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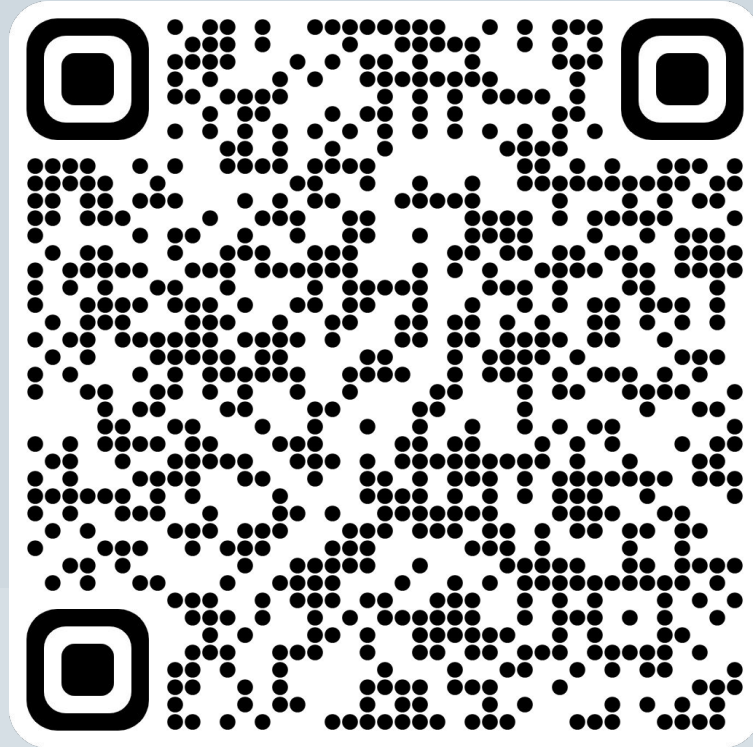
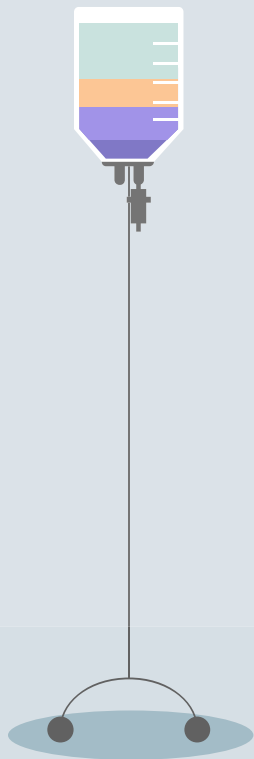


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A WORD FROM

Society of Advancement of
Chicanos/Hispanics and
Native Americans in Science
(SACNAS)

AMSA at UC Merced presents:

RESEARCH OPPORTUNITIES

Thursday, November 16, 2023 | 6:30pm COB 116



MCAT QUESTION OF THE
DAY & MED SCHOOL
SPOTLIGHT



QUESTION



Apoptosis is the process of programmed cell death that can occur in multicellular organisms. The proteins involved in apoptosis are associated with pathways for cell cycle arrest and DNA repair. These processes are mostly regulated through the interplay of various proteins involved in feedback loops including some of the ones shown in Figure 1.

According to Figure 1, CDK2 activity would most reasonably increase due to all of the following EXCEPT:

- A. degradation of p21.
- B. high cyclin G concentrations.
- C. a mutation in the gene that produces PTEN.
- D. high p53 concentrations.

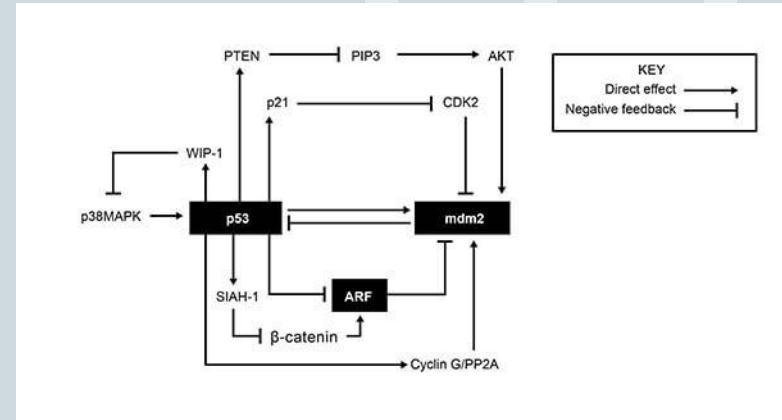


Figure 1: Feedback loops forming a regulatory network affecting apoptosis, cell cycle arrest and DNA repair.



D. high p53 concentrations

Explanation:

- degradation of p21 implies that the concentration of p21 in its active form goes down. The diagram shows that p21 has a negative influence on CDK2. In other words, when p21 is high, CDK2 goes low. But in our instance, p21 is low (degraded) so this allows CDK2 to rise unchecked
 - high cyclin G leads to high mdm2 and low p53
- The great majority of mutations will result in an ineffective gene product or none at all. Thus we have a decrease in PTEN which will lead to a rise in PIP3, rise in AKT, rise in mdm2, decrease in p53 which we already established means an eventual rise in CDK2.
- High p53 concentrations: clearly we get the opposite of the above, meaning a decrease in CDK2. High p53 stimulates p21 which has a negative feedback on CDK2.

California Northstate University

College of Medicine

California Northstate University College of Medicine is a private for-profit medical school located in Elk Grove, California, and is one of the four colleges of California Northstate University, granting the degree of Doctor of Medicine.

Minimum Accepted MCAT Requirements: GPA - 2.80, New MCAT - 497
Preferred, Competitive MCAT Candidate: GPA - 3.50, New MCAT - 511

California Northstate University College of Medicine prefers a baccalaureate degree from a regionally accredited, four-year institution within the United States or a non-U.S. equivalent institution.

Applicants are required to submit a minimum of three and a maximum of four letters of recommendation.

2 Letters from a Science professor teaching the BCPM course
1 Letter from Other (e.g., Research advisor, Non-Science Professor, Community leaders, Employer Superior)

Doctor of Medicine- Tuition & Fees for 2023-2024 Academic Year

| Tuition & Fees | Year 1-M1 | Year 2-M2 | Year 3-M3 | Year 4-M4 |
|----------------|-------------|-------------|-------------|-------------|
| Tuition | \$69,069.00 | \$72,521.00 | \$76,148.00 | \$79,955.00 |

- Complete CNUCOM admission prerequisites.
- Complete your primary application via the Association of American Medical Colleges (AMCAS)
- Completed AMCAS applications will be reviewed by the CNUCOM Admissions Committee and Admissions Office. Selected, qualified applicants will be invited to complete the CNUCOM Supplemental Application (a \$100 non-refundable fee is assessed to the application)
- Submit your Letters of Recommendation (LOR).
- Successfully complete the interview.

Different Programs:

- College of Medicine
- College of Pharmacy
- College of Health Sciences
- College of Psychology
- College of Dental Medicine

Loma Linda University

School of Allied Health Professions

- A baccalaureate degree from an accredited institution, completed by December 31 of the year of application. Any baccalaureate degree is acceptable, but a strong science background is encouraged.
- Overall GPA 3.0 on a 4.0 scale AND Science GPA 3.0 on a 4.0 scale
- Human Anatomy and Physiology: must contain a laboratory component. Physiology. Must cover all organ systems.
- Chemistry:
 - General Chemistry, Inorganic Chemistry, Organic Chemistry, and Biochemistry: a minimum one-year sequence, of which all three courses must contain a laboratory component
- General Microbiology: must contain a laboratory component.
- Documented paid patient care experience of 2,000 hours minimum is required by August 1 of the year of matriculation.
- Applicants must have direct, hands-on patient care experience working in a clinical setting which requires a high level of critical thinking and responsibility to the patient. Only paid hours are acceptable.
- Three letters of recommendation, including one from a practicing MD/DO/PA with whom the applicant has worked under in a direct, hands-on, paid patient care experience.

- The Family Nurse Practitioner (FNP) program prepares registered nurses with a baccalaureate or master's degree to function as Advanced Registered Nurse Practitioners in the FNP role.
- A completed online application and \$55 fee
- Completion of a Bachelor of Science in Nursing (BSN) or Master's degree (in any field) from an accredited institution
- Unofficial transcripts from all colleges/universities attended. Official or unofficial transcripts should be uploaded through the online application form.
- Recommended grade point average of 3.0 or higher
- Three letters of recommendation: Applicants are required to submit letters of recommendation from individuals who can attest to their competence and ability to be successful at a graduate level of study.
- A professional résumé
- Statement of professional goals
- Documentation of RN license

ANNOUNCEMENTS



MEETING TIMES

Please scan the QR code to fill out the form!

We would like to know which day/time works best for our general body meetings next semester.



UPCOMING EVENT

Come donate blood at Diversified
Doctor's Blood Drive!

November 29 2023
10:00 am to 3:00 pm
California Room

BLOOD DRIVE

HOSTED BY



November 29, 10-3



**Give back to your community and
sign up to donate with Diversified
Doctors, Sigma Chi, and Red Cross!**



California Room



To sign up, scan the QR
code on the left or go to
redcrossblood.org and
type in sponsor code:
UCMERCED

For more information, DM @diversifieddoctors on Instagram!

RESEARCH: WHY IS IT
IMPORTANT?



03: WHY IS RESEARCH IMPORTANT?



SKILL DEVELOPMENT

Gain critical thinking, reading, and writing skills in addition to insight on a topic of interest

EXPERIENCE

Wide variety of options- can be both laboratory-based research or social sciences and humanities research



INVOLVEMENT

Shows professionalism, involvement, and commitment- also prepares students for graduate school

TIPS FOR SEEKING RESEARCH

01

Choose a field involving something you're interested in—or a topic you understand well!

02

Show commitment by maintaining research for at least one semester

03

Be cooperative with fellow researchers to maintain professionalism

04

Don't forget about other extracurriculars like clinical experience, volunteer work, etc.



TIPS FOR REACHING OUT

01

Choose a professor you know or whose work you are interested in

02

Show that you are truly interested in their research by reading some of their publications

03

Explain why you could be a good fit for their research team- include any qualifications or experiences

04

Email the professor to formally request an undergraduate lab position



04: RESEARCH OPPORTUNITIES



RESEARCH OPPORTUNITIES

Laboratory and SSHA research opportunities right here on campus!

OPPORTUNITIES

LABORATORY

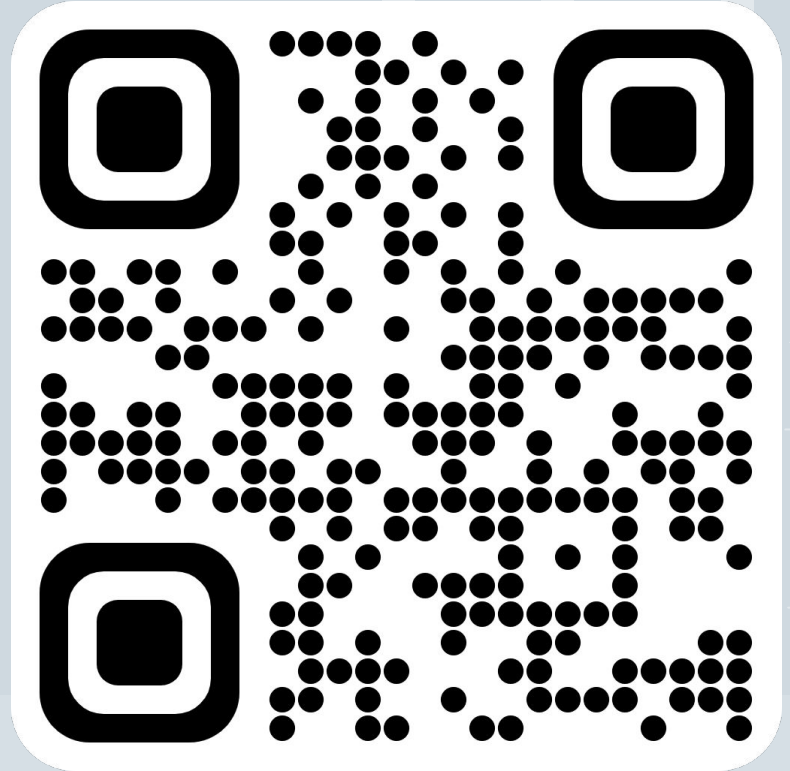
1. **Michael Cleary:** Nervous system development & RNA biology
2. **Kirk Jensen:** Immunology & host-parasite interactions
3. **Sora Kim:** Environmental change & biotic response
4. **Jessica Blois:** Quaternary Ecology & Paleoinformatics
5. **Michael Findlater:** Organic synthesis & Earth-abundant metals
6. **Alexander Noy:** Bioelectronics & Nanofluidics

SSHA

1. **Heather Bortfeld:** Language processing & development
2. **Anna Epperson:** Disparities in health risk behavior
3. **Jennifer Hahn-Holbrook:** Maternal-child health psychology
4. **Nicotine and Cannabis Policy Center (NCPC):** Tobacco and Nicotine effects on individuals

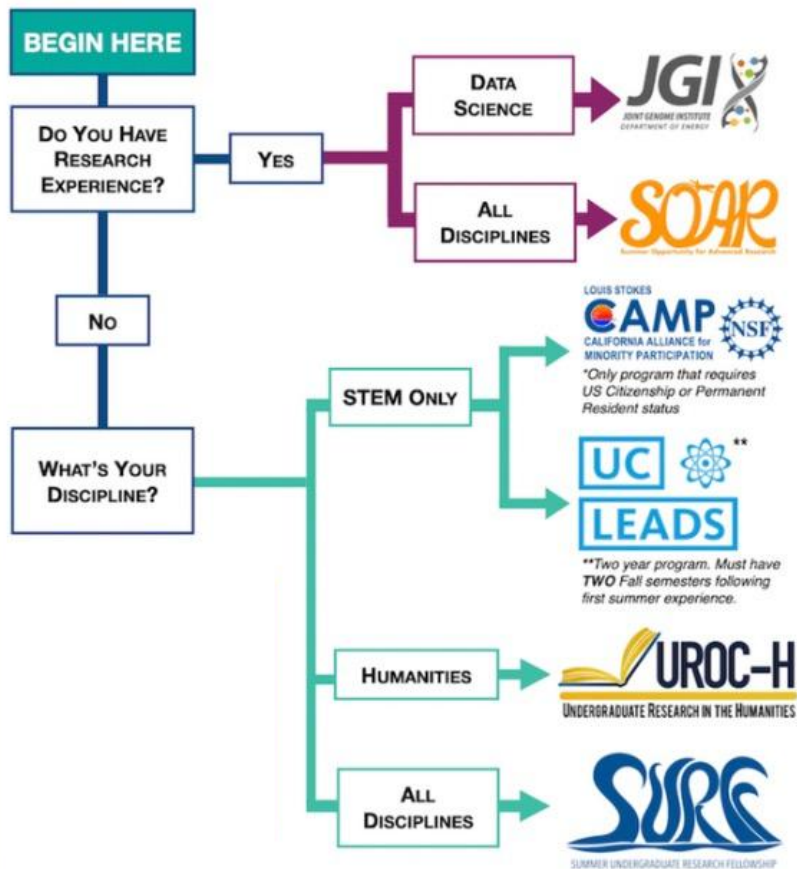
UROC

- Open to all majors
 - Fits many pathways
- Over summers- PAID!
- Eligible for travels (paid for) and national conferences
- Networking Benefits
- Application closes January 30th, 2024

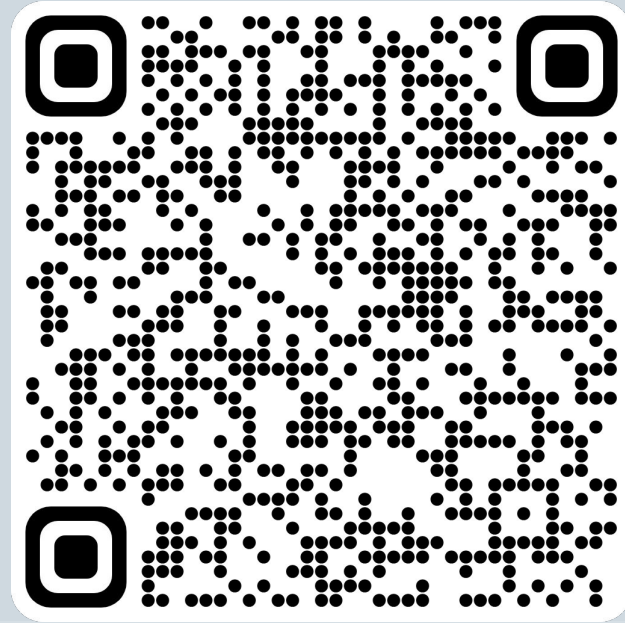


UROC FLOWCHART

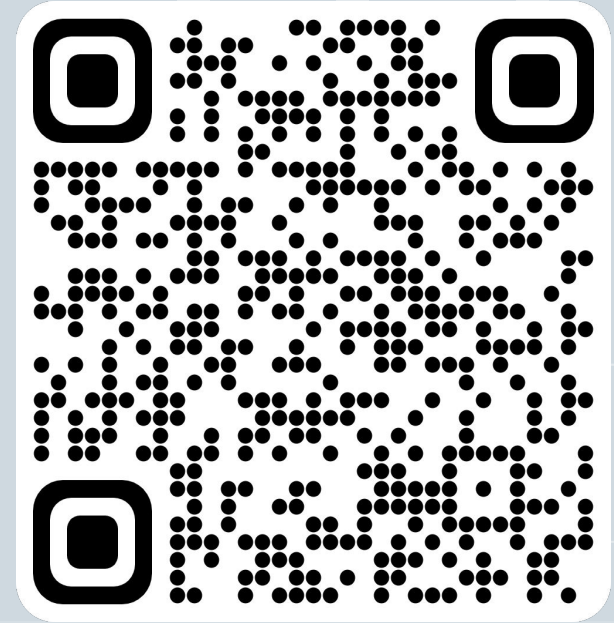
FIND YOUR UROC PATH



USEFUL LINKS



Nicotine and Cannabis Policy
Center (NCPC)



School of Natural Sciences Faculty
Labs

Outreach opportunities



The HOPE Medical Scholars mentorship program pairs prospective medical and dental students with current Harvard Medical School and Harvard School of Dental Medicine students (students who were recently in your shoes and have substantial application experience with the medical/dental school application process). Mentors and mentees will meet virtually (on Zoom) for roughly 1 hour per session for 6 sessions

The application is due by 11:59 pm on December 3rd, 2023.

More Outreach



Volunteers assist in various areas, including companionship to patients, special events, thrift stores, community awareness, and more.

THANKS

Does anyone have any questions?

amsaucmerced.com
[@amsa.ucmerced](https://twitter.com/amsa.ucmerced)

Next Meeting: Thursday, November 30th, 2023
@6:30pm in COB 116



SIGN IN

