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# PREMED PERSPECTIVE



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# Going Natural: The Benefits of Chiropractic Care

I call chiropractic care the “underdog” of health treatments, overlooked by the majority of the population as they proceed straight to mainstream medicine to cure their ailments. Most people either have not truly realized the tremendous benefits of chiropractic care or cringe at the mere mention of it, feeling disgusted and even nervous about the associated thoughts of back cracking and spine manipulation. Thus, I want to dispel all these unnecessary worries and convince those nonbelievers of chiropractic care about its benefits since 31 million Americans suffer from back pain as well as other sicknesses unrelated to back trauma. In more ways than one, chiropractic care can be considered superior to the field of medicine and most recommended for certain physical illnesses.

The earliest documented usage of chiropractic care dates back to 2200 BC and 1500 BC in China and Greece, where spinal manipulation and maneuvering the lower extremities of the back were performed. Then in about 450 BC, the Greek physicist, Hippocrates, published texts explaining the significance of back treatment. It was finally introduced to the United States in the late 19<sup>th</sup> century by Daniel David Palmer, who founded the Chiropractic profession in 1865. Since then, the field has steadily grown, with chiropractic colleges blooming throughout the nation and patients gaining confidence in its health benefits.

What is chiropractic exactly, many may ask. It is a natural, physical therapy that emphasizes the human body's ability to heal itself without the use of surgery or medication. Chiropractors perceive the body as a whole and focuses on its physiological and biochemical aspects, such as structural, spinal, musculoskeletal, emotional and environmental relationships with the body. Treatment normally consists of manipulation and adjustment of the spinal column and other bone structures. Chiropractors tend to patients with neuromuscular skeletal complaints such as headaches, joint pain, neck pain, lower back pain, carpal tunnel syndrome, tendonitis, and many others. However, chiropractic care is not limited to muscle or back pain. It can be used to treat even allergies, asthma, and digestive disorders.

The primary benefit of chiropractic care is the fact that it is so cost effective. Because it emphasizes the usage of natural procedures, it remains a drug and surgery free therapy, saving patients thousands of dollars they would otherwise spend on medication and other medical costs. If a person suf-

fering from a certain bodily injury visits a general practitioner, she is likely to undergo expensive physical tests and to receive a prescription for painkillers that only suppresses the problem instead of fixing it. Not only would she spend an exorbitant amount of money on medical care, but she is also not guaranteed a complete cure from her problems. In fact, a recent study shows that chiropractic care is able to cut health care costs such as for treating back pain by 28%, reduced hospitalization among back pain patients by 41%, reduced back surgeries by 32%, and medical imaging (i.e. MRI, X-ray) by 37%. Moreover, the patients of the study even reported to be very satisfied with the care as well.

As previously mentioned, chiropractic care is not strictly dedicated to relieving muscle and back pains and injuries. It also extends to aiding patients with physical maladies and internal illnesses. Recently, the success of chiropractic care on the treatment of ear infections (otitis media) has emerged and proven to be the preferred method of ear infection care. Prior to this practice, ear infections had typically been treated with antibiotics, which had only been effective if the infection was bacterial. Moreover, research studies have shown that the usage of antibiotics is often not any better than the body's immune system. Dr. Joan Fallon, the chiropractor who performed the research on chiropractic's effect on ear infections, reported that nearly 80% of children treated no longer suffered from ear infections for at least the 6 month period after the individual visits.

To all those backpack carriers out there that come home with aching necks and backs, I recommend that you visit a chiropractor to relieve yourself of your pain. Chiropractic care is safe, effective, and worth the effort. There are a number of chiropractic offices in the local area, and they can be found on [www.amerchiro.org](http://www.amerchiro.org)

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- Stephanie Wong

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# Medical School Profile

## University of Illinois at Urbana/Champaign Medical Scholars Program

### INTERVIEW WITH UNIVERSITY OF ILLINOIS @ URBANA-CHAMPAIGN MEDICAL SCHOLARS PROGRAM

*Amanda Cuevas is the Coordinator of Student Affairs and the Medical Scholars Program (MSP) at the University of Illinois @ Urbana-Champaign. She recently visited the UC Berkeley campus at a career fair and Premed Perspective (PP) had the opportunity to interview her about MSP.*

#### **STUDENT LIFE:**

**PP:** What is the campus setting like at the University of Illinois?

**Amanda Cuevas:** It is a great traditional Big Ten campus—about 36,000 students in the heart of the Midwest. People generally are very friendly and hospitable.

**PP:** What kinds of facilities are available to students on and off campus (clinical, research and extracurricular facilities?)

**Amanda Cuevas:** We are home to some of the best research facilities in the world, including the interdisciplinary Beckman Institute, in which many of our students conduct their graduate school research – see <http://www.publications.uiuc.edu/World.pdf> for more information about our facilities. For medical school, we have two hospitals in town and a Veteran's Administration Hospital in Danville, which is located about 30 minutes away, where students conduct their clinical training. The campus also enjoys a rich cultural and social environment, boasting facilities such as the Krannert Center for the Performing Arts where students attend plays and musicals and vibrant Campus Recreation facilities where students can work out, join extramural sports teams, etc.

**PP:** Is it feasible to balance an active social life outside of academics with such a rigorous program?

**Amanda Cuevas:** Absolutely. Our students are simply amazing and are able to balance work with an active social life. This year our Medical Scholars Program Advisory Committee (MSPAC), our student-led MSP body, created a Big Sib Program in which they also plan various monthly social activities for our Medical Scholars.

**PP:** What kinds of activities do students engage in outside of the campus setting?

**Amanda Cuevas:** As one of my students recently said, "You can find just about anything to do here." Some students have helped create a free-clinic in town, others hike and train for marathons, others attend sporting and musical events in Chicago, St. Louis and Indianapolis, others participate in various national and international professional organizations, and that is just a small sampling of the variety of activities our MSPers participate in.

**PP:** What is the ethnic makeup of the students in MSP?

**Amanda Cuevas:** We have a diverse group of students including Hispanic, African-American, Asian American, Native American, White, for example.

#### **ADMISSIONS**

**PP:** What are the average MCAT and GPA numbers of students who are accepted into your program? Are there any other standardized test scores that are required for admission into MSP?

**Amanda Cuevas:** On average, our students carry a 3.5 undergraduate GPA and a 32 on the MCAT.

**PP:** If students are below average in these numbers, what other components of the application are strongly looked at?

**Amanda Cuevas:** The MSP is looking for students who can demonstrate a commitment to a career that melds the training afforded by a joint degree program. Applicants should have the ability to articulate clearly why pursuing an MD/PhD through the MSP is critical to their future career goals. The program seeks students with research experience and MSP applicants should have solid letters of recommendation from research supervisors as well as from other faculty well acquainted with their work.

**PP:** What are the current tuition fees and the trend of these fees over the past decade?

**Amanda Cuevas:** At the time of admission to the MSP for MD/PhD students, the first year of funding is guaranteed. The MSP "track record" is that all MD/PhD students who are in good academic standing and are progressing toward completing both degrees have received support. In general students are supported at the "half-time level" during the four years they spend primarily in graduate work, and at the "quarter-time level" (same tuition and fee waiver, one-half the stipend) during the four years they spend primarily pursuing medical studies. There is no commitment to fund MD/JD or MD/MBA students although most do find such support during their medical school training.

#### **CURRICULUM**

**PP:** Describe the school's curriculum and how students are able to manage the completion of two degrees within this time frame.

**Amanda Cuevas:** All MSP students begin their studies in their graduate department. There is a great deal of flexibility in the program, although we are finding that the majority of our students are taking a few M-1 courses each year during their graduate studies. So, students are finishing their M-1 year and their PhD at the same time. That way one's dissertation or thesis is completed before starting the clinical years M-2 through M-4

**PP:** How are students evaluated academically in both clinical and research settings? *(continued on page 4)*

# Editorial

## Life after Graduation

So many of us premed students rush through our undergraduate years with one ultimate goal (never mind the undergraduate degree) - medical school. This is reminiscent of the secondary school routine where we worked equally hard to enable admission into this fine undergraduate institution; very few of us ever considered landing a job or globe-trotting prior to, as is popular with our European counterparts, plunging head on into college. It seems that with premed undergraduates, this historical pattern only repeats itself.

Unbeknownst to many unassuming premeds, there is an alternative. Reality is that you are *not* forced to conform to the strict academic timeline you found online, and contrary to popular belief, it really is not the end of your healthcare dreams if one aspect of it goes off track—you *do* have time to mend mistakes. You can take a year off, or several years off before starting medical school. There is a plethora of opportunities to consider pursuing during that time, whether you plan to pad that application or use it as a time of self-reflection, dabbling in career paths that have nothing to do with medicine.

So you think it is impossible to take time off because you have already taken the MCAT? Think again. Your MCAT score is good for three years after you take it, giving you up to a two-year break period before deciding to write your life off into another four years of school. You have already started the admissions process? Good news! Some schools will actually let you defer admission status to take time off before continuing into medical school. You think you might be too old by the time you start medical school? You would be surprised to learn that the average age of admitted medical students is 25, and students as old as 45 still matriculate. Do not let such details dissuade you from taking a much needed year off; you may be liable for burn-out.

Some students who take time off use the time in a strategically academic sense to raise their GPAs by taking classes

at a community college before baring all to medical school admissions boards. Others become involved with full-time university research, or fully commit themselves to intensive volunteering at hospitals and other local clinics. Some take service work a step further by taking a few years off and joining government service programs such as Peace Corps or AmeriCorps, where you can be trained and sent to a different part of the globe in need of your services while the program pays for your living expenses.

In a completely untraditional light, some students use the time to pursue other interests that they did not have the time for before, such as extensive traveling. There are study abroad programs that allow graduated students to experience college abroad while learning a different language; other students pull a 180 and embark on an entirely different career path for a breath of fresh air. Sometimes, it is simply a more financially sound decision as some students decide to work and stash away a little bit of money before paying for medical school tuition fees.

Another incentive for some time off is that students who have taken a year off often believe that their time away from the academic routine added dimension to their character. This was well-received by admissions officers who are not always on the lookout for yet another fresh-faced undergraduate without a lick of real-world experience; although it is true to say that any qualified undergraduate should find the interview a pleasant undertaking.

In the end, only you can decide what is right for you, and that may include rushing right onto medical school after tossing your graduation cap, or perhaps slowing down the pace a little by taking a breather to reevaluate your chosen career path. Just do not forget that you *do* have a choice in the direction of your life.

-Christine Chen

## Medical School Profile (cont' from page 3)

(continued from page 3)

**Amanda Cuevas:** The Medical Scholars Program administration meets with each student and his/her graduate advisor each spring to ensure that the students are making satisfactory progress towards earning both the MD and PhD degrees.

**PP:** In what ways are the research and clinical learning integrated with each other?

**Amanda Cuevas:** The Medical Scholars Program (MSP) has created the Preparing Future Physician-Scholars (PFPS) seminar series to provide our dual-degree students with the tools to successfully pursue careers in academic medicine. We also sponsor Bench to Bedside and Research Grand Rounds Seminar Series to help students make the connection between basic science research and clinical medicine.

**PP:** What is unique about MSP that distinguishes it from other MD/PhD programs?

**Amanda Cuevas:** The MSP has over 150 MD/JD and MD/PhD students pursuing graduate study in over 35 academic disciplines, including the behavioral sciences, humanities, physical sciences, as well as the biomedical sciences. With such diverse student perspectives, the MSP provides a unique and electric environment for bright and creative scholars to pursue their passion for combining cutting edge research with individualized high quality clinical training.

For more information, please visit the MSP website at [www.med.uiuc.edu/msp](http://www.med.uiuc.edu/msp) or contact Amanda Cuevas, Coordinator, at 217-244-7800 and [acuevas@uiuc.edu](mailto:acuevas@uiuc.edu).

- Meera Sridhar

# Embryonic Cord Banks

**D**id you ever think that the blood in your embryonic cord could have saved a life? Not only can embryonic cords save a person from an atrocious disease, they can be even more convenient to use than stem cells.

Stem cells are cells that make all red blood cells, white blood cells, and platelets. Stem cells are found in human bone marrow, blood, and the blood in the embryonic cord of a newborn. A transplant of bone marrow can be used to treat many diseases such as leukemia and lymphoma. This all sounds good in theory, but in reality transplants are not always successful, as many of the people we know around us have passed away due to these diseases. This is due to the obstacle of finding a well-matched donor. There is only a 25 % chance of finding a suitable donor in relatives, and the percentage decreases in unrelated donors. And even when a donor is found, other problems arise such as Graft-versus-host diseases or GVHD. GVHD occurs when the bone marrow recognizes the recipient as foreign and attacks the skin, liver, and intestinal tract, which can prove to be fatal. Scientists are currently working on ways that can increase the chances of a successful transplant, such as taking out the genes that cause GVHD in the bone marrow or searching for genes needs in a donor match to result in a successful transplant.

In the meantime, there is an alternative to bone marrow transplant – embryonic cord blood banking. One significant benefit of cord blood is that there is a lower incidence of GVHD because cord blood is more primitive and is less likely to attack the recipient's body. Another advantage of cord blood in finding a match is that cord blood is more undeveloped. This means that the match between donor and recipient does not have to be perfect. Obtaining cord blood is also easier in that it is simply obtained from the umbilical cord, while bone marrow requires an invasive technique of injecting at the rear of the donor's pelvic bone. It is also shown that cord blood contains ten times the amount of stem cells and contains more proliferating properties than bone marrow. It is especially useful now to use cord blood since the use of stem cells has become political, limiting the amount of stem cells that can be used for research.

How does cord blood banking work? The ideal time for women who wish to donate the cord blood is before their 35<sup>th</sup> week of pregnancy. The cord blood is collected only after the baby has been born and the umbilical cord has been clamped. Trained staff drains the blood from the umbilical cord and placenta, taking about ten minutes or less. The cord blood is only stored with the signed consent of the parents. Cord blood is then taken to a laboratory where it is tested and processed to make sure there are no signs of infections. The blood is then stored in a plastic of vinyl bag within a liquid nitrogen freezer, making

it able to be stored indefinitely.

There are three main choices of the locations at which the cord blood can be stored. There are non-profit public cord blood banks where blood is stored for free and placed on a donor registry called the National Marrow Donor Program. Then there are for-profit public cord blood banks which profits by selling cord blood for cord blood research. Lastly, there are private cord blood banks that charges a fee anywhere from \$300 to \$1,835 to store the blood that is owned solely by the parents. It is not up for use by cord blood research or to be put on a registry.

The high cost of cord banks may be one of the disadvantages of cord blood banking. But some private banking companies do provide their services free of charge for "case of need" families or families who have a relative awaiting a transplant. Another disadvantaged related to high cost is that there is a high chance that the cord blood will not be used in the future. According to the American Academy of Pediatrics (AAP), the chances of banking and later use of the stem cells for a transplant are about 1 in 20,000. But the chances that cord blood banking is used significantly increases when there is a family member with a current or potential need to undergo stem cell transplantation. Cord blood transplants treat over 45 diseases including leukemia and other cancers, metabolic disorders, and blood disorders. So if you or anyone you know is giving birth soon and has a relative with one of these diseases, make sure you tell them about this option!

*-Jennifer Shih*

The **Cal in Berkeley Student Internship Program** offers UC Berkeley students through Cal Corps the opportunity to learn and serve their community through internships with the local government and nonprofits, and participation in an enriching weekly seminar. There are many internships available for those interested in a health or medical career.

**You can find out more at:**  
<http://students.berkeley.edu/calcorps/cib.html>

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# Med School Interview 101

So you have worked hard during your years at Cal with the hopes that one day you will become a doctor. You have submitted your primary and secondary applications and have gotten a couple of interview invitations! Now what do you do?

## **Pre-Interview Preparation**

Be sure you conduct research on the school that you will be interviewing at because interviewers will ask you why you are applying to their particular institution.

You are always going to be asked political questions concerning healthcare so make sure to read up on healthcare policy. Understand the difference between the American system of healthcare and those in other regions such as Europe and Canada.

Be very familiar with your application because most likely your interviewer will have looked over your application and ask you to elaborate on your experiences and exposure to the medical field. If you do research, make sure you know your research inside and out because they will ask you questions regarding your work to test the extent of your involvement and your level of understanding of the theories behind your project.

Know yourself well and be able to describe yourself. Prepare an answer as to why you want to pursue a career in medicine and be prepared to articulate your reasons. For example, if you want to enter the field of medicine because you have had experiences working in a hospital, what specific aspects of that experience sparked your interest?

It is always better to over-prepare rather than be caught under-prepared, so try to think of questions that you might be asked and review answers that you might possibly give.

## **Dress to Impress**

Everyone at med-school interviews will be dressed in a navy blue, black, or gray suit. This is *not* a time to be creative. Remember, you are dressing up to impress 40-80 year olds, so this is not a time to pursue the latest trends in fashion; dress very conservatively--think Barbara Walters or Peter Jennings and you will be fine. Be sure to wear comfortable shoes that match your suit because you will be doing a lot of walking as you tour the various hospitals and teaching facilities.

It is also a good investment to purchase a legal pad from the ASUC because you will be given a lot of papers and it would look nicer if you were not holding a manila envelope.

## **What to Expect on Interview Day**

Typically, the day will start bright and early (around 7:30 or 8 A.M.). It will be difficult for those of you who are interviewing in the east because of the three hour time difference, so try to fly in the night before your interview.

The day will probably begin with a welcome session, led by the Dean of Admissions. During this time you will be given a packet with information about the school, its hospitals, financial aid, etc (you can put these papers in your new legal pad!). You will probably have anywhere between one and three interview sessions with faculty, current students, or alumni. In between these interviews, there will be some downtime during which you can chat with other interviewees as well as explore the campus on your own. Around 12 or 1 P.M., you will have lunch with a group of current med-students, and this would be a good chance for you to ask questions. You might want to pack a snack or two for later on during the day. The same group of students will take you on a tour of the campus. You have just completed your day of interviews!

Remember to send a "thank you" card to each of your interviewers after you get home. For additional brownie points, you can also write a "thank you" note to the Dean of Admissions telling him how wonderful your visit to the campus was.

## **Typical Questions**

Here is a small sample of questions that you might hear from your interviewers:

- Tell me about yourself.
- Why do you want to study medicine?
- Why do you want to study at [enter med-school name here] Medical School?
- What specialty within medicine do you want to pursue and why?
- What sparked your initial interest in medicine?
- How have your experiences further intensified your interest?
- What scares you the most about coming to medical school?
- What was your greatest success and greatest failure?
- What is the greatest thing that has ever happened to you?
- What do you think the government should do to improve healthcare?
- Tell me about your research as if I were a six year old child.

- Victoria Zheng and Jennifer Hsu

# Too Short of An Injection: The Flu Shot Shortage

People these days are not going to the doctors because they are sick; they go because they *do not* want to become sick. This trend of activity is especially apparent this season due to the nationwide flu vaccine shortage. More and more people are rushing into clinics, begging clinicians to give them or their loved ones a flu shot, an injection that does not even guarantee that they will not get the flu anyway.

Just how bad is this vaccine shortage? According to Chiron and the U.S. Center for Disease Control, out of the one hundred million vaccines that are suppose to be made available to the public, only a total of sixty-one million are actually available, leaving a huge shortage of about thirty-nine million vaccines—thirty-nine million potential cases of the flu, particularly with those who are weaker, the elderly, pregnant women, and young children. Suppliers are trying their best to “squeeze” as much of what they have left, but even so, with more potential cases of the flu than the potential vaccines, an epidemic of this sort may arise and last for a long time since flu vaccines take such a long time to make. Where does that leave us?

While all types of patients crowd clinics in hopes of vaccinations, the astonishing fact is that those patients who are standing in these long lines do not fall under any of the high risk groups mentioned. Clinics are hence advised by the Center for Disease Control and other health organizations to only administer the vaccines to patients who are at “high-risk”: those with chronic illnesses, the elderly, and children. Our own University Health Services Tang Center, which originally had dates and appointments all set up for vaccinations, has cancelled all the appointment times for the rest of this season except for one (November 1, 2004), due to this national shortage. The Tang Center had initially asked students and others to forego the vaccine and save the vaccinations for higher risk people, in anticipation for the national shortage; now, with the exception of that one date, all the vaccinations are saved and there are no shots given, even to high-risk people.

However, we should not lose hope of escaping the flu quite yet. Tommy Thompson, Secretary of Health and Human Services, announced during the week of October 26, 2004, that the U.S. Food and Drug Administration is currently attempting to find other foreign sources of the flu vaccine to import back to the U.S. Currently, inspectors have found five million vaccines in Canada and Germany that are potential imports, granted they pass the necessary tests as satisfactory vaccines. In addition, manufacturers such as Merck and Company have complied to manufac-

ture a larger supply of its pneumococcal vaccine as an advisory by the CDC to combat one of the larger complications of the flu - pneumonia. Other flu drugs, such as Pneumovax and FluMist, have also been increased in production to protect people from flu complications.

Meanwhile, as we all wait for the final reports of the potential vaccine imports, health services, clinics, and the CDC all advise people to exercise caution and basic hygiene practices as personal contributions in preventing the flu. Washing our hands after contact, using pocket sanitizers, and covering our nose and mouth when sneezing and coughing are all fundamental practices in which we can all take part to prevent the flu from hitting us hard. And as always, drink plenty of liquids (particularly water and those high in vitamin C), get sufficient amounts of rest/sleep, eat balanced meals...all the things we have all heard of before, be it from clinicians or parents. If people do their part in combating the flu, we can all feel healthier and protected—without any vaccine and/or its side-effects.

For more information about how to protect oneself from the flu and updates about the vaccine supply, visit the CDC website at [www.cdc.gov/flu](http://www.cdc.gov/flu).

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-Diana Yee

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**The  
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# Antibiotic Use Leads to the Growth of More Bacteria?

Antibiotics are of great importance to clinical use since it can treat human diseases by killing bacteria or nullifying its growth. Starting from 1950s and even earlier, there were tremendous discoveries of antibiotic classes mostly by the screening of soil samples for natural products that have antibacterial activity. Thereafter, even more antibiotics have been designed synthetically in order to improve their potencies. At this point in time, people thought that the human's battle against bacterial infections had been won.

Antibiotics discovered decades ago aim to attack bacteria cell growth by disrupting the bacterial cell wall, the cellular protein synthesis, and the normal DNA/RNA replication/repair mechanisms. Given the presence of a plethora of antibiotics, however, there is still a constant demand of new antibiotics due to the inevitable development of bacterial resistance against the existing ones. Unless efficient, resistance-combating drugs are introduced, there exists an increasing likelihood for the recurrence of old diseases.

Bacterial resistance is developing and spreading rapidly, particularly in hospitals where antibiotics are heavily used and various types of strains can interact and mutate. Under these circumstances, bacteria are easier to gain resistance (acquired resistance). Some known defense mechanism of bacterial defense against antibiotics includes mutation of drug target, inactivation or destruction of the antimicrobial, and inhibition of antibiotic entry to the target site. As time proceeds, the mortality rate of bacteria declines even with administration of antibiotics. In order to tackle the problem of bacterial acquired resistance, scientists attempt to block the mechanisms of bacteria's inherent persistence.

Inherent persistence differs from acquired antibiotic resistance, in which the inherent persistent bacteria are still sensitive to antibiotics. Inherently persistent bacteria would modify their typical growth rate to strive for survival, and they would not be killed when confronted with antibiotics. Their origin of persistence can be linked to the pre-existing heterogeneity in bacterial populations. Upon environmental stress

(antibiotics), they have mechanisms to "switch" to the persistent phenotype of reduced growth and maturation rates in order to increase the chances of survival. The mechanisms of survival in inherently persistent cells are not uncommon in more complex organisms such as insects and plant seeds. Should the mechanism of phenotypic switch be clearly understood, it would be applicable to fight against bacteria that are resistant to antibiotics.

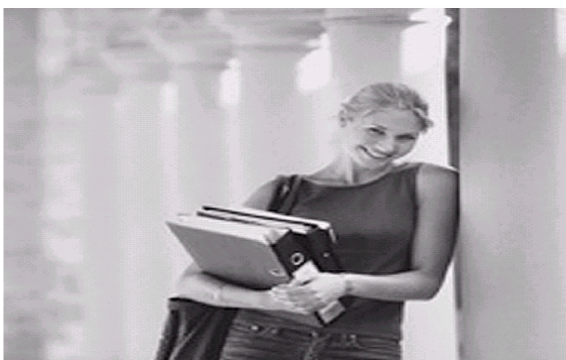
Besides inheriting a phenotypic switch, bacteria that are confronted with antibiotics can also reduce their susceptibility to these drugs by altering their cellular signal transduction pathway at the molecular level. This leads to the temporary inhibition of cell division during exposure to specifically b-lactam antibiotics, namely ampicillin.

Based on the overview of bacterial resistance development, it is clear that bacteria can defend against most antibiotics and survive unhampered by the antibiotic treatment. To avert the crisis of conquered diseases, developing new drugs in a timely manner is essential. This development also needs to be accompanied by a reduction in the use of antibiotics (to avoid rapid resistance development), alleviation of negative pressures from pharmaceuticals and the FDA on approving new antibiotic drugs, the prioritization of antimicrobial discovery, and introducing incentives for the development of new and better drugs. Until then, we will not be equipped to fight against the crisis of conquered diseases resurfacing in society.

## Sources:

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3. Miller, C. et al. "SOS Response Induction by b-Lactams and Bacterial Defense Against Antibiotic Lethality" *Science* **305** (2004)
4. Levin, B.R. "Noninherited Resistance to Antibiotics" *Science* **305** (2004)

-Cathy Hsu



*"Consider and write your Personal Comments carefully; many admissions committees place significant weight on this section." – AMCAS Worksheet*

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# Premed Events at Berkeley

## Career Center Events

"Why I made the Switch from a Career in Medicine to a Career in Public Health, A Critical Look at Medicine"

**Date and Time:** Monday, November 22; 7:00 PM

**Place:** 22 Warren

**Description:** Berkeley Public Health Alliance presents a panel of Professors/MDs will discuss why they made the switch from a career in medicine to a career in public health.



For a complete list of Career Center events, check out <http://career.berkeley.edu/Calendar/Calendar.asp>

Want to get the most updated information about events and opportunities for premeds? Sign up for CareerMail at <http://career.berkeley.edu/MailList/>, and select "Pre-Med" as your career interest.



**If you wish to subscribe or re-subscribe to Premed Perspective each semester, please email us at [premedperspective@yahoo.com](mailto:premedperspective@yahoo.com) next semester with your email address if you wish to remain on the mailing list.**

**Good luck on Midterms and Finals!**

## Clubs on Campus

**AMSA (American Medical Student Association)**

<http://www.ocf.berkeley.edu/~amsa/>

**BSHA (Black Students in Health Organization)**

<http://www.ocf.berkeley.edu/~bsha/>

**CHE (Chicanos and Latinos in Health Education)**

<http://www.ocf.berkeley.edu/~cheucb>

**EMBS (Engineers in Medicine and Biology Association)**

<http://www.inst-eeecs.berkeley.edu/~embs>

**Medical Cluster**

<http://www.ocf.berkeley.edu/~mcluster>

**PMHS (Pre-Med Honor Society)**

<http://www.ocf.berkeley.edu/~pmhs/>

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