CLARISSA M. CHENEY

CURRICULUM VITAE

Department of Biology Pomona College 121 R. C. Seaver Biology Building 175 W. 6th Street Claremont, CA 91711

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EDUCATION

Ph.D. University of Pennsylvania, 1979 Biology

Thesis advisor: Dr. J. W. Lash

Thesis title: Diversification within embryonic chick somites:

differential response to notochord.

M. Phil. Yale University, 1970 Biology

B. A. Goucher College, 1969 Biological Sciences

EMBO Course on Antibodies as Probes in Development, Southampton, UK, July 1980 Molecular Biology of *Drosophila* Course, Cold Spring Harbor Laboratory, NY July 1979 Embryology Course, Marine Biological Laboratory, Woods Hole MA, Summer 1976 Invertebrate Zoology Course, Marine Biological Laboratory, Woods Hole MA, Summer 1967

PROFESSIONAL EXPERIENCE

Associate Professor of Biology, Pomona College, Claremont, CA 1997-present Chair of Biology, Pomona College, Claremont CA July 2005-July 2007

Assistant Professor of Genetics, Washington University School of Medicine, St. Louis MO 1989-1997

Assistant Professor of Biology, The Johns Hopkins University, Baltimore MD 1986-1989 Lecturer, Goucher College, Towson MD 1985-1986

Assoc. Research Scientist, The Johns Hopkins University, Baltimore MD 1982-1986 Postdoctoral Fellow, The Johns Hopkins University, Baltimore MD 1979-1982

Postdoctoral Advisor: Dr. A. Shearn

Postdoctoral Project: Biochemical analysis of *Drosophila* imaginal disk mutants.

Teaching Assistant, Embryology Course, Marine Biol. Lab., Woods Hole, MA 1978

Teaching Assistant, Undergraduate Curriculum Project, Univ. of Penna., 1975-1976

Teaching Assistant, Introductory Biology, Univ. of Penna., 1974-1975

Teacher of science, grades 9-12, Commonwealth School, Boston, MA 1972-1974

Teacher of science, grades 7-12, Day Prospect Hill School, New Haven, CT 1970-1972

Teaching Assistant, Introductory Biology, Yale Univ., 1969-1970.

HONORS

Irvine Distinguished Faculty Fellowship for mentoring of underrepresented students, Pomona College 2003

The George Owen Teaching Award for outstanding teaching (sole recipient in 1988).

Awarded by the Class of 1988, The Johns Hopkins University 1988

American Cancer Society post-doctoral fellowship 1979 (awarded, but declined)

University Fellowship, University of Pennsylvania 1978 (awarded, but declined)

Woods Hole Scholarship from Goucher College 1967

Academic Scholarship, Goucher College 1964-1968 National Honor Society, Marblehead High School, Marblehead, MA 1963

MAJOR RESEARCH SUPPORT:

NIH NRSA predoctoral trainee, Univ. of Pennsylvania (a competitive award) 1976-1979

NIH NRSA postdoctoral fellowship 1979-1983

NSF research grant, co-principal investigator with A. Shearn, 1983-1985

Basil O'Connor Starter Scholar Research Award from the March of Dimes Birth Defects Association, 1986-1989

American Cancer Society Institutional Grant award 1987, \$10,000.

Lucille P. Markey Charitable Trust Institutional Grant, (a competitive award within WashU) 1990-1992, \$60,000.

NIH BRSG award, 1990, \$9,000.

NSF research grant, "Small GTP-binding proteins and cell division control", 1992-1995, \$250,000.

NSF research grant, "RUI: Proteins that control interaction of rab GTPases and GDI", 1999-2002, \$262,000.

NSF research grant, "RUI: Proteins that control rab GDI", 2002-2006. \$265,000.

TEACHING AND MENTORING ACTIVITIES AT POMONA COLLEGE Courses:

- 1. Biology 52: Introductory Biology (Cellular and Molecular), Lab Instructor, Bio 52, Fall 1997 (3 contact hrs/wk, 33 sophomores) Fall 1997.
- 2. Biology 40: Introductory Genetics, Lecturer and Lab Instructor, Spring 1998 (7 contact hrs/wk, 31 freshmen and 1 senior); Spring 1999 (7 contact hrs/wk, 30 freshmen and 1 sophomore); Spring 2000 (7 contact hrs/wk, 27 freshmen,4 sophomores; course coordinator). Spring 2001: on sabbatical leave. Spring 2002 (7 contact hrs/wk, 30 freshmen); Spring 2003 (7 contact hrs/wk, 31 freshmen, 1 sophomore; course coordinator); Spring 2004 (7 contact hrs/wk, 30 freshmen), Spring 2006 (7 contact hrs/wk, 32 freshmen and sophomores); Spring 2007 (7 contact hrs/wk, 34 freshmen and sophomores); Spring 2009 (7 contact hrs/wk, 34 freshmen and sophomores).
- 3. Biology 169: Developmental Biology, Lecturer and Lab Instructor (2 lab sections), Fall 1998 (11 contact hrs/wk with no TAs), 25 juniors and seniors; Fall 1999 (11 contact hrs/wk with 2 TAs), 24 juniors and seniors; Fall 2000 (9 contact hrs/wk with 2 TAs, 27 juniors and seniors; Fall 2001 (11 contact hrs/wk with 1 TA, 18 seniors and 3 juniors); Fall 2002 (11 contact hrs with 1 TA, 10 juniors and 9 seniors); Fall 2003 (11 contact hrs/wk with 1 TA, 8 juniors, 12 seniors, 1 auditor); Fall 2005 (11 contact hrs.wk with 1 TA, 20 seniors); Fall 2006 (11 contact hr/wk, 15 seniors and 1 junior); Fall 2007 (11 contact hr/wk, 12 seniors and 5 juniors); Fall 2008 (11 contact hrs/wk, 7 seniors and 7 juniors).

Research Students (Total=62):

Senior experimental theses (Total =38):

1997-1998:

Miri Vanhoven (MoBio) Constructing GDI mutants in an expression vector

Currently, cell and molecular Ph.D. student, UCSF with C..

Bargmann. NSF pre-doctoral fellow.

Olivia Doyle (MoBio) P element-mediated deletions in the *quartet* genomic region

Ph.D. in Biology, Johns Hopkins with Joe Gall

Eric Kaufman (MoBio) Immunoaffinity chromatographic isolation of GDI interacting

proteins. M.D., U. Chicago

1998-1999:

Stacy Alvares (Bio) Yeast two-hybrid system to identify GDI interacting proteins

Full-time research in a *Drosophila* lab at Harvard

Medical School, 1999-2001

Currently, Ph.D. student, Cell and Molecular Biology,

Univ. Wash, Seattle

Jackie Flores Rivera (MoBio) nanos mRNA and quartet

Currently, Mol. Bio. Ph.D. program, USC.

Annie Lee (MoBio) quartet cDNA

Graduate work, in Cell and Molecular Ph.D. student,

UCBerkeley

Christina Tsou (MoBio) rab interactions of GDI mutants

M.P H., Harvard, 2001 J.D., Univ. Cal. Berkeley

Colin Havenar-Daughton (MoBio) Proteins that bind nanos mRNA

Ph.D. student, Immunology, Univ of Washington

1999-2000:

Brian Richardson (Bio) Hsp 83 and oogenesis

Ph.D, Cornell University Medical School with Mary Baylies, currently post-doc with Dr. Ruth Lehmann, NYU

Dennis Kang (Bio) Fertilization and *nanos* mRNA localization

Masters in Physical Therapy, Columbia U, in private physical therapy practice

in private physical therapy practice.

Kenji Morimoto (Bio) GDI affinity chromatography and GDI interacting proteins

M.D., Cornell Medical School, pediatric oncology resident,

UCLA

John Cupp (MoBio) Screening for *quartet* cDNAs.

M.D., UCSF

Roozbeh Houshyar (Bio) Secretion in GDI mutants

Full-time research, Yale Medical School, 2000-2001 Full-time research, UCLA Medical School, 2001-2002

M.D., Ross University

Adriana Ramirez (MoBio) Mutagenic screen for secretion mutants

Elementary school teacher, El Monte, 2000-2001

M.D., UCĽA

2000-2001 (on sabbatical Spring 2001):

Sornya Ponrartana (Bio) EMS mutagenic screen for pupal lethals

M. D., USC

2001-2002:

Maria Christenson (Bio) Mapping of AL289

M.P.H., USC, in D. Pharm program UCSF

Ryan Skophammer (Bio) Isolation of gene trap mutants that interact with GDI

Ph.D. student in Mol. Biol, UCLA

Joe Lee (Bio) Tbox genes in mice

M.D., Univ. of Pennsylvania

2002-2003:

Janetta Iwanicki (Bio) Female sterile phenotype of 35D GDI interactor

M.D. student at UCSF

Laurence Meloty-Kapella (Bio) rab26 as a candidate GDI interactor in 78A

M.S. Cal State SF, Ph.D. student in Molecular Biology at

UCLA

Mika Izutsu (Bio) Female sterile phenotype of 43C interactor

M.D. student, Univ. Hawaii

Sarom Pyun (Bio) Mapping the spa2 GDI interactor

TeachAmerica

2003-2004:

Lillias Holmes (Bio) Female sterile phenotype of 35D GDI interactor

M.D. student, Univ. of Pennsylvania; surgery intern,

Harvard

Ryan Takeshita (Bio) Phenotype and sequence of new GDI alleles

Ph.D. student, MCDBiology, UColorado, Boulder

Steve Wylie (Mo Bio) GST-GDI pull-down studies of GDI interactors

Ph.D. student, Biology, Johns Hopkins Univ, deceased

3/09.

Shannon Wolff (Neuro) commissureless as a candidate GDI interactor

M.D. student, Univ. Nevada, Reno

2004-2005 (on medical leave Fall 04, sabbatical Spring 05):

Michelle Keese (MoBio) rab26 as a GDI interactor

M. D. student, U Chicago

Naveen Sangji (MoBIo) Gint3 as a GDI interactor

M.D. student, Harvard HST program

Alexis Moore (Bio) The 43C GDI interactor

D.D. S. student, Harvard Dental School

2005-2006:

Dan Holtzman (MoBio) Molecular analysis of GDI-Gint3 interaction

M.D. student, UCSF

Erin Kahle (MoBio) Gint3 expression and cellular localization

Research lab technician, NIH

Anne Kirk (Neuroscience) Comm phenotype in GDI mutants

M.D. student, UTSW medical school

David Levine (Biology) Analysis of mutant GDI proteins in flies

High school science teacher, Chicago, for 2 years M.D. student, Washington University in St. Louis

Amy Rapp (Biology) Molecular analysis of Comm-GDI interaction

M. D. student, UTexas

2006-2007:

Jonathan Lee (MoBio) Using yeast systematic genetic array to find GDI interactors

M. D. student, UChicago

2007-2008: (on sabbatical Spring 08)

Palak Amin (MoBio) Making tagged GDI transgenes in *Drosophila*

NIH post-bac research, applying to Biochem PhD programs

Simiao Amy Li (MoBio) GFP-tagging Gint3 in *Drosophila*

Applying to medical school

2008-2009:

Reed Ayabe (MoBio) FRET analysis of Gint3-GDI interactions in *Drosophila*

Connie Cheng (MoBio) Gint3, GDI and degradation and p97 interactions in *Drosophila*

Amelia Nordmann (Biology) GDI-Gint3 interactions using QCM-D and DPI

2009-2010:

Kimberly Chau '10 In situ studies of Gint3 embryonic expression Ben Kozak '10 Mass spec analysis of Gint3 interactors Hemocyte behavior in Gint3 mutants

Other Research Students:

1997-1998:

Alice Chen Mapping AL289 (REU)

Ph.D. student in Biology at Johns Hopkins University, Weintraub

Prize recipient 2005, post-doc with Doug Melton, Harvard

John Cupp Making FRT GDI null mutant constructs (REU)
Kenji Morimoto Germ-line GDI clones (REU)
Christina Tsou Germ-line quartet clones (REU)

Summer 1998

Stacy Alvares Yeast two-hybrid system to identify GDI interacting proteins (Hughes)

Kenji Morimoto Proteins that interact with GDI (REU)

Devin Johnsen Mapping AL289, a new female sterile mutant (SURP)

M.S. in Animal Science, Cal Poly, Pomona; D.V. M.,

UC Davis, in private vet practice, Oakland CA

Vinoy Prasad Site-directed mutagenesis to put GDI mutants into an expression vector

Applying to medical school 2002-2003 (REU)

1998-1999:

Mindy Miner Sequencing new open reading frames in *quartet* mutants (REU)

Currently, Ph.D. student in epidemiology at UWash

Devin Johnsen Mapping AL289 using P element mediated male recombination (REU)

Kenji Morimoto
Dennis Wu
Constructing stocks for mutagenic screens
April Kinkade
Song Ahn
Caroline Kuo
Credit
Constructing stocks for mutagenic screens

M. D., USC

Frances Chiu Constructing stocks for mutagenic screens (volunteer)

M. D., UCLA

Summer 1999:

Tom Vasquez Confirming FRT GDI null mutant constructs (CAMP)

M.S. in organic chemistry, UCIrvine, Chem Lab Coordinator,

Pomona College

Selena Cataldo quartet cDNAs (REU)

M.D., Northwestern

Devin Johnsen Mapping AL289 using P-element mediated male recombination

(HHMI)

Dennis Wu
Song Ahn
Caroline Kuo

Constructing stocks for mutagenic screens

Fall 1999:

Tom Vasquez Confirming FRT GDI null mutant constructs (NSF grant)

April Kinkade Deficiency screen for GDI interacting genes (credit), Ph.D. student ,Biology, UC San Diego

Spring 2000:

April Kinkade Deficiency screen for GDI interacting genes (NSF grant)

Summer 2000:

Terri Abe Screen for dominant GDI enhancers (REU)

M.D., USC

Ryan Skophammer P screen for pupal lethals (SURP)

Currently, Ph.D. student, Mol. Biol., UCLA

Sumire Kawai Deficiency screen for GDI interacting genes (SURP)

M. D., UCSD, currently intern Cedars Sinai

Randy Gastwirt Proteins that bind to GDI (Hughes)

Currently, Ph.D. student in Biochemistry, UCSD

Devin Johnsen Mapping AL289 (NSF grant)
Dennis Kang Fertilization and *nanos* mRNA localization (NSF grant)

Fall 2000:

Sara Turner Glue secretion in GDI mutants (REU)

Currently Ph.D. student in Biology, Purdue Univ.

Octav Constantinescu Larval serum protein secretion in GDI mutants (NSF grant)

M.D. student, UCLA

Randy Gastwirt Proteins that bind to GDI
Ryan Skophammer P screen for pupal lethals
Terri Abe P screen for dominant GDI enhancers

(NSF grant)
(NSF grant)

Spring 2001 (on sabbatical):

Sara Turner Glue secretion in GDI mutants (NSF grant)
Ryan Skophammer
Terri Abe Screen for pupal lethals (NSF grant)
Sumire Kawai Deficiency screen for GDI interacting genes (NSF grant)

Summer 2001:

Ryan Skophammer Gene trap screen for GDI interactors (SURP grant)
Maria Christenson Mapping the AL289 interactor (SURP grant)
Sumire Kawai Deficiency screen for GDI interactors (SURP grant)

Fall 2001:

Janetta Iwanicki Female sterile phenotype of a 26A GDI interactor (REU)
Mika Izutsu Female sterile phenotype of a 35C GDI interactor (NSF grant)

Spring 2002:

Janetta Iwanicki Female sterile phenotype of a 26A GDI interactor (NSF grant)

Laurence Meloty-Kappela Mapping 78A GDI interactor (REU)

Summer 2002

Janetta Iwanicki Female sterile phenotype of a 26A GDI interactor (Beckman fellowship)

Laurence Meloty-Kappela Mapping 78A GDI interactor
Shannon Wolff Mapping AL289
Steve Wylie GST-GDI pull-down
(REU)
(SURP)

Fall 2002:

Steve Wylie GST-GDI pull-down (REU grant)

(Beckman Fellowship)

Megha Shah Female sterile phenotype of 49F interactor (NSF grant) M.D. student, U. Chicago Complementation of new GDI alleles (NSF grant) Jonder Ho Naveen Sangji GDI two-hybrid interactor (NSF grant) **Spring 2003:** Sequencing new GDI alleles Rvan Takeshita (REU grant) Sequencing a GDI interactor (NSF grant) Naveen Sangji **Summer 2003:** Sequencing a GDI interactor (SURP-Irvine grant) Naveen Sangji Megha Shah Female sterile phenotype of 49F interactor (Irvine Faculty grant) Michelle Keese rab26 as a GDI interactor (Irvine Faculty grant) Complementation of new GDI alleles (NSF grant) Jesse Mays Shannon Wolff 71F GDI interactor (NSF grant) Steve Wylie GST-GDI pull-down (SURP grant) Janetta Iwanicki 35D interactor (Beckman fellowship) Fall 2003: Megha Shah Female sterile phenotype of 49F interactor (NSF grant) rab26 as a GDI interactor (NSF grant) Michelle Keese Jesse Mays Complementation of new GDI alleles (NSF grant) Paul Robustelli Identifying the 49F interactor (for credit) Shalini Lal Pheromone synthesis in the 35D interactor (NSF grant) **Spring 2004:** Daniel Holtzman GDI-GDI interactions in yeast 2 hybrid (for credit) Paul Robustelli Making a rab-null GDI (for credit) Ph.D. student, Cambridge (England) University, Gates-Cambridge Fellowship, NSF predoctoral graduate research fellowship. **Summer 2004:** Michelle Keese rab26 as a GDI interactor (Merck fellowship) (NSF grant) (SURP grant) Naveen Sangji Gint3-GDi interactions Amy Rapp Comm-GDI interactions Alexis Moore (SURP) grant 43C GDI interactor Dan Holtzman GDI-GDI interactions in yeast 2 hybrid (NSF grant supplement) **Fall 2004** (on medical leave to have both hips replaced): Dan Holtzman GDI-GDI interactions in yeast 2 hybrid (for credit) Comm-GDI interactions Amy Rapp NSF grant **Spring 2005** (on sabbatical): Dan Holtzman '06 GDI-GDI interactions in yeast 2 hybrid (for credit) Eric Otieno '07 Putting Gint3 into a P vector (NSF grant) Putting AK307 into Y2H (NSF grant) Palak Amin '08 Amy Rapp '06 Comm-GDI interaction (for credit) **Summer 2005** Michelle Keese '05 rab26 and GDI function (SURP) Gint3-GDI pull-downs (NSF grant) Naveen Sangii '05 Jonathan Lee '07 35D GDI interactor (NSF supplement) Anne Kirk '06 Comm phenotype in GDI alleles (NSF supplement)

GDI-Gint3 interaction in MMIII

Dan Holtzman '06

Amy Rapp '06	Comm-GDI interaction	(NSF grant)
Fall 2005 Palak Amin '08 Jonathan Lee '07 Eric Otieno '07 Michael Lawson '09	Cloning AK307 into pLexA Mapping the j5 GDI mutant Cloning Gint3 into pUASp Which part of Gint3 binds GDI	(NSF grant) (for credit) (NSF grant) (volunteer)
Spring 2006 Palak Amin '08 Simao Li '08 Michael Lawson '09 Prashant Kotwani '09	Cloning AK307 into pLexA Making a rab-null GDI mutant Which part of Gint3 binds GDI Putting Gint3 fly mutants into marked backs	(NSF grant) (dept. support) (volunteer) ground (volunteer)
Summer 2006 Palak Amin '08 Simiao Li '08 Mike Lawson '09	Tagging GDI and Gint3 in flies Tagging Gint3 with GFP Bioinformatics of Gint3 and rabs	SURP SURP HHMI
Dan Holtzman '06	Interactions of GDI and Gint3	Beckman
Fall 2006 Palak Amin '08 Simiao Li '08 Paul Fields '09 Jasmine Walia '09	Tagging GDI and Gint3 in flies Tagging Gint3 with GFP Sequencing GDI alleles GDI in Y2H	(for credit) (for credit) (for credit) (for credit)
Spring 2007 Palak Amin '08 Simiao Li '08 Paul Fields	Tagging GDI and Gint3 in flies Tagging Gint3 with GFP Sequencing GDI alleles	(for credit) (for credit) (for credit)
Summer 2007 Palak Amin '08 Simiao Li '08 Connie Cheng '09 Kimberly Chau '10	Tagging GDI and Gint3 in flies Tagging Gint3 with GFP QCM-D on GDI and Gint3 Fly segmentation strains for Bio169	HHMI SURP Rose Hills Steller
Fall 2007 Connie Cheng '09 Reed Ayabe '09 Kim Chau '10	QCM-D on GDI and Gint3 Gint3 Antibody and Immunostaining Gint3 RNAi flies	(for credit) (for credit) (for credit)
Spring 2008 (on sabb Connie Cheng '09 Reed Ayabe '09 Kim Chau '10 Amy Briggs '10	oatical) Gint3 function Gint3 Antibody and Immunostaining Gint3 RNAi flies Overexpression of Gint3	(for credit) (for credit) (for credit) (dept. support)
Summer 08 Palak Amin '08 Reed Ayabe '09 Kimberly Chau '10 Amelia Nordmann '09	Tagging GDI and Gint3 in flies Localization of GFP-Gint3 Gint3 RNAi flies 9 GDI-Gint3 interactions and QCM-D	Dean's Office and Sigma Xi HHMI SURP Merck

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rly Chau '10 Gint3 RNAi flies (for credit) Bruke Tedla '11 GDI and choline kinase interaction (for credit) Janet Ma '11 GDI and diablo interaction (for credit)

Spring 09

Kimberly Chau '10	Gint3 RNAi flies	(for credit)
Bruke Tedla '11	Gint3 mutants	(for credit_
Janet Ma '11	Hemocytes in GDI mutants	(for credit_
Vincent Chan '11	quartet sequencing	(volunteer)
Christine Kho '11	Cloning COOH-Gint3	(for credit)
Ben Kozak -10	Gint3 interactors in flies	(for credit)

Summer 09

Kimberly Chau'10	Expression of Gint3	SURP
Ben Kozak '10	Gint3 interactor in flies	Beckman
Christine Kho '11	QCM-D and COOH-Gint3	Merck
Janet Ma '11	Endocytosis in GDI hemacytes	(for credit)
Bruke Tedla '11	5307 and SAL3 rescue	(for credit)
Vincent Chan '11	GDI modification	(volunteer)

Fall 09

Bruke Tedla '11	Gint3 mutants	(for credit)
Vincent Chan '11	GDI modification	(for credit)
Gabriel Friedman '12	Hemocytes in GDI mutants	(for credit)

In addition to these research students, several students are involved each year in support activities in the lab.

Library Senior Thesis Students (reader): (1997-1998) P. Koh (Neurobiology), S. Lehto (Molecular Biology), M. Wu (Molecular Biology), A. Chen (Biology); (1998-1999) A. Huang (Neurobiology), E. Scheppke (Molecular Biology), M. Reiss (Biology); (1999-2000) D. Senning (MoBio); (2000-2001-on sabbatical spring semester) K. Frank (Bio), R. Gastwirt (Bio); (2001-2002) C. Ma (Bio), A. Bell-Hibbs; (2002-2003) A. Hahn (MoBio); (2008-2009) Lauren Lederle (Neuro) (Total = 13)

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Advisor to (Spring 1998):11 students
            (1998-1999): 28 students
            (1999-2000): 25 students
            (2000-2001): 21 students
            (2001-2002): 16 students
            (2002-2003): 15 students
            (2003-2004): 17 students
            (2004-2005): 15 students
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(2005-2006): 10 students (plus 4 from L. Seligman, who was on sabbatical) (2006-2007): 16 students (plus 25 from Hoopes, Hanzawa and Levin who were on sabbatical)

(2007-2008): 20 students (2008-2009): 23 students

(2009-2010):

ADMINISTRATIVE AND SERVICE ACTIVITIES AT POMONA COLLEGE

1997-1998 Member, Biology Department Review Committee.

1998-1999 Member, Pomona College Admissions Committee

Biology Department Bulletin Board Person

1999-2000 Biology Department Library Liaison

Biology Department Bulletin Board Person

Member, Biology Department New Building Committee

2000-2001 Biology Department Library Liaison

Biology Department Bulletin Board Person

Womens' Commission (Fall only, on sabbatical in Spring)

Member, Biology Department New Building Committee

2001-2002 Biology Department Bulletin Board Person

Member, Biology Department New Building Committee

Member, Pomona College Medical Sciences Committee

2002-2003 Biology Department Bulletin Board Person

Member, Biology Department New Building Committee

Member, Pomona College Faculty Personnel Committee

Member, Watson Fellowship Committee

Member, Search Committee for Biology Department Chair, Harvey Mudd College

2003-2004 Biology Department Bulletin Board Person

Seaver South Building Chair

Member, Biology Department New Building Committee

Member, Pomona College Faculty Personnel Committee

Member, Computational Biology Search Committee

2004-2005: On medical leave, Fall 04, to have both hips replaced.

On sabbatical, Spring 05

HHMI summer student coordinator

2005-2006: Biology Department Chair

Member, Alumni Reunion Planning Committee

HHMI summer student coordinator

2006-2007: Biology Department Chair

HHMI summer student coordinator

Beckman Grant Co-PI, with Dan O'Leary

2007-2008: On sabbatical Spring 08

Watson Fellowship Committee

HHMI summer student coordinator

Beckman Grant Co-PI, with Dan O'Leary

Pomona representative to HHMI diversity conference, Jan. 08 in Chevy Chase, MD

Member, Seaver South Renovation Steering Committee

Freshman Book Discussion Leader

2008-2009 Watson Fellowship Committee

HHMI summer student coordinator

Member, Seaver South Renovation Steering Committee

Beckman Grant PI

Biology Department Senior Thesis Czar

Harassment and Discrimination Grievance Committee

Faculty Participant, Orientation Adventure Sea Kayaking Trip

Freshman Book Discussion Leader

2009-20010 Watson Fellowship Committee

HHMI summer student coordinator

Beckman Grant PI.

Biology Department Senior Thesis Czar

Harassment and Discrimination Grievance Committee

TEACHING AND MENTORING ACTIVITIES AT WASHINGTON UNIVERSITY

Thesis Students:

Janelle Jakubowski, 1995-1997, (transferred to Kerry Kornfeld's lab at Wash. U. when I moved to Pomona College. Finished Ph.D. October 2001).

Trina Sarafi, 1994-1996. M.S., Washington University, in May 1997 (Transferred 12/96 to Brandeis Univ. for personal reasons, did Ph.D. with P. Sangupta, May 2001).

Joseph E. Zahner, 1987-1992. Ph.D., 1992, Johns Hopkins University (Postdoc with J. Pringle, UNC, 92-94, postdoc with K Blumer, WashU 94-95, Assistant Professor of Biology, St. Louis University, St. Louis, MO 96-00, left to start a biotech start-up company)

Courses:

- 1. Coursemaster, Special Topics in Developmental Biology: Advanced *Drosophila* Developmental Genetics (20 hrs/year), 1994-1996.
- 2. Coursemaster, Cell Motility and the Cytoskeleton Journal Club 1992-1994
- 3. Coursemaster, Developmental Biology Journal Club 1992-1994
- 4. Lecturer, Advanced Genetics (8 hrs/year) 1991-1997
- 5. Lecturer, Graduate Developmental Biology (10.5 hrs/year)1992-1994, 1996
- 6. Lecturer, Molecular Cell Biology (Graduate Students) (6 hrs/year) 1990-1992.
- 7. Lecturer, Molecular Cell Biology (Medical Students) (3 hrs/year) 1990-1993
- 8. Discussion Leader, Ethics in Scientific Research (12 hrs/year) 1996.
- 9. Discussion Leader, Molecular Cell Biology (Graduate Students) 8 hrs/year, 1993, 1996.
- 10. Discussion leader (with J. Cooper), 1st year Medical Student Minicourse on Human Genetic Diseases of the Cytoskeleton (12 hrs/year) 1991 and 1992.

Qualifying Exam Committee for: (1992) M. Hermiston, J. Wu (Chair), L. Wilson, A. Jones; (1993) T. Hesman, B. Hug, D. MacIvor, D. McEwen, S. Srinivasa; (1994) C. Colledge (Chair), M. Kankel (Chair), H. Holemon, T. Meier, U. DeSilva, M. Arlt, T. Griffith, D. Wang, M. Wielgosz, S. Trejo, K. Wang, P. Golin, R. Emmons, J. Han, M. Li, R. Truong; (1995) C. Fu, A. Deora, S. Gary, K. Iovine, R. Murphy, R. Kundra; (1996) S. Tanenbaum (Chair), S. Gorski (Chair), E. Garabedian (Chair); (1997) A. Brands, T. Stokes, K. Moulder, A. Reddy. (Total=38)

Thesis Committee for: P. Jay (Ph.D., 1994), J. Waddle (Ph.D., 1994), V. Mermall (Ph.D. 1994), A. Jones (Ph.D., 1995) J. Dobrowolsky, (Ph.D., 1996), L. Wilson Berry (Ph.D., 1998), C. Colledge (Ph.D., 1998), R. Emmons, T. Hesman (Ph.D., 1998), S. Ford (M.S., 1997), R. Murphy (Ph.D. 1998), R. Huber. (Total=12)

Graduate Rotation Students: (1990) J. Hiken; (1991), L. Strelow; (1992) R. Kundra; (1993) M. Kankel, M. Arlt, S. Gary, C. Manahan, (1994) T. Sarafi, W. Lyon, R. Bannerjee, A. Brands, S. Gorski; (1995) J. Jakubowski, P. Kulcharyk, W. Vukovich (exchange student from Regensburg University, Germany), A. Schaefer; (1996) T. Rakhra, M. Vogel (exchange student from Regensburg University, Germany). (Total=18)

Undergraduate Research Students: *WashU students*: W. Lewis, 1992-1995; S. Tanenbaum, 1992-1993; Nicole Nguyen, 1994-1995; D. Sun, 1996-1997; M. Boonyapredee, 1996; (Total = 5) *non-WashU students*: A. Adams (Whitman College), summer 1990; A. Jellin (Evergreen State College), summer 1991; M. Trevathan (Duke University), summer 1995; S. Mehta (Univ. of Pennsylvania), summer 1996. (Total=4)

Undergraduate Honors Thesis Student: Sara Tanenbaum, 1992-1993. B. A. with honors, Washington University, 1993 (Ph.D. 2000, Washington University with R. Cagan, currently works at Exelexis, a biotech company in Northern California).

Post-doctoral Fellow: Dr. Nancy Kravit, 1990-1992.

ADMINISTRATIVE AND SERVICE ACTIVITIES AT WASHINGTON UNIVERSITY

Graduate Admissions:

- 1. Chairman, Graduate Admissions Committee A, Div. of Biology and Biomedical Sci., 1994-1995 and 1995-1996 (Two full "seasons"). This was a 12-person committee that was one of two committees that considered applicants for admission to the Ph.D. programs for 7 sub-programs within the single, inter-departmental umbrella biomedical Ph.D. program at WashU. Total enrollment in the program was about 500 students, with a total of about 700 applications each year.
- 2. Graduate Admissions China Initiative, March 1996. One of two faculty sent by Washington University to interview students in Shanghai and Beijing for admission to graduate study in the Division of Biology and Biomedical Sciences
- 3. Committee member, Graduate Admissions Committee A, Div. of Biology and Biomedical Sci. 1992-1996 (Four full "seasons").

Developmental Biology Graduate Program and related activities:

- 1. Co-director, Developmental Biology Summer Undergraduate Research Program, 1995-1997 (Co-Principal Investigator, with P. Taghert, P.I., of the NSF-REU grant that funded this program through 1998). This was a summer research internship program that sponsored about 20 students per summer. In addition to research, the program sponsored weekly ethics and journal club discussions and workshop introductions to different developmental organisms and techniques.

 2. Committee member, Developmental Biology Graduate Program Steering Committee 1991-
- 2. Committee member, Developmental Biology Graduate Program Steering Committee 1991-1996
- 3. Committee member, Admissions Committee, Developmental Biology Summer Undergraduate Research Program 1990-1995
- 4. Co-organizer, Developmental Biology Graduate Program Mini-symposium, 1993 and 1994.
- 5. Committee member, Graduate Recruiting Committee, Div. of Biology and Biomedical Sci. 1992-1993
- 6. Faculty advisor, Cell and Molecular Graduate Program Student Retreat Organizing Committee, 1996
- 7. Faculty advisor, Developmental Biology Graduate Program Student Retreat Organizing Committee, 1997.

Other:

Committee member, Compton Scholarship Committee for undergraduate scholarships (Hilltop campus), Spring 1996.

TEACHING, MENTORING, AND ADMINISTRATIVE ACTIVITIES AT JOHNS HOPKINS UNIVERSITY

Coursemaster and sole faculty member in charge for Experimental Molecular and Cellular Biology Laboratory I and II, 1986-1989. This was a two-semester sequence required for sophomore and junior biology majors and consisted of 13 different laboratory exercises per semester. The labs included exercises such as ion-exchange chromatography, thin-layer electrophoresis, enzyme kinetics and Western blotting. The course had a typical enrollment of

200-250 students per semester and a staff of 14-18 graduate teaching assistants and 4-5 workstudy students. The Owen teaching award was given to me by the 1988 graduating senior class for my role in this course.

Undergraduate research students: *JHU students*: J. Holland, 1985-1989; M. Takeno, 1986; J. Clark, 1986-1988; M. Goldstein, 1986-1988; J. Kang, 1984-1986; D. Lindsay, 1986-1988. (Total=6)

Goucher students: K. Kersbergen (1986); S. A. Brown (1987); S. E. Brown (1988); A. O'Meara (1988). (Total = 4)

Graduate rotation students: (1986) J. Miner, T. Burn; (1987), B. Peculis, J. Zahner, J. Macke. (Total=5)

Committee member, Pre-health careers advising committee, 1987-1989.

Faculty advisor to 40 sophomore, junior and senior biology majors, 1986-1989.

TEACHING ACTIVITIES AT GOUCHER COLLEGE

Coursemaster and sole lecturer, Molecular Genetics (40 hrs/semester), Fall 1985. This was an advanced elective for juniors and seniors.

Coursemaster and sole lecturer, Genetics, (40 hrs/semester), Spring 1986. This was a required course for sophomore biology majors.

INVITED SEMINARS AND TALKS

Invited speaker, Blue Room Talk Series, Pomona College, Oct. 2008

Invited seminar speaker, Keck Graduate Institute, Claremont, March 2008

Invited seminar speaker, Pomona College, HHMI/HMC summer seminar series, June 21, 2006.

Invited panel speaker, UC Irvine Graduate Careers Workshop, Oct. 2005

Invited seminar speaker, Department of Biochemistry, St. Louis University School of Medicine, St. Louis MO, February 2005

Invited panel speaker, Caltech Careers Symposium for grad students, Pasadena CA, 2003

Invited panel speaker, Panel on Drosophila research at Primarily Undergraduate Institutions,
Undergraduate teaching workshop, National Drosophila Research Conference,
Washington DC, March 2001

Invited seminar speaker, Developmental Biology Group, Univ. of California, Irvine, 2001

Invited seminar speaker, Dept. of Biology, California State University, Fullerton, 2001

Invited speaker, Southwest Drosophila Research Meeting, Irvine, CA, June 1998.

Invited speaker, "Frontiers of Biology", a symposium honoring the retirement of Professor Ann Lacy, Goucher College, Towson MD, April 1998.

Invited panel speaker, "Teaching and Research at Primarily Undergraduate Institutions," National Drosophila Research Conference, March 1998.

Invited seminar speaker, Dept. of Biology, Harvey Mudd College, 1997

Invited seminar speaker, University of Cayey, Cayey, Puerto Rico, 1997

Invited seminar speaker, Department of Biology, St. Louis University, 1997

Invited seminar speaker, University of Cayey, Cayey, Puerto Rico, 1996

Invited minisymposium speaker, Am. Soc. for Cell Biology meeting 1994

Invited seminar speaker, Drosophila Discussion Group, St. Louis University 1994

Invited seminar speaker, Dept. of Biology, Wright State University, Dayton, OH 1994

Invited seminar speaker, Dept. of Biology, Washington University, St. Louis, MO 1993

Invited speaker, FASEB conference on GTP binding Proteins and Vesicle Trafficking 1992

Invited seminar speaker, Dept. of Cell Biology, Washington University School of Medicine, St. Louis, MO 1992

Invited seminar speaker, Dept. of Biology, Univ. of Michigan, Ann Arbor, MI 1990

Invited seminar speaker, Dept. of Biology, Brooklyn College, Brooklyn, NY 1987

Participant, Molecular Membrane Biology Gordon Research Conference 2005

Participant, Developmental Biology Gordon Research Conference 2005

Participant, FASEB conference on mRNA transport 1994

Participant, Developmental Biology Gordon Research Conference 1993

Participant, FASEB meeting on ras GTPases 1993

PEER REVIEW ACTIVITIES

Panelist, NSF panel on Graduate Research Fellowships, February 2003, February 2004, February 2005 (Chair of Biology and Developmental Biology Panel), February 2006 (Chair of Microbiology, Developmental Biology and Computational Biology Panel), February 2007 (Chair of Genetics and Evolutionary Biology Panel), February 2008 (Molecular and Developmental Biology), February 2009 (Molecular and Developmental Biology).

Panelist, NSF panel on Cellular Organization, October 2002; May 2003; October 2003.

Panelist, NSF panel on Course, Curriculum, and Laboratory Instruction, July 2001.

Panelist, NSF panel on Instructional Materials Development for Secondary School Science, July 1992, January 1993, July 1993, January 1994, July 1994.

Panelist, NSF panel on Research Opportunities and Career Advancement for Women (Division of Integrative Biology and Neuroscience), March 1993

Reviewer, NSF molecular and cellular biology program, 1992, 1996, 1999, 2000, 2008; mechanismsof animal development program, 1994, 1996; Developmental Neuroscience, 2002.

Reviewer, Ohio Cancer Research Associates, 1995.

Reviewer for Genetics and for Cell Motility and the Cytoskeleton, 1992; for Gene, 1996.

Textbook Reviewer for:

Genetics by R. Brooker, Benjamin/Cummings Press, 1999

Genetics by P. Russell . Cummings, 2001

Genetics by Snustad and Simmons, Wiley, 2001

OTHER PROFESSIONAL ACTIVITIES

Tenure reviewer for University of Richmond, VA, August 2008.

Tenure reviewer for Dickinson College, Carlisle, PA December 2007.

Tenure reviewer for Monmouth University, New Jersey, Oct. 2007.

Committee member, external review committee for Biology Department Review, University of San Francisco, April 2007

Committee member, Masters Thesis in Biology for Carlos Rosales, at Cal Poly Pomona, March 2005.

Co-organizer and panel participant, Panel on Drosophila research at Primarily Undergraduate Institutions, Undergraduate teaching workshop, National Drosophila Research Conference, Washington DC, March 2004

Session chair, Cell Biology and the Cytoskeleton Platform Session, National Drosophila Research Conference, San Diego, CA April 2002.

PROFESSIONAL SOCIETIES AND ORGANIZATIONS:

Society for Developmental Biology Genetics Society of America American Society for Cell Biology American Association for the Advancement of Science Project Kaleidoscope Faculty 21

PROFESSIONAL DEVELOPMENT

Pac 4 Workshop, Pomona College 1998

Teaching workshop on classes of 20-30, Pomona College 1999

Project Kaleidoscope Faculty 21 National Assemblies, Chicago, September 1998; Washington DC, October 1999; Tucson, Arizona, December 2000.

Workshop on technology in the classroom, Pomona College, June 1999

Workshop on teaching Developmental Biology laboratory, Univ. of Maine Marine Lab, Damariscotta, Maine, June 1999

Workshop on using Drosophila in the Developmental Biology Laboratory, Univ. of Maine Marine Lab, Damariscotta, Maine, June 2001

Yeast Genetics and Genomics Course, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY August 2006

COMMUNITY OUTREACH ACTIVITIES:

Invited speaker to Mt. Baldy Group of the Angeles Chapter of the Sierra Club, Claremont CA, on the environmental aspects of the R.C. Seaver Biology Building, July 2005

Science Fair Judge for the Monsanto Scholarship (awarded to the best 12th grade entrants)St. Louis Science Fair, St. Louis, MO 1993-1997.

Guest teacher, Riverview Gardens Middle School, Florissant, MO October 1995 Guest teacher, Gateway Middle School, St. Louis, MO October 1996

PUBLICATIONS

Refereed Publications:

- **1. Cheney, C. M.** and J. W. Lash. 1981. Diversification within embryonic chick somites: Differential response to notochord. Devel. Biol. 82: 288-298
- **2.** Cheney, C. M. and A. Shearn. 1983. Developmental regulation of imaginal disc proteins: Synthesis of a heat shock protein under non-heat shock conditions. Devel. Biol. 95: 325-330.
- **3.** Ostrovsky, D., C. M. Cheney, A. W. Seitz, and J. W. Lash. 1983. Fibronectin distribution during somitogenesis in the chick embryo. Cell Differentiation 13: 217-223.
- **4.** Lash, J. W., A. W. Seitz, **C. M. Cheney**, and D. Ostrovsky. 1984. On the role of fibronectin during the compaction stage of somitogenesis in the chick embryo. J. Exp. Zool. 232:197-206.
- **5.** Cheney, C. M. and J. W. Lash. 1984. An increase in cell-cell adhesion in the segmental plate results in a meristic pattern. J. Emb. Exp. Morph. 79:1-10.
- **6. Cheney, C. M.,** K. G. Miller, *T. J. Lang**, and A. Shearn. 1984. Specific protein modifications are altered in a temperature-sensitive *Drosophila* mutant. Proc. Nat. Acad. Sci. 81: 6422-6426.

- **7.** Simcox, A. A., **C. M. Cheney**, E. Hoffman, and A. Shearn. 1985. A deletion of the 3' end of the *Drosophila* hsp70 gene increases the stability of the mutant mRNA during recovery from heat shock. Molec. Cell. Biol. 5: 3397-3402.
- **8. Cheney, C. M.** and T. J. Lang. 1986. Defects in protein modification precede developmental defects in I(3)c21RRW630, a temperature-sensitive *Drosophila* developmental mutant. Devel. Biol. 114: 43-41.
- **9. Cheney, C. M.** and T. J. Lang. 1988. Developmental and protein modification defects caused by mutations in the *Drosophila* gene, *l*(3)*c*21*R*. Devel. Biol. 130: 551-557.
- **10.** Zahner, J. E. and **C. M. Cheney.** 1990. *quartet*: a *Drosophila* developmental mutation affecting chromosome separation in mitosis. Devel. Gen., 11:27-40
- **11.** Zahner, J. E. and **C. M. Cheney**. 1993. A *Drosophila* homolog of bovine smg p25a GDP dissociation inhibitor (GDI) undergoes a shift in isoelectric point in the developmental mutant, quartet. Molec. Cell. Biol. 13:217-227.
- **12.** Cheney, C. M., N. G. Kravit, and J. W. Verbsky. 1993. A new myosin I gene in *Drosophila*. Bioc. Biop. Res. Comm. 3:1280-1288.
- **13.** Garrett, M. D., A. K. Kabcenell, J. E. Zahner, T. Sasaki, Y. Takai, **C. M. Cheney** and P. J. Novick. 1993. Interaction of Sec4 with GDI proteins from bovine brain, *Drosophila melanogaster* and *Saccharomyces cerevisiae*: Conservation of GDI membrane dissociation activity. FEBS Letters 331:233-238.
- **14.** Garrett, M., J. E. Zahner, C. M. Cheney and P. Novick. 1994. GDI1 encodes a GDP dissociation inhibitor that plays an essential role in the yeast secretory pathway. EMBO J. 13:1718-1728.
- **15.** Ricard, C. S., J. M. Jakubowski, J. W. Verbsky, M. A. Barbieri, *W. M. Lewis**, G. E. Fernandez, M. Vogel, *C. Tsou*,* *V. Prasad** P. Stahl, G. Waksman and C. M. Cheney. 2001. *Drosophila* rab GDI mutants show developmental defects but normal rab membrane extraction. Genesis: The Journal of Genetics and Development 31:17-29.

Book Chapters:

- **1.** Lash, J. W. and C. M. Cheney. 1982. "Diversification within embryonic chick somites: in vitro analysis of proteoglycan synthesis", in Differentiation in vitro: British Society for Cell Biology Symposium 4, M. M. Yeoman and D. E. S. Truman, eds, Cambridge University Press, pp.193-206
- **2.** Ruderman, J. V., T. R. Tansey, E. T. Rosenthal, T. Hunt and C. M. Cheney. 1983. "Spatial and temporal aspects of gene expression during *Spisula* embryogenesis", in Time, Space and Pattern in Embryonic Development, W. R. Jeffery and R. A. Raff, eds., Alan R. Liss, Inc., New York, pp. 49-63.

Manuscripts in preparation:

1. Palak P. Amin, Simiao Amy Li, Connie Y. Cheng, Reed Ayabe, Alex Chien-You Chen¹, Brian E. Richardson*, Katherine L. Ayres*, Daniel J. Holtzman*, Naveen F. Sangji*, Alexis K. Moore*, Erin Kahle*, Paul Robustelli*, Michael Lawson*, Michelle Keese*, Alyssa Cope*,

Andre Cavalcanti, Daniel Martinez and Clarissa M. Cheney Rab GDP Dissociation Inhibitor (GDI) interacts with Gint3, a PUG and UBX Domain protein. In preparation Biochemical and Biophysical Research communications.

- **2.** *Takeshita*, *R. A**, *Levine*, *D. M.**, *Mays*, *J.**, *P. A. Fields**, H. Minye, J. Merriam and C. M. Cheney. Genetic analysis of *Drosophila* rab GDP dissociation inhibitor (GDI) mutations. In preparation for Genetics.
- **3.** Keese M. L.*, L. Meloty-Kapella*, Wolff S. R. *, Johnsen, D. A. J. *, Kawai, S. * and C. M. Cheney. Deficiency screen for GDI interactors. In preparation for Genetics.

Meeting presentations:

For the past 20 years, I have attended and presented a poster or platform talk at two national scientific meetings each year (and sometimes at an additional meeting): the Annual Drosophila Research Conference and the annual meeting of the American Society for Cell Biology. In the last 5 years, I have brought Pomona students to some of these national meetings, where the students have presented their research in posters.

 $[*]Undergraduate\ or\ alumni\ co-authors$