Thesis Library:
2013-2014 Abstracts

1. Acuna, Erika
   Thesis: Impact Of Menu Labeling On Adolescents: A Quantitative Study In Four Diverse Los Angeles Communities
   Faculty Advisors: Kathryn Hillstrom, Valerie F. Ruelas, Ellen Iverson, Jennifer Jackson

2. Bucar, Edie
   Thesis: Studies On The Mechanism Of Reduced Replication Of F1-R, A Sendai Virus Mutant Variant
   Faculty Advisor: Nancy McQueen

3. Chow, Monica
   Thesis: Impacts Of Cell Phone Addiction: Nomophobic Behaviors Among Generations
   Faculty Advisor: Carol Blaszczynski

4. Chua, Aaron
   Thesis: Anna Politkovskaya: A Muddled Legacy
   Faculty Advisor: Choi Chatterjee

5. Franco, Jeannette
   Thesis: Jeannette Street (Play)
   Faculty Advisor: José Cruz González,

6. Hsu, Michael
   Thesis: CPM: An Online Platform For Curriculum Review
   Faculty Advisor: Chengyu Sun

7. Kan, Carolyn
   Thesis: Synthesis And Characterization Of Kinase Inhibitors Encapsulated In Mpeg-PLGA Nanoparticles For The Purpose Of Anticancer Drug Delivery
   Faculty Advisor: Yong Ba

8. Lin, Yulan
   Thesis: Evaluating The Chemistry Triplet: Is There A Preferred Order Of Presentation?
   Faculty Advisor: James A. Rudd, Ji Y. Son

9. Matos, Julie
Thesis: An Empirical Investigation Of The Relationship Between Teacher's Gender And Self-Disclosure On Facebook And Perceived Credibility: Does A Teacher's Gender Affect The Relationship Of Self-Disclosure And Credibility Through Facebook?Faculty Advisor: Chunsheng Bai

10. Olavarrieta, Moises
Thesis: Identity And Bias In Sorority Members
Faculty Advisor: Jessica Bodoh-Creed

11. Pham, Annie
Thesis: Epistatic Analysis Of Wdr68 And Endothelin-1 In First Arch Patterning In Danio Rerio
Faculty Advisor: Robert Nissen

12. Pomirchy, Michael
Thesis: Theoretical Perspectives On Minimum Wage Legislation: Neoclassical, Institutional, And Marxian
Faculty Advisor: Michael McLendon

13. Sabin, Susanna
Thesis: Tracing The Origin Of Tuberculosis: An Integrated Paleopathological Perspective
Faculty Advisor: Elizabeth Miller

14. Serrano, Ivan
Thesis: Effects Of Music Tempo On Resistance Training Performance
Faculty Advisor: Dana Ryan

15. Vela, Tatiana
Thesis: Determining Whether Wdr68 Is Required For Bmp Signaling In The 293t Cell Line
Faculty Advisor: Robert Nissen

Impact of Menu Labeling on Adolescents: A Quantitative Study in Four Diverse Los Angeles Communities

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ABSTRACT: The impact of calorie menu labeling on consumers in unclear, especially when comparing communities with significant differences in rates of obesity and access to healthy food choices. This study evaluated the impact of the new Federal Menu Labeling Law on adolescence menu selection in Los Angeles County in four communities with different socio-demographic profiles. Two of the communities, South LA and East LA, are described as low-income and have high rates of obesity, as well as high concentrations of fast food venues compared to Manhattan Beach and Culver City, who are high and medium-income areas and whose rates of obesity and number of fast food venues are much lower. A quantitative intercept study using exit surveys assessed the impact of menu labeling on adolescent consumers of two fast food chain restaurants in the four communities. A total of 508 intercept surveys over a 10 month period were collected at McDonalds and Taco Bell locations. In all four communities, about half of adolescents noticed the caloric information and of those who noticed, only 13% of adolescents let the information influence their order. This information was found confusing by 15.4% of respondents. Despite the availability of caloric postings, other factors were more important when it came to ordering such as taste, price and allowance. This study suggests that making the decision to eat at particular fast food restaurants were to socialize and influenced by location of restaurants and adolescent allowance. Education about calories and the understanding of how to use the information is key to making better food choices in fast food restaurants; with basic nutrition knowledge about the information, menu labeling may be more effective.

Key words: menu labeling, Affordable Care Act, calorie postings, adolescents, low-income communities, high-income communities, obesity

ABSTRACT

STUDIES ON THE MECHANISM OF REDUCED REPLICATION OF F1-R, A SENDAI VIRUS MUTANT VARIANT

By

Edie Brita Bucar

Sendai virus (SeV), a negative, single-stranded RNA virus that causes a respiratory tract infection in rodents, serves as a model for human respiratory tract infections. In addition to wild-type (wt) SeV, our lab studies a mutated variant, F1-R, which causes a systemic infection in rodents. Sequencing of F1-R has shown ten mutations leading to amino acid changes in the virus. To determine which mutations are associated with the phenotypic changes of F1-R, reverse genetics viruses (RGV) that contain combinations of the F1-R mutations were created. RGV0 contains the same F and M gene mutations as F1-R but lacks both the P and the L gene mutations. Multicycle replication assays showed that RGV0 replicates better than F1-R, and animal studies suggest that it is more virulent than F1-R, while still retaining the ability to cause a systemic infection. Our lab hypothesizes that mutations in the P and/or L gene(s) cause reduced replication and decreased virulence of F1-R as compared to RGV0. Since the P gene codes for the C proteins, which regulate genome and anti-genome production levels, it is possible that a varied ratio of infectious anti-sense RNA, and non-infectious sense RNA produced and then packaged during viral assembly may be the possible cause of reduced replication in F1-R. The parent wt SeV strains for F1-R and RGVO do differ; F1-R evolved from wt Z, while RGV0 was derived from wt Fushimi. Thus, both wild-type strains must be included in the assays to account for strain differences. A newly synthesized reverse genetics virus, RGV22, contains the P mutation but not the L. The replication of this virus in comparison to the aforementioned SeV strains was performed in order to elucidate the role of the P mutation. It was found that RGV22 replicated like wt SeV, and did not show reduced replication like F1-R, indicating that the P

mutation alone does not cause the reduced replication phenotype. Therefore, the L mutation is involved, either alone or in concert with the P mutation, in order to cause the reduced replication in F1-R. In order to further test the hypothesis that the reduced rate or F1-R production is due to a decrease in the negative sense (genomic) to positive sense (anti-genomic) RNA synthesis rate, a one-step qRT-PCR assay was developed in order to better quantify total virus produced by each of the strains. This was the foundation for a strand-specific two-step qRT-PCR assay in development to obtain a ratio of negative sense RNA and positive sense RNA viruses produced by each SeV. Once genomic to antigenomic RNA ratios are obtained for each virus, this will be used to validate the findings of the replication study, and will further test the hypothesized mechanism by which the P mutation may contribute to the reduced replication of F1-R.

ABSTRACT

Impacts of Cell Phone Addiction: Nomophobic Behaviors among Generations

By

Monica Ka Yun Chow

Many people are becoming increasingly dependent on mobile devices such as cell phones, laptops, and tablets. This dependency on cell phones and the overwhelming need to stay connected with society may have a potentially harmful impact on its users. The increased use of cell phones brings up issues in society such as texting or calling while driving, but far less attention has been paid to the new phenomenon of Nomophobia. Nomophobia, a term coined in 2011 by the UK based research-based organization called YouGov, describes an individual's phobia of losing their digital device. Nomophobes are disconnected from reality as they are focused on being connected through their cell phones. This dependency on cell phones contributes to social phobias and anxiety disorders. This thesis serves to identify and compare any differences among the effects of nomophobia on various generations including the Baby Boomers, Generation X, Y, and the Millennials.

ABSTRACT

Anna Politkovskaya: A Muddled Legacy

By

Aaron Bryan G. Chua

On October 7, 2006 Anna Politkovskaya, a prominent Russian journalist, author, and human rights activist, was found dead in her apartment building, her body riddled with multiple bullet wounds inflicted at point-blank range.[1] Politkovskaya, aged 46 at the time of her death, was known as one of the most vocal critics of Russian President Vladimir Putin and for her extensive coverage of the 2nd Chechen War (1999-present). While the international community was focused on the global War on Terror being waged in Iraq and Afghanistan, Politkovskaya strove to raise awareness of what the West, herein referring to the United States and the countries of Western Europe, associated with human rights abuses being committed in Chechnya by Russia's armed forces.[2]

Politkovskaya traveled for years throughout Chechnya, bearing full witness to the unfolding tragedy and carefully documenting the atrocities being committed in the region in the name of national security. She then traveled extensively abroad in an effort to make the world aware of the Putin regime's transgressions and to gather support to halt the violence and end the corruption.[3] Politkovskaya's coverage of the 2nd Chechen War garnered her awards and acclaim from around the world and her advocacy for decisive action to resolve the plight of the Chechen and Russian civilians and soldiers had been

[1] C.J. Chivers. (2006, October 8). Journalist Critical of Chechen War is Shot Dead in Moscow. *New York Times.*
[2] Celestine Bohen. (2001, December 15). In Chechnya, Truth is a Dangerous Goal. *New York Times*.
[3] Anna Politkovskaya. (2003). *A Small Corner of Hell: Dispatches from Chechnya*. Chicago, Illinois: University of Chicago Press.

lauded as inspiring by countries such as the United States, Great Britain, and France.[4] With such international renown, it would have been reasonable to expect that Anna Politkovskaya's death would have catapulted her cause, the exposure of the Putin regime's corruption and abdication of moral responsibility within Chechnya, to the forefront of the West's attention. It did not. While her murder has focused more attention on both President Putin, and his increasingly authoritarian policies within Russia, and on the spread of terrorism within Chechnya, it has not, as Politkovskaya would have hoped, drawn a similar amount of international attention to the cause she spent almost a decade covering. Given the circumstances surrounding her death, Politkovskaya's murder has increasingly been seen as politically motivated, her death construed as a tragic example of a government whose adherence to democratic ideals has always been questionable.[5]

[4] Emma Gilligan. (2010). *Terror in Chechnya*. Princeton, New Jersey: Princeton University Press. (150-153).
[5] Anna Kordunsky. (2012, November 10). Russia: Message Behind a Killing. *New York Times*.

Abstract/Introduction:

Jeannette Street by Jeannette Franco

Theater is an art form that can guide us and make us reflect on the human condition. Theater is therapy, theater is a catalyst for social change, theater is a social study, and theater is a culture creator. These are the practical applications I have observed and have used to create my art, during my undergraduate studies as a Music, Theatre Arts and Dance student at California State University, Los Angeles. There are a myriad of artists who have developed works to challenge the status quo and have caused social change through their work. Some have made their art by taking on the challenge of making human relations a dialogue, so that both parties can hear arguments and reflect. They give arguments pause so that people may see, through theater, all sides of an argument. Artists like Anna Deavere Smith with her one-woman show *Twilight: Los Angeles*, Luis Valdez and the Teatro Campesino with their vignettes challenging Latino stereotypes in *Los Vendidos*, Augusto Boal's empowering people with *Theater of the Oppressed*, The Tectonic Theater Project's *The Laramie Project* and all of Bertolt Brecht's works have been some of the examples I explored to create my art, especially as I took on the challenge of developing my thesis. I wrote a play that brings together the ideas of theater as therapy, theatre as catalyst for social change and theater as a reflection on society. Through my studies I was able to create my play *Jeannette Street* that deals with familial relations, identity search, and immigration policy. The process I underwent was one of research of past productions with similar concerns, interviewing the subjects of the play, transcribing, translating, journaling, writing a play, and recording the process so that it may be replicated for future one-person shows.

ABSTRACT

CPM: An Online Platform for Curriculum Review

By

Michael Hsu

CPM is a web-based online platform developed for use in the curriculum review process at California State University, Los Angeles (CSULA) on behalf of the Office of Semester Conversion and the Office of Undergraduate Studies.

CPM provides a system infrastructure consists of a site hierarchy for colleges departments completed with curriculum proposal repositories for current and archived proposals, providing metadata, organization, and different views and access. Building on top of the aforementioned components, a Curriculum review workflow facilitates the very complex curriculum review process with many steps and different requirements from various parties involved. By using CPM, faculties can access previously approved proposals, create and upload new proposals, submit them for review, and receive automatic email notifications throughout the process.

The project began in fall 2012 as a senior design project. This thesis continues the work and finished implementation of the major features by late March 2014. Currently it is in operational use by all colleges/offices/committees involved in the curriculum review process. New features are continuously being added to the system as requested.

ABSTRACT

Synthesis and Characterization of Kinase Inhibitors Encapsulated in mPEG-PLGA Nanoparticles for the Purpose of Anticancer Drug Delivery

By

Carolyn Kan

mPEG-PLGA (methoxy poly(ethylene glycol)- poly(lactic-co-glycolic acid) is an amphiphilic biocompatible polymer which can form nano-scale micelles, or nanoparticles (NPs), in aqueous environments. Hence, hydrophobic drugs are readily encapsulated within the hydrophobic cores of the NPs. In cancer therapies, NPs of the right size are found to passively accumulate at solid tumor sites through the enhanced permeability and retention (EPR) effect. This is because angiogenesis generates vessels with fenestrations of 600-800 nm in diameter, and tumors also generate impaired drainage systems. Therefore, mPEG-PLGA NPs are promising for targeted delivery of potent hydrophobic anticancer drugs. The hydrophobic compound, Sorafenib, was chosen for this study because it is a kinase inhibitor and has been approved to treat renal cancer and hepatocellular carcinoma. The objective of this study is to find the experimental methods and conditions to encapsulate Sorafenib in mPEG-PLGA NPs with optimized size, drug loading levels, and drug release profile. In addition, cytotoxicity assays have also been performed to determine its viability in cell lines.

Abstract

Evaluating the chemistry triplet: Is there a preferred order of presentation?

by

Yulan Ingrid Lin

In the teaching and learning of chemistry, the chemistry triplet of macroscale, nanoscale, and symbolic are different representations of chemical phenomena. Experts in chemistry manipulate, interact with, and navigate the three different representations better than novices. The learning theory of concreteness fading predicts that abstract concepts are best learned by presenting examples that progress from concrete to abstract. Thus, we expected that the preferred order of presenting examples when teaching would be (1) macroscale, (2) nanoscale, and (3) symbolic. After being presented with varied sequences of instructional videos, undergraduate students in psychology courses were assessed on their ability to navigate the chemistry triplet. The data were analyzed to assess whether students should first be presented with abstract or concrete examples, and whether a particular progression facilitates student learning. The results of this study may contribute both to pedagogical theory and classroom instruction.

Abstract: Credibility is often thought of as the most important variable that effects the student-teacher relationship. Furthermore, credibility has been shown to be enhanced within the classroom through teacher self-disclosure. With the proliferation of computer mediated communication in the classroom, more and more instructors are turning to this new medium as a way to communicate with their students and classrooms. Facebook is one way that instructors choose to stay in contact and communicate with students. This platform allows for a new and unique way to self-disclose personal information and could alter the perception of credibility through this mediation versus face-to-face disclosure. Some research has shown that the higher the level of self-disclosure, the more credible the teacher was perceived. Extending the research of J.P. Mazer et al (2009), this study aims to test for any perceived differences in a teacher's gender and self-disclosure on Facebook. Using a sample of 54 students pulled from lower-division communication courses this study employs the use of two fictitious instructor Facebook pages – one of a female the other a male – then operationalizes credibility using McCroskey and Teven's 18 point bipolar adjective credibility measurement (1999). Based upon research that shows gender can alter individual's perceptions of credibility in various contexts, we hypothesize that there will be a significant impact between gender and credibility through self-disclosure on Facebook.

An Empirical Investigation of the Relationship between Teacher's Gender and Self-Disclosure on Facebook and Perceived Credibility:

Does a teacher's gender affect the relationship of self-disclosure and credibility through Facebook?

By

Julie Matos

ABSTRACT

Identity and Bias in Sorority Members

By

Moises Jesus Olavarrieta

This study examines the influence that sorority affiliation has on the identity of a college student and how membership influences perception of members from different sororities. A brief history of fraternities and sororities in relation to the history of universities in America is presented starting from the colonial period. This study is significant because it is relevant to the over 9.6 million fraternity and sorority members across the United States and to the universities that host these students. It also contributes to the relatively little research done in this field. Existing studies explore the role that fraternity and sorority affiliation plays on members in terms of self identity, personal development, social lifestyle, and even on ethnic identity. However, there has been very little research on self-identity and member perception among sorority members. This research uses a variety of theoretical models in order to define what identity and bias are, gain a better understanding of sororities, better develop interview questions, and to predict what the responses of sorority members will be. Important results included finding no major differences in self identity across historically ethnic sororities; sororities pressured their members to maintain positive relationships with other sororities; and the new member process was often the only source of information for other sororities, which resulted in a misunderstanding of the values of other sororities.

ABSTRACT

Epistatic analysis of *wdr68* and *endothelin-1* in First Arch Patterning in Danio Rerio

By

Annie Pham

Craniofacial defects are among the most common human birth defects. Both *wdr68* and *endothelin-1* (*edn1*) are essential for lower jaw formation in zebrafish. The fact that *wdr68* is required for the expression of *edn1* supports a model in which the sole function of *wdr68* in lower jaw formation is the induction of *edn1* expression. If the model is true, then I should see rescue of lower jaw formation in *edn1* mRNA-injected animals homozygous for the loss of function *wdr68*^{hi3812} allele that otherwise lack *wdr68* function. Specifically, I hypothesized that *edn1* mRNA injection into *wdr68*$^{hi3812/hi3812}$ zebrafish embryos will at least partially rescue lower jaw patterning and formation. The assays used to assess the outcome of the experiments were alcian blue cartilage staining and in situ hybridization techniques. I found that the rescue of the Meckel's cartilage failed in alcian blue stained *edn1cds* mRNA injected Wdr68$^{hi3812/+}$ incrossed embryos. 35% of *edn1cds* mRNA injected embryos lacked the Meckel's cartilage. This was 10% higher than expected based on Mendelian ratios (25%) for mutant offspring of incrossed heterozygotes. Using an assay with an earlier developmental endpoint, partial rescue was seen by in-situ hybridization with antisense *dlx6a* RNA in *edn1cds* mRNA and pCS2-edn1cds + pCS2-GFP plasmids injected embryos. However, through *dlx6a* ISH analysis of *edn1cds* mRNA injected wildtype genotyped embryos I found evidence suggesting a non-canonical pathway in the zebrafish. This proposed non-canonical pathway led to downregulation of *dlx6a* expression in medial regions of the first and

second arches in *edn1cds* mRNA injected wildtype genotyped embryos. The non-canonical pathway was originally described in a subset of patients with Auriculocondylar Syndrome. Additional experiments are needed to confirm the proposed non-canonical pathway for Edn1 signaling in zebrafish. A greater understanding of Edn1 signaling events will improve understanding of deformities in human lower jaw formation, such as Auriculocondylar Syndrome.

ABSTRACT

Theoretical Perspectives on Minimum Wage Legislation: Neoclassical, Institutional, and Marxian

By

Michael Pomirchy

Economists have debated minimum wages for several decades and still have not reached a consensus on the use of this policy tool. The literature on the minimum wage does not focus enough on evaluating theoretical models and estimates, which are important given their frequent use in discussions of this legislation. In particular, three major theoretical frameworks – Neoclassical, Institutional, and Marxian - have not yet been tested definitively in terms of their predictive power of minimum wage laws. Neoclassical theory encompasses the competitive labor model and predicts that increases in the minimum wage reduce employment among low-skilled or teenage workers, cuts on-the-job training, and leads to negative changes in other economic indicators. Institutionalism favors increasing the minimum wage because it bolsters aggregate demand, improves productivity, and mitigates the inequality of bargaining power between firms and workers. Finally, the Marxian tradition focuses on the changes in consumption and investment as well as the increased stability of the income distribution and employment level. This paper finds that, given an analysis of myriad empirical studies, the effect of the minimum wage on employment has been shown to be relatively modest; some studies suggest a negative effect, some show a positive effect, while some show no effect at all. On training, most studies find that the effect is non-existent. Studies on the impact on aggregate demand indicate that the effect, if any, is very modest, and this paper's own time-series analysis shows a statistically

insignificant relationship between minimum wages and GDP growth. Finally, the minimum wage has been shown to compress the income distribution and reduce inequality.

Tracing the Origin of Tuberculosis: An integrated paleopathological perspective

By Susanna J. Sabin

A thesis presented to the faculty of the Honors College at California State University, Los Angeles in partial fulfillment of the requirements of the Honors College.

Los Angeles, CA

May 14, 2014

ABSTRACT

Tuberculosis is arguably one of the most impactful diseases in human history, yet its origin in human populations is still poorly understood. In modernity, we see evidence of the co-evolutionary relationship between humans and the organisms that cause tuberculosis in the emergence of drug-resistant strains of the pathogen. Given our long-standing relationship with the disease, it is plausible that there is more evidence of co-evolutionary impact in the past. A long-standing hypothesis of the emergence of tuberculosis in human populations is that shortly after the domestication of cattle, the bovine species of tuberculosis, *Mycobacterium bovis,* underwent genetic change to become a contagious pathogen for humans. The group-living that is associated with cattle domestication allowed the new pathogen, *Mycobacterium tuberculosis,* to establish a viable reservoir within the human species. This researcher has found, however, that little evidence exists in support of this hypothesis. Numerous paleopathological and biochemical studies have been conducted in an attempt to elucidate the circumstances surrounding the co-evolutionary relationship between humans and the pathogens that cause tuberculosis. However, only incomplete evidence for a comprehensive hypothesis of the emergence of tuberculosis in human populations has been gathered. This researcher has surveyed these studies and evaluated the disjointed evidence to yield an integrated perspective of the origins of tuberculosis. This researcher has analyzed studies in pathological skeletal morphology, ancient DNA analysis, and modern genetic mapping to produce an up-to-date geographic and temporal "map" of the co-evolutionary relationship between *Homo sapiens* and members of the *Mycobacterium tuberculosis* complex extending back to our origins as a species in East Africa. This "map" will depict the known presence of tuberculosis in the prehistoric/ancient world. Accompanied by this evaluation of evidence and suggested hypothesis are recommendations for future research into

this topic. These include pursuing research questions from an integrated perspective, which refers to the utilization of all available, relevant knowledge to solve a given problem, and more thoroughly communicating with fellow researchers of the topic across disciplines, so knowledge is built on knowledge. The findings of future research in this area have immense potential for enlightening our understanding of the genetic make-up of the *Mycobacterium tuberculosis* complex and its importance to modern medicine. This investigation provides information will assist modern health professionals in interpreting the evolutionary mechanisms of tuberculous pathogens and reveals paths for future research into the relationship between tuberculosis and humans.

ABSTRACT

Effects of Music Tempo on Resistance Training Performance

By

Ivan Serrano

Music has a constant presence in everyday life. Research has shown a positive relationship with music as an ergogenic aid in aerobic exercise. However, less research exists on the relationship between music and resistance training. The purpose of this study was to examine the relationship between music tempo and resistance training work output. Ten college-aged participants (5 male/5 female, age 22±3 years) took part in the study. Criteria for participation included at least 6 months of previous or current resistance training experience. Baseline testing included 1 Repetition Max tests for the Bench Press and Leg Press. The next two weeks consisted of one day a week of 3 sets of 30 second reps, at 75% of their 1RM for Bench and Leg Press. Participants had 2 minutes of rest in between sets. Participants listened to playlists of their reported favorite genre of music (Hip-Hop/Rap, Rock, Country, Classical/Jazz). The order of the tempos were randomly assigned for each week, varying between a high and low tempo playlist. Results showed no significant difference between genre selection and work output in any of the conditions (bench low $p< 0.66$, bench high $p< 0.42$, leg low $p<0.41$, leg high $p< 0.96$). There was also no significant difference between tempos and work output on bench or leg press ($p< 0.89$, $p< 0.67$) respectively. However, males showed a significantly greater output than females when listening to a low tempo playlist ($p= 0.009$). Future research is needed to better understand the mechanism behind this finding.

ABSTRACT

DETERMINING WHETHER WDR68 IS REQUIRED FOR BMP SIGNALING IN THE 293T CELL LINE

By

Tatiana Pauline Vela

In vertebrates, the bone morphogenic protein (Bmp) pathway is important for the specification and migration of neural crest cells and facilitates craniofacial development. The Bmp signaling cascade functions through several members of the mothers against decapentaplegic protein family (Smads) to relay cell-surface receptor signals to the nucleus to promote transcription. The Smad1, Smad5, and Smad8 (Smad1/5/8) transcription factors function by binding to DNA along with other DNA binding factors and co-factors. WD40-repeat domain protein 68 (Wdr68) is also an important factor in craniofacial development and has previously been identified as a Smad2/3 interactor in a tandem affinity purification assay. Although Wdr68 does not contain DNA binding domains, it localizes within the cell nucleus to the promoter regions of target genes. Wdr68 is also known to interact with Homeodomain-Interacting Protein Kinase 2 (HIPK2) that, in turn, binds to Smad1, 2, and 3. Thus, we speculate a model in which a Wdr68-containing complex modulates BMP signaling responses perhaps through interactions with Smad1/5/8. Specifically, we hypothesize that Wdr68 is required for BMP signaling. To determine whether Wdr68 modulates Bmp signaling, we use a BMP-responsive reporter (BRE-luc) in a dual luciferase assay to measure Bmp responses in a human keratinocyte (293T) cell line with either normal or reduced levels of Wdr68

protein. Doxycycline-inducible control and antisense-*wdr68* knockdown constructs will be used to modulate the levels of Wdr68 protein in 293T cells. Western blot analysis was used to assess the levels of Wdr68 protein. A constitutively active Bmp receptor is used to induce a Bmp response. BRE-luciferase activity is measured in Wdr68-depleted cells and compared to non-depleted control cells. The Smad signal inhibitor Hipk2 is be used as a positive control as Bmp responses inhibitor.