0533-B

http://www.csuci.edu/ira/index.htm

Application
Instructionally Related Activities Funds Request
2013-2014 Academic Year

DEADLINES: Application Submitted to AVP:
Fall and Academic Year 2013-14: 03/01/13
Spring 2014 deadline: 10/01/13

Submittal Process: Applications must be first be signed by your program chair and then submitted to the appropriate AVP for approval. AVP's will next forward application to the IRA Coordinator for review. If there are questions or concerns, you may be asked for revisions or additional information. The IRA Coordinator will then forward applications to the IRA Committee for consideration.

Fiscal Management: Project Sponsor's program will be responsible for all costs incurred over and above what is funded through the IRA award and will be responsible for seeing that any revenue that is intended to offset the amount of the IRA award is transferred accordingly.

Duplicate requests- if Sponsor is submitting multiple proposals for recurring events involving speakers, musicians, etc., please combine your requests into one proposal.

Activity Title: UNIV392: Biotechnology in India

Project Sponsor/Staff (Name/Phone): Nitika Parmar/805-437-8873

Activity/Event Date(s): January 4-Jan 20th, 2014

Date Funding Needed By: July, 2013

***Please Note that for Fall Requests the earliest that you will be notified of funding availability will be early June 2013 and for Spring Requests early January 2014.*

Previously Funded? ■ YES ☐ NO If Yes, what Semester/Year? Spring, 2012
Proposal(s) # 463

***If previously funded, please attach copy of post-event IRA Report**

Report submitted for previously Funded Activity?: ■ YES ☐ NO

Academic Program or Center Name: Biology

Estimated total Course Fee revenue:

Amount Requested from IRA: 30,175.00 **(Should match "Total Requested from IRA" on Page 5)**

Estimated Number of Students Participating: 12

Conditions and Considerations

Please check if any of the following apply to your IRA:

☐ **Artist/Performer/Speaker Fees & Honoraria**- On the Activity Budget, please indicate whether the vendor's price was set by you / CI representative, or is a fee that was set by the vendor themselves.

☐ **Large Event**- For a large event, consultation with the campus Event Coordinator's office at (805)437-8548 is required.

☐ **Equipment Purchase**- If requesting large equipment purchase -over $200, or will be a fixture installed on campus- Project Sponsor must show proof of correspondence with OPC Administration. In addition, all other purchases must follow Procurement Guidelines.

☐ **Field Trip**- Sponsor must comply with all policies found at http://www.csuci.edu/hr/AcademicFieldTripGuidelinesandForms.htm. If approved, Identified Risks of Participation and Release Agreement must be submitted for each student to the Program Office (Public Folders-HR Forms).

☐ **Involves Human Subject Data Collection for Public Dissemination -Requires IRB Approval.** If Project Sponsor proposes to conduct research with human participants, the proposal may be subject to Institutional Review Board for the Protection of Human Subjects (IRB) review. All research that involves any type of interaction with human subjects – from simple surveys to complex biomedical procedures – must be reviewed and approved by the IRB *prior to* starting the research. Data for "Public Dissemination" indicates interviews/surveys that result in a journal/poster session/newsletter, etc.

> ☐ **Exempt from IRB Approval** –If your project is exempt from IRB review, include copies of correspondence with IRB Board. It is the Project Sponsor's responsibility to inquire with the IRB **prior** to IRA application submission to determine if the project is exempt from IRB review so that funding is not delayed.

☐ **IT Requirements-** If your activity has IT requirements, your application requires proof of correspondence and approval from IT Administration.

■ **International Travel**- Requires International Travel application be submitted to Center for International Affairs. Include copy of CIA budget and course syllabus in your IRA application.

☐ **Risk Management Consultation**-Events that involve or engage students directly with a performer or artist (i.e. in a workshop or other than as a passive audience member) will require consultation with Risk Management. Requires proof of correspondence with Risk Management.

☐ **Space/OPC Requirements, Infrastructure/Remodel**-Requires proof of correspondence with OPC Administration.

☐ **Late Submission -** Requires explanation for emergency funding.

☐ Other -

Application
Instructionally Related Activities Funds Request
2013-2014 Academic Year
Requirements and Signatures

Please provide the following in your application:

1. **Brief Activity Description.** Describe the activity and its relationship to the educational objectives of the students' program or major.

Funds are being requested for student travel to India during the winter break of the 2013-2014 academic year (January 4, 2014- January 20, 2014). I recently proposed a UNIV392 course entitled "**Biotechnology in India**" which will be offered in Fall, 2013. This course was approved by the Center for International Affairs as well as the President at CI. The 3-unit course will provide CI students an opportunity to visit India and explore biotechnology advancements there. A maximum of 12 students will be enrolled in this class and the instructor will accompany the students to India for the international experience field trip. Students will be exposed to applications in the areas of biotechnology and environmental ecology from the Indian perspective. Emphasis will be placed on demonstration of research experimentation in the fields of molecular biology, immunology, cell biology, animal husbandry, biomedical research and ecological conservation at top research institutions in three cities- New Delhi, Karnal and Chandigarh, as well as an Ecovillage close to Mumbai. Students will learn about the booming biotechnology research in India on one side and the deep emphasis placed on India's ancient history, cuisine, culture, arts, religion and rich traditions on the other.

The goal of this course is to familiarize students with techniques used in the fields of biotechnology and environmental ecology in India.

2. **Relation to IRA to Course Offerings.** All IRAs must be integrally related to the formal instructional offerings of the University and must be associated with scheduled credit courses.

a. Please list all classes that directly relate to the proposed activity.

The proposed activity (international travel component) directly relates to the UNIV392 course which was approved by the Center for International Affairs and is to be offered in Fall, 2013.

b. For each class listed in #2a, describe in detail how exactly the IRA activity will be integrated with the class's activities, how often/ on what expected date(s), and to what extent.

The proposed activity will provide a real-life experience to the content taught in UNIV392 whereby various elements of classical and modern-day biotechnology will be discussed. Students will be able to observe biotech practices in India from a scientific and cultural context. The travel component is a crucial and required part of this course which will allow students to experience the dynamic biotechnology research in India along with its traditions and culture. The course will be taught in Fall, 2013 (please see attached syllabus for all activity dates and content) and the travel will occur from January 4-20th, 2014. Over a period of two weeks, students will get the opportunity to explore four major cities in India and interact with scientists and students. Students will also experience the mix of the traditional and modern and mingle with people of various backgrounds. The course will explore biology in the context of applied research and provide students the opportunity to observe research projects ongoing in India. The course will also offer opportunities to discuss and debate selected bioethical issues pertinent

to the fields of biotechnology and the environment. Thus, the proposed travel component of this course directly aligns with CI's mission of graduating students with multicultural and international perspectives.

3. **Learning Outcomes.** List all expected learning outcomes, as connected specifically with each course listed in #2.

Students who successfully complete this course will be able to:
- Understand the concepts of biotechnology as practiced in India
- Explain the theory and practice of a variety of experimental techniques as practiced in India
- Understand the role of India as a booming biotechnology hub
- Demonstrate their ability to explore and appreciate the diverse nature of India's traditions
- Understand the vibrant history and culture of India

4. **Activity Assessment.** Describe the assessment process and measures that the program will use to determine if it has attained its educational goals. **Please note that a report will be due at the end of the semester.**

A variety of assessment tools will be utilized in this course *before and after* the international travel has occurred, as listed below:

- Pre-trip presentations (30 points): Students will research the culture, traditions and history of India, along with biotechnological applications practiced in India and present their findings in the form of an oral presentation in class. Each student is required to make a presentation.
- Reflective journal (50 points): Students should develop a steadily growing document where they are expected to record their reflections and thoughts on what they are learning about India and how it's changing their belief about preconceived notions and perceptions. Entries into the journal are required for each day spent in India.
- Attendance (30 points): Students are required to attend each event/activity during the time spent in India in order to get full benefit of the international experience. A summary of each event/activity is expected to be recorded in the reflective journal. Students are also required to attend all in-class sessions at CI as well as all orientation and workshop sessions.
- Final presentation (40 points): ***After the conclusion of the trip***, each student will be making a presentation about the experiences gained during the international experience in the form of a 5-page report as well as an oral/poster presentation. The poster presentation will be made at the Sage Forum that will occur at CI in Spring, 2014 (May). The experiences may also be presented at the 2014 CI Spring International week celebrations typically held in April.

5. **Activity Budget.** Please enclose a complete detailed budget of the entire activity. **Bold** specific items that you are requesting IRA to fund (Page 6).

> This application is to seek funds for students who enroll in a new UNIV392 course entitled "Biotechnology in India", to be offered in Fall, 2013 to enable them to travel to India as the culminating point of this course. This international experience travel has several elements to it and funds are being requested for travel costs, accommodation, food as well as tours. Since the instructor of this course will be accompanying the students, funds are also being requested for faculty travel costs. Please see section I for student expenses and section II for faculty expenses.

The bulk of the travel arrangements will be made by a highly-reputed travel agency (Thomas Cook) which has provided a full quote of the costs (see attached quote with this application).

Section I (Student Expenses)

The prices quoted below are for one student for the entire duration of the trip (16 days); a total of 12 students are expected to travel.

a) Travel from Los Angeles to New Delhi (RT airfare): $1500

b) Ground transportation (includes air travel within India, journey by train as well as road journeys via rental vans/vehicles): $500

c) Hotel accommodations: $700 ; lodging and breakfast included on all days. The accommodation includes hotel stays as well as lodging in the Ecovillage for the educational retreat.

d) Entrance fee to heritage sites and tourist monuments: $80 (Taj Mahal, palaces and museums)

e) Meals: $100- this will cover the cost of four pre-paid meals (both lunch and dinner); breakfast is already included in the hotel room cost. Cost of all other meals will be borne by the students themselves.

f) Cultural activities: $100- this cost includes attending cultural fairs, traditional shows as well as art and craft events.

g) Visas for India: $76- students will be required to get tourist visas to India which are currently priced at $76 for a 6-month, multiple entry visa for US citizens ($56 for a non-US citizen)

h) Tours: $250 (5 tours at $50 each) Students will be sightseeing in all places to visit landmark areas specific to each particular city and conducted tours will be arranged with a guide.

Total cost per student: $3306
Cost for 12 students: $39,672

Section II (Faculty Expenses)

The prices quoted below are for one faculty for the entire duration of the trip (16 days).

a) Travel from Los Angeles to New Delhi (RT airfare): $1500

b) Ground transportation (includes air travel within India, journey by train as well as road journeys via rental vans/vehicles): $450

c) Hotel accommodations: $700 ; lodging and breakfast included on all days. The accommodation includes hotel stays as well as lodging in the Ecovillage for the educational retreat.

d) Entrance fee to heritage sites and tourist monuments: $80 (Taj Mahal, palaces and museums)

e) Meals: $100- this will cover the cost of four pre-paid meals (both lunch and dinner); breakfast is already included in the hotel room cost. Cost of all other meals will be borne by the faculty herself.

f) Cultural activities: $100- this cost includes attending cultural fairs, traditional shows as well as art and craft events.

g) Travel insurance: $65- faculty will purchase travel insurance from the Foreign Travel Liability Insurance Program (FTLIP) administered by the CI Environment, Safety and Risk Management *(Note: Cost for faculty is $65 versus $50 for students)*

h) Tours: $250 (5 tours at $50 each) Faculty will accompany students for sightseeing in all places to visit landmark areas specific to each particular city and conducted tours will be arranged with a guide.

i) Communication device: $100-cost for renting cell phones for the students and/or a pre-paid India SIM cards which can be used with international cell phone models so that students can communicate with each other as well as with me on a regular basis.

Total cost for one faculty: $3345

Section III (Operating Expenses)

a) Supplies: $100 (supplies for students to prepare their posters and faculty to buy guidebooks for students)

b) Printing and copying: $150 (service to print advertisement, promotional and recruitment flyers)

Total operating expenses: $250

Total IRA funds request (travel for 12 students, one faculty; operating costs) = $30175 (from IRA Budget worksheet)

6. **International Trips.** If your event is an international trip submitted through the Center for International Affairs, you must include a copy of the program budget as submitted to CIA (to ensure congruency between the two budgets), as well as a copy of the course syllabus.

*** See UNIV392 application, budget sheet and syllabus attached.

Note: Since this involves international travel, International Travel application was submitted to the Center for International Affairs and approved by them. In addition, I have also consulted with Risk Management officials at CI. India is currently not noted on the Travel Warning list.

7. **Sources of Activity Support.** Please list the other sources of funding (including course fees), and exact expected amounts of additional support for the activity.

Currently, there is no formal support for the international component activity of this UNIV392 course.

8. **Audience/ Marketing/Promotions.** Who is your intended target audience? How will your event be advertised to students?

The target audience will be undergraduate students of CI. The course is open to all undergraduate students of all majors. However, considering that we will be exploring biotech research institutions in India, depending on the demand and enrolment, priority may be given to Biology students and students who have not participated in study abroad trips previously. Advertisement of the course will be done through flyers and posters posted across campus, through global e-mails sent to all Biology and Chemistry students, through information sessions presented at Biology and Chemistry Clubs as well as at the LSAMP meetings. Interested students will be required to complete a brief questionnaire (via Survey Monkey) and provide two letters of recommendation from CI faculty, excluding the instructor for this course. The questionnaire will primarily provide me insights into students' academic preparation, their level of confidence and expectations as well as their motivation for this course. The recommendation letters will provide useful feedback about students' potential and skills. Based on the analyses of these findings, students will be recruited by me. If, for any reason, more than 12 students are found to be suitable for this course, I will conduct brief interviews with the students and then recruit the top 12 candidates.

9. **Sustainability**. If appropriate, indicate how the content or delivery of the project promotes sustainability at CI.

One of the activities that students will be engaged in is an Educational Retreat at Govardhan Ecovillage (GEV) in India. Govardhan Eco Village is a farm community spread over a scenic landscape of 60 acres north of Mumbai, India. Since its inception in the year 2003, Govardhan Eco Village has made steady progress in Organic farming, Education, Rural development, Alternative energy, Eco friendly constructions and Sustainable living. The purpose behind Govardhan Eco Village is to present a sustainable living model based on community living. Students in this course will thus get to see sustainable practices in India and will glean valuable information which will be shared with the CI community and could potentially be implemented in a practical sense on our campus.

10. **Images**. For previously funded IRA activities, include copies of images from past IRA activity or activities, demonstrating student participation and levels of students served.

See attached "Past Activities".

11. **Acknowledgment.** Project Sponsor and Program Chair acknowledge that they have reviewed and accepted the Conditions and Considerations herein.

IRA Travel Activity Budget

California State University | INSTRUCTIONALLY RELATED ACTIVITIES CHANNEL ISLANDS

2013-2014

Activity Title:

Sponsor Name: Nitika Parmar

Number of Students Participating 12

Number of Faculty 1

I	Students traveling expenses:		Cost/ea	# Requested	Total	Comments/Additional Notes
		Airfare	1500	12	18000	
		Ground Transportation	450	12	5400	
		Hotel Accommodations	700	12	8400	$50/night x 14 nights (1-2 students/room)
		Registration Fees			0	
		Entrance Fees	80	12	960	
		Meals	100	12	1200	4 prepaid meals @ $25 each (others out-of-pocket)
		Cultural Activities	100	12	1200	4 cultural activities @ $25 each
		Vehicle/Van Rental	50	12	600	
	Other:	Tours	250	12	3000	Tours (5 tours at $50 each)
	Other:	Visa fees for India	76	12	912	Current Tourist visa fee (6 month visa)
	STUDENT TRAVEL TOTALS		3306		39672	
II	**Faculty Traveling Expenses:**		**Cost/ea**	**# Requested**	**Total**	**Comments/Additional Notes**
		Airfare	1500	1	1500	
		Ground Transportation	450	1	450	
		Hotel Accommodations	700	1	700	
		Registration Fees			0	
		Entrance Fees	80	1	80	
		Meals	100	1	100	
		Cultural Activities	100	1	100	
	Other:	Tours	250	1	250	Tours (5 tours at $50 each)
		Communication device	100	1	100	
		Travel Insurance	65	1	65	
		FACULTY TRAVEL TOTALS	3345		3345	
III	**Operating Expense Budget**		**Cost/ea**	**# Requested**	**Total**	**Comments/Additional Notes**
		Supplies	100	1	100	
	Other:	printing/copying	150	1	150	
		OPERATING EXP. TOTALS	250		250	
IV	**Out of Pocket Student Expenses**		**Cost/ea**	**# Requested**	**Total**	**Comments/Additional Notes**
		Health Insurance			0	n/a Not funded by IRA or the university
		Tuition/Registration			0	n/a Not funded by IRA or the university
		Travel Insurance			0	
		Out of Pocket Meals			0	
		STUDENT EXP. TOTALS	0		0	

V. Total costs of the trip- Please Note that Formulas Calculate Automatically			
	Total Student Traveling Expenses	39672	
	Faculty Travel Expenses, if funded at 100%	3345	
	Operating Expenses, if funded at 100%	250	
	TOTAL IRA FUNDING REQUESTED	**43267**	
	Out of Pocket Student Expenses	0	Not funded by the University
	UNIV 391/392 & International Trips only		
	Maximum IRA student funding @ 2/3rd of student total cost	**26580**	
	1/3 of total cost payable by students through course fee	13091.8	
	TOTAL IRA FUNDING REQUESTED FOR INT'L TRIPS	**30175**	
	Out of Pocket Student Expenses	0	Not funded by the University

Parmar, Nitika S.

From: Jimenez, Antonio
Sent: Thursday, November 29, 2012 3:18 PM
To: Parmar, Nitika S.
Subject: Your UNIV 392 course to India

Dear Nitika,

This email is to let you know that I just received notification from the President's office that your UNIV 392 proposal has been approved and signed by the President. That means that it is official now and you can start advertising and recruiting if you want.

Best regards,

Antonio

UNIV 392
Study Abroad Program: Biotechnology in India

California State University, Channel Islands
Fall, 2013
Instructor: Dr. Nitika Parmar
Meeting Times: Thurs, 12.00- 2.50 p.m.
Office hours: By appt.
Office: Aliso Hall Room 206; Phone: (805) 437-8873
Email: nitika.parmar@csuci.edu

Course description
This course will provide CI students an opportunity to visit India and explore biotechnology advancements there. Students will be exposed to applications in the areas of biotechnology and environmental ecology from the Indian perspective. Emphasis will be placed on demonstration of research experimentation in the fields of molecular biology, immunology, cell biology, animal husbandry, biomedical research and ecological conservation at top research institutions in three cities- New Delhi, Karnal and Chandigarh. Students will learn about the booming biotechnology research in India on one side and the deep emphasis placed on India's ancient history, cuisine, culture, arts, religion and rich traditions on the other. The trip will include visits to well-known monuments such as the Taj Mahal as well as places of historical significance such as forts, temples and museums.

Program Overview
Travel to India and explore the dynamic biotechnology research along with its traditions and culture. Over a period of two weeks, explore four major cities in India and interact with scientists and students. Experience the mix of the traditional and modern and interact with people of various backgrounds.

Course Objectives
The goal of this course is to familiarize students with techniques used in the fields of biotechnology and environmental ecology in India. The course will explore biology in the context of applied research and provide students the opportunity to observe research projects ongoing in India. The course will also offer opportunities to discuss and debate selected bioethical issues pertinent to the fields of biotechnology and the environment. Students will be expected to come to this class with a high level of intellectual curiosity with an aptitude to learn. Currency with regard to news about India and its activities through the media is expected.

Learning Outcomes
Students who successfully complete this course will be able to:

- Understand the concepts of biotechnology as practiced in India
- Explain the theory and practice of a variety of experimental techniques as practiced in India
- Understand the role of India as a booming biotechnology hub
- Demonstrate their ability to explore and appreciate the diverse nature of India's traditions
- Understand the vibrant history and culture of India

Course Format and Reading Assignments
Class will meet once a week for about three hours to understand multiple perspectives and developmental stages leading up to the modern India with a focus on the current state of biotechnology in India. Content will be delivered via lectures, journal articles, videos, media reports and a culminating visit to India. Students are expected to be actively participating in discussion both in class and after the study abroad trip. Reading assignments will be posted a week in advance and should be read prior to class meeting in order to have quality discussion sessions. Please do not use your cell phone, surf the web, or send/read emails or text messages while class is in session.

Blackboard
All protocols, announcements, syllabus, assignments and review information will be posted on Blackboard. You are highly encouraged to constantly monitor Blackboard for all communication needs.

Correspondence
I will only correspond with you at your *csuci e-mail address* for all communication needs. Please make sure you have the correct address listed on your student information page. Do not communicate with me using your personal e-mail as it may go in my junk mail.

Orientation and Workshops
Multiple (at least three) orientation sessions will be held prior to the trip and will cover all information and requirements pertinent to the trip including accommodations, travel, medical facilities, security, food, cultural expectations, shopping guidance and etiquette.

A workshop will be held after the trip whereby students will be expected to present the results of their study abroad experience in response to a survey given by the instructor.

ASSESSEMENT: The following combined assessment will be followed:

- **Pre-trip presentations (30 points):** Students will research the culture, traditions and history of India, along with biotechnological applications practiced in India and present their findings in the form of an oral presentation in class. Each student is required to make a presentation.
- **Reflective journal (50 points):** Students should develop a steadily growing document where they are expected to record their reflections and thoughts on what they are learning about India and how it's changing their belief about preconceived notions and perceptions. Entries into the journal are required for each day spent in India.
- **Attendance (30 points)**: Students are required to attend each event/activity during the time spent in India in order to get full benefit of the international experience. A summary of each event/activity is expected to be recorded in the reflective journal. Students are also required to attend all in-class sessions at CI as well as all orientation and workshop sessions.
- **Final presentation (40 points):** After the conclusion of the trip, each student will be making a presentation about the experiences gained during the international experience in the form of a 5-page report as well as an oral presentation. Details will be provided during the semester.

GRADING: The student's course grade is computed using the standard scale:

(95–100%)	A	(90–94.9%) A–	(85–89.9%) B+	(80–84.9%) B
(75–79.9%)	B–	(70–74.9%) C+	(65–69.9%) C	(60–64.9%) C–
(55–59.9%)	D+	(50–54.9%) D	(49.9% or below) F	

Course Schedule (Class will meet every Thursday): *Schedule is tentative and subject to change.*

Date	Activity
August 29, 2013	Introduction to course and expectations
September 5	India- Culture and Traditions
September 12	India- Religion, Food and Art
September 19	**Pre-trip Orientation I**
September 26	India- Education system
October 3	India- Research Institutes
October 10	India- Research Institutes
October 17	**Pre-trip Orientation II**
October 24	India- Biotechnology advances
October 31	India- Biotechnology advances
November 7	India- Biotechnology advances
November 14	**Pre-trip Orientation III**
November 21	Student presentations
November 28	**No class (Thanksgiving Holiday)**
December 5	Student presentations
December 12	Student presentations
December 19	**Final orientation**
January 3, 2013- January 20, 2014	**Trip to India**
February 4, 2014	Written reports and oral presentations due
May, 2014	Present posters at the Sage Forum in CSUCI

Faculty Background

Dr. Nitika Parmar is an Associate Professor of Biology at CSUCI. Dr. Parmar is originally from India and is very familiar with the people, local customs, traditions and travelling arrangements in India. She can converse in English and two local languages of the region.

Academic Dishonesty

Academic honesty is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards academic dishonesty as an extremely serious matter, with serious consequences that range from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, or collaboration, consult the course instructor.

In accordance with CSUCI policy on academic dishonesty, students in this course who submit work of others as their own (plagiarize), cheat on examinations, help other students cheat or plagiarize, or commit other acts of academic dishonesty will receive appropriate academic penalties, which may result in course failure. Cheating on exams will result in an "F" on the exam, likely resulting in a lower, or possibly, failing grade in the course. The catalog defines academic dishonesty to include "such things as cheating, inventing false information or citations, plagiarism and helping someone else commit an act of academic dishonesty. It usually involves an attempt by a student to show possession of a level of knowledge or skill that he/she does not possess". The catalog describes the process for evaluating cases of dishonesty and assignment of appropriate penalties. Please refer to the University Catalog for details. The Academic Dishonesty Policy is listed below:

1. Academic dishonesty includes such things as cheating, inventing false information or citations, plagiarism and helping someone else commit an act of academic dishonesty. It usually involves an attempt by a student to show possession of a level of knowledge or skill that he/she does not possess.

2. Course instructors have the initial responsibility for detecting and dealing with academic dishonesty. Instructors who believe that an act of academic dishonesty has occurred are obligated to discuss the matter with the student(s) involved. Instructors should possess reasonable evidence of academic dishonesty. However, if circumstances prevent consultation with student(s), instructors may take whatever action (subject to student appeal) they deem appropriate.

3. Instructors who are convinced by the evidence that a student is guilty of academic dishonesty shall assign an appropriate academic penalty. If the instructors believe that the academic dishonesty reflects on the student's academic performance or the academic integrity in a course, the student's grade should be adversely affected. Suggested guidelines for appropriate actions are: an oral reprimand in cases where there is reasonable doubt that the student knew his/her action constituted academic dishonesty; a failing grade on the particular paper, project or examination where the act of dishonesty was unpremeditated, or where there were significant mitigating circumstances; a failing grade in the course where the dishonesty was premeditated or planned. The instructors will file incident reports with the Vice Presidents for Academic Affairs and for Student Affairs or their designees. These reports shall include a description of the alleged incident of academic dishonesty, any relevant documentation, and any recommendations for action that he/she deems appropriate.

4. The Vice President for Student Affairs shall maintain an Academic Dishonesty File of all cases of academic dishonesty with the appropriate documentation.

5. Student may appeal any actions taken on charges of academic dishonesty to the "Academic Appeals Board."

6. The Academic Appeals Board shall consist of faculty and at least one student.

7. Individuals may not participate as members of the Academic Appeals Board if they are participants in an appeal.

8. The decision of the Academic Appeals Board will be forwarded to the President of CSU Channel Islands, whose decision is final.

Students with Disabilities

The Disability Resource Program at CSUCI promotes and assists students with disabilities. If a student requires special accommodations for a quiz/exam, it is the responsibility of the student to deliver the accommodations notice to the appropriate faculty or staff. Failure to notify the appropriate persons in a timely manner may result in a delay or denial of services. Accommodations may include physical adaptations and classroom modifications. Physical adaptations may be comprised of classroom arrangements and/or preferential seating. Classroom modifications may occur in one or more of the following areas: environment, materials, requirements and testing. Receiving accommodations should not be regarded as giving the student "special privileges," but rather as minimizing the impact of the disability to the greatest extent possible. The Disability Policy is listed below:

Cal State Channel Islands is committed to equal educational opportunities for qualified students with disabilities in compliance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990. The mission of Disability Accommodation Services is to assist students with disabilities to realize their academic and personal potential. Students with physical, learning or other disabilities are encouraged to contact the Disability Accommodation Services office at (805) 437-8510 for personal assistance and accommodations.

Please go to http://www.csuci.edu/disability/disability.htm for further details.

Itinerary

- Depart (Los Angeles to New Delhi, India): January 3 or 4, 2014 (will pick the day with cheaper airfare)
- Arrive in New Delhi, India: January 5 or 6, 2014
- January 7, Monday: Visit to Indian Institute of Technology, New Delhi; *evening tour* of New Delhi
- January 8, Tuesday: Visit to TERI (The Energy and Resources Institute), New Delhi; *evening tour* of New Delhi
- January 9, Wednesday: Visit to Council of Scientific & Industrial Research (CSIR) and National Institute of Immunology (NII)
- January 10, Thursday: Visit Agra and *day tour* of Taj Mahal and vicinities; spend one night in Agra (Agra is 75 miles south of New Delhi)
- January 11, Friday: Return to New Delhi and fly to Mumbai; reach Govardhan Ecovillage (GEV) by early evening (GEV is 55 miles north of Mumbai)
- January 12-13, Saturday/Sunday: Attend Educational Retreat at Govardhan Ecovillage (GEV)
- January 14, Monday: Return to Mumbai and fly to Chandigarh (Chandigarh is 155 miles north of New Delhi)
- January 15, Tuesday: Visit the Institute of Microbial Technology (IMTECH); *evening tour* of Chandigarh
- January 16, Wednesday: Day trip to the National Dairy Research Institute (NDRI) in Karnal (2 hours north of Chandigarh)
- January 17, Thursday: Visit Punjab University and Postgraduate Institute of Medical Education & Research (PGIMER)
- January 18, Friday: Return to New Delhi by train and take flight back to Los Angeles
- January 19, Saturday/January 20, Sunday, 2014: Arrive back in Los Angeles

Number of Students			12			
Number of Faculty			1			
I	**Students traveling expenses:**		**Cost/ea**	**# Requested**	**Total**	**Comments/Additional Notes**
		Airfare	$ 1,500.00	12	$ 18,000.00	
		Ground Transportation	$ 450.00	12	$ 5,400.00	
	$50/night x 14 (2 students/room)	Hotel Accommodations	$ 700.00	12	$ 8,400.00	
		Registration Fees	$ -	12	$ -	
		Entrance Fees	$ 80.00	12	$ 960.00	
	4 prepaid meals @ $25 each (others	Meals	$ 100.00	12	$ 1,200.00	
	4 cultural activities @ $25 each	Cultural Activities	$ 100.00	12	$ 1,200.00	
		Travel Insurance	$ 50.00	12	$ 600.00	
		Vehicle/Van Rental	$ 50.00	12	$ 600.00	
	Other: Tours (5 tours at $50 each)		$ 250.00	12	$ 3,000.00	
II	**Faculty Traveling Expenses:**		**Cost/ea**	**# Requested**	**Total**	**Comments/Additional Notes**
		Airfare	$ 1,500.00	1	$ 1,500.00	
		Ground Transportation	$ 450.00	1	$ 450.00	
	$50/night x 14	Hotel Accommodations	$ 700.00	1	$ 700.00	
		Registration Fees	$ -		$ -	
		Entrance Fees	$ 80.00	1	$ 80.00	
	4 prepaid meals @ $25 each (others	Meals	$ 100.00	1	$ 100.00	
	4 cultural activities @ $25 each	Cultural Activities	$ 100.00	1	$ 100.00	
		Travel Insurance	$ 50.00	1	$ 50.00	
	Other: Tours (5 tours at $50 each)		$ 250.00	1	$ 250.00	**
	Other: Communication device		$ 100.00	1	$ 100.00	**
III	**Operating Expense Budget**		**Cost**	**Comments/Additional Notes: Please be Specific**		
		Supplies	$ 100.00			
		Printing/Copying	$ 150.00			
	Other:		$ -	**		
	Other:		$ -	**		
	Other:		$ -	**		
IV	**Out of Pocket Student Expenses**		**Cost/ea**	**Comments/Additional Notes: Please be Specific**		
		Health Insurance	n/a	Not funded by IRA or the University		
		Tuition/Registration	n/a	Not funded by IRA or the University		

	Other:		n/a	Not funded by IRA or the University		
	Other:		n/a	Not funded by IRA or the University		
Total costs of the trip						
	Total Student Traveling Expenses				$ 39,360.00	
A	**Maximum IRA funding @ 2/3rd total cost**				**$ 26,213.76**	
	Remaining 1/3 is payable by students through course fee				$ 13,146.24	
B	Faculty Travelling Expenses, funded at 100%				$ 3,330.00	
C	Operating Expenses, funded at 100%				$ 250.00	
	Total IRA funding Requested (Total of A, B & C)				**$ 29,793.76**	
	Out of Pocket Student Expenses, not funded by the University				$ 13,146.24	

PLEASE NOTE: This UNIV 392 budget sheet was submitted to CIA in Fall, 2012. The budget worksheet for IRA is a slightly revised version of this due to two reasons:

1. The Travel Insurance is mistakenly included in this worksheet but it is an Out-of-Pocket expense for the students and hence has been exlculded in the revsied version .
2. The revsied budget now includes funds for securing visas to India ($76 per student).

These adjustments have led to a change in the IRA funding request from $29,793.76 to $30,175.00 (increase of $381)

Instructional Related Activities
Report Form (# 491)

SPONSOR	DEPARTMENT
Dr. Nitika Parmar	Biology

ACTIVITY TITLE	DATE (S) OF ACTIVITY
Presentation of research at the 2012 SACNAS National Conference	**October 11-14, 2012**

PLEASE EXPLAIN (1) DESCRIPTION OF ACTIVITY; (2) HOW DID THE ACTIVITY RELATE TO A COURSE(S); AND (3) WHAT YOU LEARNED FROM THE PROCESS.

NOTE: ONE STUDENT ATTENDED THIS CONFERENCE AND PRESENTED OUR RESEARCH FINDINGS; THE SECOND STUDENT WAS NOT ABLE TO ATTEND DUE TO PERSONAL REASONS.

THE PRESENTING AUTHOR RECEIVED A TRAVEL AWARD FROM SACNAS AND HENCE NO IRA FUNDS WERE AVAILED FOR THIS PURPOSE. HENCE, WE DID NOT USE THE $2080 THAT WAS ALLOCATED FOR THIS ACTIVITY AS THE STUDENT GOT ALTERNATE FUNDING FROM THE CONFERENCE ITSELF AS A TRAVEL AWARD.

TCTP as a Regulator of mTOR

Laura Milbrandt and Nitika S. Parmar, PhD.

Biology Program, California State University Channel Islands, Camarillo, CA

Introduction

TCTP (Translationally-Controlled Tumor Protein) is a highly conserved protein that has been suggested as a tumor associated antigen as shown by its deregulation in many different types of cancers. TCTP has been shown to interact with Rheb, a key player of the PI3 kinase/mTOR signal transduction cascade and hypothesized to function as its GEF. However, this interaction has been controversial *(Ya-Chieh et al., 2007)*. This pathway regulates cell growth, cell proliferation, cell motility, cell survival, protein synthesis, and transcription.

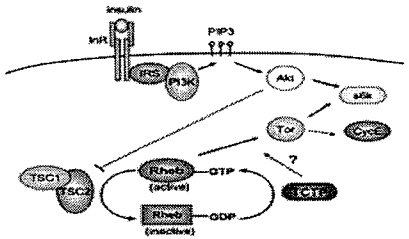


Fig. 1: A potential role for TCTP in mTOR signaling

Objective

To determine the impact of TCTP on mTOR signaling via gene silencing using RNA interference.

Materials

- Cell lines HEK293 & HeLa
- Commercially synthesized TCTP siRNAs (Ambion/Sigma)
- Transfection reagents: Lipofectamine RNAiMAX

Methods

- mRNA analysis via RT-PCR
- Cell transfection using Lipofectamine RNAiMAX
- mTOR signaling analysis via immunoblotting using anti-phospho-S6 Kinase antibody
- Cell viability analysis using MTS assay

siRNA	Targeted Exons
siRNA A	3 and 4
siRNA B	3
siRNA C	4

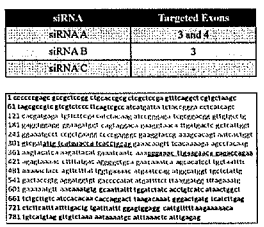


Fig. 2: siRNAs targeting the human TCTP mRNA

Coding sequence is shown in red and targeting siRNAs are shadowed and underlined.

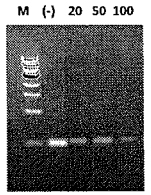


Fig. 3: Silencing by TCTP-specific siRNA

HEK293 cells were transfected with a candidate TCTP specific siRNA. Total RNA was extracted 36 hours post transfection and reverse-transcriptase PCR was performed using TCTP specific primers . *M: DNA marker; (-): Untransfected cells; (20, 50 and 100: Cells transfected with 20 nM, 50 nM and 100 nM TCTP siRNA respectively.)*

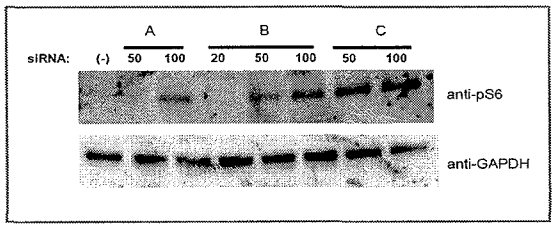


Fig. 4: Effects of dose dependent TCTP silencing on downstream mTOR effectors

HeLa cell lines were transfected with varying concentrations (0 nM-100 nM) of TCTP specific siRNAs. S6 phosphorylation was analyzed 36 hours post transfection. Anti-GAPDH was used as loading control. *(-: Untransfected cells; A, B and C: TCTP siRNAs)*

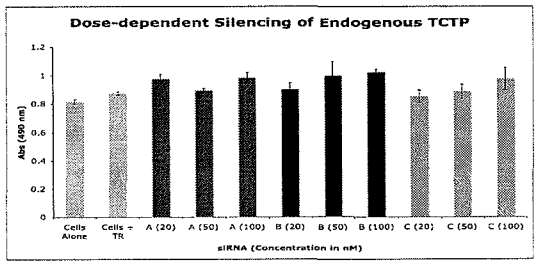


Fig. 5: Dose-dependent inhibition of TCTP on cell viability

HeLa cells were transfected with varying concentrations (0 nM-100 nM) of TCTP specific siRNAs. MTS assay was performed 36h post transfection.

Summary

- Endogenous silencing of TCTP was accomplished
- S6 phosphorylation was found to increase with TCTP silencing
- Silencing of TCTP was found to stimulate growth and increase cell viability moderately in a dose dependent manner

Conclusions

- Data obtained from immunoblotting and cell viability correlate and suggest that TCTP has an inhibitory effect on mTOR signaling and cell viability

Future Directions

- Over-express TCTP and determine impact on mTOR signaling
- Determine amino acid residues involved in TCTP's function and perform site-directed mutagenesis
- Investigate the interaction between Rheb and TCTP via immunoprecipitation

Acknowledgements

- CSUPERB President's Commission Scholar Award to Laura Milbrandt for Summer 2012
- CSUCI Faculty Development Mini-grant to mentor Nitika Parmar for Fall 2012

References

1. Bommer, U. & Thiele, B. (2004). The translationally controlled tumour protein (TCTP). *International Journal of Biochemistry & Cell Biology, 36*(3), 379-385.
2. Dong, X. et al. (2009). Molecular basis of the acceleration of the GDP-GTP exchange of human ras homolog enriched in brain by human translationally controlled tumor protein. *J. Biol. Chem.* 284(35), 23754-64.
3. Ya-Chieh Hsu, Joshua J. Chern, Yi Cai, Mingyao Liu & Kwang-Wook Choi (2007) *Drosophila* TCTP is essential for growth and proliferation through regulation of dRheb GTPase. *Nature* 445, 785-788 .
4. Wang, X. et al. (2008). Re-evaluating the Roles of Proposed Modulators of Mammalian Target of Rapamycin Complex 1 (mTORC1) Signaling. *J. Biol. Chem.* 283(45), 30482-92.

Instructional Related Activities
Report Form (IRA # 463)

SPONSOR	DEPARTMENT
Dr. Nitika Parmar	Biology

ACTIVITY TITLE	DATE (S) OF ACTIVITY
Presentation of research by students at two national conferences- NCUR and ASBMB meetings.	**March 28-30, 2012 (NCUR) and April 21-24, 2012 (ASBMB).**

PLEASE EXPLAIN (1) DESCRIPTION OF ACTIVITY; (2) HOW DID THE ACTIVITY RELATE TO A COURSE(S); AND (3) WHAT YOU LEARNED FROM THE PROCESS.

1. DESCRIPTION: Two students presented their work at the NCUR (national Council on Undergraduate Research) meeting while three students presented their work at the ASBMB (American Society for Biochemistry and Molecular Biology) meeting; work was presented in the form of posters. This work was a culmination of 9-12 months of research experimentation conducted in research mentor's lab.

2. RELATION TO COURSE: Students presenting their work were enrolled in BIOL494 (Independent Research) and UNIV498 (Faculty-Student Collaborative Research) with me. All learning objectives of this class (designing and implementation of experiments as well as dissemination of results) were fulfilled as a result of participation in these meetings.

3. LEARNING: Students gained valuable skills in presenting their research data with confidence and in a scientific professional manner as a result of being exposed to these national conferences. The poster was included in the Undergraduate Research Competition at ASBMB and was critically analyzed by various judges.

Students were also able to network with several other individuals in their field and build useful relationships. Attendance and presentation at such conferences is particularly critical for students who intend to pursue a graduate degree and strengthens their prospects of successfully seeking admission in top schools. successfully got admitted to Pharmacy school in Loma Linda University while secured employment at UC, San Francisco in a biological lab; is currently a CI student and continuing research with me.

LIST OF ATTENDEES

1. (NCUR AND ASBMB MEETINGS)
2. (NCUR AND ASBMB MEETINGS)
3. (ASBMB MEETING)

**Please attach assessment forms from students, list of attendees, peoplesoft program report

E-mail to the Dean's Office
30 days after activity

TCTP Silencing: Impact on mTOR Signaling

Jessica Cortez, Mary Grabiak, Laura Milbrandt and Nitika S. Parmar, PhD.
Biology Program, California State University Channel Islands

Introduction

TCTP (translationally-controlled tumor protein) is a highly conserved protein that has been suggested as a tumor associated antigen as shown by its deregulation in many different types of cancers. TCTP has been shown to interact with Rheb, a key player of the PI3 Kinase/mTOR signal transduction cascade. This pathway regulates cell growth, cell proliferation, cell motility, cell survival, protein synthesis, and transcription.

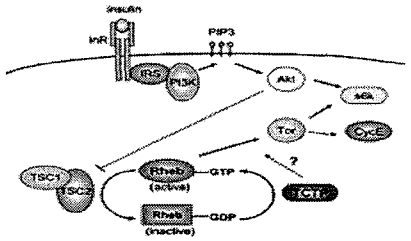


Fig. 1: A potential role for TCTP in mTOR signaling
TCTP has been shown to interact with Rheb, a key player of the PI3 Kinase/mTOR signal transduction pathway. However, this interaction has been controversial *(Ya-Chieh et al., 2007*

Materials and Methods

- Cell lines HEK293 &HeLa
- Commercially synthesized TCTP siRNAs (Ambion/Sigma)
- EGFP-TCTP tagged plasmids
- Transfection reagents: Polyfect, Lipofectamine RNAiMAX

siRNA	Targeted Exons
siRNA A	3 and 4
siRNA B	3
siRNA C	4

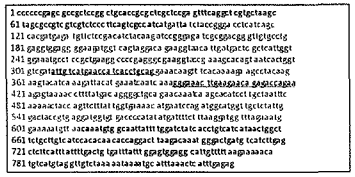


Fig. 2: siRNAs targeting the human TCTP mRNA
Coding sequence is shown in red and targeting siRNAs are shadowed and underlined

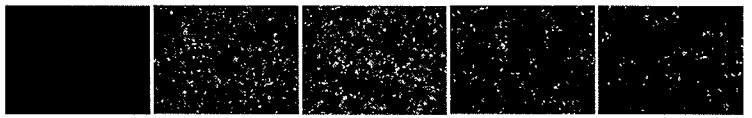


Fig. 3: Dose response of candidate TCTP-specific siRNA
HeLa cells were transfected with EGFP-TCTP plasmid with and without TCTP specific siRNA. Decrease in EGFP fluorescence was assayed 36 hours post transfection. (A) Cells alone; (B) Cells transfected with EGFP-TCTP plasmid alone; (C-E) Cells co-transfected with EGFP-TCTP plasmid and candidate TCTP siRNA C (20 nM, 50 nM and 100 nM respectively).

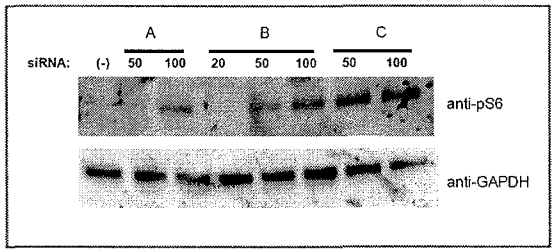


Fig. 4: Effects of dose dependent TCTP silencing on downstream mTOR effectors
HeLa cell lines were transfected with varying concentrations (0 nM-100 nM) of TCTP specific siRNAs. S6 phosphorylation was analyzed 36 hours post transfection. Anti-GAPDH was used as loading control. *(-: Untransfected cells; A, B and C: TCTP siRNAs)*

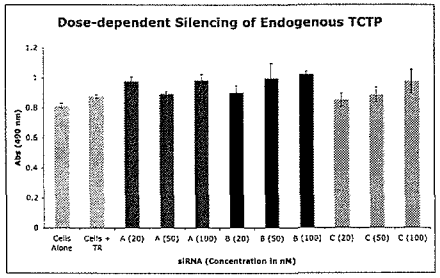


Fig. 5: Dose-dependent inhibition of TCTP on cell viability
HeLa cells were transfected with varying concentrations (0 nM-100 nM) of TCTP specific siRNAs. MTS assay was performed 36h post transfection.

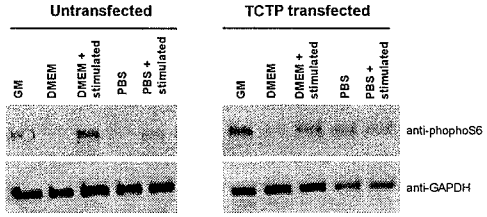


Fig. 6: Effects of TCTP over-expression under serum starvation
HEK293 cells were transfected with EGFP-TCTP for 24h following which they were serum starved in DMEM for 24h or in PBS for 30min. Following starvation, cells were stimulated with serum for 15 min. S6 phosphorylation was analyzed using anti-phospho S6. Anti-GAPDH was used as loading control.
(GM: Growth media/DMEM + serum; DMEM: Starved in DMEM alone; PBS: Starved in PBS; Stimulated: Stimulated with DMEM + 20% serum)

Conclusions

- Silencing of TCTP genes was found to stimulate growth and increase cell viability moderately
- S6 phosphorylation was found to increase with TCTP silencing
- Over-expression of TCTP does not impact starvation phenotype significantly

Future Directions

- Investigate the interaction between Rheb and TCTP

References

1. Bommer, U. & Thiele, B. (2004). The translationally controlled tumour protein (TCTP). *International Journal of Biochemistry & Cell Biology, 36*(3), 379-385.
2. Dong, X. et al. (2009). Molecular basis of the acceleration of the GDP-GTP exchange of human ras homolog enriched in brain by human translationally controlled tumor protein. *J. Biol. Chem.* 284(35), 23754-64.
3. Ya-Chieh Hsu, Joshua J. Chern, Yi Cai, Mingyao Liu & Kwang-Wook Choi (2007) *Drosophila* TCTP is essential for growth and proliferation through regulation of dRheb GTPase. *Nature* 445, 785-788 .
4. Wang, X. et al. (2008). Re-evaluating the Roles of Proposed Modulators of Mammalian Target of Rapamycin Complex 1 (mTORC1) Signaling. *J. Biol. Chem.* 283(45), 30482-92.

Acknowledgements

- UNIV 498 Faculty-Student Collaborative Research Award to PI (Nitika Parmar)
- LSAMP (Louise Stokes Alliance for Minority Participants) award to Jessica Cortez
- CSUCI Undergraduate Research scholarship to Mary Grabiak
- Laura Milbrandt, CSUCI undergraduate researcher

Instructional Related Activities
Report Form (IRA # 383)

SPONSOR	DEPARTMENT
Dr. Nitika Parmar	Biology

ACTIVITY TITLE	DATE (S) OF ACTIVITY
Presentation of research by students at two national conferences- ASBMB and ASM meetings.	**April 9-13, 2011 and May 21-24, 2011.**

PLEASE EXPLAIN (1) DESCRIPTION OF ACTIVITY; (2) HOW DID THE ACTIVITY RELATE TO A COURSE(S); AND (3) WHAT YOU LEARNED FROM THE PROCESS.

1. DESCRIPTION: Two students presented their work at the ASBMB meeting while one student presented her work at the ASM meeting; work was presented in the form of posters. This work was a culmination of 15-24 months of research experimentation conducted in research mentor's lab.

2. RELATION TO COURSE: Students presenting their work were enrolled in BIOL494 (Independent Research) with me. All learning objectives of this class (designing and implementation of experiments as well as dissemination of results) were fulfilled as a result of participation in these meetings.

3. LEARNING: Students gained valuable skills in presenting their research data with confidence and in a scientific professional manner as a result of being exposed to these national conferences. In addition, one student (who presented her work at the ASBMB meeting actually won the top Thematic Award for best poster in the RNA category. Her poster was judged the best amongst 1000 poster presentations.

Students were also able to network with several other individuals in their field and build useful relationships. One student (who attended the ASBMB meeting was able to network with international students who were attending the same conference, which directly led him to explore the possibilities of pursuing a graduate degree in Australia. He recently visited Sydney and Melbourne and is applying for a Masters' program at some of the universities located in these cities.

Attendance and presentation at such conferences is particularly critical for students who intend to pursue a graduate degree and strengthens their prospects of successfully seeking admission in top schools (as evidenced by s admission to Yale University for a PhD program)

LIST OF ATTENDEES

1. (ASBMB MEETING)
2. (ASBMB MEETING)
3. (ASM MEETING)

**Please attach assessment forms from students, list of attendees, peoplesoft program report

E-mail to the Dean's Office
30 days after activity

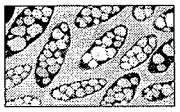
Isolation and Characterization of Novel Bioplastic-Producing Bacteria

Paramjit Singh and Nitika Parmar, Ph.D.
Biology Program, California State University, Channel Islands

Aim: To assess the ability of bioplastic production of unknown strains of bacteria collected from a variety of different environments using known bioplastic producers as controls.

Background: Bioplastics are defined as plastics made from renewable resources such as plant starch and microbial species. Bioplastics are made from a compound called polyhydroxy-alkanoate (PHA). Poly 3-hydroxy butyric acid (PHB) is the most common microbial PHA. PHB produced in response to stressful conditions, serves as an energy storage molecule to be utilized when common energy sources are absent. Plastic polymers accumulate intracellularly as storage granules in microbes.

Bioplastic producers:
1. *Pseudomonas olevarans*
2. *Ralstonia eutrophus*
3. *Bacillus megaterium*



Courtesy: Tian et. al., (2005) J. of Bacteriology

Materials & Methods:
- Known and unknown strains were cultivated in a variety of media containing different carbon sources and substrates
- Bioplastic production was quantitated using standard PHB extraction and estimation protocols
- Growth profiles of all strains were analyzed

Unknown	Site of collection	Unknown	Site of collection
1	Outdoor plastic chair	9	Wooden bench
2	Outdoor plastic chair	10	Kayak at Harbor
3	Trash bag	11	Dock of Harbor
4	Trash can	12	Ventura beach marsh
5	Refrigerator liner	13	Ventura beach sand
6	Kids' toys	14	Plastic, Malibu beach
7	Sprinkler 1	15	Backyard soil
8	Sprinkler 2	16	Malibu beach soil

Table 1: Sites from where unknown bacterial species were collected

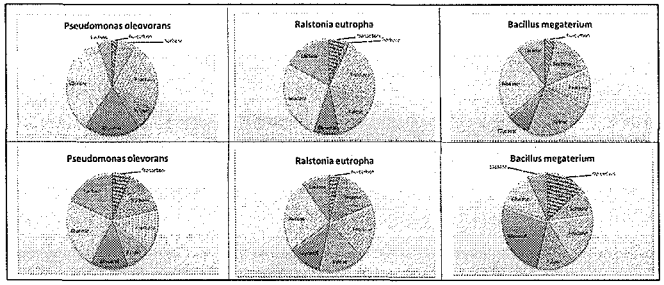


Fig. 1. Effect of different carbon sources on PHB production in known bacterial strains ***Top: - Heptanoate; Bottom: + Heptanoate***

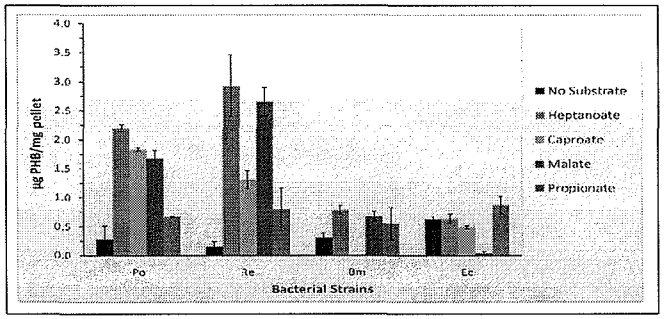


Fig. 2. Effect of different substrates on PHB production in known bacterial strains using minimal media

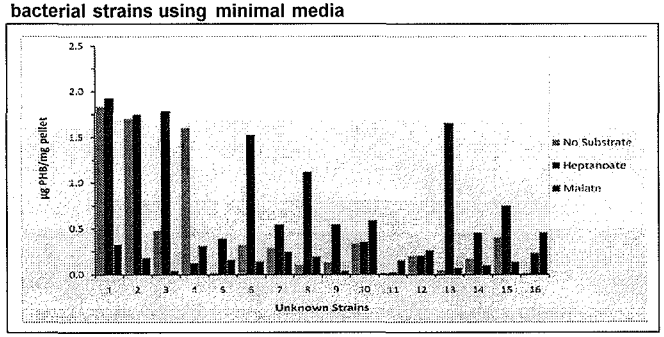


Fig 3. Production of PHB by unknown bacterial species in the absence (green) or presence of substrate (Red- Heptanoate; Blue- Malate)

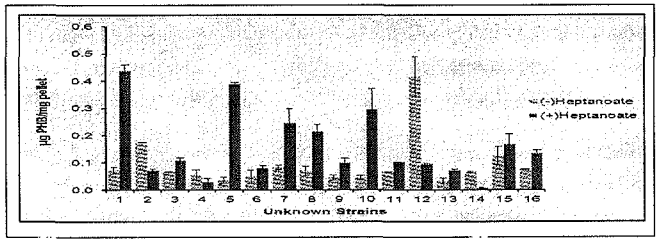


Fig. 4. PHB production in unknown bacterial strains in the absence (grey bars) and presence (red bars) of heptanoate

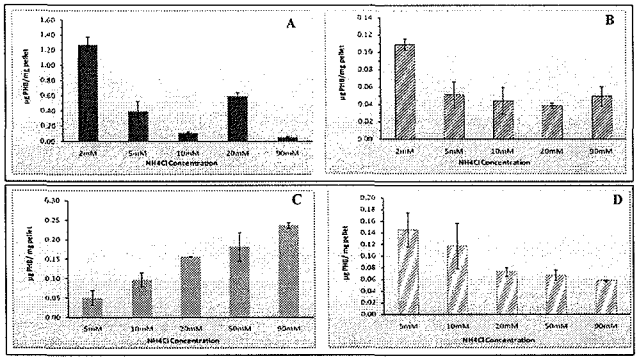


Fig 5. Effect of nitrogen limitation on PHB production by *P. oleovorans* (A), *R. eutropha* (B), *S. maltophilia* (C) and *R. aquatilis* (D)

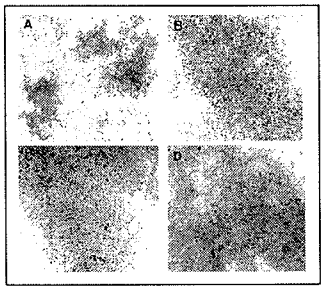


Fig. 6. Micrographs of bacteria showing PHB accumulation. Cultures of *E. coli* (panel A), *R. aquatilis* (panel B), *S. maltophilia* (panel C) and *Pseudomonas* (panel D). Smears were stained with Sudan Black and counter-stained with Safranin. Imaging was performed under bright-field illumination at 1000x magnification.

Unknown	Identification
1	Not available
2	Not available
3	Not available
4	*Bacillus niacini PM1*
5	*Micrococcus sp C-09*
6	*Rahnella aquatilis*
7	*Arthrobacter sp. C-101*
8	Not available
9	*Xanthomonas sp. P5*
10	*Stenotrophomonas G-44-1*
11	Not available
12	*Stenotrophomonas maltophilia*
13	*Stenotrophomonas maltophilia*
14	*Xanthomonas sp. P5*
15	*Staphylococcus sp. II B11*
16	*Pseudomonas fluorescens*

Table 2. Identification of microbes by 16S rRNA sequencing.

Conclusions: Our study has led to the discovery of two novel bioplastic producers, *Rahnella aquatilis* and *Stenotrophomonas maltophilia*.

Future Directions:
1. Identify the genes responsible for plastic production in the two novel species.
2. Confirm PHB synthesis by NMR analysis.

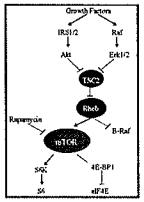
Acknowledgements:
- UNIV 498 (Faculty-Student Collaborative Research) to NP
- SAGE Student Research Award to PS

Double Knockdown of the Rheb Gene in Mammalian Cells Using RNA Interference

Ashley R. Bonneau and Nitika S. Parmar, PhD.
Biology Program, California State University Channel Islands

Introduction:
The insulin/mTOR pathway has been implicated in a variety of cancers. The activation of mTOR is regulated by an upstream G-protein, Rheb. Two Rheb genes exist in mammalian systems – Rheb1 and RhebL1 (Rheb2). Although Rheb1 and RhebL1 share significant sequence homology, we hypothesize that RhebL1 may have distinct functions of its own within the mTOR pathway. To elucidate the function of RhebL1, RNA interference (RNAi) was utilized to silence the expression of the Rheb genes *in vitro*.

Materials and Methods:
- Cell lines HEK293, HeLa, NIH3T3 (ATCC)
- Commercially synthesized synthetic Rheb1 and RhebL1 siRNAs (Ambion)
- Cy3-labeled GAPDH siRNA
- EGFP-Rheb1 and RhebL1 tagged plasmids




```
Rheb1     MPQSKSRKIAILGYRSVGKSSLTIQFVEGQFVDSYDPTIENTFTKLITVNGQEYHLQLVD
RhebL1    MPLVRYRKVVILGYRCVGKTSLAHQFVEGEFSEGYDPTVENTYSKIVTLGKDEFHLHLVD
          **  : **:.*****.***:**: ******.* :.****:***::*::*:. :*:**:***

Rheb1     TAGQDEYSIFPQTYSIDINGYILVYSVTSIKSFEVIKVIHGKLLDMVGKVQIPIMLVGNK
RhebL1    TAGQDEYSILPYSFIIGVHGYVLVYSVTSLHSFQVIESLYQKLHEGHGKTRVPVVLVGNK
          *********:* :: *.::**:*******::**:**: :: ** :  **.::*::*****

Rheb1     KDLHMERVISYEEGKALAESWNAAFLESSAKENQTAVDVFRRIILEAEKMDGAASQGKSS
RhebL1    ADLSPEREVQAVEGKKLAESWGATFMESSARENQLTQGIFTKVIQEIARVENSYGQERR-
           **  **  ::  *** *****.*:*:*****:*** : .:* ::* *  :::: .* :

Rheb1     CSVM
RhebL1    CHLM
          * :*
```

Fig. 1: Sequence alignment of human Rheb1 and RhebL1 proteins
Alignment was performed using ClustalW program
(http://www.ebi.ac.uk/Tools/clustalw2/index.html)
Identical residues are marked with (*) and conserved residues are marked with (:)

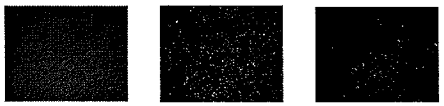


Fig. 2: Optimization of transfection reagent in HEK293 cells
Transfection of Cy3-labeled GAPDH siRNA Cy3 fluorescence was assayed 24 hours post transfection. (a) Cells alone and (b) cells transfected with 5nM siRNA using Lipofectamine RNAiMAX or (c) siPORT Lipid

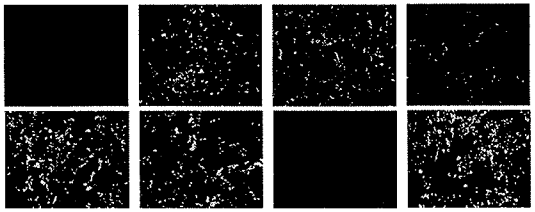


Fig. 3: Differential silencing capacity of RhebL1-specific siRNAs
(a) Cells alone; (b) Cells transfected with EGFP-RhebL1 alone; (c-g) with RhebL1 siRNAs (20nM each) or (h) non-specific siRNA

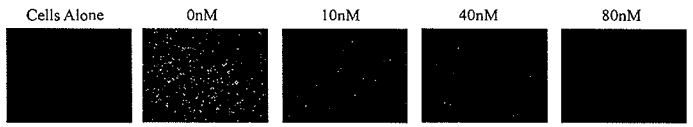


Fig. 4: Silencing of RhebL1 as a function of siRNA concentration
HEK293 cells were co-transfected with EGFP-RhebL1 plasmid with different concentrations of RhebL1 siRNA5. Decrease in EGFP fluorescence was monitored 36h post transfection via microscopy

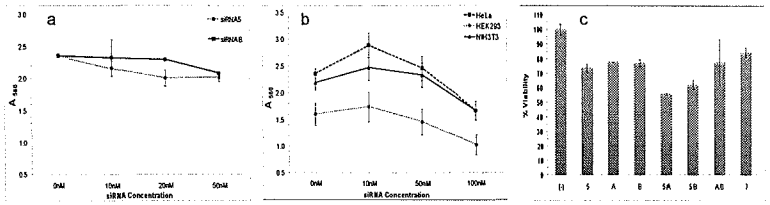


Fig. 5: Effect of Rheb silencing on cell viability
(a) HEK293 cells were transfected with varying concentrations (0nM-50nM) of Rheb1 siRNA B or RhebL1 siRNA5; (b) HeLa, HEK293 and NIH3T3 cells were transfected with varying concentrations (0nM-100nM) of RhebL1 siRNA5; (c) HEK293 cells were transfected with Rheb1 siRNA A/B or RhebL1 siRNA5 individually at 100nM or in combination at 50nM each; siRNA7 was used as the negative control. MTT assay was performed to monitor cell viability

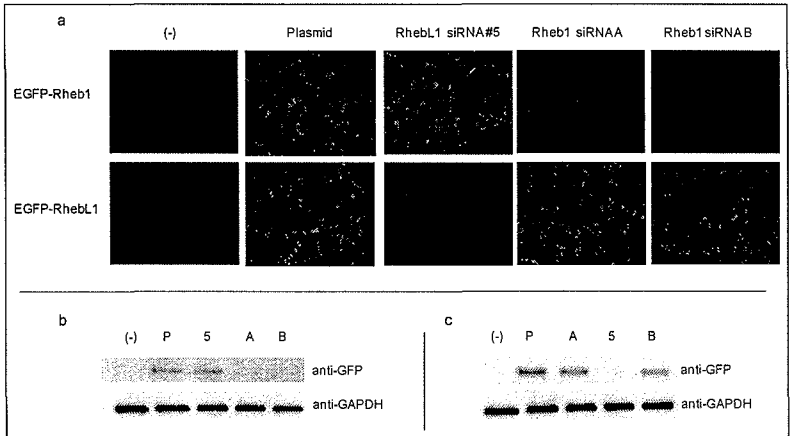


Fig. 6: Specificity of siRNAs towards Rheb1 and RhebL1 genes
HEK293 cell lines were co-transfected with Rheb plasmids and Rheb-specific siRNAs (50nM). (a) Cells were transfected with EGFP-Rheb1 (top row) or EGFP-RhebL1 (bottom row) plasmids and treated with the siRNAs. Fluorescence was monitored 24h post transfection. Immunoblot of cell lysates transfected with either EFGP-Rheb1 (panel b) or EGFP-RhebL1 (panel c)

(-): Untransfected cells; P: Plasmid alone; 5: Plasmid +RhebL1 siRNA5; A: Plasmid +Rheb1 siRNA A; B: Plasmid +Rheb1 siRNA B

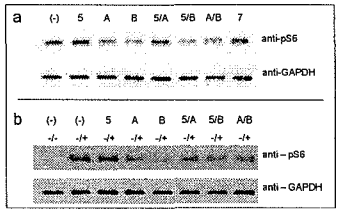


Fig. 7: Effect of Rheb silencing on S6 phosphorylation
HEK293 cell lines were treated with Rheb1 and RhebL1 siRNAs individually (100nM) or in combination (50nM each) for 24h. *(-): Untransfected cells, 5: RhebL1 siRNA5, A: Rheb1 siRNA A, B: Rheb 1 siRNA B, 7: Scrambled siRNA7* (a) Cells were grown in complete growth media containing 10% serum; (b) Cells were serum starved for 24h after siRNA treatment and then stimulated with serum for 30 minutes *(-/-: Starved/unstimulated; -/+: Starved/stimulated)*

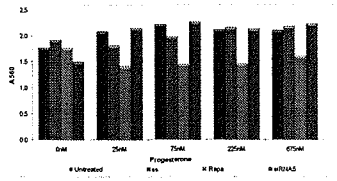


Fig. 8: Phenotype Microarray analysis via BIOLOG
HeLa cells were either serum starved for 18h (ss), serum starved and treated with 100nM rapamycin for 18h (Rapa), or treated with RhebL1 siRNA5 for 24h and then seeded on a BIOLOG PM-M6 plate containing varying amounts of progesterone (0-675nM). Cell viability was assayed 24h post seeding

Conclusions:
- Amongst eleven commercially synthesized siRNAs tested, one candidate siRNA for RhebL1 and two candidate siRNAs for Rheb1 emerged showing maximum silencing capabilities
- Silencing of both Rheb genes together inhibited growth more significantly than individual silencing
- RhebL1 silencing did not influence S6 phosphorylation

Future Directions:
- Silence the Rheb gene in the following ovarian cancer cell lines: ES-2, SKOV3 and TOV-21G

Acknowledgements:
- Barry M. Goldwater Scholarship to AB
- CSUPERB – Doris A. Howell Research Award to AB
- SAGE Student Research Award to AB
- CSU Faculty-Student Collaborative Research Seed Grant to NP

Natural Oils as Regulators of Cell Growth

Authors: Simon J Majeno[*], Charmaine Ibarra[#], CSU Channel Islands
Mentors: Nitika Parmar[*], Phil Hampton[#], Biology[*] & Chemistry[#] Programs, CSU Channel Islands

Aim

The aim of this study is to screen a number of natural food oils to determine their effects on mammalian cell cycle controls and intracellular signaling pathways, specifically the insulin/mTOR pathway.

Background

The cell cycle is governed by a myriad of different proteins which participate in an even greater number of signaling pathways. Regulation of these proteins via change in their activity could cause a significant impact on the control of the cell cycle which in turn could be the underlying cause of several cancers. The incidence of cancer from one cultural group to the next varies significantly. Dietary habits are an obvious difference between cultures. We hypothesize that natural food oils used for human consumption may contain potential cancer suppressors.

Methodology

- Twelve oils were subject to solubility testing using solvents such as DMSO, PBS and water. 20% DMSO was chosen as the standard solvent. 5% stock solution of each oil were prepared in 20% DMSO (v/v).
- HeLa cells grown in 48-well plates were treated with a range of different concentrations of each oil for 24 hours.
- Using visual analyses for cell health, candidate compounds were further analyzed for their effects on cell viability via the MTT assay.
- The oil with the most significant effect on cell viability (Menthol-Eucalyptus) was analyzed via GCMS.
- Status of S6 phosphorylation was analyzed by immunoblotting. GAPDH served as the loading control.

Conclusions

- The Menthol-Eucalyptus and Blackberry oils used in these experiments visually appear to inhibit cell growth without causing significant cell death.
- MTT cell proliferation data supports this claim.
- Changes in the S6 phosphorylation implicate an effect on the mTOR pathway.

Results

Oil	Cell Death	Morphology
Safflower	NA	NA
Almond	+++	Normal
Nutmeg	+++	Normal
Camphor apothecary	+++	Normal
Ginger	++	Abnormal
Caster	+++	Normal
Clove	++	Abnormal
Blackberry	+	Abnormal
Anise	++	Abnormal
Menthol-Eucalyptus	+	Abnormal
Cinnamon bark	+++	Normal

Figure 1: Effect of different oils on growth and morphology of HeLa cells.

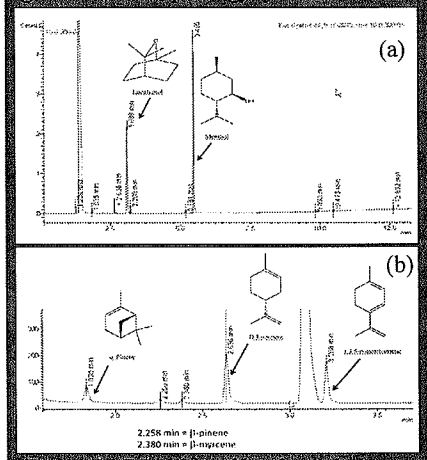
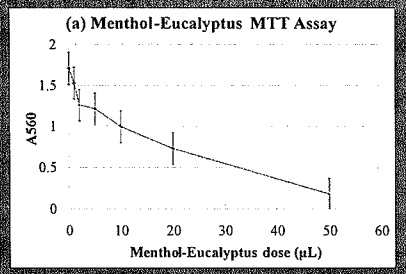


Figure 3: GC/MS profile of menthol-Eucalyptus oil



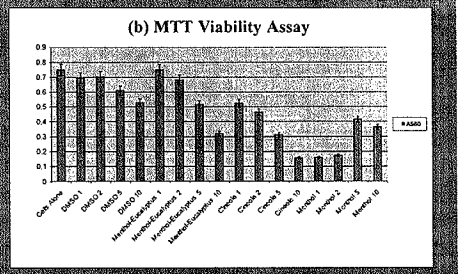


Figure 2: Dose-dependent effect of (a) Menthol-Eucalyptus and (b) Menthol-Eucalyptus, Cineole and Menthol on cell viability in HeLa cells.

Name	Structure
Eucalyptol	
Menthol	
D-Limonene	
1, 3, 8-p-menthatriene	
α-pinene	
β-pinene	

Figure 4: Structures of compounds found in Menthol-Eucalyptus oil via GC-MS

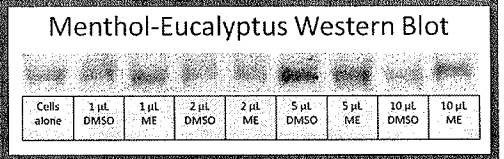


Figure 5: Treatment of HeLa cells with menthol-eucalyptus oil affects S6 phosphorylation. Control cells were treated with 20% DMSO alone.

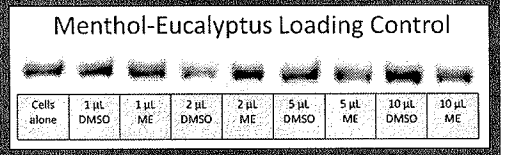


Figure 6: Immunoblot using anti-GAPDH to normalize for loading.

Future Directions

- Test the effects of the individual compounds found in menthol-eucalyptus oil on cell viability and mTOR pathway.
- Perform a dose and time-dependent assay.
- Derivatize candidate compounds and retest them.
- Monitor the effects of the most promising compounds on cancer cell lines.
- Revisit other promising oils and perform similar experiments.

Literature Cited

Biological Effects of Essential Oils- A Review. (2008) *Food and Chemical Toxicology, Vol 46 (2) 446-475.*
F. Bakkali, S. Averbeck, D. Averbeck, M. Idaomar.

Acknowledgements

This research has been aided by funding from the National Science Foundation, NSF-HRD 0331537, Louis Stokes Alliance for Minority Participation grant to the California State University System.

Channel Islands
CALIFORNIA STATE UNIVERSITY

CIA Form A1

Please answer all questions under Course Information and sections II through IV. Complete the attached budget sheet. Attach syllabus and itinerary requested in sections I and IV. Print, sign and obtain Academic Chair signature. Submit form to Antonio Jimenez, BT 1275.

UNIVERSITY 392: INTERNATIONAL EXPERIENCE COURSE PROPOSAL

COURSE INFORMATION

Instructor(s): Nitika Parmar

Travel location(s): India (New Delhi, Agra, Mumbai, Karnal and Chandigarh)

Dates of trip: January 3-20, 2015

Course title: UNIV392: Biotechnology in India

Number of units (1-3): 3

Academic area of the faculty proposing course: Biology

Faculty rank: Associate Professor

Faculty email: nitika.parmar@csuci.edu

Proposed minimum enrollment: 10

Proposed maximum enrollment: 12

Grading method (letter grade, credit/non credit): Letter

Do the dates of the program conflict with regular classes/faculty workdays? ☐ Y ☒ N

Have you offered this program before? ☐ Y ☒ N

I) SYLLABUS

Please, attach a syllabus for this course providing the following required information:

1. Professor's name(s), office location, office hours, contact information.
2. Course description, course content and format of the course (classroom lectures, field trips, seminars with local experts, etc.)? Include this information for the portions of the course that are conducted within the United States and within the international country. How will the content of the course you plan to teach be related to the travel-study destination?
3. Student learning outcomes and how they relate to the program/major outcomes and the University mission.
4. Required elements, which may include assignments, readings, attendance and course participation policies, etc.

5. Grade information as specified in the Channel Islands Policy on Grades (SP01-38)
6. Evaluation criteria (it can include student behavior as it relates to citizenship, punctuality, helpfulness, working well with the group, being responsible and respectful to the host culture and their people, etc.)
7. Academic honesty information as specified by the Policy on Academic Dishonesty (SP01-57)
8. Channel Islands Disability Statement
9. Tentative class schedule and itinerary (It is recommended to include a "subject to change" disclaimer)

Please respond to the following in the space after each item:

II) FACULTY INFORMATION

1. What is your own linguistic, cultural, and/or academic experience with the travel study destination? If you have limited experience with the destination, explain how you plan to maximize student safety (for instance, will you be using a local tour company or tour guide?) I am from India and have spent the first 28 years of my life there. I am fully conversant with the culture, language, food, transportation and lodging arrangements. I have traveled to the sites mentioned in this proposal (New Delhi, Agra, Mumbai, Karnal and Chandigarh). I am conversant with a lot of educational and research institutions and am very comfortable navigating in the country. I have several colleagues in the tourism and hospitality industry who will be useful in making arrangements.

2. Previous experience leading groups of students (nationally or internationally). I have not taken CI students on an international trip before although I have conducted field trips with my students locally and have also taken my own research students to national conferences within USA. Although this will be a first time international experience for me, the fact that I am from India itself and am very comfortable with all organizational logistics in the country makes me confident that the trip should go smoothly.

III) RECRUITMENT AND ORIENTATION

1. How will students be recruited? Regular CI students should have at least one recommendation from a faculty member other than the teacher for the overseas course. Advertisement of the course will be done through flyers and posters posted across campus, through global e-mails sent to all Biology and Chemistry students, through information sessions presented at Biology and Chemistry Clubs as well as at the LSAMP meetings. Interested students will be required to complete a brief questionnaire (via Survey Monkey) and provide two letters of recommendation from CI faculty, excluding the instructor for this course. The questionnaire will primarily provide me insights into students' academic preparation, their level of

confidence and expectations as well as their motivation for this course. The recommendation letters will provide useful feedback about students' potential and skills. Based on the analyses of these findings, students will be recruited by me. If, for any reason, more than 12 students are found to be suitable for this course, I will conduct brief interviews with the students and then recruit the top 12 candidates.

2. For whom is the course designed (CI undergraduate students, CI graduate students, students with a certain program area, open university students, others)? Will there be any priority order when accepting students to the program? The course is open to all undergraduate students of all majors. However, considering that we will be exploring biotech research institutions in India, priority will be given to Biology students and students who have not participated in study abroad trips.

3. **Attach an outline for the orientation session(s) for students**. Make sure the orientation includes comments on the security of the country, both politically and medically, as determined from reports issued by the State Department.

IV) LOGISTICAL ARRANGEMENTS

1. Will your travel arrangements (e.g., accommodations, meals, excursions, airfare) be managed by an independent provider (e.g., AIFS, CEA, ISA, Australearn), a foreign university, or a travel agent? Please explain. Air transportations for both international travel and travel within India will be arranged by Nitika Parmar. Ground transportation within India will also be arranged through rental taxi and van agencies. Travel involving trains within India will be done using Indian railways online booking system.

Excursions, tours and cultural trips will be arranged in the local destinations via the state tourism department as well as private licensed tour operators, whichever is cost-effective.

Accommodations will be arranged in advance via reservations made at hotels before the commencement of the trip. Students will be required to share hotel rooms (2 students per room)

Meals will be taken at local eateries and budget restaurants to experience the full Indian cuisine.

2. Housing: where will be the students stay during the study abroad experience? If staying with host families, are meals included? Students will be staying in budget hotels during the entire length of their trip. Budget hotels will be chosen based on their comfort level, security and price. I have several contacts in the

hotel industry who can provide excellent accommodations within a reasonable price range and ensure comfort and security.

3. Meals: Are meals arranged for the students? If not, where can students find their own food? One aspect of this trip is to also experience the cuisine of India and for this purpose students will be eating at local restaurants and cafeterias. India is abounding with restaurants catering to all palates and all hotels have plenty of eateries within walking distance.

4. Transportation: What are the transportation arrangements for the trip? If traveling from location to location, what means of transportation will be used?

Travel between Camarillo and LAX will be provided by Roadrunner shuttle. Flights to and from India will utilize international carriers and will be booked by Nitika Parmar either through the airline online booking system or a travel agent, whichever is cost-effective. Air travel within India (specifically from New Delhi to Mumbai and Mumbai to Chandigarh) will be booked using national carriers by Nitika Parmar using the online booking system or domestic travel agent, whichever is cost-effective. Air travel in India will involve journeys of no more than 2.5 hours each way. Train journey (from Chandigarh to New Delhi) will involve a 3 hour journey and reservations will be made online uisng the Indian Railway booking services. For travel from Mumbai to Govardhan EcoVillage and back, as well as day trips to Karnal and local travel (within New Delhi, Mumbai, Agra and Chandigarh), reservations for vans and taxis will be made using the pre-paid government regulated reservation system. For tours in New Delhi, Agra and Chandigarh, reservations will be made using licensed tour operators who will provide their own buses for the tours.

5. Safety/security: Please give a brief synopsis of the status of the security of the country, both politically and medically, as obtained from the Department of State. What arrangements have been made to maintain the safety and security of the students throughout the program? Although no travel warnings have been issued by the Department of State for travel to India, the embassy does encourage US citizens to enroll in the Smart Traveler Enrollment Program (STEP). All students will be required to enroll in this program prior to travel. Politically, India is not going through a period of unrest and no security threats have been cited.

From the US Department of State: "India, the world's largest democracy, has a very diverse population, geography, and climate. India is the world's second most populous country, and the world's seventh largest country in area. Tourist facilities offer varying degrees of comfort. Amenities are widely available in large cities and tourist areas."

Language: The medium of instruction in India is pre-dominantly English and travellers to all major cities do not experience any language barriers.

Security: Travel in India will be done as a group and students will not be allowed to travel anywhere (include local restaurants) on their own as individuals. The entire cohort will travel as a group throughout the trip. For students interested in exploring additional aspects of India during free time, the instructor will always accompany them. All bookings will be made using licensed and government approved vendors. The following guidelines are expected to be followed:

a. Students will be required to return back to their hotels no later than 11p.m. during the entire trip. Student teams comprising of women only will not be allowed to travel on their own without an accompanying male student and instructor.

b. Students will be encouraged to respect local customs and dress. Conservative dressing is encouraged although this will not be a problem as the trip will take place during winter time when weather conditions are often cold.

c. Students will be encouraged not to carry too much cash while shopping. Passports and important documents will be deposited in the safety deposit boxes at the hotels (if available) while students go shopping.

d. Students will be provided information about local police stations and emergency personnel before embarking on a local trip.

Medical: Medical care in the major population centers (such as the ones listed in this proposal) approaches and meets Western standards. Top class hospitals provide ample care and services although they expect cash payment for their services. Private clinics are open until late in the evenings. Ambulances (both private and government) are available. Students will be provided information about vaccinations that are required before travel during the pre-trip orientation and will also carry routine medication with them for small ailments such as fever, headache, diarrhea, etc. Preventive medication for malaria may also be carried although winter is typically not the season for malaria outbreaks in India.

Communication: Although telephone calls can be made locally from telephone booths, I intend to rent cell phones for the students and/or a pre-paid India SIM cards which can be used with international cell phone models so that students can communicate with each other as well as with me on a regular basis. The exact need and type of card needed will depend on students' individual cell phones and will be discussed during the pre-trip orientation.

Itinerary for the trip, including side trips:

Depart (Los Angeles to New Delhi, India): January 3 or 4, 2013 (will pick the day with cheaper airfare)

Arrive in New Delhi, India: January 5 or 6, 2013

January 7, Monday: Visit to Indian Institute of Technology (IIT), New Delhi; evening tour of New Delhi

January 8, Tuesday: Visit to TERI (The Energy and Resources Institute), New Delhi; evening tour of New Delhi

January 9, Wednesday: Visit to Council of Scientific & Industrial Research (CSIR) and National Institute of Immunology (NII)

January 10, Thursday: Visit Agra and day tour of Taj Mahal and vicinities; spend one night in Agra (Agra is 75 miles south of New Delhi)

January 11, Friday: Return to New Delhi and fly to Mumbai; reach Govardhan Ecovillage (GEV) by early evening (GEV is 55 miles north of Mumbai)

January 12-13, Saturday/Sunday: Attend Educational Retreat at Govardhan Ecovillage (GEV)

January 14, Monday: Return to Mumbai and fly to Chandigarh (Chandigarh is 155 miles north of New Delhi)

January 15, Tuesday: Visit the Institute of Microbial Technology (IMTECH); evening tour of Chandigarh

January 16, Wednesday: Day trip to the National Dairy Research Institute (NDRI) in Karnal (2 hours north of Chandigarh)

January 17, Thursday: Visit Punjab University and Postgraduate Institute of Medical Education & Research (PGIMER)

January 18, Friday: Return to New Delhi by train and take flight back to Los Angeles

January 19, Saturday/January 20, Sunday: Arrive back in Los Angeles

6. **Attach an itinerary for the trip, including side trips.**

Number of Students					**12**		
Number of Faculty					**1**		
I	**Students traveling expenses:**			**Cost/ea**	**# Requested**	**Total**	**Comments/Additional Notes**
		Airfare		$ 1,500.00	12	$ 18,000.00	
		Ground Transportation		$ 450.00	12	$ 5,400.00	
	$50/night x 14 (2 students/room)	Hotel Accommodations		$ 700.00	12	$ 8,400.00	
		Registration Fees		$ -	12	$ -	
		Entrance Fees		$ 80.00	12	$ 960.00	
	4 prepaid meals @ $25 each (others	Meals		$ 100.00	12	$ 1,200.00	
	4 cultural activities @ $25 each	Cultural Activities		$ 100.00	12	$ 1,200.00	
		Travel Insurance		$ 50.00	12	$ 600.00	
		Vehicle/Van Rental		$ 50.00	12	$ 600.00	
	Other: Tours (5 tours at $50 each)			$ 250.00	12	$ 3,000.00	
II	**Faculty Traveling Expenses:**			**Cost/ea**	**# Requested**	**Total**	**Comments/Additional Notes**
		Airfare		$ 1,500.00	1	$ 1,500.00	
		Ground Transportation		$ 450.00	1	$ 450.00	
	$50/night x 14	Hotel Accommodations		$ 700.00	1	$ 700.00	
		Registration Fees		$ -		$ -	
		Entrance Fees		$ 80.00	1	$ 80.00	
	4 prepaid meals @ $25 each (others	Meals		$ 100.00	1	$ 100.00	
	4 cultural activities @ $25 each	Cultural Activities		$ 100.00	1	$ 100.00	
		Travel Insurance		$ 50.00	1	$ 50.00	
	Other: Tours (5 tours at $50 each)			$ 250.00	1	$ 250.00	**
	Other: Communication device			$ 100.00	1	$ 100.00	**
III	**Operating Expense Budget**			**Cost**	**Comments/Additional Notes: Please be Specific**		
		Supplies		$ 100.00			
		Printing/Copying		$ 150.00			
	Other:			$ -	**		
	Other:			$ -	**		
	Other:			$ -	**		
IV	**Out of Pocket Student Expenses**			**Cost/ea**	**Comments/Additional Notes: Please be Specific**		
		Health Insurance		n/a	Not funded by IRA or the University		
		Tuition/Registration		n/a	Not funded by IRA or the University		
	Other:			n/a	Not funded by IRA or the University		
	Other:			n/a	Not funded by IRA or the University		
Total costs of the trip							
	Total Student Traveling Expenses					$ 39,360.00	
A	**Maximum IRA funding @ 2/3rd total cost**					**$ 26,213.76**	
	Remaining 1/3 is payable by students through course fee					$ 13,146.24	
B	Faculty Travelling Expenses, funded at 100%					$ 3,330.00	
C	Operating Expenses, funded at 100%					$ 250.00	
	Total IRA funding Requested (Total of A, B & C)					**$ 29,793.76**	
	Out of Pocket Student Expenses, not funded by the University					$ 13,146.24	

STUDY ABROAD TRIP TO INDIA: ORIENTATION SESSIONS (Fall, 2013)

Three orientation sessions will be held in class at CI prior to the trip to India and one final orientation session will be held just before departing for India. Orientation sessions may also involve talks by staff members of the Center for International Affairs at CI as deemed necessary.

Orientation session I Topics: September 19, 2013

i. Preparing for cultural adjustment and social considerations
ii. What to expect in terms of weather, food, traditions and religion
iii. Conservative versus modern views from Indian perspectives
iv. Shopping guides

Orientation session II Topics: October 17, 2013

i. Education and research in India in the area of biotechnology and environmental ecology
ii. Research institutes outlook
iii. Biotechnology industries in India and their global standings

Orientation session III Topics: November 14, 2013

i. Trip details focusing on accommodations, transportation, food and local travel in India
ii. Student health abroad (vaccinations and medications; access to care while in India)
iii. Student safety abroad (money, baggage, laptops, electronic devices)
iv. Finances
v. Documentation (passport, visas, STEP enrolment)
vi. Communication (cell phones)
vii. Consular information
viii. Emergency situations, responses and assistance
ix. Insurance

Final orientation Topics: December 19, 2013

i. Academic requirements and research tools
ii. Document check (visas)
iii. Confirmation of flight and travel reservations
iv. Confirmation of medical requirements
v. How to pack
vi. Alcohol Policy -Alcohol & Drugs; Illegal drugs
vii. Arrests overseas
viii. Road safety
ix. Working Through Homesickness
x. Adjustment for women
xi. Contact Numbers

Channel Islands
CALIFORNIA STATE UNIVERSITY
DIVISION OF ACADEMIC AFFAIRS

October 15, 2012

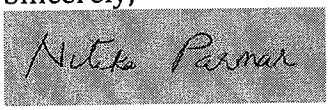
To,
The Center for International Affairs Advisory Committee
CSU, Channel Islands

Subject: UNIV392 Review and Response to Transportation Concerns

Dear Committee Members,

Thank you for reviewing my UNIV392 course proposal for Fall, 2013 which will involve travel to India in January, 2014. The main concern of the committee was the safety of the students in regards to transportation and the committee wanted to see more details with regard to the reliability of travel proposed. I am providing the requested information (see next page) and have addressed these concerns. Please let me know if additional details are required. Thank you.

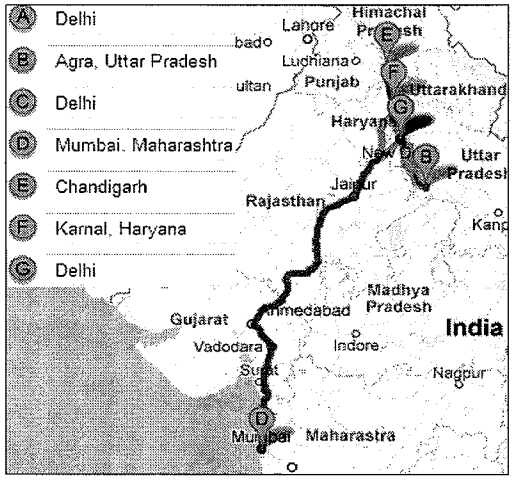
Sincerely,



Nitika Parmar
Associate Professor, Biology Program
206 Aliso Hall
CSUCI
1 University Drive
Camarillo, CA 93012
Tel: 805-437-8873
e-mail: nitika.parmar@csuci.edu

Educational Tour to India

Delhi * Agra * Delhi * Mumbai * Chandigarh * Karnal * Delhi



Day 01: 06th Jan'14: ARRIVE DELHI **[Flight details: TBA]**
Arrival at Indira Gandhi International Airport, Delhi. Welcome and assistance on arrival at airport and then transfer to the hotel.
Overnight is at the hotel in Delhi.

Day 02: 07th Jan'14: DELHI – Visit to IIT Delhi
Breakfast is at the hotel. After breakfast visit to Indian Institute of Technology, Delhi. In the afternoon proceed for sightseeing of Old Delhi visiting monuments such as Jama Masjid, take a rickshaw ride, drive past Red Fort and visit Raj Ghat, the memorial place of Mahatma Gandhi.
Overnight is at the hotel.

Day 03: 08th Jan'14: DELHI
Breakfast is at the hotel. After breakfast visit TERI, New Delhi. In the afternoon proceed for sightseeing of New Delhi visiting Qutub Minar and Humayun's Tomb. Drive past monument such as Parliament, government offices & India Gate.
Overnight is at the hotel.

Day 04: 09th Jan'14: DELHI
Breakfast is at the hotel. Visit to CSIR & NII.
Overnight is at the hotel.

Thomas Cook (India) Ltd
Plot No. 520, Udyog Vihar Phase III, Gurgaon -122016, Haryana
Telephone: - 91-124-6120100 Web: - www.thomascook.in

Day 05: 10th Jan'14: DELHI – AGRA **[BY ROAD: 205 Kms/05 Hrs]**
Today morning drive to Agra. Check in at the hotel. In the afternoon visit Taj Mahal [Taj Mahal is closed on Friday] and Agra Fort.
Overnight is at the hotel.

Day 06: 11th Jan'14: AGRA – DELHI/MUMBAI **[BY FLIGHT: TBA]**
Breakfast is at the hotel. After breakfast drive to Delhi and transfer to airport to connect flight for Mumbai. Drive to Govardhan Ecovillage by evening [By road: 100 Kms/03 Hrs].
On own arrangement

Day 07 - 08: 12th – 13th Jan'14: GOVARDHAN ECOVILLAGE
Attend Educational Retreat at Govardhan Ecovillage.
On own arrangement

Day 09: 14th Jan'14: MUMBAI/CHANDIGARH **[BY FLIGHT: TBA]**
Today morning drive to Mumbai and transfer to airport to connect flight for Chandigarh. Rest of the evening at leisure for independent activities.
Overnight is at the hotel.

Day 10: 15th Jan'14: CHANDIGARH
Breakfast is at the hotel. After breakfast visit IMTECH. In the afternoon proceed for sightseeing of Chandigarh visiting Rock Garden and Sukhna Lake.
Overnight is at the hotel.

Day 11: 16th Jan'14: CHANDIGARH – KARNAL – CHANDIGARH
Drive to Karnal to visit NDRI [By road: 124 Kms/2.5 Hrs]. After visit drive back to the hotel.
Overnight is at the hotel.

Day 12: 17th Jan'14: CHANDIGARH
Today morning visit to Punjab University and Post Graduate Institute of Medical Education & Research [PGIMER], Chandigarh.
Overnight is at the hotel.

Day 13: 18th Jan'14: CHANDIGARH=DELHI/LOS ANGELES
Early in the morning transfer to railway station to board train for Delhi. On arrival in Delhi transfer to airport to connect flight for Los Angeles.

*****TOUR ENDS*****

Thomas Cook (India) Ltd
Plot No. 520, Udyog Vihar Phase III, Gurgaon -122016, Haryana
Telephone: - 91-124-6120100 Web: - www.thomascook.in

HOTELS ENVISAGED:-

City	Nights	Hotel	Room Category	Meal Type
Delhi	04	Radisson Blu Dwarka	Superior	CP
Agra	01	Mansingh Palace Agra	Standard	CP
Govardhan Ecovillage	**On Own arrangement**			
Chandigarh	04	Hotel Bella Vista	Deluxe	CP

*Abbreviation – CP = Bed & Breakfast

TOUR PRICE on twin share basis on above Hotels:-

Pax Slabs	Validity: 06 Jan'14 – 18 Jan'14
12 Paying Pax + 01 Tour Leader Free	USD 1072 Per Person
Single Room Supplement	USD 545 Per Single

*Above mentioned prices are nett. and non commissionable and on per person basis

Airfare Supplements (No free pax):-	
Supplement for Normal Airfare for sector **Delhi – Mumbai** in economy class will be:	USD 133 Per Person
Supplement for Instant Purchase Airfare for sector **Mumbai – Chandigarh** in economy class will be: ***Note:*** These fares are Non refundable and subject to change without prior notice / at the time of issuance.	USD 119 Per Person

Hotel Details:-	
Hotel Name	**Website / Weblinks**
Radisson Blu Dwarka, Delhi	http://www.radissonblu.com/hotel-newdelhidwarka
Mansingh Palace Agra	http://www.mansinghhotels.com/agra.aspx
Bella Vista Chandigarh	http://www.bellavista.in/

OUR TOUR PRICE INCLUDES:

- 09 night's hotel accommodation on twin sharing basis.
- Meal Plan is on Bed & breakfast basis.
- All Transfers, sightseeing and excursions as per itinerary shall be provided by an air-conditioned Vehicle as mentioned against each pax slab below:-
  - 07-13 Pax = air-conditioned Mini Coach
- Road taxes, parking fee, fuel charges, interstate taxes, and porterage at all airports / railway stations.
- Entrance fees of the monuments (one time visit only) as per itinerary.
- Services of a local English speaking guide.
- 01 Cycle rickshaw ride in Delhi.
- Train travel for sector Chandigarh=Delhi by AC chair car class.
- Thomas Cook representative for assistance on all arrival and departure transfers to meet, greet and assist.
- All currently applicable taxes.

OUR TOUR PRICE EXCLUDES:

- Airfare, airport tax or visa fees.
- Any Meals on board train or during the tour except specified.
- Any Optional visits listed in the Itinerary.
- Camera Fee (where levied), telephone calls, laundry, drinks, mini bar, room service, tips, personal insurance, any rides and items of personal nature not specified in the inclusions above.
- Any additional expenses arising from unforeseen problems unrelated to the organization like natural disaster, accident, medical evacuation ,war, strikes, terrorist attacks, cancellation or missing the connection for flight or last minute change of timings etc.
- Any other service, which has not been specified as "included".

SPECIAL NOTES:-

- The price quoted above are net & non commissionable.
- **Above quote is valid from 06 Jan'14 – 18 Jan'13**
- No refund for unutilized services.
- All confirmations will be subject to availability of accommodation.
- Breakfast timings in Indian Hotels are between 0700 hours – 1000 hours.
- Check in – Check out timings at most of the Hotels are:-
  - Check in = 1400 Hours
  - Check out = 1200 Noon Hours
  - Early check-in and late check-out are subject to availability.
- Price is subject to change with increase in fuel cost & taxes.
- For Air bookings, we will need complete names including full first names of the guests;
- For Train bookings, we will need complete names along-with Date of birth of the guests as per passport, 120 days in advance;
- Rates include only those items specified in your itinerary.
- All the above hotels / room categories are indicative, and are yet to be booked – which will be initiated as soon as we have guest's acceptance of

Thomas Cook (India) Ltd
Plot No. 520, Udyog Vihar Phase III, Gurgaon -122016, Haryana
Telephone: - 91-124-6120100 Web: - www.thomascook.in

the quote. Any change in hotel / room category may attract supplement / reduction of cost;

- ⇨ Effective 2nd October 2008, the Government has introduced "No-Smoking" legislation for hotels, restaurants and all public places. As a consequence, smoking is prohibited in all parts of the hotel except in designated bedrooms where smoking is permitted. The hotel has dedicated smoking guest bedrooms. Should you desire a smoking bedroom, please let us know. We shall endeavor to reserve a smoking bedroom for you, subject to availability;
- ⇨ In case of any currency fluctuations or amendment in local Government taxes, or any fuel hike, we reserve the right to adjust the tour price accordingly

For Security Reasons, it is mandatory to supply below mentioned information of the guests to respective units

- o Guest First and Last Name
- o Nationality
- o Positive ID - travel documents i.e. Passport, that guest will be carrying to identify him / her self at the time of check-in

RESPONSIBILITY

All arrangements for transportation, accommodation, transfers and sightseeing will be made by TRAVEL CORPORATION (INDIA) LTD. as agent for the passenger upon the express condition that we shall not be held liable for any injury, damage, loss, accident or irregularity which may be caused by any company or person employed in the operation of the tour.

GOVERNING LAW AND JURISDICTION

Any dispute or claim shall be governed by, and construed in accordance with, the laws of India and the parties submit to the exclusive jurisdiction of the courts in India.