

SUMMARY PROPOSAL BUDGET YEAR 1

ORGANIZATION Western Oregon University				FOR NSF USE ONLY		
				PROPOSAL NO.	DURATION (months)	
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR Sarah M Boomer				AWARD NO.	Proposed	Granted
				NSF Funded Person-months		
A. SENIOR PERSONNEL: PI/PI, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)				CAL	ACAD	SUMR
1. Sarah M Boomer - none				0.00	0.00	0.10
2.						
3.						
4.						
5.						
6. (0) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)				0.00	0.00	0.00
7. (1) TOTAL SENIOR PERSONNEL (1 - 6)				0.00	0.00	0.10
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)						
1. (0) POST DOCTORAL ASSOCIATES				0.00	0.00	0.00
2. (0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)				0.00	0.00	0.00
3. (0) GRADUATE STUDENTS						0
4. (0) UNDERGRADUATE STUDENTS						0
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)						0
6. (0) OTHER						0
TOTAL SALARIES AND WAGES (A + B)						2,000
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)						400
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)						2,400
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)						
2 Digital Epifluorescence Microscopes				\$	13,500	
TOTAL EQUIPMENT						13,500
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)						0
2. FOREIGN						0
F. PARTICIPANT SUPPORT COSTS						
1. STIPENDS \$ 1,000						
2. TRAVEL 0						
3. SUBSISTENCE 0						
4. OTHER 0						
TOTAL NUMBER OF PARTICIPANTS (1) TOTAL PARTICIPANT COSTS						1,000
G. OTHER DIRECT COSTS						
1. MATERIALS AND SUPPLIES						0
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION						0
3. CONSULTANT SERVICES						0
4. COMPUTER SERVICES						0
5. SUBAWARDS						0
6. OTHER						0
TOTAL OTHER DIRECT COSTS						0
H. TOTAL DIRECT COSTS (A THROUGH G)						16,900
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)						
Salary (Rate: 59.0000, Base: 2000)						
TOTAL INDIRECT COSTS (F&A)						1,180
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)						18,080
K. RESIDUAL FUNDS (IF FOR FURTHER SUPPORT OF CURRENT PROJECTS SEE GPG II.C.6.j.)						0
L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)						\$ 18,080 \$
M. COST SHARING PROPOSED LEVEL \$ 13,500				AGREED LEVEL IF DIFFERENT \$		
PI/PI NAME Sarah M Boomer				FOR NSF USE ONLY		
ORG. REP. NAME* Philip morris				INDIRECT COST RATE VERIFICATION		
		Date Checked	Date Of Rate Sheet	Initials - ORG		

SUMMARY PROPOSAL BUDGET YEAR 2

ORGANIZATION Western Oregon University				FOR NSF USE ONLY			
				PROPOSAL NO.	DURATION (months)		
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR Sarah M Boomer				AWARD NO.	Proposed	Granted	
				A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)			
				CAL	ACAD	SUMR	
1. Sarah M Boomer - none				0.00	0.00	0.10	\$ 2,000
2.							
3.							
4.							
5.							
6. (0) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)				0.00	0.00	0.00	0
7. (1) TOTAL SENIOR PERSONNEL (1 - 6)				0.00	0.00	0.10	2,000
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)							
1. (0) POST DOCTORAL ASSOCIATES				0.00	0.00	0.00	0
2. (0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)				0.00	0.00	0.00	0
3. (0) GRADUATE STUDENTS							0
4. (0) UNDERGRADUATE STUDENTS							0
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)							0
6. (0) OTHER							0
TOTAL SALARIES AND WAGES (A + B)							2,000
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)							400
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)							2,400
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)							
TOTAL EQUIPMENT							0
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)							500
2. FOREIGN							0
F. PARTICIPANT SUPPORT COSTS							
1. STIPENDS \$ <u> </u> 2,000							
2. TRAVEL <u> </u> 0							
3. SUBSISTENCE <u> </u> 0							
4. OTHER <u> </u> 0							
TOTAL NUMBER OF PARTICIPANTS (2)							
TOTAL PARTICIPANT COSTS							2,000
G. OTHER DIRECT COSTS							
1. MATERIALS AND SUPPLIES							0
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION							0
3. CONSULTANT SERVICES							0
4. COMPUTER SERVICES							0
5. SUBAWARDS							0
6. OTHER							0
TOTAL OTHER DIRECT COSTS							0
H. TOTAL DIRECT COSTS (A THROUGH G)							4,900
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) Salary (Rate: 59.0000, Base: 2000)							
TOTAL INDIRECT COSTS (F&A)							1,180
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)							6,080
K. RESIDUAL FUNDS (IF FOR FURTHER SUPPORT OF CURRENT PROJECTS SEE GPG II.C.6.j.)							0
L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)							\$ 6,080
M. COST SHARING PROPOSED LEVEL \$ 0				AGREED LEVEL IF DIFFERENT \$			
PI/PD NAME Sarah M Boomer				FOR NSF USE ONLY			
ORG. REP. NAME* Philip morris				INDIRECT COST RATE VERIFICATION			
				Date Checked	Date Of Rate Sheet	Initials - ORG	

SUMMARY PROPOSAL BUDGET Cumulative

ORGANIZATION Western Oregon University				FOR NSF USE ONLY			
				PROPOSAL NO.	DURATION (months)		
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR Sarah M Boomer				AWARD NO.	Proposed	Granted	
				A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)			
				CAL	ACAD	SUMR	
1. Sarah M Boomer - none				0.00	0.00	0.20	\$ 4,000
2.							
3.							
4.							
5.							
6. () OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)				0.00	0.00	0.00	0
7. (1) TOTAL SENIOR PERSONNEL (1 - 6)				0.00	0.00	0.20	4,000
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)							
1. (0) POST DOCTORAL ASSOCIATES				0.00	0.00	0.00	0
2. (0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)				0.00	0.00	0.00	0
3. (0) GRADUATE STUDENTS							0
4. (0) UNDERGRADUATE STUDENTS							0
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)							0
6. (0) OTHER							0
TOTAL SALARIES AND WAGES (A + B)							4,000
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)							800
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)							4,800
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)							
				\$	13,500		
TOTAL EQUIPMENT							13,500
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)							500
2. FOREIGN							0
F. PARTICIPANT SUPPORT COSTS							
1. STIPENDS \$ <u>3,000</u>							
2. TRAVEL <u>0</u>							
3. SUBSISTENCE <u>0</u>							
4. OTHER <u>0</u>							
TOTAL NUMBER OF PARTICIPANTS (3)							
TOTAL PARTICIPANT COSTS							3,000
G. OTHER DIRECT COSTS							
1. MATERIALS AND SUPPLIES							0
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION							0
3. CONSULTANT SERVICES							0
4. COMPUTER SERVICES							0
5. SUBAWARDS							0
6. OTHER							0
TOTAL OTHER DIRECT COSTS							0
H. TOTAL DIRECT COSTS (A THROUGH G)							21,800
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)							
TOTAL INDIRECT COSTS (F&A)							2,360
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)							24,160
K. RESIDUAL FUNDS (IF FOR FURTHER SUPPORT OF CURRENT PROJECTS SEE GPG II.C.6.j.)							0
L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)							\$ 24,160
M. COST SHARING PROPOSED LEVEL \$ 13,500				AGREED LEVEL IF DIFFERENT \$			
PI/PD NAME Sarah M Boomer				FOR NSF USE ONLY			
ORG. REP. NAME* Philip morris				INDIRECT COST RATE VERIFICATION			
		Date Checked		Date Of Rate Sheet		Initials - ORG	

C *ELECTRONIC SIGNATURES REQUIRED FOR REVISED BUDGET

7. Budget and Budget Justification

Facilitation of this project will require one major equipment purchase (digital epifluorescence microscopes), and salary to support analysis/dissemination and educational stipends for student assistants. Each of these items will be described in detail. All additional supporting technology (lab computers, PCR machines, and a DNA sequencer upgrade) will be generously provided by NSF via my renewed MO-RUI grant, which begins concurrent with the proposed start-date of this CCLI project.

Digital Epifluorescence Microscopes

Two teaching-grade epifluorescence microscopes with digital capturing ability are requested, to be shared by four teams (discounted cost = \$27000 total, down from \$29,742, Olympus price quote). Each will house two filters: one for green/FITC and the other for red/rhodamine fluorescence tags, the two most widely used fluorescent labels for FISH methods. These teaching-grade microscopes are the cheapest available models and contrast with more elaborate eukaryotic cell research grade epifluorescence microscopes that contain additional filters, significantly better oculars for publication quality images, and confocal/laser abilities (average price = \$30,000-\$80,000 each). Negligible funding for specific molecular probes (average cost = \$50-100 per probe, each enough to last 5 years) will be funded by annual department supply budgets. Digital epifluorescence microscopy, in combination with on-line assessment and web-based lab project construction will add a profound dimension to this curriculum. Digital microscopes will also be used for non-fluorescent phenotypic staining (e.g. Gram Staining) during weeks 2-4 and for epifluorescent diagnostics, enumeration studies, and imaging during weeks 5-

6. It should be emphasized that requested microscopes have no overlapping research application in my RLMO research project because my target bacteria – phototrophs - contain light-harvesting pigments that naturally autofluoresce, interfering with probe fluorescence. This was a key reason, too, that the current anoxygenic phototroph enrichment was eliminated from the proposed new project curriculum.

Salary

In order to effectively teach, assess, database, and disseminate this project between Fall, 2003 and Fall 2005, I am requesting specific funds for faculty salary and student assistantship stipends. In terms of professional faculty salary, I am requesting summer salary (0.10 person months) for each of the two years proposed in this project (2004 and 2005) when I will be involved in protocol troubleshooting and modification, and project evaluation and dissemination. In terms of student assistantships, I am requesting stipend funding for one microbiology lab teaching assistant for each offering of the new course (\$1000 per student per course). Student assistantships will be offered to biology education majors as a means to gain experience teaching and assessing new curricula; assistants will also database assessment results each term and have the opportunity to co-author and present disseminated materials from this project.