

History of Brain Science [830:415]



A word from the first known medical text of mankind, the so-called "Edwin Smith Surgical Papyrus", probably first written by the Egyptian surgeon called Imhotep (1700 BC) and based upon now lost texts from ~3000 BC

Fall 2020

Online Learning using **CANVAS** – Asynchronous Remote (AR*) Course

*This means that you can self-pace your learning; all lectures are pre-recorded and posted online.

Recommended Self-paced Learning Times: Tues/Thurs 1:40-3:00pm

- Instructor: Dr. Kasia Bieszczad
Office: Psychology Building Room 327
Email: kasia.bie@rutgers.edu
- Office Hours: Tuesday afternoons (2-3pm) via **ZOOM** meetings
- Grading: You will receive a letter grade (worth your 3 credits) based upon assignment evaluations (e.g., weekly pop-quizzes and peer-evaluations of projects), Chat blogs (one per week), class participation (this involves posting and responding to your peers' Discussion board questions!), two non-cumulative midterms, and a term paper that you will share with the rest of your class in a 20-25 minute pre-recorded Powerpoint-type presentation that you will post to CANVAS. *There will be no final exam.*

I. Rationale:

This course is designed to reveal the nature of scientific inquiry and revolution. How did a person's ideas and hypotheses shape the knowledge gained in the realm of neurobiology and neuroscience? How do these continue to shape how we think about the brain in our modern times? Our class goal, as students and as educators, is to discover how we are all a continuation of the history of neuroscience. This course transforms you from a student into a researcher, an investigator, and a discoverer in the field of psychobiology. You will cultivate an appreciation for controversies in neuroscience, the hypotheses that prevailed and methodologies that developed to advance (or suppress) one idea over another.

II. Course Aims and Outcomes:

You already have a fundamental understanding of how the brain works by taking your pre-requisite psychology courses. This Advanced Topics course takes your existing knowledge to the next level by discussing how our current understanding of brain function came about. Furthermore, we will find how the questions neuroscientists and neurobiologists ask today are deeply rooted in the assumptions and controversies of our past. Use this course as your bridge to appreciate current research goals in brain science and to think critically about your own questions, hypotheses and ideas for methodologies that will take us into the future to discover how the brain (really) works.

Specific Learning Outcomes:

By the end of this course, you will:

- Learn to find, read, analyze and evaluate scientific literature
- Compare and argue for/against different sides of controversies in neuroscience during in-class discussions
- Hone critical thinking skills in order to determine why some published results are more/less compelling than others
- Develop independent learning strategies and study habits
- Identify historical contexts of neuroscientific discovery
- Review concepts and current understanding of brain organization and function
- Trace citation(s) of primary scientific literature to discover its impact over time
- Develop research skills and become familiar with useful research engines
- Construct and write a written report highlighting one figure in neuroscience and his/her contributions to neuroscience
- Transform your written report into a presentation that will teach your class peers (and professor!) about the importance of your chosen historical figure
- Learn how to evaluate your peers with constructive criticism
- Develop an appreciation of the ebb and flow of ideas in the history of science

III. Format and Procedures:

Participation (200 pts):

You will each start off with 100 points in this category. This being a discussion-based class, your online presence and participation in CANVAS are essential to succeed with an A in the class. If you continuously fail to submit Chat blog or Discussion board posts and replies and can not provide proof of a valid reason for your absence online, 25 points will be deducted. *Please inform me now if you know of planned absences (job or grad school interviews, etc.) so that we may make arrangements for make-up quizzes, one-one-one discussions, etc. if necessary and appropriate.* I will be reasonably flexible given the uncertainty for many of us in the time of COVID-19. The remaining 100 of your Participation points will be accumulated over the course of the semester in the form of pop-quizzes.

- A word about **pop quizzes** (10 pts each):
- A few questions may be given before lecture pertaining to information readily available in assigned readings in the textbook or other assigned readings (papers, online publications, etc.). These pop-quizzes are EASY and meant to be a simple and freebie way to add up points for your grade over the semester. Do your reading ☺ But please take note that it is impossible to receive any credit if you are late to submit your responses and missed the open time window in which to take the quiz. Pop quizzes are on the *prior* week's readings.
- Quizzes will be timed from the time at which you start the quiz online and will only be available for 1 week. You can submit your responses only once per quiz.
- Each and every one is welcome to SUBMIT TO ME a pop quiz question from that week's reading (with the correct answer) that I may use in the pop-quiz for the whole class in the next week. Questions submissions are due by email (kasia.bie@rutgers.edu) by Monday at midnight. If I happen to select yours, lucky you because you will know the answer!

Weekly Chat Blog post in CANVAS (50 points):

You will be required to record your ideas, research plans, impressions of the class discussion(s), questions, etc etc etc. in the form of an online journal (aka blog) entry every week using the **Chat** function on CANVAS. Keep it simple, but rich with content (3-4 sentences can be enough). *What's the point?* Your success in the class will depend on how often and frequently you think about the

issues covered in class, how much reading and thinking you do about what you have read, and thinking about what/who you want to cover for your term paper from Week One (Yes: think, think, think.). Your blog entries are a kind of notebook that you can look back on over the next few months as you develop your ideas, make progress in your research, and ultimately use all of this information to aid you in writing your paper. This is also a venue for you to communicate questions that you have about the content covered in class and how the discussions make you feel. I will check your Chat blog entries weekly on Monday mornings, so make sure to have an entry in by Sunday at 11:59pm. We can adjust our class discussions during the following week to accommodate the questions or discussion points brought up in the **Chat blog**. So I invite you to let me know what you are thinking and feeling! Blogs should be entered using the Chat in CANVAS.

Weekly Discussion Post in CANVAS (50 points; *second half of the semester only*—see Schedule):

In the second part of this course, you and your peers will each be giving a talk on your chosen topic person in the History of Brain Science (see Term Paper, below). To practice using some of the modern video-conferencing technologies now available to all of us, you will be required to record your talk and post it to CANVAS (more on how to do that later). Each recorded talk will be associated with a **Discussion** board on CANVAS. It will be your job to view each of your classmate's talks online and use the Discussion board to submit one question or comment to the presenter. Like your Chat blogs, I will check your Discussion entries weekly on Monday mornings, so make sure to have your question or comments posted in the **Discussion** board by Sunday at 11:59pm. If you were a presenter that week, then it will be your job to answer the questions that your peers posted to the best of your ability. All questions and comments should be entered and answered on the Discussion board in CANVAS.

Mid-Term Exam (2 x 100 points each, for a total of 200 points):

There will be TWO Mid-Terms, which will test your critical thinking skills – not just the retention of facts, ideas, and controversies discussed in class until this point. Focus will be to test how you think, more than how much information you can regurgitate on an exam. However, you will be expected to support statements with evidence from literature and your research. The format will be several short-answer essay Qs. Each Exam will be worth 100 points.

Term Paper (300 points):

Term Papers will be submitted in electronic form to CANVAS and will be cross-checked for originality using *TurnItIn.com*. Reports should be typed, **single-spaced**, using 12 point Times New Roman font with 1½ -inch margins and approximately **6 pages** in length (you can go slightly over or under, but 6 pages is a good benchmark). Please include a **cover page** with your paper's title, your name and ID#, my name, the date, and course (this should be the first page and only page of the report showing your name). Every page of the term paper should be **numbered** at the bottom right-hand corner and have your *student ID# only* in the top right-hand corner. After your Literature Cited page, please provide me with the abstract/first page of any **references** you have used (use at least two per report – at least one must be a primary research paper from a peer-reviewed journal article). I will give specific guidelines about the structure and format of the paper in a separate handout, which will also be posted on CANVAS. But here is the basic idea:

- Pick an individual (i.e., a person) in the history of neuroscience. This will be the focal point and topic of your paper. Try to find a picture of him/her; you will get to “know” this person.
- Start thinking about what your topic might be TODAY! Sooner the better so you can plan.
- Understand the years of the active work in neuroscience and the cultural context.

- Determine the scientific issue, hypothesis, approach, significant result(s), and this individual's interpretation of that result(s).
- Track and identify the impact of this person and his/her work on future work in neuroscience or on current understanding of brain organization or function. Or, if there is no immediate evidence of impact, hypothesize the potential impact of this person's contribution to neuroscience.
- *Fun fact:* Lots of impactful neuroscientists are our contemporaries, i.e., they are alive and respond to email! Contact them; ask if you can quote them; get the real insider's view of what happened, when and why.

Oral Presentation (100 points) + Peer evaluation (100 points):

You will transform your paper into a presentation (using Powerpoint, Keynote, Prezi, or a similar program of your choice with my approval) that you will present to the rest of the class in a 20-25 minute talk. You will get a template of how to make your slides and how to structure your talk. You will receive a grade in points out of 100 possible from me for the content and organization of your talk. Detailed information about my expectations for your presentations will follow later in the semester. I will give an example talk during our first class meeting after the mid-semester break.

Peer evaluation is exactly what it sounds like: getting a grade from your peers! Giving an oral presentation is all about EFFECTIVE COMMUNICATION. The peer evaluation will be anonymous and determined from the total number of points allocated to you by *at least 3* of your classmates (randomly selected). Points will be tallied in a rubric (created by me) that will outline all the essential components of an effective presentation (i.e., for effective communication of your content) like speaking style, slide organization, slide appearance, pace, use of technology (like slide animations, videos, online recording tools, etc.) in addition to the content of your talk. I will review each and every peer evaluation to verify that all assessments are fair and balanced. Your final peer evaluation points will be the average of your 3+ anonymous peer reviewers. All peer-evaluations will be assigned by me using CANVAS (more on that later).

Final Exam (0 points):

There will be **no final exam**. Instead, you should be thinking about your Term Paper from Day One and Week One and on. Post your ideas on your CANVAS Chat blog, the Discussion board and develop the ideas using feedback from your Professor and Peers. The paper will be a wonderful culmination of our time together in class and of your research at home (in the library, online, etc.). As such, the paper will be worth the largest percentage of your grade.

Some other important things to know:

Late assignments: Assignments *not* handed in on the date due (by 11:59pm) are considered LATE – no exceptions! Submitting your work any time after this on the same day will result in a 10% penalty. Each day after will result in a further 20% penalty. Late work is to be submitted to CANVAS, which will document your name and the date & time of submission.

Academic Dishonesty: Please don't even try it. You are welcome to discuss ideas and concepts with your peers but each report must be written individually. If there is reason to believe that any part of your work is not your own, you will receive a ZERO for that report. Use of external website resources such as Chegg.com or others to obtain solutions to homework assignments, quizzes, or exams is cheating and a violation of the University Academic Integrity policy. Cheating in the course may result in grade penalties, disciplinary sanctions or educational sanctions. Posting homework assignments, or exams, to external sites without the instructor's permission may be a violation of

copyright and may constitute the facilitation of dishonesty, which may result in the same penalties as plain cheating. Any cheating and plagiarism will not be taken lightly and could even result in automatic failure of the course. All writing assignments WILL be rigorously checked for plagiarism (e.g., TurnItIn.com). Please consult with me directly concerning any questions or concerns.

Academic Integrity: Students are expected to maintain the highest level of academic integrity. You should be familiar with the university [policy on academic integrity](#) (←Click the link). Violations will be reported and enforced according to this policy. Note on academic integrity in the online environment (<https://nbprovost.rutgers.edu/academic-integrity-students>).

Yours and Mine, Intellectual Property: Almost all original work is the intellectual property of its authors. These works may include syllabi, lecture slides, recorded lectures, homework problems, exams, and other materials, in either printed or electronic form. The authors may hold copyrights in these works, which are protected by U.S. statutes. Copying this work or posting it online without the permission of the author may violate the author's rights. More importantly, these works are the product of the author's efforts; respect for these efforts and for the author's intellectual property rights is an important value that members of the university community take seriously.

For more on copyright protections at Rutgers U., please refer to [Rutgers Libraries](#) (←Click).

Class Format

As an "asynchronous remote" class, it means that all lectures are pre-recorded and it is up to you to plan to view them regularly. I recommend sticking to the original time schedule as much as you can (Tues/Thurs).

- Lectures will be posted to CANVAS on Tuesday and Thursday afternoons. Prior lectures will remain on CANVAS for at least 3 weeks.
- If there is a pop quiz, it will be available on CANVAS from Tuesday morning to Sunday at midnight.
- Sending me a candidate pop quiz question? Then send it by Sunday at midnight to be considered.
- Assignments (posting Chat blogs, to Discussion boards, and talk videos) are due Sunday at midnight.

Be sure to check your email and CANVAS regularly. Any class emails will also be archived – so no excuses for not getting my emails due to inbox load errors or whatever. All of your assignments and lectures to watch will be on CANVAS, so make a habit to keep up to date on CANVAS. It is easy!

IV. My Assumptions:

You are encouraged to ask questions and discuss experiments, ideas and your papers openly among your peers, classmates, and professor. We are all here for you and for each other – so be inquisitive! It will only make the class that much better. I have essentially one general assumption: that the most important thing we need to do as researchers is IDENTIFY ASSUMPTIONS. We all have deeply engrained ideas about how the world, including the brain, works. Why?

The point of this class is to **ASK "WHY?"**

I will also mention that this class centers on the biology of psychology (i.e., psycho-biology). So a core idea of the class is that the processes of the mind are based in the biology of the body.

P.S. We will explore how the concept of "psycho-" and "biology" came about.

Please do schedule a time to see me (via ZOOM) if you want to chat about the topics covered in class, or if something didn't make sense in lecture and/or discussion. Your first route for this kind of communication is via your weekly Chat Blog Entry. The next best way to contact me is by email: kasia.bie@rutgers.edu to set up an Office Hours appointment on ZOOM. When coming to office hours, have questions ready for me! It will produce the most efficient use of our time together. If at all possible, email me your questions before hand so I can be better prepared to help out. The more you ask and we discuss, the more the benefit for everyone!

V. Course Requirements:

The tasks and assignments are aligned with the learning outcomes in skills, knowledge, attitudes and values I hope you will leave the course with.

1. Class attendance and participation: Please do everything you can to be "present" online this semester. This will be important to keep your self-paced learning on track, and to make sure you can submit all pop-quizzes on time. This is truly a discussion-based class, which means that it will be most enjoyable and rewarding if we are all there to **Chat** and have **Discussions** about the topics and issues covered over the course of the semester.

2. Course readings:

(a) Required text: *Minds Behind the Brain: A History of the Pioneers and Their Discoveries*. By Stanley Finger (Oxford University Press 2005)

(b) Additional background readings, links to more (text)books of interest, and historical papers in neuroscience will be made available by me or your peers on the CANVAS website.

3. Technology Requirements for Online Learning:

(a) Computer or tablet, internet access, speaker and microphone.

(b) Please visit the Rutgers Student Tech Guide page for resources available to all students. If you do not have the appropriate technology for financial reasons, please email Dean of Students deanofstudents@echo.rutgers.edu for assistance. If you are facing other financial hardships, please visit the Office of Financial Aid at <https://financialaid.rutgers.edu/>.

VI. Grading Procedures:

Grades will be based on:

(a) Online participation (which requires logging in frequently!)	[20% or 200 points]
(b) TWO Mid-terms (each worth 10%)	[20% or 200 points]
(c) Term paper (i.e., written report)	[35% or 350 points]
+ Weekly blog entries	[5% or 50 points]
(d) Oral presentation	[10% or 100 points]
+ Peer evaluation	[10% or 100 points]
TOTAL:	100% or 1000 points

VII. Academic Integrity:

Each student in this course is expected to abide by the Rutgers University Code of Student Conduct and Academic Integrity Policy. Any work submitted by a student in this course for academic credit will be the student's own work. For this course, collaboration is allowed in the following instances:

research strategies, peer-review of drafts of term paper, peer-review of oral presentation or other instances based upon special requests and my approval.

Of course, you are encouraged to study together and to discuss information and concepts covered in lecture and the sections with other students, even to give ideas of which historical figures to select for your term paper. You can give "consulting" help to or receive "consulting" help from such students. However, this permissible cooperation should never involve one student having possession of a copy of all or part of work done by someone else, in the form of an e-mail, an e-mail attachment file, online forums, a diskette, or a hard paper copy. I am an avid fan of TurnItIn.com, so all papers will be uploaded and compared against any existing History of Neuroscience papers and published reports.

Please ask me if you would like assistance in appropriate ways to cite previously published work. That's one great reason to schedule an office hour appointment with me!

And visit <http://academicintegrity.rutgers.edu/resources-for-students> for info and useful links.

Should copying occur, both the student who copied work from another student and the student who gave material to be copied could both automatically receive a zero for the assignment. Penalty for violation of the University Code of Student Conduct can also be extended to include failure of the course and University disciplinary action. The risk really isn't worth it.

During examinations, you must do your own work. Chatting, texting, or other forms of discussion is not permitted during the examinations, nor may you compare papers, copy from others, or collaborate in any way. Any collaborative behavior during the examination will result in failure of the exam, and may lead to failure of the course and University disciplinary action.

VIII. Accommodations for students with disabilities:

In compliance with the Rutgers University policy and equal access laws, I am available to discuss appropriate academic accommodations that may be required for student with disabilities. Requests for academic accommodations are to be made during the first two weeks of the semester, except for unusual circumstances, so arrangements can be made. Students are encouraged to register with the RU Office of Disability Services to verify their eligibility for appropriate accommodations and provide me with appropriate documentation. We will be able to make arrangements for you, no problem!

IX. Inclusivity Statement:

We understand that our members represent a rich variety of backgrounds and perspectives. The Psychology Department is committed to providing an atmosphere for learning that respects diversity. While working together to build this community we ask all members to:

- share their unique experiences, values and beliefs
- be open to the views of others
- honor the uniqueness of their colleagues
- appreciate the opportunity that we have to learn from each other in this community
- value each other's opinions and communicate in a respectful manner
- use this opportunity together to discuss ways in which we can create an inclusive environment in this course and across the Rutgers U. community

Note: This syllabus is our contract, student-to-teacher and teacher-to-student, that you and I will commit to this course with integrity, honesty, enthusiasm and an open mind to new ideas and various points of view. We will treat each other and our classmates with respect and patience and remember to listen as much as we speak.

Signed, KMB 9/01/2020

Signed (by you),

X. Tentative Course Schedule

[Note that you will be keeping a weekly blog throughout the semester...see Chat Blog Entry #s]

Schedule is subject to change to accommodate guest presenters & student needs.

Topics	Readings	Purpose	Assignment
Tues. September 1st Orientation to the History of Neuroscience	Check out CANVAS—it is our learning platform. Make sure you can use ZOOM—it is how your Prof will hold office hours.	Introduction to the Online Version of Rutgers Education—a new way to learn!	Log in to CANVAS . Take the Online Learning Module .
Thurs. September 3rd Welcome to the History of Neuroscience <i>*Note “no class” Tues. Sept. 8th – Happy Labor Day!</i>	Our class syllabus, <i>Minds Behind the Brain-Preface & Chapter 1</i> .	General overview of course, expectations, and an intro to our CANVAS Website. And... A meet-n-greet!	Check out CANVAS! We will use this to work and communicate together in this online course.
Thurs. September 10th Why ask questions about it?	<i>Minds Behind the Brain (MBB) Chapter 2 & 3.</i>	Modernization with Hippocrates.	Chat Blog entry #1. Weekly entries are due to CANVAS on Sunday by 11:59pm , but feel free to submit yours any time earlier during the week.
Tues. September 15th How can we find it out anyway?	<i>MBB Chapter 4</i>	Galen, The Father.	
Thurs. September 17th What does it look like, really?	<i>MBB Chapter 5.</i>	Vesalius, The Anatomist	<i>Did you remember your Chat Blog entry #2?</i>
Tues. September 22nd A Special Guest is visiting today to inspire your History of Brain Science papers and presentations.	<i>MBB Review of Chapters 1&2&3&4&5.</i>		
Thurs. September 24th Does introspection with it help?	<i>MBB Chapter 6.</i>	Descartes, The Searcher	<i>Did you remember your Chat Blog entry #3.</i>
Tues. September 29th How do the parts fit together?	<i>MBB Chapter 7.</i>	Willis, The Original	
Thurs. October 1st Puzzle pieces.	<i>MBB Chapter 9.</i> (Yes, we'll skip 8 for now)	Gall, The Cartographer	<i>Did you remember your Chat Blog entry #4.</i>
Tues. October 6th ~MIDTERM EXAM 1~	<i>The exam will be held online today, i.e., you will have 90 minutes to finish. Details to follow.</i>		
Thurs. October 8th A real “special” part is found?	<i>MBB Chapter 10.</i>	Broca, The Frenchman	Topic of paper due by 10/9.
Tues. October 13th More “special” parts.	<i>MBB Chapter 12.</i> (Yes, we'll do 12 before 11 after still skipping 8)	Charcot, The Psychologist	<i>Did you remember your Chat Blog entry #5.</i>
Thurs. October 15th Maps everywhere? And what's in a map anyway?	<i>MBB Chapter 11 & assigned reading.</i>	Ferrier & Hitzig, En Garde!	
Tues. October 20th Mush turns into nets? Filled with... Sparks or Soups?	<i>MBB Chapter 8 & 16.</i> (Read Chapter 13 for additional background).	Galvani vs. Loewi vs. Dale, in The War	<i>Did you remember your Chat Blog entry #6.</i>

Thurs. October 22nd How does it all link up?	<i>MBB</i> Chapter 17 (especially pgs. 284-290)	Levi-Montalcini, The Guide	
Tues. October 27th Can we find spaces in between?	<i>MBB</i> Chapter 14.	Sherrington, The Thinker	Primary research article on topic due today, 10/23!
Thurs. October 29th Why does technology matter?	<i>MBB</i> Chapter 15.	Adrian, The Recorder	<i>Did you remember your Chat Blog entry #7, and PRIMARY RESEARCH ARTICLE DUE?</i>
Tues. November 3rd *Election Day!* Finally! Back to the Future.	<i>MBB</i> Chapter 17 & 18.	The Wonderment.	Term paper title and outline due by 11/11
Thurs. November 5th ~MIDTERM EXAM 2~	The exam will be held online today, <i>i.e.</i> , you will have 90 minutes to finish. Details to follow.		
Tues. November 10th Example presentation by Dr. B.	Peer-assigned readings, packet, handouts, etc.	Also, you will see how each of your presentations should flow, look, and contain. But add in your own personality!	<i>Did you remember your Chat Blog entry #9?</i>
Thurs. November 12th Student presentation 1 & 2		Your drawn number from our first class together assigns your presentation day. There will be 2-3 talks per class meeting.	Starting today, you will be posting questions to "Discussion" on CAVNAS for each presenter.
Tues. November 17th Student presentation 3 & 4	"		<i>Did you remember your Chat Blog entry #10?</i>
Thurs. November 19th Student presentation 5 & 6	"		You should have a working draft of your paper ready by now-ish
Tues. November 24th Writing Workshop	"	Dr. B. will host an "open office hours" for writing help.	<i>Did you remember your Chat Blog entry #11?</i>
Thurs. November 26th	THANKSGIVING DAY BREAK / No Class.		
Tues. December 1st Student presentation 7 & 8	"		Peer-review of Term Paper draft due by 11/30
Thurs. December 3rd Student presentation 9 & 10	"		<i>Did you remember your Blog entry #13?</i>
Tues. December 8th Student presentation 11 & 12	"		
Thurs. December 10th Student presentation 13 & 14	"		<i>Did you remember your Blog entry #14?</i>
December 11th – 14th Reading Days – No Classes.	...and writing day(s)!		

Dec. 15th-22nd Exam Days **Tues. Dec. 15th 12-3pm ***Tues. December 22nd 4-7pm	...and writing week! <i>There will be no final exam. But please keep these dates (** and *** on the left) open if possible for make-up talks, etc. if needed.</i>	Term Paper due on Tues. Dec. 15th by 5pm
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XI. Additional Resources for Readings and Research

In addition to our class textbook, you may want to check out the following texts and resources to *find* and *find out about* your person of interest:

<http://www.sfn.org/about/history-of-neuroscience/autobiographical-chapters>
<http://www.sfn.org/about/history-of-neuroscience/classic-papers>
<http://www.nasonline.org/publications/biographical-memoirs/online-collection.html>
<http://www.neurotree.org>

XII. List of (Some) Historical Figures in Psychobiology

Alcmaeon	Helmholtz	Ecker	Spencer	Fleschsig
Hippocrates	Hermann	Malpighi	Hugh Jackson	Galvani
Plato	Bernstein	Leeuwenhoek	Magnus	Volta
Aristotle	Overton	Ruysch	Magendie	Marc Dax
Herophilus	Lucas	Ehrenberg	Ferrier	Charcot
Erasistratus	Forbes	Valentin	Bolk	Loewi & Dale
Rufus of Ephesus	Adrian	Gennari	Larsell	Levi-Montalcini
Galen	Erlanger & Gasser	Baillarger	Lowenthal &	Charles K. Mills
Avicenna	Hodgkin	Remak	Horsley	Charles H. Fraizer
Mondino	Bernard	Meynert	Adrian	Ruysch
Leeuwenhoek	Elliott	Betz	Magoun & Snider	Pick's
Fontana	Dale	Lewis	Aranzi	Alzheimer's
Ehrenberg	Loewi	Ramon y Cajal	Massa	Parkinson's
Valentin	Dale	Campbell	Haller	Klüber-Bucy
Remak	Pourfour du Petit	Brodmann	Cotugno	Creutzfeld-Jacobs
Purkyne	Huber	The Vogts	Luschika	Tourette
(Purkinje)	Vicq D'Azyr	Nemesius	Key & Retzius	Leipmann
Schwann	Stilling	Avicenna	Dandy	Gerstmann
Hannover	Koelliker	Prochaska	Goldmann	Scoville
Koellinker	Flechsig	Rolando	Weed	Brenda Milner
Deiters	Araetus	Flourens	Berengario	McLean
Waller	Mistichelli	Hitzig/Fritsch	Da Capri	Brown-Sequard
Kuhne	Turck	Bartholow	Wepfer	Schiff
Ranvier	Legallois	Ferrier	Beevor	Henning
Nissl	Bell	Grunbaum &	Pfeifer	Zwaardemaker
Virchow	Magendie	Leyton	Monro	Swedenborg
Gerlach	Muller	Krause	Kellie	James & Lange
Golgi	Brown-Sequard	Panizza	Donders	Bichat
Ehrlich	Eckhard	Munk	Roy & Sherrington	Papez
His	Turck	Henschen	Hill	Henry Head
Forel	Sherrington	Minkowski	Cushing	O. Foerster
Ramon y Chal	Whytt	Holmes	Jensen	Ebbinghaus
Waldeyer	Unzer	Schafer & Brown	Forbes & Cobb	Donald Hebb
Held	Prochaska	Bianchi	Schmidt & Kety	W. Penfield
Barker	Hall	Flechsig	Steno	Fulton
Harrison	Weber Brothers	Brodmann	Varolio	Jean Baptiste-
Praxagoras	Erb	Goltz	Gall & Spurzheim	Bouillard
Vesalius	Westphal	Monakow	Tiedmann	William James
Descartes	Babinski	Lashley	Reil	Bliss & Lomo
Willis	Sechenov	Gudden	Hannover	Roger Sperry
Borelli	Pavlov	Dusser de Barenne	Stilling	Larry Squire
Glisson	Piccolomini	& McCulloch	Blum	Hubel & Wiesel
Haller	Tiedemann	Varolio	Gerlach	Ralph Gerard
Monro II	Owen	Vioussens	Golgi	Donald Lindsley
Galvani	Leuret	Malacarne	Weigert	Axelrod, Julius
Aldini	Gratiolet	Reil	Marchi	Bishop, Peter O.
Matteucci	Huschike	Luciani	Nissl	Bernard Katz
Du Bois-Reymond	Irving Diamond	Auburtin	Turck	Benjamin Libet
Muller	Turner	Broca	Gudden	
Albe-Fessard	Robert Galambos	James Sprague	Louis Sokoloff	

For further information or to discuss specific questions, please post to your Chat blog, or check our class CANVAS website. Email kasia.bie@rutgers.edu to reserve an Office Hours appointment on Tuesdays (between 2-3pm) or at a convenient ad hoc time.