



UNC
GLOBAL

THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

COLLEGE OF ARTS & SCIENCES

STUDY ABROAD OFFICE

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January 11, 2016

Administrative Board of the College of Arts & Sciences
Office of General Education
CB #3510
300 Steele Building
UNC-CH

UNC Science in Dublin- Summer

Dear Colleagues:

The Department of Biology and the Study Abroad Office are submitting for your approval a proposal to establish a faculty-led summer study abroad program in Dublin, Ireland beginning in Summer 2017 and continuing annually.

Program overview

This six-week summer study abroad program will be led by a UNC Biology professor and hosted by IES Abroad in their Dublin study center. Participants will enroll in two courses. All UNC students on this program will take **BIOL 202: Molecular Biology and Genetics** (4 credits), and they will choose one of several IES-taught courses to take concurrently (3 credits).

Program rationale

By teaching a science course in an international context, this program will contribute to the university's objective of offering more international opportunities to science students.

The Study Abroad Office has experienced an increased demand for faculty-led study abroad programs designed for science majors. Our current program offering for science students includes faculty-led summer programs in France, Spain, Sweden, China, and Costa Rica. The programs in France and Spain have been at capacity, and in one instance over capacity, in the last two summers. The programs in Sweden, China, and Costa Rica are new in 2016. As of January 4, 2016, 25 students have started an application for the Sweden program, a program that can only accommodate 20. Attendance at study abroad information sessions for science majors has more than doubled.

In advising appointments and at outreach events, an increasing number of students are identifying themselves as science majors and many are inquiring about program options in English-speaking countries. This new program in Ireland would add diversity in location and culture and in an English-speaking country.

The program's required course, BIOL 202, is a heavily enrolled course required for the Biology major and the MCAT. The program will give students access to this course in a unique small group and international setting. The IES-taught course will offer students a connection to the host city and culture, giving students international exposure.

Resident Director

Associate Professor Kevin Slep will serve as the UNC Resident Director in 2017 and possibly beyond. Prof. Slep's CV is provided in the appendix.

Other UNC science faculty members have expressed interest to serve as the resident director in future years. Allowing science faculty to rotate years will give others an opportunity to participate in the program and will allow the program to be sustainable.

IES Abroad

IES is a non-profit study abroad organization that administers study abroad programs for US college students. IES offers many programs at their centers throughout the world. UNC-CH has an institutional agreement with IES and many of their semester and summer programs are approved for UNC-CH student participation, including the IES Dublin programs. The IES Dublin summer programs have been particularly popular among UNC-CH students in the past few years with a total of 19 students participating in the Irish Studies and the Internship programs in Summer 2015.

IES has a customized programs division that works with US partner institutions, like UNC-CH, to develop and administer customized faculty-led programs. These programs are designed to utilize existing IES resources and tailor a program to meet specific needs of the US university. UNC-CH has a customized program hosted by IES at their Japan center. This new UNC-CH program at IES's Dublin center will follow a similar model.

Dublin, Ireland

Dublin is the capital and largest city in Ireland with over 1.2 million inhabitants. The city center is, however, relatively small and can be navigated by foot, with most of the population living in the suburbs. The IES center is within walking distance to the city center.

Program dates

The proposed program dates for 2017 are June 6 - July 23. These dates correspond with the existing Irish Studies summer program at the IES Dublin center. UNC-CH students will be integrated into this existing summer program, taking one class with students from other US institutions.

Program content

Students will take two courses:

1. BIOL 202: Molecular Biology and Genetics, 4 UNC graded credits, taught by Kevin Slep, syllabus in the appendix.
2. Choice of an IES-taught course from the existing Irish Studies program. Students earning the equivalent of a C or better will earn 3 transfer credits at UNC-CH. The courses will include:
 - Irish Communal Identity
 - Celtic Myth and Legend in Early Ireland

- Ireland and the EU
- History of Ireland 1798-1922
- Irish Literature in the Last 100 Years: Identity, Selfhood and the State

The IES-taught courses explore Irish culture and history through an in-depth and hands-on approach. The courses offer students an academic exposure to Ireland's political and social history, contemporary economic issues, and literary heritage. In addition to in-class lectures and discussions, the courses include field studies which give students an opportunity to explore first-hand the heritage of Ireland, as well as its contemporary culture through its art, theater, and film.

The program will include a cultural event, such as a cooking class, theatre performance, or athletic event; a three-day and two-night trip to Northern Ireland; and optional regional excursions.

Enrollment

The program will accept applications from UNC-CH and non-UNC-CH undergraduate students, with priority given to UNC-CH students. Target program enrollment is 18 participants. Applicants must have a minimum GPA of 2.7 and at least rising sophomore status. BIOL 101 and CHEM 101 are pre-requisites.

On-site logistics

IES will provide a full range of logistical support including program development, on-site orientation, excursions, and 24/7 emergency support.

The on-site orientation includes a guided tour around the IES Abroad Center and areas of interest in Dublin. The session will offer an introduction to student life in the city and integration into Irish society and culture.

IES will provide necessary facilities including classroom space and housing. Students will live in apart-hotel housing with shared rooms, kitchen facilities, laundry facilities, and internet. IES will also provide housing for the Resident Director in an apartment.

More information about IES's services is outlined in the contract included in the appendix.

Emily Marlton, Northern Europe and Oceania Program Director in the Study Abroad Office, conducted a site visit to Dublin in December 2012, including half day visit to the IES Dublin center.

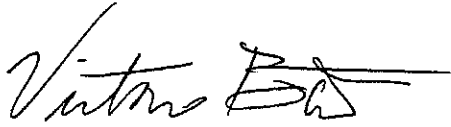
Health and Safety

Students will be enrolled in international accident and health insurance through HTH Worldwide (www.hthstudents.com) for the duration of the program.

There are no immediate health or safety concerns in Dublin. Modern medical facilities and highly skilled medical practitioners are available in Ireland. According to the State Department website's country description for Ireland, Ireland remains largely free of terrorist incidents and has a low rate of violent crime. The most common issue Americans face in Dublin, if any, is that of pickpockets around areas frequented by tourists.

We are happy to provide any further information that you may need to evaluate this proposal.

Yours sincerely,



01/15/16

Dr. Victoria Bautch, Professor and Chair, Department of Biology

Date



1.19.16

Dr. Robert Miles, Associate Dean: Study Abroad and International Exchanges

Date

BIOL 202 Molecular Biology & Genetics

Dr. Kevin Slep

**Summer 2017
Dublin, Ireland**

Class Lectures: M,T,W,Th: 8:50-10:30

Recitations: M & W 10:40-12:00

Class Dates: Thursday June 8, 2017 – Thursday July 20, 2017

Final Exam: Friday July 21, 2017, 9:00-12:00

Prerequisites

BIOL 101 and CHEM 101, with a grade of C or better

Your instructor

Prof. Kevin Slep Office hours: Tues. 10:30-12:00 or by appointment
Email : kslep@bio.unc.edu

Main Goals of the course

1. To provide you with the core principles of genetics and molecular biology
2. To gain higher level thinking skills
3. This course should excite you about basic science and its applications

Course Learning Outcomes

Upon completion of the 202 course in Biology, a student should be able to:

(Skills):

- Build hypotheses to answer a specific scientific question, design an experiment using an appropriate technique/assay to answer the question, and predict results of their experiment.
- Give examples of how advances in genetics and molecular biology, from the discovery of DNA's structure to sequencing individual genomes, have changed the world (examples include recombinant insulin, personalized medicine, transgenic crops)

(Concepts):

- Explain the term “allele” for a single gene at a population, organismal, cellular, and molecular level; explain how dominance and recessiveness are expressed at these levels.
- Explain how genetic variation comes from in a population (e.g. from meiosis, mutation, and epigenetic changes).
- Predict genotypic and phenotypic ratios of offspring in defined genetic crosses and work these problems in reverse (when given data about offspring, determine the genotypes and phenotypes of the parents).
- Deduce modes of inheritance (example: autosomal dominance, x-linked recessive) from genetic pedigrees and explain how incomplete penetrance and variable expressivity complicate these analyses.
- Distinguish single gene traits from polygenic traits and the influence of the environment on traits.
- Explain how DNA is replicated normally and abnormally and how these concepts are utilized in the polymerase chain reaction (PCR).
- Compare and contrast the consequences of germline errors during meiosis (such as non-disjunction, and translocations) and somatic errors during abnormal mitosis (such as non-disjunction and cancer)
- Explain the flow of genetic information, based on the central dogma- from DNA to proteins and how mutations are carried through this flow of information.
- Describe the nature of the genetic code
- Describe the general organization of prokaryotic and eukaryotic genomes, including the identification and significance of the different parts of a gene (e.g. regulatory/non-regulatory, exons/introns; transcription start site; translation start site; UTRs)
- Explain how a gene can be regulated transcriptionally and post-transcriptionally and how this leads to limited expression under different conditions (such as in different environments, during the course of development, or disease conditions)
- Predict the outcome of experimental manipulations in genes (e.g. GFP-tagging to investigate gene expression)
- Describe the basic steps in gene cloning (restriction, ligation, etc.)
- Design a transgenic animal/bacteria, where a protein of interest is specifically produced
- Explain the significance of research in genetic model organisms to understand fundamental biological phenomena.

Copyright Information:

All materials used in this course including notes, tests and assignments are covered by copyrights which forbid you from sharing class materials with any group.

Expectations

The course is composed of four class meetings and two recitation sessions each week. **This is NOT a class for passive learners. You are expected to be actively engaged in this course through class discussions, class activities and pre- as well as post-lecture assignments and readings.**

It is expected that you will spend several hours reading/working problems associated with each class. If you stay on top of your reading and homework, there will be no need to cram for an exam. Practice, practice, practice. Do problems that are assigned and then do others that are not assigned! Use the internet or other textbooks in the library to find more problems if you run out from your textbook.

Textbook

Klug et al.: Essentials of Genetics 8th Edition

The textbook is available in the bookstore. This text comes with a web-based software package called **MasteringGenetics** that will be the medium through which **you will be quizzed and receive short pre-lecture and post-lecture assignments.** The package also includes an interactive eBook. There are also other purchase options of the textbook (e.g. you can buy a used textbook and a stand-alone MasteringGenetics package). For a detailed description of all the purchase options, please check Sakai under “Syllabus”

Recitations

During recitations, the Professor will lead you through activities or problem solving practices. This course is a 4 credit hour course, and the recitations are not simply “going over the material that was learned in class”, but rather **a core component of the course.** Some of the material covered in recitations will be supplemental to the one discussed in class. There will be no make-up opportunities for in-class assignments if you do not attend a recitation.

Class and Recitations Attendance

Students are expected to attend and participate in class meetings and recitations. While the course follows the textbook, some of the material discussed in lecture may not be found in the text. You are responsible **for all material and announcements made in lectures.** You are not responsible for material that was not covered in class, **unless it was specifically assigned (see detailed schedule for assigned readings).**

Assignments

During the summer session you will have **pre-class, in-class, and post-class assignments**.

- The pre-class assignments will be based on **assigned readings from the textbook**. The assignments will be given via the **MasteringGenetics** system (see above).
- In-class assignments will include **Polleverywhere** (see below) and other activities.
- Post-class assignments will include **assigned homework problem sets**, **MasteringGenetics**, and occasionally **Peerwise** assignments (see below).

All assignments due dates appear on the detailed schedule. Updates will be announced on Sakai. **You are responsible for submitting the assignments on time.** There will be no “second chances” in this case.

Polleverywhere

In this class you will use a polling system to answer questions that we pose during class. You can submit your responses using a laptop or other mobile device with a WiFi connection, such as an iPod Touch or an iPad. Before you can participate, you'll need to create an account. For instructions on how to register to Polleverywhere, please follow the guidelines found on Sakai under the Resources folder.

PeerWise

One of your assignments during the summer session will be to create multiple choice questions that address the material we learn. Asking questions and evaluate your peers' questions has been shown to be an invaluable tool in developing deep learning. Posting and reviewing questions will be done through an interactive system called PeerWise. Instructions on how to register and how to use PeerWise will be given during the summer session

Grading

The material taught in class meetings and labs will be tested separately but the grades are combined for the final course grade. Your grade for this course will be determined as follows:

3 midterm exams = (21% each = 63%)
1 semi-cumulative final exam (21%)
MasteringGenetics assignments (6%)
Recitations (10%)

Grades will not be assigned for individual exams, only points; you will be able to see how you did from a posted distribution of scores after each test. Final grades will be assigned on the total number of points for the entire summer session: A 93-100; A- 90-92; B+ 87-89; B 83-86; B- 80-82; C+ 77-79; C 73-76; C- 70-72; D+ 66-69; D 60-65; F <60

A curve will be used ONLY if the class grade average is <75. Exam questions will be taken from class meetings and assigned readings. Exams must be taken on the dates indicated; no makeup exams except in special circumstances, i.e. medical or family emergency documented in writing.

THE PROFESSOR RESERVES THE RIGHT TO MAKE CHANGES TO THE SYLLABUS, INCLUDING PROJECT DUE DATES AND TEST DATES. THESE CHANGES WILL BE ANNOUNCED AS EARLY AS POSSIBLE

Schedule For a detailed schedule, including assigned readings, assignments, recommended readings, and objectives, check the lecture schedule under the Sakai "Syllabus" folder

Date	Topic
1- Thu 06/08	Structure and function of genes and genomes
2- Mon 06/12	Genetic variation – from genotype to phenotype
3- Tue 06/13	DNA replication
4- Wed 06/14	Genetic variation arises by mutation
5- Thu 06/15	Genetic variation arises by chromosomal rearrangements
6- Mon 06/19	Gene dosage
7- Tue 06/20	Exam I (Lectures 1-6)
8- Wed 06/21	Personal genomics
9- Thu 06/22	The flow of genetic information - Transcription
10- Mon 06/26	Gene expression – The making of a transcript
11- Tue 06/27	Gene expression – Translation and the nature of the genetic code
12- Wed 06/28	Revisiting alleles and mutations
13- Thu 06/29	Exam II (Lectures 9-14)
14- Mon 07/03	Regulation of gene expression in prokaryotes I
15- Tues 07/04	Regulation of gene expression in prokaryotes II
16- Wed 07/05	Regulation of gene expression in eukaryotes I
17- Thu 07/06	Regulation of gene expression in eukaryotes II – Epigenetics and alternative splicing
18- Mon 07/10	Regulation of gene expression in eukaryotes III - miRNAs
19- Tue 07/11	Exam III (Lectures 16-20)
20- Wed 07/12	Recombinant DNA technology I
21 Thu 07/13	Recombinant DNA technology II
22- Mon 07/17	How genes affect phenotypes – transmission genetics I
23- Tue 07/18	Gene interactions

24- Wed 07/19	Pedigrees
25- Thu 07/20	Molecular genetics of Cancer
26- Fri 07/21	Cumulative Final Exam (9:00-12:00)

KEVIN C. SLEP

Associate Professor, Department of Biology
University of North Carolina at Chapel Hill

a) PERSONAL

Lab Mailing Address:	Department of Biology CB# 3280, Coker Hall The University of North Carolina at Chapel Hill Chapel Hill, NC 27599-3280	Office:	402 Fordham Hall
		Office Phone:	(919) 962-4858
		Lab Phone:	(919) 962-0758
		FAX:	(919) 962-1625
Web:	www.sleplab.org	Email:	kslep@bio.unc.edu

b) EDUCATION

1993-2000 Yale University, Ph.D. in Molecular Biophysics and Biochemistry.
Advisor: Dr. Paul B. Sigler. "Biochemical and Structural Mechanism of the Regulator of G-Protein Signaling GTPase Activating Protein Family and the Mechanism of Phosphodiesterase Gamma Potentiation".

1989-1993 Bowdoin College, A.B. in Physics (with Honors) and Biochemistry; minor in Law and Government, with General Honors. Independent research advisor: Dr. Dale Syphers. "The Design of Aharanov-Bohm Effect Analogs to Investigate Vector Potential Induced Phase Shifts".

c) PROFESSIONAL EXPERIENCE

2015-Present Co-Director, Graduate Program in Molecular and Cellular Biophysics, University of North Carolina at Chapel Hill.

2014-2015 Associate Director, Graduate Program in Molecular and Cellular Biophysics, University of North Carolina at Chapel Hill.

2014-Present Associate Professor, Department of Biology. University of North Carolina at Chapel Hill.

2007-2014 Assistant Professor, Department of Biology. University of North Carolina at Chapel Hill.

2000-2007 University of California, San Francisco, Post-Doctoral Fellow with Dr. Ronald D. Vale. "Molecular Mechanisms of Microtubule Plus End Tracking Proteins".

d) HONORS

2009-2011 March of Dimes Basil O'Connor Research Starter Scholar Award

2008-2011 Klingenstein Fellowship in the Neurosciences

2002-2005 Helen Hay Whitney Foundation Postdoctoral Fellowship sponsored by the Agouron Institute

2001 Graduate Thesis Commendation, Yale University

1993 *Summa cum Laude*, Bowdoin College General Honors

1993 *Summa cum Laude*, Bowdoin College Physics Departmental Honors

1993 *Phi Beta Kappa*

1993 Noel C. Little Prize in Experimental Physics, Bowdoin College

1989-1993 National Merit Scholarship

1989-1993 James Bowdoin Scholar, Bowdoin College

1988 Williams College Book Award

PROFESSIONAL MEMBERSHIPS

2012-Present American Society for Biochemistry and Molecular Biology (ASBMB)

2000-Present American Society for Cell Biology (ASCB)

1994-Present American Association for the Advancement of Science (AAAS)

e) BIBLIOGRAPHY

BOOKS AND CHAPTERS

Campbell, J.N., Slep, K.C. (2011)

$\alpha\beta$ -Tubulin and microtubule binding assays.

Methods in Molecular Biology, Microtubule Dynamics: Methods and Protocols. 777: 87-97.

PAPERS / ARTICLES UNDER REVIEW

Adikes, R.C., Campbell, J.N., Howard, A.E., Slep, K.C.

The *S. cerevisiae* XMAP215 Family Member Stu2 Arranges its TOG Domain Array Using a Structurally Distinct 15 nm Parallel Coiled Coil.

Submitted: Journal of Biological Chemistry.

REFEREED PAPERS / ARTICLES

*Co-corresponding author

Plevock, K.M., Galletta, B.J., Slep, K.C. *, Rusan, N.M. * (2015)

Newly Characterized Region of CP190 Associates with Microtubules and Mediates Proper Spindle Morphology in *Drosophila* Stem Cells.

PLoS One. Dec; 10(12): 1-23; e0144174.

Das, A., Dickinson, D.J., Wood, C.C., Goldstein, B., Slep K.C. (2015)

Crescerin uses a TOG domain array to regulate microtubules in the primary cilium.

Molecular Biology of the Cell. Nov; 26(23): 4248-64.

Howard, A.E., Fox, J.C., Slep, K.C. (2015)

Drosophila melanogaster Msp3 utilizes unique structural elements to promote domain stability and maintain a TOG1- and TOG2-like tubulin-binding surface.

Journal of Biological Chemistry. Apr; 290(16): 10149-62.

Klebba, J.E., Galletta, B.J., Nye, J., Plevock, K.M., Buster, D.W., Hollingsworth, N.A., Slep, K.C., Rusan, N.M., Rogers, G.C. (2015)

Two Polo-like Kinase 4 Binding Domains in Asterless Perform Distinct Roles in Regulating Kinase Stability.

Journal of Cell Biology. Feb; 208(4): 401-14.

Fox, J.C., Howard, A.E., Currie, J.D., Rogers, S.L., Slep, K.C. (2014)

The XMAP215 family drives microtubule polymerization using a structurally diverse TOG array.

Molecular Biology of the Cell. Aug; 25(16): 2375-92.

Slevin, L.K., Romes, E.M., Dandulakis, M.G., Slep, K.C. (2014)

The Mechanisms of Dynein Light Chain LC8-mediated Oligomerization of the Ana2 Centriole Duplication Factor.

Journal of Biological Chemistry. Jul; 289(30): 20727-39.

Rao, L., Romes, E.M., Nicholas, M.P., Brenner, S., Tripathy, A., Gennerich, A.*, Slep, K.C.* (2013)

The Yeast Dynein Dyn2-Pac11 Complex is a Dynein Dimerization/Processivity Factor: Structural and Single Molecule Characterization.

Molecular Biology of the Cell. Aug; 24(15): 2363-77.

Leano, J.B., Rogers, S.L., Slep, K.C. (2013)

- A Cryptic TOG Domain with a Distinct Architecture Underlies CLASP-Dependent Bipolar Spindle Formation.
Structure. Jun; 21(6): 939-50. [§]
- [§]Commentary: Wilbur, J.D., Heald, R. (2013) Cryptic no longer: arrays of CLASP1 TOG domains. **Structure.** Jun; 21(6):869-70.
- Slep, K.C. (2012)
Structure of the Human Discs Large 1 PDZ – Adenomatous Polyposis Coli Cytoskeletal Polarity Complex: Insight into Peptide Engagement and PDZ Clustering.
PLoS One. Nov; 7(11): 1-11; e50097.
- Slevin, L.K., Nye, J., Pinkerton, D.C., Buster, D.W., Rogers, G.C.*, Slep, K.C.* (2012)
The Structure of the Plk4 Cryptic Polo Box Reveals Two Tandem Polo Boxes Required for Centriole Duplication.
Structure. Nov; 20(11): 1905-17. [§]
- [§]Commentary: Jana, S.C., Bazan, J.F., Bettencourt-Dias, M (2012) Polo boxes come out of the crypt, a new view of PLK function and evolution. **Structure.** Nov; 20(11):1801-4.
- Romes, E.M., Tripathy, A., Slep, K.C. (2012)
Structure of a Yeast Dyn2-Nup159 Complex and Molecular Basis for Dynein Light Chain – Nuclear Pore Interaction.
Journal of Biological Chemistry. May 287(19): 15862-73.
- Currie, J.D., Stewman, S., Schimizzi, G., Slep, K.C., Ma, A., Rogers, S.L. (2011)
The microtubule lattice and plus-end association of *Drosophila* mini spindles is spatially regulated to fine-tune microtubule dynamics.
Molecular Biology of the Cell. Nov; 22(22): 4343-61.
- Applewhite, D.A., Gröde K.D., Keller, D., Zadeh, A., Slep, K.C., Rogers, S.L. (2010)
The spectraplakins short stop is an actin-microtubule crosslinker that contributes to organization of the microtubule network.
Molecular Biology of the Cell. May; 21(10): 1714-24.
- Sawyer, J.K., Harris, N.J., Slep, K.C., Gaul, U., and Peifer, M. (2009)
The *Drosophila* afadin homolog Canoe regulates linkage of the actin cytoskeleton to adherens junctions during apical constriction.
Journal of Cell Biology. Jul 13; 186 (1): 57-73.
- Slep, K.C., Kercher, M.A., Wieland, T., Chen, C., Simon, M.I., Sigler, P.B. (2008)
Molecular architecture of $G\alpha_o$ and the structural basis for RGS16-mediated deactivation.
Proceedings of the National Academy of Science. Apr 29; 105:6243-8.
- Slep, K.C., Vale, R.D. (2007)
Structural basis of microtubule plus end tracking by XMAP215, CLIP-170 and EB1.
Molecular Cell. Sept 21; 27:976-91.
- Slep, K.C., Rogers, S.L., Elliott, S.L., Ohkura, H., Kolodziej, P.A., Vale, R.D. (2005)
Structural determinants for EB1-mediated recruitment of APC and spectraplakins to the microtubule plus end.
Journal of Cell Biology. Feb 14; 168 (4): 587-598.
- Sowa, M.E., He, W., Slep, K.C., Kercher, M.A., Lichtarge, O., Wensel, T.G. (2001)
Prediction and confirmation of a site critical for effector regulation of RGS domain activity.
Nature Structure Biology. Mar 8; 8 (3), 234-7.
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Structural determinants for regulation of phosphodiesterase by a G-protein at 2.0 Å.
Nature. Feb 22; 409 (6823): 1071-7.
- He, W., Lu, L., Zhang, X., el-Hodiri H.M., Chen, C., Slep, K.C., Simon, M.I., Jamrich, M., Wensel, T.G. (2000)
Modules in the photoreceptor RGS9-1/ $G\beta_{5L}$ GTPase-accelerating protein complex control effector coupling, GTPase acceleration, protein folding, and stability.

- Journal of Biological Chemistry.** Nov 24; 275 (47): 37093-100.
 Apanovitch, D.M., Slep, K.C., Sigler, P.B., Dohlman, H.G. (1998)
 Sst2 is a GTPase-activating protein for Gpa1: purification and characterization of a cognate RGS-G α protein pair in yeast.
Biochemistry. Apr 7; 37 (14): 4815-22.

OTHER NON-REFEREED WORKS

- Slep, K.C. (2010)
 Structural and mechanistic insights into microtubule end-binding proteins.
Current Opinion in Cell Biology. Feb; 22(1): 88-95.
- Slep, K.C. (2009)
 The role of TOG domains in microtubule plus end dynamics.
Biochemical Society Transactions. Oct; 37(5): 1002-1006.
- Roberts, D.M., Slep, K.C., Peifer, M. (2007)
 It takes more than two to tango: Dishevelled polymerization and Wnt signaling.
Nature Structural & Molecular Biology. Jun; 14(6): 463-5.

INVITED ORAL PRESENTATIONS

*Meetings/presentations held outside the USA

- 2015 East Carolina University, Greenville, NC. "TOG Arrays: A Common Mechanistic Paradigm for Regulating Microtubule Dynamics"
- 2012 University of Arizona, Tuscon, AZ. "Regulating Microtubule Dynamics with Arrayed TOG Domains"
- 2012* Tel Aviv University, Tel Aviv, Israel. "Molecular Mechanisms for Regulating Microtubule Dynamics at Both the Plus and Minus End"
- 2012* Technion, Technion City, Haifa, Israel. "Molecular Mechanisms for Regulating Microtubule Dynamics at Both the Plus and Minus End"
- 2012 University of Virginia, Charlottesville, VA. "Mechanisms of Modular Domains in the Regulation of Microtubule Dynamics"
- 2012 Florida State University, Tallahassee, FL. "Structural Mechanisms of Cytoskeletal Regulators"
- 2012 Glaxo Smith Kline, Research Triangle Park, NC. "Structural Mechanisms of Cytoskeletal Regulators"
- 2011 Albert Einstein College of Medicine, Bronx, NY. "Structural Mechanisms for Regulating Microtubule Dynamics"
- 2010 National Institutes of Health, National Heart, Lung and Blood Institute (NHLBI), Bethesda, MD. "Regulators of Microtubule Dynamics"
- 2009* The Dynamic Cell – Joint Meeting of the Biochemical Society and the British Society for Cell Biology, University of Edinburgh, UK. "The Role of TOG Domains in Microtubule Plus End Dynamics"
- 2008 38th Mid-Atlantic Macromolecular Crystallography Meeting, University of North Carolina at Chapel Hill, Chapel Hill, NC. "Molecular Mechanisms of Microtubule Plus End Tracking Proteins"
- 2006 University of North Carolina at Chapel Hill, Chapel Hill, NC. "Life at the Edge: Molecular Mechanisms of Microtubule Plus End Tracking Proteins"
- 2006 Vanderbilt University, Nashville, TN. "Molecular Mechanisms of Microtubule Plus End Tracking Proteins"
- 2006 Duke University, Durham, NC. "Molecular Mechanisms of Microtubule Plus End Tracking Proteins"
- 2006 Washington University, St. Louis, MO. "Molecular Mechanisms of Microtubule Plus End Tracking Proteins"

- 2006 University of Texas Southwestern, Dallas, TX. "Molecular Mechanisms of Microtubule Plus End Tracking Proteins"
- 2006 University of North Carolina at Chapel Hill, Chapel Hill, NC. "Molecular Mechanisms of Microtubule Plus End Tracking Proteins"
- 2006 Thomas Jefferson University, Philadelphia, PA. "Molecular Mechanisms of Microtubule Plus End Tracking Proteins"
- 2006 Cornell University, Ithaca, NY. "Molecular Mechanisms of Microtubule Plus End Tracking Proteins"
- 2006 Dartmouth College, Hanover, NH. "Molecular Mechanisms of Microtubule Plus End Tracking Proteins"
- 2006 University of Rochester, Rochester, NY. "Molecular Mechanisms of Microtubule Plus End Tracking Proteins"
- 2004 Agouron Institute Structural Biology Meeting, Yountville, CA. "Structural and in vivo Analysis of the Microtubule Tip Binding Proteins EB1 and CLIP-170"
- 2004* Pacific-Rim International Conference on Protein Science (PRICPS) Annual Meeting, Yokohama, Japan. "Structural and in vivo Analysis of the Microtubule Tip Binding Proteins EB1 and CLIP-170"
- 2001 Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting, Ft. Lauderdale, FL. "Crystal Structures of Complexes of Transducin Alpha with the Catalytic Core of RGS9 and Phosphodiesterase gamma"

INVITED ORAL PRESENTATIONS AT UNC

- 2013 Biology Department Seminar Series. "Regulating Cytoskeletal Form and Function from Centrioles to Cilia"
- 2012 Genetics and Molecular Biology Retreat, Myrtle Beach, SC. "Regulating Microtubule Dynamics With Arrayed TOG Domains"
- 2011 MD/PhD Graduate Program Seminar Series. "Regulators of Microtubule Dynamics"
- 2007 University of North Carolina at Chapel Hill, Chapel Hill, NC. Biology Departmental Retreat. "Molecular Mechanisms of Microtubule Plus End Tracking Proteins"

f) TEACHING ACTIVITIES

Courses

- 2016-Present Biology 704, Seminar in Biophysics 30 Lectures (90 min. each), 8 students
- 2008-2009, 2011-Present Biology 643, Molecular Mechanisms of the Cytoskeleton 30 Lectures (90 min. each), 9 students
- 2008-Present Biology 202.006, Undergraduate Genetics and Molecular Biology (Genetics half) 21 Lectures (50 min. each), ~225 students
- 2008-Present Biochemistry 902, Biophysical Society Summer Course in Biophysics for Minority Students 1 Lecture (50 min.) 2008-2014, 2 Lectures (50 min. each) 2015-Present, 15 students
- 2008-2014 Cell Biology 643, Cell Biology 3 Lectures (50 min. each), 45 students
- 2014-2016 Biology 691H, Honors seminar, Assistant-instructor with John Bruno
- 2010-2013 Biochemistry 704, Seminars in Biophysics 1 Lecture (90 min.), 2 students
- 2009-2012 Cell Biology 644, Cell Biology 1 Lecture (50 min.), 45 students
- 2012 IDST195, Modes of Inquiry 1 Lecture (75 min.),
- 2011-2012 BBSP 902.005, Seminar in Biological and Biomedical Sciences 21 Lectures (90 min.), 14 students
- 2011, 2013 Biochemistry 712, Scientific Writing 5 Lectures (120 min.), 9 students
- 2008 Biology 649, Seminar in Cell Biology 15 Lectures (120 min. each), 3 students

Graduate Program Memberships

- 2010-Present Curriculum in Genetics and Molecular Biology
- 2008-Present NIH-UNC Graduate Program Partnership: Cell Motility and the Cytoskeleton

2007-Present UNC Graduate Program in Cellular and Molecular Biophysics

Postdoctoral Associates Trained

2011-2014 Yaodong Chen, Ph.D.

Graduate Students Trained

2013-Present Amy Howard (Biochemistry & Biophysics; American Heart Association Predoctoral Fellowship Award)

2013-Present Rebecca Adikes (Biology)

2012-Present Karen Plevock (Biochemistry & Biophysics; NIH-Graduate Program Partnership, Co-Mentored with Nasser Rusan, NIH-NHLBI)

2012-Present Thomas Lane (Biochemistry & Biophysics)

2011-Present Alakananda Das (Biochemistry & Biophysics; HHMI International Student Research Fellowship; UNC Graduate School Dissertation Completion Fellowship Award)

2010-2014 Lauren Slevin (Biology; NSF Graduate Research Fellowship Award; Ph.D. received Fall 2014)

“A Structural Study of Conserved Centriole Duplication Machinery”

2010-2014 Jonathan Leano (Biochemistry & Biophysics; NSF Graduate Research Fellowship Award; Ph.D. received Summer 2014)

“The CLASP Family Regulates Microtubule Dynamics by Using an Array of TOG-Like Domains”

2009-2014 Jamie Campbell (Biochemistry & Biophysics; UNC Graduate School Dissertation Completion Fellowship Award; Ph.D. received Spring 2014)

“The XMAP215 Family Drives Microtubule Polymerization Using a Structurally Diverse TOG Array”

2008-2012 Erin Romes, Ph.D. (Biochemistry & Biophysics; Ph.D. received Fall 2012)

“Structural and Biochemical Analysis of Dynein Light Chain-Mediated Homodimerization of Cytoskeletal and Nuclear Pore Proteins”

Rotation Students Trained (*Joined)

2012-2013 Felix Peng, Rebecca Adikes*, Amy Howard*

2011-2012 Karen Plevock*, Thomas Lane*

2011-2012 Alakananda Das*

2009-2010 Christopher Higgins, Lauren Slevin*, Jonathan Leano*

2008-2009 Brian Gibbs, Keith Miller, Peter Thompson, Jamie Campbell*, Jillian Tyrell, Blaire Steinwand, Ivan Sabath

2007-2008 Anthony Blount, Guy Aaron Hobbs, Erin Romes*

Undergraduate Students Trained

2015 Benjamin Lowe (Biol395 Fall 2015)

2015 Chandler Albert (Biol395 Fall 2015)

2015 Ashley Gwyn (Volunteer, Summer 2015, Fall 2015)

2015 Anna Cook (Volunteer, Summer 2015)

2015 Ana De La Cruz (Biophysical Society Summer Course in Biophysics for Minority Students)

2014-2015 Brian Saway (Volunteer, Fall 2014; Biol395 Spring 2015, Summer II 2015)

2013-2015 Sarah Speed (Volunteer, Spring 2013; Biol395 Fall 2013 & Spring 2014; Biol495 Fall 2014)

2013-2015 Olivia Stevens (Volunteer, Spring 2013; Chem395 Fall 2013, Spring 2014 & Fall 2014)

2012-2015 Tanner Fadero (Volunteer, Fall 2012; Biol395 Spring 2013 & Fall 2013; Biol 495 Spring 2014 & Fall 2014)

2012-2014 Cameron Wood (Biol395 Fall 2012, Spring 2013; Biol495 Fall 2013)

2012-2014 Mary Dandulakis (Volunteer, Summer 2012 & Spring 2013; Chem395 Fall 2013, Spring 2014)

2012-2013 Trent Wei (Volunteer, Summer 2012; Biol395 Fall 2012 & Spring 2013)

2011 Vontriska Jones (Biophysical Society Summer Course in Biophysics for Minority Students)

2011	Eric Lee (volunteer Fall 2010, Spring 2011)
2011	Emily Rich (Biol395 Spring 2011)
2011	Derek Pinkerton (Biol395 Spring 2011)
2010	Tally Miller (UNC SMART Program Summer 2010; Biol395 Fall 2010)
2010	Aamir Husain (Biol395 Spring 2010 & Fall 2010)
2010	Advaita Punjala (Biol395 Spring 2010)
2009-2011	Rebekah Shaw (Biol395 Fall 2009 & Spring 2010; Biol396 Fall 2010 & Spring 2011)
2009	Rachel Miller (Biol395 Spring 2009 & Summer I 2009)
2007-2008	Pierce Haar (Volunteer, Fall 2007)

Undergraduate Honors Theses Conducted in my Laboratory

2014-2015	Tanner Fadero (Highest Honors, J.N. Couch Award for Best Undergraduate Thesis) "Characterization of DTACC Structure and Function"
2014-2015	Sarah Speed (Highest Honors, Biology Department Commencement Speaker) "Structure-Function Studies of Essential Centrosomal Proteins Associated with Primordial Dwarfism and Microcephaly"
2014-2015	Olivia Stevens (Honors: Dept. of Chemistry) "Structural Characterization of XMAP215 Family TOG Domains"
2013-2014	Cameron Wood (Highest Honors, J.N. Couch Award for Best Undergraduate Thesis) "Probing the Structure of mCHE-12's TOG Domains to Understand their Role in Regulating Microtubule Dynamics <i>in vitro</i> "
2012-2013	Trent Wei (Honors) "Probing the Structure and Mechanism of Human CLASP C-terminal TOG Domains and Regulation of Microtubule Dynamics"
2011-2012	Derek Pinkerton (Highest Honors, Honors Undergraduate Research Award Recipient) "Characterization of Plk4's C-terminal Polo Box Domain"
2010-2011	Rebekah Shaw (Honors, Michael P. and Jean W. Carter Research Award Recipient) "Characterization of <i>Drosophila</i> Transforming Acidic Coiled-Coil Using Cell Biology and Structural Analysis"

Technicians Trained

2011	Debbie Glover
2008-2011	Louise Pratt

Federal Work Study Students Trained

2015-2016	Nguyen Le
2015-2016	Sophia Corella
2013-2016	April Hamer
2012-2015	Benjamin Twery
2013-2014	Nikita Hall
2012-2013	Joseph Strasser
2012-2013	Santosh Bodepudi
2011-2012	Heather Min
2011-2012	Tanner Fadero
2008	Rashad Holloway

Undergraduate Sponsor (for research performed in the Medical School, Dental School, or Chem. Dept.)

2015	Austin Quimby (Dr. Paul Dayton, Biomedical Engineering, Biol395: Fall 2015)
2015	Jessica Vandenberg (Dr. Zoe McElligott, Psychiatry, Biol395: Spring 2015, Summer I 2015)
2014-2015	Wesley Roten (Dr. Brian Kuhlman, Biochemistry, Biol395: Fall 2014, Spring 2015)
2014	Gunjan Patel (Dr. Garrett Stuber, Psychiatry, Biol395: Spring 2014; Dr. Zoe McElligott, Psychiatry, Biol395: Fall 2014)
2014	Deborah Kiserow (Dr. Jean Cook, Biochemistry, Biol395: Spring 2014)

2013-2014	Frederick Ferguson (Dr. Robert Bourret, Microbiology and Immunology, Biol395: Fall 2013, Spring 2014)
2013-2014	Brian Eglinger (Dr. Saskia Neher, Biochemistry, Biol395: Fall 2013, Spring 2014)
2013-2014	Helen Zhang (Dr. Edward Miao, Microbiology and Immunology, Biol395: Fall 2013 & Spring 2014)
2012-2014	Nadia Nagy (Dr. Hagir Suliman, Duke, Anesthesiology, Biol395: Fall 2012 & Spring 2013, Biol495 Spring 2014)
2013-2014	Davis Trinh (Dr. Edward Miao, Microbiology and Immunology, Biol395: Fall 2013, Summer I 2014)
2013	Sarah Davis (Dr. Zhi Liu, Dermatology, Biol395: Spring 2013)
2013	Brittany Hollis (Dr. Clyde Hodge, Psychiatry, Biol395: Spring 2013)
2012-2013	Daniela Mysta (Dr. Angélique Whitehurst, Pharmacology, Biol395: Fall 2012 & Spring 2013)
2012	Hae Yon Lee (Dr. William Kaufmann, Lineberger CCC, Biol395: Fall 2012)
2012-2013	Meredith Deal (Dr. Ed Collins, Microbiology, Biol395: Spring 2012 & Fall 2012)
2012	Matt Hodges (Dr. Rita Fuchs Lokensgard, Psychology, Biol395: Spring 2012, Fall 2012)
2012	Christopher Hanlin (Dr. Rita Fuchs Lokensgard, Psychology, Biol395: Spring 2012)
2011-2012	Jessica Haesu Jin (Dr. David Rubenstein, Dermatology, Biol395: Fall 2011, Spring 2012)
2011	Chloe Greguska (Dr. Lishan Su, Lineberger CCC, Biol395: Spring 2011 & Fall 2011)
2010-2011	Sam Wu (Dr. Ian Davis, Genetics, Biol395: Fall 2010 & Spring 2011)
2010-2011	Tanner Beam (Dr. Sharon Campbell, Biochemistry, Biol395: Fall 2010 & Spring 2011)
2010-2011	Advaita Punjala (Dr. Vytas Bankaitis, Cell & Developmental Biology, Biol395: Fall 2010; Biol396 Spring 2011)
2010	Will Morrel (Dr. Marcey Waters, Chemistry, Biol395: Fall 2010)
2010	Michael Foote (Dr. Aravind Asokan, Genetics, Biol395: Spring 2010)
2010	Maxime Camo (Dr. Franck Polleux, Pharmacology, Biol395: Spring 2010)
2009-2010	Suneet Bhansali (Dr. Jonathan Homeister, Pathology, Biol395: Fall 2009 & Spring 2010, Biol 396: Fall 2010)
2008-2009	Miranda Bickel (Dr. Eric Everett, Dentistry, Biol395: Fall 2008 & Spring 2009)
2008	Benjamin Sines (Dr. Jean Cook, Biochemistry, Biol395: Spring 2008 & Fall 2008)
2007	Neel Patel (Dr. Sid Kalachandra, Dentistry, Biol295: Fall 2007)

Graduate Thesis Committees (outside of my lab)

2015-Present	Michael Little, Dept. of Chemistry (Redinbo Lab)
2014-Present	Katie Rehai, Genetics & Mol. Biol. Curriculum (Shaub-Maddox Lab)
2014-Present	Joshua Lawrimore, Genetics & Mol. Biol. Curriculum, Committee Chair (Bloom Lab)
2013-Present	Kristi Schaefer, Genetics Curriculum (Peifer Lab)
2013-Present	Carly Sacks, Dept. of Biology (Kieber Lab)
2013-Present	Adrienne Snyder, Dept. of Chemistry (Brustad Lab)
2013-Present	Seth Zimmerman, Dept. of Biochemistry (Kuhlman and Hahn Labs)
2013-Present	Danielle Rogers, Genetics & Mol. Biol. Curriculum (Sekelsky and Erie Labs)
2013-Present	Julianne Huang, Dept. of Chemistry (Redinbo Lab)
2013-Present	Rebecca Pollett, Dept. of Biochemistry, Committee Chair (Redinbo Lab)
2012-Present	Mary Aiken, Dept. of Chemistry (Redinbo Lab)
2011-2015	Christopher Higgins, Dept. of Biology (Goldstein Lab)
2010-2015	Kyle Grode, Dept. of Biology (Rogers Lab)
2013-2015	Kathryn Trogden, Dept. of Biology (Rogers Lab)
2011-2015	Ryan Hallett, Dept. of Biochemistry (Kuhlman Lab)
2011-2014	Adam Roberts, Dept. of Biochemistry (Redinbo Lab)
2008-2013	Deirdre Tatomer, Dept. of Biology (Duronio Lab)
2009-2013	Jolien Verdaasdonk, Dept. of Biology (Bloom Lab)
2008-2013	Chia-Yi Cheng, Dept. of Biology (Kieber Lab)
2009-2011	Josh Currie, Dept. of Biology (Rogers Lab)

2008-2012 Karen Cherkis, Genetics & Mol. Biol. Curriculum (Dangl, Grant, Sondek Labs)
2008-2012 Jason Yi, UNC/NIH (Hammer Lab, National Institutes of Health, NHLBI)
2008-2012 Monica Frazier, Dept. of Biochemistry (Redinbo Lab)
2008-2012 Anthony Blount, UNC/NIH (Adelstein Lab, National Institutes of Health, NHLBI)
2008-2009 Sarah Kennedy, Dept. of Chemistry (Redinbo Lab)
2007-2012 Kim Peters, Dept. of Biology (Rogers Lab)
2007-2011 Rebekah Potts, Dept. of Biochemistry (Redinbo Lab)
2007-2011 Yuan Chen, Dept. of Biochemistry (Redinbo Lab)

Chancellor's Science Scholars (CSS) Faculty Mentor

2014-Present Skyler Jones

g) GRANTS

2015-2017 Molecular Mechanisms of Spectraplakins
 National Institutes of Health
 Eunice Kennedy Shriver National Institute of Child Health & Human Development
 1R03HD084980, Slep (PI)
 Total Costs: \$148,000

2014-2017 Mechanisms of Microtubule Regulators in Cilia Formation and Function"
 March of Dimes
 Research Grant, Slep (PI)
 Total Costs: \$313,459

2011-2015 Molecular Mechanisms of Cytoskeletal Regulators
2015-2016 NCE National Institutes of Health
 National Institute of General Medical Sciences
 1R01GM094415, Slep (PI)
 Total Costs: \$1,088,068

2011-2014 Molecular Mechanism of CLASP-dependent Kinetochores Attachment
 March of Dimes
 Research Grant, Slep (PI)
 Total Costs: \$166,964

2010-2012 Regulators of Centriole Duplication and Structure
 National Institutes of Health
 Eunice Kennedy Shriver National Institute of Child Health & Human Development
 1R03HD064881, Slep (PI)
 Total Costs: \$148,000

2009-2011 Molecular Mechanism of CLASP-dependent Kinetochores Attachment
 March of Dimes
 Basil O'Connor Research Starter Scholar Award, Slep (PI)
 Total Costs: \$150,000

2008-2011 Molecular Mechanisms of NAV1/UNC53-dependant Neuronal Outgrowth and Migration
 The Ester A. & Joseph Klingenstein Fund, Inc.
 Klingenstein Fellowship in the Neurosciences, Slep (PI)
 Total Costs: \$150,000

2008-2010 Probing Dynein Mechanism and Inhibition via AAA Architectural Analogs
 UNC, University Research Council, Slep (PI)

Total Costs: \$4837

2008 Linking Neuronal Guidance to Cytoskeletal Dynamics: Nav1
UNC, Junior Faculty Development Award, Slep (PI)
Total Costs: \$7,500

h) PROFESSIONAL SERVICE

National and International Service

Ad hoc Reviewer *Biochemica et Biophysica Acta – Proteins and Proteomics*
BioEssays
BMC Biology
Computational and Structural Biotechnology Journal
Developmental Cell
FASEB Journal
FEBS Journal
Journal of Biological Chemistry
Journal of Cell Biology
Journal of Cell Science
Journal of Molecular Biology
Medicinal Research Reviews
Molecular Biology of the Cell
Neuron
PLoS ONE
Proceedings of the National Academy of Sciences
Protein Science
Recent Patents on Biotechnology

Grant Reviewer

2016 National Science Foundation (NSF) Graduate Research Fellowship Program (GRFP)
2015 Hungarian National Research, Development and Innovation Office (NKFIH); Individual Research Grant
2014-2015 Israeli Science Foundation; Individual Research Grant
Spring 2014
Spring 2015
2012-2015 American Heart Association; Basic Cell, Cell Structure and Survival (CSS1) Peer Review Study Section Member:
Fall 2015 Study Section
Spring 2015 Study Section
Fall 2014 Study Section
Spring 2014 Study Section
Fall 2013 Study Section
Spring 2013 Study Section
Fall 2012 Study Section
Spring 2012 Study Section
2014 Human Frontier Science Program (HFSP) Career Development Award 2015
2011 Dutch National Science Foundation (NWO); Graduate Programme
2010 French National Cancer Institute (INCa); PLBIO 2010 “Biomedical Research”

External Tenure Review Service

2015 University of Texas Southwestern (oral interview)

UNC Service*Department of Biology*

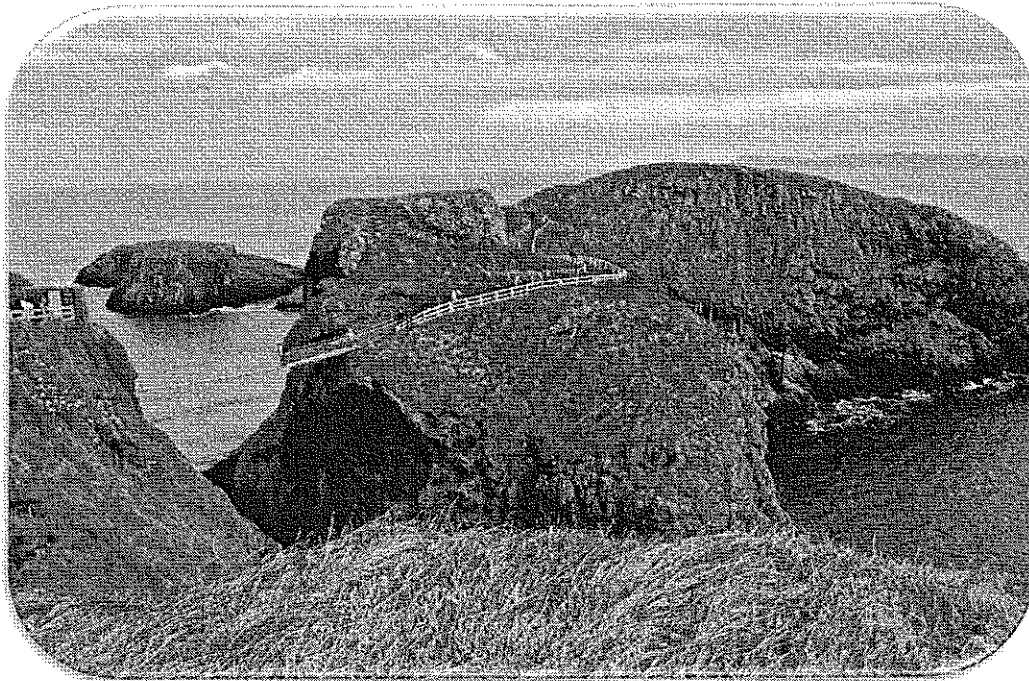
- 2014-Present** Faculty Mentoring Committee for Dr. Daniel McKay (Biology & Genetics Depts.)
2014-Present Chairman's Advisory Committee
2013-Present Undergraduate Honors Committee
2013-Present Faculty Mentoring Committee for Dr. Paul Maddox (Biology Dept.)
2013-Present Development Committee
2013-Present Undergraduate Honors Program, Assistant Instructor and Organizer
2008-Present Advising Committee
2008-Present Undergraduate Studies Committee
2008-Present Undergraduate Honors Thesis Grader
2008-Present Seminar Host: Speaker (UNC Host Program; Speaker's Institute)
 Kevin Gardner (Biology; City Univ. of New York)
 Kristen Verhey (Biology; University of Michigan)
 Erika Holzbaur (Biophysics; University of Pennsylvania)
 Jonathon Howard (Cytoskeletal Program; Yale University)
 Christopher Stroupe (Biophysics; University of Virginia)
 Andres Leschziner (Biology; Harvard)
 Jonathan Dennis (GMB; University of Florida)
 Arne Gennerich (Cytoskeletal Program; Albert Einstein College of Medicine)
 Joseph Noel (Biology; Salk Institute)
 Bill Weis (GMB; Stanford)
 Ron Vale (Biology; UCSF)
 Rebecca Heald (Biology; UC Berkeley)
- 2009-2014** Graduate Studies Committee
2013 Undergraduate Studies: Honors Program Assessment Subcommittee
2013 UNC Biology Academic Day laboratory host
2011-2012 Faculty Search Committee: Quantitative Imaging
2009-2010 Graduate Written Exam Preceptor
2008-2009 New Faculty Orientation Committee
2008 Departmental Secretary

Other

- 2015** Structural Biology Electron Microscopy Task Force – Committee Member
2015 Chancellor's Science Scholars (CSS) Applicant Interviewer
2014 Chancellor's Science Scholars (CSS) Research Panelist
2013-Present Biological and Biomedical Sciences Program (BBSP) Graduate Admissions Committee – Quantitative Biology Committee
2013-Present Graduate Comprehensive Written Exam Preceptor: Dept. of Biochemistry and Biophysics
2011-Present Advisory Board Member: Graduate Program in Biochemistry and Biophysics
2012-2014 Poster Grader: IMSD Biomedical Research Symposium
2011-2012 Biological and Biomedical Sciences Program (BBSP) Graduate First Year Group Mentor
2010-2011 Biological and Biomedical Sciences Program (BBSP) Graduate Admissions Committee – Biophysics, Structural Biology, Computational Biology and Chemical Biology
2008-2009 Biological and Biomedical Sciences Program (BBSP) Graduate Admissions Committee – Cell Signaling and Pathogenesis Committee
2007-2008 Meeting Organization Committee, 38th Annual Mid-Atlantic Macromolecular Crystallography Meeting, Chapel Hill, NC.

Public Service

- 2007-Present** Undergraduate Bowdoin College Alumni Interviewer – BASIC Admissions Program



Biology in Dublin
University of North Carolina
IES Abroad Dublin | June 6, 2017 – July 23, 2017

University of North Carolina Faculty: Kevin Slep
University of North Carolina Contact: Emily Marlton
IES Abroad Contact: Anne Curtis

Addendum Date: September 8, 2015
Date Amended: December 4, 2015

On this 4th day of December, 2015, the Institute for the International Education of Students, an Illinois (USA) non-profit corporation (hereinafter "IES Abroad") and University of North Carolina (hereinafter "the School") enter into this Addendum to the Master Agreement for Customized Programs entered into by and between the parties on the 22nd day of March, 2017 (hereinafter "the Master Agreement").

1. IES Abroad and the School agree to conduct a Customized International Program for students of the School (hereinafter "the Program") with the following program components, subject in all cases to the terms and conditions contained in the Master Agreement, which is incorporated herein by this reference as though fully set forth herein.
2. The Program will take place in Dublin starting on **June 6, 2017**, and terminating on **July 23, 2017**.
3. It is understood that IES Abroad shall only be responsible for those program components included specifically in this addendum related to the activities arranged in Dublin, which shall be managed and supported by the staff of the IES Abroad Dublin Center. IES Abroad shall not be responsible for any other aspect or component of the program. It is understood that all program components sponsored or accompanied solely by the School, its faculty, staff, contractors or agents, including, but not limited to, activities at other locations, shall be the sole and exclusive responsibility of the School. By way of example only, the School shall be responsible for student oversight, including student health, safety and general well-being at any School sponsored or arranged programmatic events when the group is not accompanied by an IES Abroad staff member.

The components of the Program shall be as follows:

PREDEPARTURE SUPPORT

Note the items listed here under the pre-departure support section are provided to School at no additional charge and are included as part of the standard IES Abroad Customized Program support.

Personal Representative. The School will be assigned a personal IES Abroad Customized Programs representative who is available to answer questions regarding the program prior to departure, and will remain a primary contact throughout the program and after its completion.

Program Marketing Toolkit. IES Abroad will provide the School with access to various marketing suggestions and templates to aid in recruiting. The School shall remain responsible for recruiting students for its own program. Additional information about the marketing toolkit is available upon request.

Online Pre-departure Information. The School's students will have access to Pre-departure Information via MyIESAbroad accounts at www.iesabroad.org. An electronic PDF of the Pre-departure Information can be sent to the School to use in pre-departure meetings with students upon request. Online Pre-departure Information will include:

- Emergency contact details for IES Abroad Center staff
- Academic program information and facilities
- Insurance and health
- Finances
- Host country cultural information
- Packing suggestions
- Housing
- Arrival instructions
- Cross-cultural adaptation resources

IES Abroad Student Handbook. IES Abroad will also provide the School with the *IES Abroad Student Handbook* to distribute to students. An electronic PDF of the *Student Handbook* will be sent to the School to use in pre-departure meetings with students. The *IES Abroad Student Handbook* focuses on policies and includes complete details on IES Abroad's:

- *Code of Student Responsibility*
- *Code of Student Conduct*
- *Alcohol and Other Drug Policy*
- *Information Technology Policy*
- *Sexual Harassment Policy*
- *Crisis Management Plan* and other safety information
- Cell phone requirement
- Health and insurance information

Online Submissions & Support. IES Abroad requires the submission of a few forms by students for participation in the program. Form content includes the collection of information such as arrival details, emergency contact details, a housing placement questionnaire, etc. IES Abroad will track all IES Abroad online form submissions from students and inform the School of missing items in order for the School to follow up directly with students.

Medical Forms Support. For programs longer than 30 days, each student is required to have a physical exam to participate in the program and must complete an IES Abroad Medical form requiring the signature of an examining physician, nurse practitioner, or physician's assistant. The IES Abroad Dean of Students Office reviews all IES Abroad Medical forms prior to departure and may contact students to offer assistance with making overseas medical arrangements, if needed, or to discuss any medications the student may be taking and their legality and/or availability overseas.

Department of State Registration. IES Abroad will register all the School's students and accompanying faculty with the U.S. Department of State prior to departure.

Visa Starter Packet. Although it is the School's responsibility to ensure its students have all legally-required visas, if a visa is needed for the host country of the program, IES Abroad will provide School's students that are U.S. citizens with an IES Abroad Visa Starter Packet to assist with the visa process

PROGRAM START AND END DATES

Please note that the School's program beginning at **IES Abroad Dublin** will begin **in country** with the arrival of students on **June 6, 2017**. This **is not** the date that students need to leave the US. It is the School's responsibility to advise its students of the appropriate departure date for leaving the US in order to arrive on June 6, 2017. The end date for this program is scheduled as **July 23, 2017**. This is the date on which the School's students, faculty and staff will be expected to vacate their IES Abroad-arranged housing and depart.

Dublin PROGRAM COMPONENTS

Airport Transfer

IES Abroad will provide an airport greeting and detailed instructions on attaining transportation from the Dublin airport to the local IES Abroad Center for students and faculty arriving on the designated arrival day. IES Abroad will also provide detailed information regarding transportation to the local IES Abroad Center for students who must arrive independently due to travel delays.

On-Site Orientation

Orientation Details. IES Abroad will provide an orientation for the School's students and accompanying faculty member promptly upon their scheduled arrival in Dublin. The orientation will be in collaboration with the standard summer IES Abroad program and shall include:

- Comprehensive information on health and safety, culture, and living in Dublin. Students will be provided with an information packet during orientation which includes a detailed student handbook, local area information, and a program schedule.
- Hop on, hop off bus tour of Dublin.
- Welcome lunch

Faculty & Staff Meeting. Upon arrival at the IES Abroad Center, the accompanying faculty will meet with IES Abroad staff to discuss the details of the program and responsibilities of each party.

Academic Program

Courses.

- **IES Abroad Course** (3 credit hours / 45 contact hours). The School's students will have the opportunity to choose one course from the Standard summer program course listings.
- **University course** (4 credits). The School's faculty member will teach one course for all of the School's students. This course will be mandatory for all of the School's students.
- **Grade Report.** IES Abroad will provide a grade report for any IES Abroad-taught courses approximately one month after the end of the program. Please note this will not be an official IES Abroad transcript, as the coursework is designed specifically for School's program.

IES Abroad Center

- **Dublin Center Description:** The IES Abroad Dublin Center occupies a red-brick Victorian building which originally housed a post office, but has now been completely renovated to include classrooms, a library and a student lounge. Ideally situated, the Center is walking distance from St. Stephen's Green and Trinity College.
- **Classroom Space:** IES Abroad will provide classroom space for all courses in the local IES Abroad Center. A white board, PC laptop, projector and high-speed internet connection are available in the classroom.
- **Computers & Internet:** The School's students and staff will have access to the library and computer lab at the IES Abroad Dublin Center on a shared basis with other students at the Center. The Center is also equipped with wireless internet access for those students and faculty who bring a laptop.

Field Trips and Excursions

Local Excursions. IES Abroad will provide the following for the School's students and accompanying faculty member.

- **Site visits and Day trips.** The School's students will have the opportunity to join the standard summer program site visits and day trips. These excursions will be at the expense of the individual student and will be billed to the university once the program has been completed. Typical site visits include Howth, Causey Farm, and other regional excursions. In addition, optional theatre, dance, and sporting events will be recommended by the IES Abroad Staff.

- **Field Trip.** *Northern Ireland (3 days/2 nights).*
The field trip includes round-trip train transportation, a 'Black Cabs' city tour, one group meal, and accommodations with breakfast included. In addition, IES will provide the following site visits:
 - Bushmills Distillery tour
 - A visit to Giant's Causeway
 - Dunluce Castle

Accommodations

- **Student Housing.** IES Abroad will arrange housing for the School's students in local apart-hotel housing. Students will share rooms. No meals will be provided, however kitchen facilities will be available. Internet and laundry access will be provided.
- **Faculty Housing.** IES Abroad will arrange housing for the School's faculty member in a two-bedroom apartment. Internet access will be provided at the accommodations. No meals will be provided, however kitchen facilities will be available.

Miscellaneous

- **Cultural Events.** IES Abroad will arrange one (1) cultural event for the School's students and faculty member during the program. Cultural events may include such activities as cooking classes, wine tasting, theatre performances, athletic events, concerts, and film screenings.
- **Farewell Dinner.** IES Abroad will arrange a farewell dinner for the School's students and faculty member at the end of the program.

Student Services Support

Fully-Trained Local Staff. The IES Abroad Center is a fully-staffed local office ready to respond quickly and professionally to student and faculty needs. An on-site Customized Programs coordinator will be designated specifically as the point of contact for students and faculty on the program. This on-site coordinator, in partnership with other IES Abroad Center staff, helps to oversee the academic quality for IES Abroad taught courses and to manage logistics including accommodations, field trips, cultural activities, and day-to-day administration. This coordinator will also handle on-site emergencies and manage student academic, health, and discipline issues in conjunction with the IES Abroad Dean of Students Office in Chicago. IES Abroad will provide information to the School's students concerning cultural activities and available local resources, such as libraries and athletic centers, in the program location.

24/7 Emergency Support. IES Abroad will provide 24/7 emergency support, including emergency protocols & evacuation plans, for students and accompanying faculty member pursuant to its customary policies and procedures.

Crisis Management Preparedness. IES Abroad has both a Crisis Management Team (CMT) and a Threat Assessment Team (TAT) monitoring the locations of students at all times. In the event of a crisis that may affect the health and safety of many, or even all, students in a specific location, the IES CMT is convened to assess and respond to the situation at hand. The CMT will respond in accordance with established IES Abroad practices and protocols and also may seek the guidance as needed of appropriate experts, including, as examples, U.S. consular officials, local law enforcement representatives, and local health care providers.

Department of State Registration. IES Abroad will register all the School's students with the U.S. Department of State upon confirmed arrival at the program location.

Health Insurance. IES Abroad offers a carefully considered plan for international student insurance, to be provided for the School's students participating in the Program, as well as the official faculty member designated to operate the Program by the School. The plan is comprised of three parts:

- A) 24-hour Medical/Travel/Technical Assistance, Emergency Medical Evacuation and Repatriation coverage provided by Cultural Insurance Services International (CISI) in conjunction with AXA;
- B) Accident and Sickness Insurance provided by CISI; and
- C) Security and Political Evacuation Services provided by CISI in conjunction with AXA and iJET Intelligent Risk Systems (iJET).

Travel Tracker. IES Abroad will monitor student whereabouts using *Travel Tracker*, a system that keeps track of students' locations when they are travelling independently.

Services Beyond the Scope of this Addendum

IES Abroad reserves the right to accept or decline any requests by School, School's faculty, staff, agents, students, or IES Abroad-approved guests for services beyond the scope of the Program Components or Pre-departure Support described in this Addendum. The parties hereby agree any services provided by IES Abroad employees, contractors, or agents that are beyond the scope of this Addendum shall be billed at the rate of \$100 per hour, plus any expenses incurred by IES Abroad in connection with the provision of such additional services. Accrued fees and expenses shall be due and payable by School to IES Abroad upon receipt of an invoice therefore.

Program Evaluation and Follow-up

At the conclusion of the Program, IES Abroad will solicit evaluations from the School's students, faculty member, and study abroad contact and share the completed evaluations with the School. School may provide its own evaluation to students in addition of the IES Abroad evaluation, but not in lieu of the IES Abroad evaluation.

Applicable IES Abroad Policies, Resources & Information

Master Agreement. In addition to the School's written acceptance of this *Program Addendum*, IES Abroad must have a current, signed *IES Abroad Master Agreement* on record for the School. To implement the program, both legal documents, the *Master Agreement* and the *Program Addendum*, must be signed by both parties a minimum of 90 days before the scheduled program start date.

Visas. For programs in countries with a visa requirement, it is the School's responsibility to ensure its students have legally-required visas. IES Abroad reserves the right to not allow students to participate in the program if they arrive on site without a visa.

IES Abroad Policies. All students on the Program shall be subject to IES Abroad student policies, including the Academic Policy, the Code of Student Responsibility, the Sexual Harassment Policy, the Alcohol and Other Drug Policy, and the IT Policy. IES Abroad student policies are available at www.IESAbroad.org/IES/Students/studentPolicies.html. The SCHOOL, its faculty, staff, representatives, officers or agents shall not delay, impede, obstruct, inhibit or otherwise prevent IES from enforcing its policies, procedures or protocols, including but not limited to IES enforcement during emergency incidents or events, or during IES investigations thereto.

Cell Phones. All students, faculty members, and assistants on the Program must have mobile phones that function in the country(ies) where the Program will take place. It shall be the responsibility of each student, faculty member and assistant designated by the School for the Program to acquire, either in the host country or in the US, a cellular phone for safety purposes. This phone is to be turned on and carried by each student, faculty member and assistant continuously throughout the Program; each must be reachable by this phone throughout the Program. The cost of these phones is not included in the IES Abroad program fees.

Communication. IES Abroad serves as the final authority on any student health, well-being or conduct matters for customized programs. The accompanying faculty member must notify IES Abroad Center staff of any student health, well-being or conduct related matters that come to the faculty member's attention so that IES Abroad can respond according to IES Abroad policies. IES Abroad will follow up communication to the accompanying faculty member and SCHOOL as appropriate.

Participant Guidelines. IES Abroad's paramount concern is the health, safety and welfare of students on customized programs. Spouses, partners and significant others of accompanying faculty who are over 18 years of age, but who are not themselves program participants ("IES Abroad-approved Guests"), shall be allowed to accompany faculty during the program or program components at their own expense only or, if the SCHOOL pays for their participation, then at the SCHOOL's expense only. Arrangements that may be facilitated for IES Abroad-approved Guests that are not a part of the Program or a program component, including but not limited to the provision of travel on excursions, entrance tickets to events, housing, or meals are a courtesy only and IES Abroad has no obligation to make such arrangements. In order to help facilitate the adequate supervision of students in a crisis or emergency, the SCHOOL shall ensure that IES Abroad-approved Guests sign IES Abroad's standard waiver forms and purchase health insurance required by IES Abroad for student and faculty participants on the program. Any minor children of faculty who are under 18 years of age, and that accompany faculty during the program or program components shall be permitted to do so only at the faculty member's own expense or, if the SCHOOL pays for their participation, then at the SCHOOL's expense, and the care for any such minor children during the program or program components shall be solely the responsibility of the faculty. Faculty members with minor children under the age of 14 who accompany the faculty on the program or any program components will be required to locate, provide and, where applicable, pay for an adult caretaker who will be responsible for the children's welfare for the duration of the program or any program component. SCHOOL must notify IES Abroad in writing of the number of IES Abroad-approved guests and any minor children of faculty, their respective ages, and their expected participation in each program component at least three months prior to the program start date.

Program Participation. The SCHOOL shall ensure that only the faculty member(s), assistant(s) designated by the SCHOOL, IES Abroad-approved Guests, and any minor children of faculty accompany each program conducted hereunder, and that only students who are enrolled in the program participate in the program's classes, field trips, and related activities.

Transportation Fees. Fees listed in this proposal do not include transportation to or from the country where the Program is based for any student, faculty member, assistant or other individual representing or associated with the School. Fees include other transportation only as specified herein.

Travel Arrangements. All students, accompanying faculty members and assistants must make appropriate travel arrangements to and from the host country for the Program according to the start and end dates outlined herein. All students and at least one accompanying faculty member (if applicable) must arrive in the city where the Program is based by the arrival date indicated herein. Additionally in some cases, arrival within a specific time frame, as outlined by IES Abroad, is required in order for the School's students, faculty and assistant, if any, to receive IES Abroad arranged transportation from the airport to the IES Abroad Center. Late arrivals are not permissible unless necessitated by a documented medical, family or other emergency, as it is necessary the School's students participate in the IES Abroad

provided orientation and any other important arrival events. Timely arrival is also necessary for IES Abroad to provide adequate staffing for orientation activities. Therefore, IES Abroad staff will not make arrangements to meet the School's late arriving students, faculty or staff at the airport, nor will IES Abroad staff provide separate orientation for any of the School's students who arrive late. Unavoidable delays due to flight cancellations and other delays beyond the control of the School and its students, faculty and staff are the exception and in those instances IES Abroad will provide detailed information regarding transportation to the IES Abroad Center for students who must arrive independently due to travel delays. Additionally, for the School's students or faculty who experience unavoidable travel delays, IES Abroad shall make a reasonable effort to provide necessary orientation information.

IES Abroad Programs. At the end of the Program, IES Abroad will offer the School's students the opportunity to receive information about other IES Abroad study abroad programs. Students will have the opportunity to decline to receive this information.

PROGRAM PRICE & CANCELLATION FEES

- Program price includes all related fees for 1 faculty member.
- All Program-related fees shall be payable in U.S. Dollars by the School to IES Abroad. IES Abroad will send an invoice to the School one month prior to the program start date; payment is due upon receipt.
- IES Abroad does not require any deposits to be paid in advance of the program. Should the School elect to cancel the program, for whatever reason, prior to the date that the student enrollment confirmation is due (please see deadlines below), the **School shall not be responsible for any payments to IES Abroad.**

Price Per Student

- Prices per student for the Program are as follows, and do not include international airfare to/from the host country:

Number of Students	Price per Student*
16 to 18 students	\$4,665.00
13 to 15 students	\$4,790.00
10 to 12 students	\$4,985.00

Program Guest(s) Costs

- Total program costs for 3 program guest(s) are as follows, and do not include international airfare to/from the host country:

Guest Program Components	Total price for 3 guests*
Guest fees include housing (cost above 1-bedroom) and Caremed insurance.	\$4,900.00

**The price reflects IES Abroad's hedged currency exchange rate and is good for 60 days from the proposal date, after which time it shall be deemed withdrawn and of no legal force or effect. If within the 60 days the proposal is accepted in writing, the price will be fixed at the proposal price. If it has been more than 60 days after the proposal date, IES Abroad reserves the right to re-price the program. Also, IES Abroad reserves the right to re-price the program prior to each new term or new semester during which the Program is offered. Each new offering of the Program shall require that the parties hereto execute a new and separate Addendum.*

- The School shall confirm to IES Abroad by **March 8, 2017** student enrollments and guests for participation in the Program by forwarding the completed *School and Student Information Document*.
- The School shall ensure that by **March 23, 2017** IES Abroad has received all completed on-line and paper forms for all students on the Program.
- There are no deposits due to IES Abroad to secure participation on this program. However, if an individual student cancels or is withdrawn from the Program on or after **March 8, 2017** the following cancellation fees will apply:

Date of Cancellation	Cancellation Fee
March 8, 2017 to March 27, 2017	10% of the total per student program fee
March 28, 2017 to April 16, 2017	25% of the total per student program fee
April 17, 2017 to May 6, 2017	50% of the total per student program fee
May 7, 2017 or later	100% of the total per student program fee

4. In all other respects, the terms and conditions of the Master Agreement shall remain unchanged and in full force and effect, and they shall govern all aspects of the Program.
5. In the event of a conflict between the terms and conditions of the Master Agreement and this Addendum, the terms and conditions of this Addendum shall be controlling.

IN WITNESS WHEREOF, each of the undersigned parties has caused this Addendum to be duly executed and delivered as of the date first referenced above.

**Institute for the International
Education of Students**

University of North Carolina

Michael S. Steinberg
Executive Vice President
Director, Academic Programs

Dr. Carol L. Folt, Chancellor
University of North Carolina at Chapel Hill

Date

Date

PHOTO GALLERY

IES Abroad Center Photos

Dublin

