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PHYL 142 Fall 2023 syllabus



Outline of Course Objectives

PHYL 142 Human Anatomy and Physiology II WWW asynchronous

S-related

Fall 2023, Sec 61128

Aug 21-Dec 12, 2023

INSTRUCTOR: Michelle Smith

OFFICE: Imiloa 112B

ONLINE OFFICE HOURS: Floating office hour - email for apt

Go to: https://meet.google.com/efn-pvsy-exj and join meeting

EMAIL: miliefsk@hawaii.edu

CREDITS: 3

WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

'O keia ka wā kūpono e ho'onui ai ka 'ike me ka ho'omaopopo i kō Hawai'i mau ho'oilina waiwai. Aia nō ho'i ma ke Kulanui Kaiāulu o ke Ko'olau nā papahana hou o nā 'ike 'akeakamai a me nā hana no'eau. Me ke kuleana ko'iko'i e ho'ohiki ke Kulanui e kāko'o a e ho'okumu i ala e hiki kē kōkua i ka ho'onui 'ike a nā kānaka maoli. Na mākou nō e ho'olako, kāko'o a paipai i nā Ko'olau a kō O'ahu a'e me nā hana no'eau ākea, ka ho'ona'auao 'oihana a me ka ho'onui 'ike ma ke kaiāulu — hō'a'ano a e ho'oulu i nā haumāna i ka po'okela.

Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawai'i and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide O'ahu's Ko'olau region and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.

CATALOG DESCRIPTION

The second semester of a two-semester course in human anatomy and physiology which includes a study of human embryology, gross anatomy, microanatomy, physiology, pathology, and homeostatic relationships. This course is intended for students entering health care or medically related fields such as nursing, physical therapy and medical technology. (3 hours lecture)

Pre-Requisite(s): Credit for PHYL 141 or equivalent preparation or instructor's consent.

Recommended Preparation: Registration in PHYL 142L.

Credits: 3 class hours

OFFICE HOURS

This class has 1 office hour. The meeting can be by phone upon request; however, the preference is for an online live meeting using Google Meet: meet.google.com/efn-pvsy-exj. I typically send out an announcement on Sunday for office hours. You need to be on time to be included in the meeting. I am happy to meet at other times as well; just send me an email. I will return all emails in regards to office hours within 24 hours. Also, weekends and holidays will have a slower response.

LEARNING RESOURCES

Required Instructional Materials:

Text: Anatomy and Physiology. Openstax. Publish Date: Apr 25, 2013

https://openstax.org/details/books/anatomy-and-physiology

Print:

ISBN-10: 1938168135

ISBN-13: 978-1-938168-13-0
Digital: ISBN-10: 1-947172-04-2

ISBN-13: 978-1-947172-04-3

iBooks:

ISBN-10: 1-938168-30-5
ISBN-13: 978-1-938168-30-7

License:

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STUDENT LEARNING OUTCOMES

- 1. Identify required anatomical structures of the covered systems.
- 2. Identify required physiological functions of the covered systems.
- 3. Describe metabolic processes of covered systems and relate them to everyday activities such as eating, sleeping, and exercise.
- 4. Explain the concepts of positive/negative feedback and homeostasis and relate them to physiological processes covered in the course.

TEACHING PROCEDURES

Coordination of lecture and laboratory experiences are the primary modes of instruction. The lecture generally emphasizes major concepts and physiological processes. The laboratory generally emphasizes anatomy from the gross to the microscopic level and associated structure-function correlations.

Students are encouraged to take responsibility for increasing their own comprehension and recall both by careful reading of assigned materials and by: taking advantage of opportunities for asking questions for clarification, answering questions posed in the text and supplementary sources, faculty office hours, and seeking out peer tutoring if necessary utilizing resources available in the academic learning computer center and learning resources center.

The primary purpose of the lecture will be to facilitate your learning of information already available in the text or in other sources available to you. You are expected to read the assigned readings before the lecture on that material. However, do not become discouraged if some of the material seems at first beyond your ability to master alone. This difficulty is expected. That is why the lecture exists—to help you understand and find ways to recall the information. But the lectures will be most useful to those who have already struggled with the material as presented in the text and have a sense of where they most need help.

MODE OF INSTRUCTION

The previously described objectives will be achieved through the aid of the following learning activities:

- Pre-recorded lecture sessions viewable as PPTs, MP4's viewable on any media player, and on YouTube with captions.
- Internet-assisted activities and resources.
- · Readings from textbook and instructor's study guides.
- Online discussions on human biology related topics
- . Quizzes and examinations assessing the students' understanding of course content.

Lecture Approach will include:

Verbal presentation: The lecture format is provided using recorded PowerPoint slides. The slides are available for printing or saving to your hard drive. They can be downloaded from: Laulima under Syllabus- Recorded Lectures. The lectures are provided as a recorded PPT, MP4, and as a YouTube video with subtitles. They are all the same. Prior to listening to lecture, it is recommended that you print out the corresponding PowerPoint lecture. You may choose to print 3 or 6 slides per page, leaving enough room to take notes. You will find it easier to follow along if you have the printouts available.

Please Ask Questions:

Questions by students for clarification of the material under discussion are welcomed.

Questions of clinical practice are best saved for the appropriate clinical course.

Questions posed by the professor to the class will also be used to guide your thinking about the material and to check current understanding and recall.

Instructional Objectives:

This course is designed to help students build a comprehensive picture of the most important aspects of structure and function from the chemical level through the integration of organ systems into a healthy living human body. This course strives to establish a firm foundation of knowledge and study skills for students going on to more specialized course work in human biology, including courses in health-related fields which focus on how disease processes represent deviations from the norm.

All of the major systems of the human body are studied. Vocabulary (as well as concept mastery) is stresses on the assumption that this will be of considerable value to these students. References are made frequently to medical applications of the course content to help students see why the level of detailed required of them is valuable to the understanding of disease processes and treatment approaches.

Students should refer to the objectives stated in the text and lab manual; these will be modified and clarified as each topic is taken up in lecture-- often by handouts as each topic is discussed.

ASSESSMENT TASKS AND GRADING

Grading:

Exams (4): 60%

Article-based Class Discussion (4): 20%

Quizzes (13): 20%

Final Grade: 100%

Grading Scale:

Total Points	Grade
100-90%	Α
89-80%	В
79-70%	С
69-60%	D
59- 0%	F

Exams (60% points): Four exams will be given throughout the semester. Each exam is worth 15% of your final grade. semester you will take the exams from home. You will be required to sign an honor pledge. Exams are 50 multiple claustions, and closed book, but the student is allowed a 2-sided 3x5" handwritten note card. You will have 1 hr as minutes to take the exam. The final exam is non-cumulative.

If the student misses an examination because of an illness or legitimate emergency, the student must contact instructor as soon as possible to arrange a time to take a make-up exam. The instructor may request that the student evidence of the illness or emergency that caused the student to miss the exam. If the student misses an for any other reason, the student may be prohibited from taking a make-up exam, thus failing to receive any points for missed exam. While make-up exams will cover the same content area as a missed exam, the exam format and specific questions may be different.

No retests will be given for any reason.

Quizzes (20%):

Thirteen quizzes will be assigned for each chapter on Laulima. You will have 30 minutes to take the quiz. They are worth 10 points each. You can have an open book or search for answers on the web, but you cannot ask for assistance from another person.

Article-based Class Discussions (20%): Four article-based class discussions will be given at various times throughout the semester. They are each worth 20% toward your final grade. Find a recent article (1-2 years old) related to the topics posted under discussion in Laulima. Discuss the topic with the class and provide a link to the article.

Review an article of your choice related to each one of the topics listed below. A good source of reliable articles can be found on Science Daily. Science Daily provides a summary of primary literature. Scrutinize where your information comes from. Don't use fact-based sites like WEBMD or random internet biased sources; however, internet journals are O.K. to use.

TOPIC 1: Diabetes Mellitus in Hawaii—

Diabetes mellitus (Type 2) is an endocrine disorder that plagues Hawaii. Find an article that discusses why is it so high in our population; what are some contributing factors to such a high rate; what are some complications associated with diabetes; and what are the treatment options. See: http://www.diabetes.org/home.jsp and http://www.fda.gov/opacom/lowlit/diabetes.html for background information.

TOPIC 2: Infectious diseases- Discuss an infectious disease, how it is transmitted, treated, prevented, and its impact on human health. You are also welcome to discuss anti-vaxxers, or antibiotic resistance.

TOPIC 3: The effect of VOG on human health—

Living on a tropical island such as ours poses many benefits, e.g., beautiful beaches, coral reefs, and a lush tropical landscape. Industrial pollution is minimal and we have some of the cleanest freshwater anywhere. However, there are dangers to our health that are produced by islands with active volcanoes. Kilauea and Mauna Loa, on the Big Island, are still active, with Kilauea constantly erupting. The volcanic emissions pose health concerns. Find an article related to Volcanic Smog (VOG) and its risk to human health.

TOPIC 4: Evaluate a diet. You could discuss plant-based (vegetarian or vegan), Ketogenic, Mediterranean, Paleolith something else. Discuss it in relevance to nutritional guidelines, effectiveness, and controversy.

STUDENT RESPONSIBILITIES

Students are expected to be prepared in advance prior to watching the lecture. Being prepared includes having all read text materials. Complete all quizzes and exams on time. Participate in class discussions.

Any changes in the course schedule, such as examination dates, deadlines, etc., will be announced through email. the student's responsibility to be informed of these changes.

It is the student's responsibility to be informed about deadlines critical to making registration changes (e.g., last d erase period and last day for making an official withdrawal.

HOW TO SUCCEED IN THIS CLASS

Understanding biological science involves understanding many difficult concepts and vocabulary, not just knc facts. The student should know that the details to these concepts are important. In addition, the student w introduced to hundreds of new words. In some cases, words that are familiar in a context other than biology w introduced in the context of biology. The student will need to understand and use these terms in a biological sc context.

While the student will have lecture outlines, the student will not succeed in this class without taking careful lecture and reading the corresponding material in the textbook before and after the lecture. The student should carefully restless lecture notes as often as possible. In addition, the students' study activities should include: drawing laddiagrams or graphs that illustrate important biological phenomena (e.g., the internal structure of the cell, the stage cell division, or the anatomy of the heart), reviewing all of the internet resource materials provided, and materials for each new vocabulary word presented (refer to lecture outlines for a lists of required terms). On one si the card, write the word. On the other side, write the appropriate biological science definition for the word. The stage should use these card for self-testing as often as possible.

The textbook includes useful study questions. The student should try to answer all of these questions as though were required assignments. It also has QR coded content that can be accessed by computer or cell phone.

The student should ask the instructor to explain the things that the student does not understand.

NATURAL SCIENCES DEPARTMENT ON WITHDRAWLS AND INCOMPLETE

1. WITHDRAWALS (W GRADES) – It is up to the student to know the withdraw date.

Students who no longer attend class and who DO NOT OFFICIALLY WITHDRAW from the course will receive grades.

2. INCOMPLETE (I GRADE) – Students must present the "Request for Incomplete" form prior to the last d instruction. "I" grades will be given only to students who are achieving passing grades and are very clo completing the course. In addition, the student must have a very good reason for not being able to complete ε work on time.

DISABILITIES ACCOMMODATIONS

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encouraged to contact the Accessibility Counselor to discuss reasonable accommodations that will help you succeed in this class. Roy Inouye can be reached at (808) 235-7448, royinouy@hawaii.edu, or you may stop by Hale Kākoʻo 106 for more information.

SEX DISCRIMINATION AND GENDER-BASED VIOLENCE RESOURCES (TITLE IX)

Windward Community College is committed to providing a learning, working, and living environment that promotes personal integrity, civility, and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking.

If you or someone you know is experiencing any of these, WCC has staff and resources to support and assist you. To report an incident of sex discrimination or gender-based violence, as well as receive information and support, please contact one of the following:

UH CONFIDENTIAL ADVOCATE

UH Confidential Advocate

Phone: (808) 348-0663

Email: advocate@hawaii.edu

TITLE IX COORDINATOR

Karla K. Silva-Park, Title IX Coordinator

Phone: (808) 235-7468

Email: karlas@hawaii.edu

Office: Hale Kāko'o 128

As a member of the University faculty, I am required to immediately report any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator. Although the Title IX Coordinator and I cannot guarantee confidentiality, you will still have options about how your case will be handled. My goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need.

For more information regarding sex discrimination and gender-based violence, the University's Title IX resources and the University's Policy, Interim EP 1.204, go to manoa.hawaii.edu/titleix/

ACADEMIC INTEGRITY

Work submitted by a student must be the student's own work. The work of others should be explicitly marked, such as through use of quotes or summarizing with reference to the original author.

In this class, students who commit academic dishonesty, cheating or plagiarism will have the following consequence(s):

Students will receive a failing grade for plagiarized assignments.

All cases of academic dishonesty are referred to the Vice Chancellor for Student Affairs.

ALTERNATE CONTACT INFORMATION

If you are unable to contact the instructor, have questions that your instructor cannot answer, or for any other issues, please contact the Academic Affairs Office:

Location: Alaka'i 121Phone: (808) 235-7422

TWO-WAY COMMUNICATION DEVICES

These devices are not allowed in the classroom. Please see to it that these devices are turned off while in class.

UH POLICY ON EMAIL COMMUNICATION

The electronic communications policy adopted in December 2005 establishes the University of Hawai'i Internet service a official medium for communication among students, faculty, and staff. Every member of the system has a hawaii.edu address the associated username and password provide access to essential Web announcements and email. You are hereby inform the need to regularly log in to UH email and Web services for announcements and personal mail. Failing to do so will missing critical information from academic and program advisors, instructors, registration and business office staff, classn student organizations, and others.

PHYL 142 Fall 2023 Schedule

PHYL 142 Section 61128 WWW asynchronous

Fall, 2023 (Aug 21-Dec 12, 2023)

Human Anatomy and Physiology II

Month	Date	Day	Topic	Quiz Due Date	Chapter	PPT
Aug	22	Т	Introduction			000
Aug	24	R	The Endocrine System		Ch 17	016
Aug	29	Т	The Endocrine System	Q1	Ch 17	016
Aug	31		Science of Gigantism or Dwarfism Video			

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Sep	5	Т	Cardiovascular system: Blood	Q2	Ch 18	017
Sep	7	R	Cardiovascular system: The heart Discussion 1 Diabetes in Hawaii	Q3	Ch 19	018
Sep	12	Т	Review (Office hours 6pm)			
Sep	14	R	Exam 1: PPT 016-018		8 am to 10 pm	
Sep	19	Т	Cardiovascular system: Blood vessels		Ch 20	019
Sep	21	R	Cardiovascular system: Blood vessels	Q4	Ch 20	019
Sep	26	Т	The Lymphatic System		Ch 21	020
Sep	28	R	Immune System		Ch 21	021
Oct	3	Т	Immune System	Q 5	Ch 21	021
Oct	5	R	Respiratory System Discussion 2 Infectious Disease		Ch 22	022
Oct	10	Т	Respiratory System	Q6	Ch 22	022
Oct	12	R	Review (Office hours 6pm)			
Oct	17	Т	Exam 2: PPT 019-022		8 am to 10 pm	
Oct	19	R	Digestive system	Q7	Ch 23	023
Oct	24	Т	Nutrition, Metabolism, and Energy Balance with GMOs	Q8	Ch 24	024a

21/23, 4:33 PM PHYL-142-0 [WIN.61128.FA23]						
Oct	26	R	Nutrition, Metabolism, and Energy Balance with GMOs		Ch 24	024b, 024c
Oct	31	Т	Supersize me video/worksheet Discussion 3 VOG			
Nov	2	R	The urinary system	Q9	Ch 25	025
Nov	7	Т	Fluid, Electrolyte, and acid-base balance	Q10	Ch 26	026
Nov	9		Review (Office hours 6pm)			
Nov	14	Т	Exam 3: PPT 023-026		8 am to 10 pm	
Nov	16	R	Reproductive system (male and female) Discussion 4 Diets	Q11	Ch 27	027
Nov	18	T	Human Development		Ch 28	028, 029
Nov	24		Holiday: Thanksgivings Day			
Nov	28	Т	Life's greatest miracle video/worksheet	Q12		
Nov	30	R	Inheritance	Q13	Ch 28	030
Dec	5		Review (Office hours 6pm)			
Dec	12		Final Exam: PPT 027- 030		8 am to 10 pm	

PHYL 142 Fall 2023 Quiz schedule

Laulima Quiz Schedule 30 minutes

Q)1	Endocrine	Q8	Metabolism
		8/25 12:00 am to 8/29 11:59 pm		

21/23, 4.3	- ·		PHTL-142-0 [WIN.01120.FA23]
			10/20 12:00 am to 10/24 11:59 pm
Q2	Blood	Q9	Urinary
	9/1 12:00 am to 9/5 11:59 pm		10/28 12:00 am to 11/2 11:59 pm
Q3	Heart	Q10	Fluid
	9/2 12:00 am to 9/7 11:59 pm		11/3 12:00 am to 11/7 11:59 pm
Q4	Blood Vessels	Q11	Reproductive system
	9/15 12:00 am to 9/21 11:59 pm		11/11 12:00 am to 11/16 11:59 pm
Q5	Immune System	Q12	Development
	9/29 12:00 am to 10/3 11:59 pm		11/22 12:00 am to 11/28 11:59 pm
Q6	Respiratory	Q13	Inheritance
	10/6 12:00 am to 10/10 11:59 pm		11/24 12:00 am to 11/30 11:59 pm
Q7	Digestive		
	10/14 12:00 am to 10/19 11:59 pm		

PHYL 142 Fall 2023 exam information & schedule

Exams are posted on **Laulima** (assignments, tests, and surveys) You will be provided with the password on the day of the exam.

- 1. You are required to sign the **honor pledge**;
- 2. There are 50 questions multiple choice. It is timed for 1 hr 50 minutes.
- 3. You are permitted to use a 3x5 inch double-sided handwritten note card.
- 4. Submit your **extra credit** by the end of the day. Extra credit is usually a review of a recent article related to any A&P topic. Try to avoid our discussion topics. Write a 1-page minimum, double spaced, typed review, provide the link to the article. Please don't use WebMD or other fact sites. Science Daily is a good choice. If you are not sure, then email the link to me in advance and give me enough time to get back to you. Upload your review to Assignments.

Exam Schedule

Exam 1: Sep 14, R, 8 am to 10 pm; PPT 016-018

Exam 2: Oct 17, T, 8 am to 10 pm; PPT 019-022

Exam 3: Nov 14, R, 8 am to 10 pm; PPT 023-026

Exam 4: Dec 12, T, 8am to 10 pm, PPT 027-030

PHYL 142 Fall 2023 Discussion Schedule

Go to **Discussion and Private Messages**. Select the discussion topic. Read the instructions and post your comment with a link to your article. Don't forget to comment on another student's post.

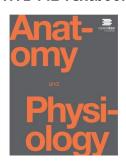
Laulima Discussions

1. Diabetes in Hawaii Aug 31, 12:00 am - Sep 7, 11:55 pm 2. Infectious disease Sep 28, 12:00 am - Oct 5, 11:55 pm

3. VOG Oct 24, 12:00 am – Oct 31, 11:55 pm

4. Diets Nov 9, 12:00 am – Nov 16, 11:55 pm

PHYL 142 Textbook



TEXT: OpenStax A&P

Digital is free; Print is \$50

Publish Date:

Apr 25, 2013

Print:

ISBN-10: 1938168135

ISBN-13: 978-1-938168-13-0

Digital:

ISBN-10: 1-947172-04-2

ISBN-13: 978-1-947172-04-3

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PHYL 142 Office Hours

OFFICE HOURS

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PHYL 142 Recorded Lecture

All lectures can be found as a recorded PPT, MP4, and Youtube video channel (with subtitles). They are all the same. However, digestion and metabolism are only as videos.

Go to this link for PPTs (no recording)

Go to this link for recorded PPT

Go to this link for MP4

Go to this link for Youtube

PHYL 142 Videos & Podcast Links

Youtube Video: The Science of Gigantism- National Geographic Channel - full video

Youtube Video: Heart Attack (the beast within)

Youtube Video: <u>Typhoid Mary</u> (immune system)

Youtube Video: <u>Secretes of Sugar</u>

Youtube Video: Immune Video

Youtube Video: Vaxxed trailer (wakefield), Wakefield (Newsweek)

Youtube Video: HPV the science behind the controversy (NPR)

Youtube Video: Supersize Me

Youtube Video: GMO: Spider goats

Youtube Video: The Digestive System

Life's Greatest Miracle video link

Life's Greatest Miracle Worksheet.docx handout

Podcast: The Man Who Touched His Heart (cardiovascular system)

Podcast: Radio Lab: Blood (cardiovascular system)

Podcast: Radio Lab: Patient Zero (immune system)

Reproduction and development: https://fb.watch/1sCgf3HlaT/

<u>Acid-base balance:</u> https://www.youtube.com/watch?v=-Af0Vvrh8Ds

PHYL 142 Articles

Articles:

Diabetes:

Cure for diabetes

Immune system:

- New class of killer T cells may prevent autoimmune diseases
- Measles Wipes Your Immune System's 'Memory,' So It Can't Fight Other Infections
- China gene-edited baby experiment 'may have created unintended mutations'
- Chinese Scientist Says He's First To Create Genetically Modified Babies Using CRISPR (NPR/Podcast)
- 1st baby born to women with a uterus transplant
- Blue dye kills malaria parasite
- Researchers Have identified why our body rejects transplanted organs
- Germ History: From Measles To Syphilis, How We Created The Golden Age Of Germs
- Vaccine sceptic Robert F Kennedy Jr says Trump asked him to lead safety study
- What's behind the anti-vax movement
- The mother who is "angry as hell" with anti-vaccination movement
- Mark Zuckerburg vaccinates his baby
- Wakefield (newsweek)
- HPV the science behind the controvercy (NPR)
- Sickle cell anemia and malaria
- Fighting malaria
- The strange case of Typhoid Mary

Nutrition

- INDIA SHOWS WHY THE GLOBAL SHIFT TO PLANT-BASED DIETS IS DANGEROUS
- Study to lower hypertension using Hula
- A fourth type of fuel for humans
- Meatless burgers
- Warming ocean could boost toxins in your shellfish
- New Dietary Guidelines will not Include a Sustainability Goal
- Bistro In Vitro: A Virtual Playground To Ponder The Future Of Meat
- Minerals the Human Body Needs
- Type II Diabetes in Native Hawaiian & Pacific Islanders in Hawaii
- Local Food Compared to Native Hawaiian Diet
- Kalo: Nutritional Value
- Canoe Plants of Ancient Hawaii
- Food in Old Hawaii
- Hawaiian "Local Food" Diet Compared to Traditional Native Hawaii Diet

GMO

- Genetically modified purple tomato approved by US regulators
- FDA approves genetically engineered pigs
- Block on GM rice 'has cost millions of lives and led to child blindness'GMO & Taro
- GMO Hawaii
- GMO Pig Human stem cells
- GMO Transparency. Honolulu Weekly, Sep.26, 2012
- Campbell Labels Will Disclose G.M.O. Ingredients
- Genetically Engineered Salmon Approved for Consumption
- Why people oppose GMO's even though science says they are safe
- GMOs are dangerous to our health, according to latest independent research (scrutinize this article)
- RETRACTED: Long term toxicity of a Roundup herbicide and a Roundup-tolerant genetically modified maize
- Genetically Modified Hawaii. Scientific America, Dec. 8, 2008

VOG

- Vog dash board
- Researchers study long term effects of VOG
- Coping with vog from Pu'u O'o
- Hawaii Volcano National Park Air Quality
- The Wrath of Vog
- USGS Volcanic Air Pollution—A Hazard in Hawai`i Fact Sheet
- VOG Injures Plants
- Residents say geothermal causes health problems
- VOG Measurement & Prediction Project
- Hawaii's silent danger: Volcanic smog, otherwise known as 'vog'
- Track Hawaii Island vog using these helpful websites

Genetics

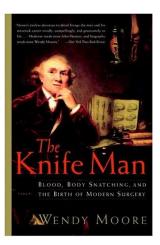
- NASA's twin study throws up an early genetic curveball
- New DNA Study Shows Humans Bred With Unknown Species
- Asgardian Microbes origin of eukaryotes
- DNA Ancestry Testing Review

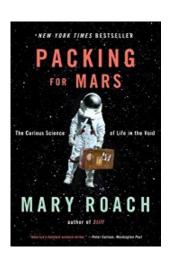
Miscellaneous

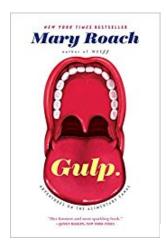
- A Marine Bacteria Shows Promise for Curing an Aggressive Brain Cancer
- An Alarming Discovery in an Astronaut's Bloodstream
- Humans placed in suspended animation for the first time
- Dwarfisms drug aims to boost healthy growth
- Self-experimentation and its role in medical research
- why are more boys than girls born every single year?
- first cloned monkeys
- why do we have different blood types?
- the Man Who Touched his Heart (W. Forssmann)
- Unraveling mysteries of asparagus pee
- Male contraceptive gel passes monkey test

Books for enjoyed reading

BOOKS:









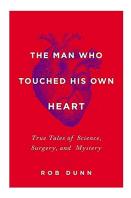


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Worksheets

Supersize me'

<u>Life's greatest miracle</u>