided by school can pick up whenever)
  - Needs to stand on table
- Portal
  - Be careful of plagiarism
    - Cited, quotes, OG words, etc
    - Use turnitin first then put in CYSF portal
  - Logbook
    - Find a way to put it into portal
- If not going to CYSF - portal gets deleted, if going to CYSF - finish portal by 21
- **Due dates**
  - **BGR due Feb 7**
  - **Methods due Feb 21**
  - **Data collection/results, analysis/conclusion due March 3**
- 5 weeks to finish data collection/results/analysis, 1 week for poster
- 

#### ▼ January 24

##### Class

- Emailed Dr. Kerba about setting up a meeting/shadowing in February
- Abstract sorting
  - Skipping #83 (Mondal) because I don't understand what's going on
  - Rahma - Avancini (17)
    - At abstract 100 of 315
  - Cai - Lee MK (9)
    - What's a narrative review?
  - Li C -

#### ▼ January 27

##### At-home

- abstract sorting
  - Li C - Li Z (3)

#### ▼ January 28

##### Class

- Need references page after intro paper on assignments but not portal, put things into the right sections
- Be clear where info came from - CYSF picky
- Work time
  - Writing intro paper based on edits from RP
  - For next time/at home:
    - Adding onto intro for length/clarity
    - Find better sources

- Abstract sorting
    - Liew (1)
  - Meeting w/ Dr. Garcia
    - General planning/clarity things - see mtg notes for details
- ▼ January 29
  - At home
    - Liu X - Papayan (4)
- ▼ January 30
  - Class
    - Work time
      - Introduction
        - Write final paragraph w/ RQ, goals
      - Abstract sorting
        - Pu - Vega (8)
    - Meeting @10:30
      - 5 week plan
      - See mtg notes
- ▼ January 31
  - At home
    - Abstract sorting
      - Wang - Feng (8)
- ▼ **Daily Notes February**
  - ▼ February 1
    - At home
      - Abstract sorting
        - Frass - Chen H 2 (22)
          - At halfway point (157 total)
  - ▼ February 3
    - Class
      - Citations
        - Can use Chat GPT to find sources to back up intro info (peer rev sources)
      - Link where/when writing data collection
      - 3 weeks to the OPs
      - Work Time
        - Intro citations (priority because late) - Finished @1:20
        - Abstract sorting
          - <https://onedrive.live.com/?wdOrigin=OWA%2EATT%2ESXS&wdPreviousSession=d71dcd52%2Dcd6d%2D6047%2D89ff%2D891de1>
          - Chen Y - Balboni (

▼ February 5

Class

- Abstract sorting
  - Missed an abstract somewhere - will find another time (nevermind)
    - Found - Missed Ou (#164)
  - Ishiura - Kasala (43)
  - <https://onedrive.live.com/?wdOrigin=OWA%2EATT%2ESXS&wdPreviousSession=d71dcd52%2Dcd6d%2D6047%2D89ff%2D891de195c>

[Papers Part 2.xlsx](#)

- Milbury - Zhou (10)
  - At  $232/315 = 0.736 \sim 73\%$  - good progress today!

At home

- Shadowing forms - submitting today once confirm that all info is correct
  - Sent out but email bounced back → let Dr. Kerba know, probably because Ms. Evans retired
    - Sent out another email to Mr. Loughhead and Ms. Kutcher (as per Dr. Kerba's advice)
- Felt productive enough in abstract sorting during class, didn't do any at home - will do more tmr

▼ February 6

At home

Abstract sorting

- Akopov - Liu (9)
- did more but spreadsheet didn't save so lost ~10 (very frustrating)

▼ February 7

Emails

- Shadowing application approved - going in on 14th

Class

- Chat
  - Logbook quality has declined - need to have specific tasks
  - OP on Feb 27 - plan for OP before!!
  - Replan February - not good
    - What happens on every week? What about poster?
  - SF OPs under 15 but 12 👍
  - OP
    - Moving OPs - still on 27
  - Do you portal!!
    - Okish now if haven't done....but plan to do it
  - SF
    - Whole day for SF - during breaks can look at each other's posters

- Tell teachers BEFORE SF
- **Disclose if/where AI was used (eg. in finding better sources)**

#### Work Time

- Abstract sorting
  - Longanathan - Mosher (24)
  - 264/315 = 83%
  - Navon - Yorke (16)
  - 281/315 = 89% (getting veryyyy close)

#### At home

- Abstract sorting
  - Allison - Yang (33)
  - 315/315!!!! = `100%!!!
- Scoring system will be worked on tomorrow - have to go to bed early because of tournament tomorrow morning

#### ▼ February 9

##### At home

- Combed through starred papers to figure out which are most important to read
  - 27 pulled papers (pulled b/c based on diet or activity interventions)
    - 27/315 - continuing to further sort tmr (type of int, what int targets)
- Questions to email Dr. Kerba
  - Can SRs be included in a lit review if R aren't? - Most papers are SR + MAs
  - Specifics of QoL - eg MH, PH, relationships
  -

#### ▼ February 10

##### At home

- Checking w/ Dr. Kerba about what papers to use for review
  - Can't use SR or R, reduced papers by 20 (uh oh - need to spend time next class going through papers again to pull more)

#### ▼ February 11

Class missed due to assembly

#### ▼ February 13

##### Class

- CYSF
  - Part of data is research
  - Analysis vs research
  - Problem is more than a sentence: BGR → problem
  - Portal finished by 21 - will need to finish before going away for language trip if selected
  - CYSF EATS UP buzz words
    - Big one is on motivation/originality of project
  - USE RUBRICS for presentation

- Conclusion isn't explaining, that happens in analysis
- Acknowledgements
  - Critical for sources of money - UofC/Department
    - 🌟🌟 Dr. (x), student mentors FROM Department of (xyz) from UofC
    - Dr. Garcia from Webber Academy
- Put CYSF portal in tasks for March - at least 1 task for the portal per class
- Nothing can be late in T2
  - **All** slides have to be in on 11:30 on Feb 27
- METHODS
  - NO EXTENSIONS
- Start thinking about poster!!!
- Work Time
  - Data
    - Spent time re-combing through papers for more relevant ones because initial sweep didn't have enough
    - Sent email to Marcus with all the paper links - ideally get for the weekend to focus on reading
  - Methodology writing (started)
    - MUST be written in past → past-perfect tense

▼ February 17

At home

- Methodology writing

[Methodology Paper.docx](#)

- Roughly 2-3 hours on writing/editing
- Struggling to write the ending of the methods because haven't gotten there yet
- Wayyyy to late to ask to be fully edited, will just ask about final paragraphs

▼ February 18

At home

- Editing methods w/ Antara

▼ February 19

Class

- Chat
  - Need to give AT LEAST 3-4 days (7 ideal) if wanting feedback on a paper
  - Deadlines moved
    - **Results: March 21 → April 14**
      - Detailed description of data. No raw data! Only graphs/tables/diagrams
      - Paragraphs that describes the figures
      - Mostly going to be done for SF → only need to describe WHAT happened

- **Don't describe why - lose marks!!!**
  - Most papers online will combine results/analysis → DONT DO THIS
- Easiest section to write
- May need to work on it during the break
- **Analysis/Discussion/Conclusions: May 1**
  - Hardest section to write
  - **Relate back to lit/RQ** - how do results compare to what exists - comp/cont?
    - Explain results/Provide alt explanation
    - Put results in context of current understanding of field
  - Answer EVERY part of RQ - Y/N does data support hypothesis
  - How does data add to field?
  - Significance/future directions come in concluding/final paragraph
- **Final Paper: May 30**
  - Use allllll feedback
  - Every source needs to be peer reviewed
- Figures
  - Text/description above the figure → reference figure in text (don't need to say ...below)
- Figure/Table Legends
  - Fig. (#). Title. (description of figure - may need to cite sources if using data from other places)
    - Goes below figure
    - Has to be able to stand alone
- PLAN YOUR LIFE
  - You are unfortunately not all that - can't just do everything
- Work Time
  - Finishing methods → getting a couple sentences checked over by Dr. Garica
  - Started working on data analysis
    - Another spreadsheet..!

At Home

- More methodology edits... + submission!

#### ▼ February 20

At home

Data Analysis

- Got through 1.5 papers (would have been 2 but I want to go back through Sun because of bias issues)
  - Maybe include as part of scoring criteria as a subtractive part (0 - -5)

#### ▼ February 21

Class

- 4 more classes till SF, 2 classes to OP
- Data analysis

- Running into issues b/c most of papers are MAs or Rs that weren't disclosed (thanks paperpile for flagging that)
- 
- Individual meeting w. Dr. Garica
  - What's important for the SF/OP - get things done sooner rather than later
  - Cut out MAs for now until get a response from Dr. Kerba
- May need to request more papers - majority MAs which don't seem like they fit what can be in review
  - Thinking of getting #149, 150, 160, 171, 179, 185, 211, 230,

At home

- Talked with Dr. Kerba about paper types (via text)
  - Going to use the RCTs from the MA/SR/Rs for data instead of the MA/SR/Rs
  - Won't be able to talk on Saturday - may talk on Sunday

#### ▼ February 22

At home

- Couldn't do much work b/c of debate tournament (8-5) and then a very long nap
- Went into aerobic exercise MA and pulled some papers from the study
  - <https://journals.sagepub.com/doi/10.1177/15347354211033352>
  - <https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2022.1050471/full>
  - <https://academic.oup.com/oncolo/article/25/3/e555/6443417>
- Because of time crunch, will probably only be able to do 3 papers per intervention (source of error that will be declared for SF)

#### ▼ February 23

At home

- Data analysis
  - Started on aerobic exercise from articles pulled yesterday

#### ▼ February 24

At home

- Data analysis
  - 1 paper (Tan...)
- Slides for Oral presentation
  - Created most of presentation (other than data analysis/results)
  - [https://docs.google.com/presentation/d/1j-wlUJVBkJgUQna7glivEEFwq7ARIXI44IDNcbGpCYw/edit#slide=id.g3315e49c03b\\_0\\_945](https://docs.google.com/presentation/d/1j-wlUJVBkJgUQna7glivEEFwq7ARIXI44IDNcbGpCYw/edit#slide=id.g3315e49c03b_0_945)

#### ▼ February 25

Class

- Data analysis
  - van der Meij - fatty acid supplement → combine w/ Tan.... for data b/c both fatty acid supplements
  - Paper searching (again)
- Oral presentation



- Added read papers to results/data analysis

#### ▼ February 26

##### At home

- Presentation Edits
  - No more data able to find before presenting
  - Final edits of aesthetics + running through presentation
- Presentation practice
  - Roughly 12 min on the dot per run-through

#### ▼ February 27

##### Class

- Oral Presentations - Presented
- Oral Presentations - Listened
  - Cole
  - Sig of cerebrospinal fluid protein biomarkers in predictions of cognitive decline in transient ischemic attack patients
    - Better understanding preventive measures for detecting cog dec
  - TIAs - mini strokes
  - Cereb Spinal Fluid has prot biomarkers useful in diagnosing dementia but not thoroughly explored in tia patients
    - RESp for cushioning movement in brain - has prot reflective of brain health
    -
  - Determine if CSF prot conc vary btwn TIA patients + healthy controls + impact cog function to affirm biomarkers that can be used to ascertain lvls of early cog dec after a tia
  - PREVENT study
    - 5 yr longitudinal cohort study age 45-75 to assess biomarkers
    - how do blood samples indicate cog decline?
    - How many protein biomarkers were being studied?
    - tau prot in structure of cells
  - stats analysis
    - cleaned data and removed participants w/o t-tau prot
    - Range of data, trends → 4 main proteins heightened in tia patients
    - Suggestion of similarities btwn demetia, tia, and alzheimers
    - Differences in sig values → How were sig values determined?
  - Corrective measures from stats an - how, pls expand?
  - Are there differences in incidence of cog deg based on when tias occurred?
  - Not strong regression → what's group status
    - Other thing than group status that impacts
  - Small sample size contributed to error, inconsistent lumbar puncture times → up overlap
  - Not all cog tests assessed but results still sig

#### Amber

- Effect of repeated sevoflurane exposure on synapse formation
- Anesthetics → have growing concerns abt effects on brain (neuro degeneration)
  - Sevoflurane- > volatile, easy rec
- Synapses
  - Communication btwn neurons
  - Strengthen or weaken over time → learning + memory
- Anesthetics blocks receptors to dec neuron action during procedures
  - Neurotransmitters blocked → synapse can't fire → deterioration of synapses
- Synapse proteins
  - synaptophysin and psd-95
  - synap
  - psd → stabilize/org glutamate receptors
- How does rep sevoflurane exposure affect synapse formation
  - looking into change in formation, density, and proteins
- dissection of mice → isolation of hippocampus → cell dissociation → neuronal plating → monitoring from DIV7 (beginning of synap activity) → sevoflur exposure daily from DIV 7-9 → fixation of cells to preserve cell structure → immunostaining → imaging/analysis
  - Analysis of length/density of synapses
- ~~Are there changes in how sevoflurane was administered vs how it usually is in people~~
- 2 main synap formations
- Decrease in juxtaposition in sevoflurane exposed cells
- understanding anesthetics on synapse density → impacts on neurodegeneration
- Are there other anesthetics that are similar to sevoflurane
- Refinement of anesthetic protocols
- Most impactful on children and elderly

#### Audrey

- Exploring antiviral defense systems + single nucleotide polymorphisms in e. coli exposed to bacteriophages
- looking at genetic mutations from parent to daughter genomes after exposure to phages (viruses)
- litic vs lysogenic phages
  - lytic - kill cell after injection of dna
  - lyso - insert dna to replicate for dna
- 97k + cases of E coli O157
  - HUS that develops in children <5, immunocomp people
- Sig
  - no spec treatment to e coli
  - looking at antibiotic resistant bacteria strains

- Development of antimicrobial treatments
- looking at phage therapy + evolution of bacteria → predicting it
- Genetic components
  - Anti viral defense sys - mutations that come after phage attacks
  - Single nucleotide polymorph - mutations in a singular gene, typ result of genetic drift, affect reaction
- Objectives
  - ST
    - profile anti-phage defense sys
    - identify Sing nuc polys from bacterial isolates
  - LT
    - dev of working phage therapy for CT usage to solve issue of bac resistance in e coli
- methods
  - phage exposure → dna extraction → whole genome seq → analysis → visualization
  - quality checking the genomes (Fast Q, Fast QC, Fast P, shovill for WGS)
    - what is whole genome sequencing
- Heatmap of defense systems vs isolates
  - Defense systems of isolates didn't change much
  - What does the heatmap show? like what's being compared
- Dendro smthg graph
  - isolates v similar → not much mutation btwn isolates after phage exposure
- BAr graph
  - looking for sing nuc polys
  - looking at what's present/no in diff isolates → some groups absent from og strain after phage therapy
  - heatmap of more specific data
    - which groups are absent
    - groups with similar presence on the heatmap are similar

#### Marie-Elise

- Implementation and evaluation of alt user interfaces for game control to improve application accessibility
- Seeing correlation btwn age, disaility, preference
- Methods
  - connect 4 vs checkers
- Variables
  - modes of control = mani
  - pref mode = resp
  - preference, engagement, experience, bio sex = confoundign
- RQ
  - how does an indvs age and disabilities impact their pref mode of interaction when playing video games

- Hyp
  - null: older w/ coord difficulty will have same control of pref as younger
  - alt: older w. diff with coord will pref speech
- Results
  - up age = up speech preference
  - Grouping conditions
    - anxiety w/ writing/focus/reading difficulty all preferred gesture
    - no anx w. writing/focus/reading → all preferred speech
  - hypothesis proven with data
- future
  - how did diff w/ focus differentiate from adhd
  -

## ▼ Daily Notes March

### ▼ March 3

#### Class

- Posters chat
    - Have to have EVERYTHING → very comprehensive
    - HAVE TO have a "flow"
    - Possible layout:
- |         | Title   |          |
|---------|---------|----------|
| BGR     | Results | Analysis |
| Methods | Results | Conc     |
- Results are big → should take most time for presenting
  - Slides = formal, poster = more informal (not over rehearsed)
  - May have sizing issues
  - 25-30 pt font
  - Work Time
    - Poster planning → done for tonight → send to dr garcia

### ▼ March 5

#### Class

- Give Dr. Garcia draft of poster (done)
- Chat
  - Not time to care about marks → work on poster and presentation
  - Wednesday → poster DONE
  - Thursday/Friday → PRINT AND PRACTICE
- Work Time
  - Writing CYSF portal things

- Problem - done
- References - done
- Methods - need to edit

At home

- Poster work
  - Finished poster → sent to Dr. Kerba/Dr. Garcia
  - May change a few more scale things but everything major is done

#### ▼ March 7

Class

- Chat
  - Figures
    - If NOT made by you, MUST be cited (eg. modified from/taken from xyz)
- Poster/Presentation Work
  - Feedback from Dr. Garcia (morning) - tweaking methods/spacing
  - Measuring scale of poster before printing → going to print at staples with nina for cheaper price
  - Presentation practice
    - Roughly 11 min → have to cut down on prbbly results (don't go through each paper)

#### ▼ March 10

At home

- Presentation run throughs
- Staples crash out (thanks for cancelling the order last night and not printing it till 5)
  - Got poster at 5pm

#### ▼ March 11 - Science Fair

Science Fair!

- Whole day of presentations

#### ▼ March 13