UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF ILLINOIS

JANIAH MONROE, MARILYN MELENDEZ, LYDIA HELÉNA VISION, SORA KUYKENDALL, and SASHA REED, Plaintiffs, v. JOHN BALDWIN, STEVE MEEKS, and MELVIN HINTON, Defendants.	)	Civil No. 3:18-cv-00156-NJR-MAB

DECLARATION OF DR. VIN TANGPRICHA, M.D.

I, Dr. Vin Tangpricha, hereby state:

1. I am a medical doctor with special expertise in treatment of transgender patients with gender dysphoria. I currently serve as President of the World Professional Association for Transgender Health ("WPATH"), the preeminent professional organization dedicated to the understanding and treatment of gender dysphoria worldwide. I have published extensively on issues relating to treatment of individuals with gender dysphoria and I treat transgender patients as part of my clinical practice.

2. I have been retained by counsel for the named plaintiffs and the putative class in the above-captioned matter to provide the Court with scientific and medical information about gender dysphoria and the standard of care for treatment, and to evaluate the current hormone therapy provided by IDOC to the named plaintiffs and the putative class members based primarily upon analysis of their medical records.

Qualifications and Basis of Declaration

3. I received my M.D. from Tufts University School of Medicine in Boston, Massachusetts in 1996. I subsequently earned a Ph.D. in Molecular Medicine from Boston University School of Medicine in 2004. I am Board Certified in Internal Medicine and in Endocrinology, Diabetes, and Metabolism by the American Board of Internal Medicine.

4. Since January 2004, I have served as Professor of Medicine, Division of Endocrinology, Metabolism and Lipids at the Emory University School of Medicine in Atlanta, Georgia. I became a full professor in September 2017. I have also been the Director of the Transgender Clinic and a staff physician at Emory since 2004, and have treated patients as a staff physician at the Department of Veterans' Affairs Medical Center ("VA") in Atlanta, Georgia since 2006.

5. Over the past 10 years, in my capacity as an endocrinologist, I have treated approximately 260 transgender patients with gender dysphoria at Emory, and approximately 100 additional transgender patients with gender dysphoria at the Atlanta VA Medical Center. I also participate in an initiative known as the WPATH Global Education Initiative, in which I deliver lectures three to four times a year on topics relating to hormone therapy for transgender persons.

6. I have authored or co-authored numerous scholarly articles and contributed to several books on topics relating to endocrinology in general and treatment of transgender patients in particular, including several guideline publications relating to endocrine treatments for transgender patients. My CV containing a full list of my publications inclusive of the past 10 years is included with this declaration as Appendix A.

7. From 2007 to 2009, I served as one of eight authors on the first hormone guidelines for transgender persons as a member of the Endocrine Society Task for Transgender Health Guidelines. This was one of the first such set of guidelines for hormone treatment of transgender persons published by a professional society, and continues to be the authoritative reference regarding hormone therapy for transgender persons. I have also served on committees of other relevant professional organizations, including with the American Association of Clinical Endocrinologists.

8. I have not previously provided expert testimony at deposition or at trial.

9. My clinical consulting fee in this case is 400 USD per hour.

10. In preparing this declaration and expert report, I relied on my review of each of the named plaintiffs' medical records (including records of their prescriptions and laboratory results), the medical records of putative class members (including records of their prescriptions and laboratory results), my extensive medical expertise in the area of endocrinology, and my review of the relevant medical literature related to hormone therapy and treatment of gender dysphoria, including the WPATH Standards of Care and the Endocrine Society Guidelines. Additional medical literature on which I have relied is cited and referenced throughout this report. I have also reviewed and relied on the materials from IDOC's Transgender Committee/GID Committee, as well as my phone interviews with each of the named plaintiffs. The materials I have relied upon in preparing this declaration are the same types of materials that experts in my field regularly rely upon when forming opinions on these subjects.

Background on Gender Dysphoria

11. Gender dysphoria, previously known as gender identity disorder, is a serious medical condition recognized in both the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5) and the World Health Organization's International Statistical Classification of Diseases and Related Health Problems (11th rev. 2018).

12. Not all transgender individuals experience gender dysphoria. Rather, individuals with gender dysphoria are those transgender individuals who experience an incongruence between their innate sense of belonging to a particular gender and the sex assigned to them at birth, accompanied by clinically significant distress or impairment of functioning because of the incongruence. Transgender patients sometimes describe this feeling informally as not feeling "at home" in their own bodies.

General Guidelines for Treatment for Gender Dysphoria

13. The medically accepted standards of care for treatment of gender dysphoria are set out in the WPATH Standards of Care for the Health of Transsexual, Transgender, and Gender-Nonconforming People (7th ed. 2011) (hereafter, "WPATH Standards"). These are internationally recognized guidelines for the treatment of persons with gender dysphoria, and inform proper medical treatment for healthcare professionals around the world.

14. The Endocrine Society promulgates its own guidelines for hormone therapy for use in treating transgender persons with gender dysphoria. The Endocrine Society is a global group of healthcare professionals dedicated to the clinical practice of endocrinology and to researching and

advancing hormone therapy for treatment of a variety of hormone disorders, including those that may accompany gender dysphoria.

15. These guidelines, which I co-authored, are entitled Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline (hereinafter, "Guidelines"), and they establish a framework for treatment of gender dysphoria, and in particular hormone therapy. The Guidelines are recognized around the world as the authoritative guide for hormone therapy in treatment of transgender persons with gender dysphoria. WPATH endorses the hormone regimens from the Guidelines.

Hormone Therapy Guidelines for Treatment of Gender Dysphoria

16. Both the WPATH Standards of Care and the Endocrine Society Guidelines identify hormone therapy as an important treatment for gender dysphoria, as such treatment is used to feminize or masculinize the body in order to reduce the distress caused by the discordance between a person's gender identity and their sex assigned at birth. WPATH Standards at 33; Guidelines at 3869.

17. Hormone therapy works to treat gender dysphoric persons by (1) suppressing endogenous sex hormone secretion determined by chromosomes and (2) maintaining sex hormone levels within the normal range for the person's affirmed gender. Endocrine Society Guidelines at 3869.

18. Hormone therapy in transgender adults is safe if it is correctly administered at proper therapeutic doses, and if patients are properly supervised according to the applicable guidelines. *See* Katrien Wierckx et al., *Cross-Sex Hormone Therapy in Trans Persons is Safe and Effective at Short-Time Follow-up: Results from the European Network for the Investigation of*

Gender Incongruence, 2014 J. SEX MED. 1999 (hereafter, "Cross-Sex Hormone Therapy"); *see also* Jamie D. Weinand & Joshua D. Safer, *Hormone Therapy in Transgender Adults is Safe with Provider Supervision; A Review of Hormone Therapy Sequelae for Transgender Individuals*, 2015 J. CLINICAL & TRANSLATIONAL ENDOCRINOLOGY 55.

19. The criteria for hormone therapy are (1) persistent, well-documented gender dysphoria; (2) capacity to make a fully informed decision and to consent for treatment; (3) being the age of majority; and (4) if significant medical or mental health concerns are present, then they are reasonably well-controlled. Guidelines at 3878; WPATH Standards at 34. Those criteria are the same for all transgender individuals.

20. The criteria's reference to "well-documented" gender dysphoria is not intended to screen out those people who have exhibited symptoms of gender dysphoria but were only recently diagnosed with the condition. Rather, this criterion in practice generally is understood to mean that the symptoms of gender dysphoria must have been present for at least 6 months. Typically when a patient is diagnosed as gender dysphoric, hormone therapy begins immediately because a person whose symptoms have reached the point that they have contacted a health care professional usually has experienced symptoms for greater than a 6-month period.

21. The presence of mental health concerns or other medical issues does not normally preclude access to hormone therapy. The accepted contraindications to starting hormone therapy are "previous venous thrombotic events related to an underlying hypercoagulable condition, history of estrogen-sensitive neoplasm, and end-stage chronic liver disease." WPATH Standards at 44. Mental health issues must be reasonably well-controlled prior to initiation of hormones, but should not prevent immediate initiation of hormone therapy, except in extreme circumstances.

WPATH Standards at 34; Guidelines at 3878. Indeed, given the nature of gender dysphoria, mental health concerns in patients are not uncommon, and effective treatment of mental health concerns may be inextricably linked to effective treatment of underlying gender dysphoria. Anxiety, depression and hopelessness are associated with gender dysphoria and are reasons to initiate hormone therapy rather than delay it. Unless a patient is unequipped to provide informed consent, hormone therapy typically should not be delayed. IDOC's practice of denying or delaying hormone therapy by requiring counseling beforehand is not a requirement that I require as a practitioner and is not medically accepted. IDOC's practice of denying or delaying hormone therapy on the basis of some co-existing mental illness is similarly misguided; symptoms such as depression and anxiety likely only can be addressed if the underlying gender dysphoria is addressed.

22. Once hormone therapy is initiated, clinicians should supervise their patients to maintain physiologic levels of the gender-appropriate hormones, and monitor patients for known risks and complications. For this and other reasons, it is important that clinicians treating gender dysphoria have expertise or training in transgender-specific diagnostic criteria, hormone treatment, and other treatments specific to transgender patient needs. Guidelines at 3869–70, 3877–78; WPATH Standards at 41.

23. In some instances, transgender patients will self-medicate by taking hormones purchased or given to them without a prescription. When treating physicians encounter such patients, it is important to continue hormone therapy, even if the patient's prior hormone regimen was sub-optimal. The physician should assess the information from the patient's self-reporting, available records and laboratory results, and any other available information and start a hormone regimen promptly, making modifications in the prescribed regimen as appropriate, until the patient

establishes care under a clinician who will institute a long-term plan for hormone therapy. This practice is known as "bridging." WPATH Standards at 43. Absent a medical contraindication, bridging care should be provided in order to ensure symptoms of gender dysphoria are addressed and the body is not re-feminized or masculinized (which can have cause significant distress in gender dysphoric patients), and in order to avoid effects of a lapse in hormones, which can include menopause-like symptoms such as hot flashes. In adolescents, bridging may be critical to avoid permanent changes to the body.

Medically Recommended Hormones for Transgender Females

24. Recommended hormone treatment for transgender females typically involves estrogen and a testosterone blocker (also known as an antiandrogen) called spironolactone. Guidelines at 3887–88.

25. The recommended hormones and dosages under the Guidelines for transgender females is an estrogen-derivative known as estradiol (if oral route, 2 to 6 mg/d, or milligrams per day) and spironolactone (if oral route, 100-300 mg/d). Research suggests that the most common effective therapeutic dose of estradiol for treatment of gender dysphoria is 4 mg/d, and that this generally is a safe and effective dosage under proper supervision. *See* Cross-Sex Hormone Therapy at 2008.

26. Ultimately, the optimal dose of estrogen will depend upon the patient. For some transgender females, 4 mg/d of estradiol may be insufficient to alleviate symptoms of gender dysphoria. The dose of estrogen should be at a level that maintains the desired sex characteristics and relieves gender dysphoria, but is also adequate to prevent osteoporosis, hot flashes, and mood disorders. *See* Vin Tangpricha & Martin den Heijer, *Oestrogen and Anti-androgen Therapy for*

Transgender Women, in LANCET DIABETES ENDOCRINOL (Apr. 2017) (hereafter, "Tangpricha Lancet Article"). If a particular dose is not meeting these goals, it may be medically necessary to increase the estradiol dosage beyond 4 mg/d. The only limiting factor in this regard is that a patient's estrogen levels should not exceed the peak level 400 pg/mL (pictograms per milliliter) typically seen in cisgender women. *See id.* at 5.

Medically Recommended Hormones for Transgender Males

27. Recommended hormone treatment for transgender males typically involves provision of testosterone, either parenterally (through injection) or transdermally (through the skin). Guidelines at 3887.

28. The recommended form and dosages of testosterone under the Guidelines for transgender males when delivered parenterally is either (1) 100-200 SQ (IM) every 2 weeks; or (2) testosterone undecanoate, 1000 mg every 12 weeks. When delivered transdermally, the recommended form and dosage of testosterone is either (1) 50-100 mg/d of testosterone gel of 1.6% concentration; or (2) 2.5-7.5 mg/d of testosterone through transdermal patch. Guidelines at 3887.

29. Ultimately, the optimal dose of testosterone will depend upon the patient. As with estradiol, it is often necessary to titrate the dose until blood tests and physical changes show the desired therapeutic goals are being met.

Medical Importance of Monitoring Hormone Levels

30. All transgender individuals receiving hormone therapy should receive regular clinical evaluation for potential adverse changes in response to treatment. The Standards of Care direct that "clinicians who prescribe hormone therapy . . . [p]rovide ongoing medical monitoring,

including regular physical and laboratory examination to monitor hormone effectiveness and side effects." Standards of Care at Section VIII, p. 42. Similarly, the Endocrine Society recommends "appropriate regular medical monitoring . . . [is] recommended for both transgender males and females during the endocrine transition and periodically thereafter," Guidelines at 3889, including patient evaluations every 2-3 months in the first year of hormone or endocrine treatment and then 1-2 times per year thereafter. Guidelines at 3871. The laboratory monitoring should include measurement of testosterone and estradiol (a derivative of estrogen) levels for females, and of testosterone levels for males. Guidelines at 3871, 3890.

31. Hematocrit and hemoglobin levels should be monitored as part of this testing in transgender patients receiving testosterone, because a testosterone level of above 55 ng/dL presents an increased risk of heart attack and stroke that can result in serious injury or death.

32. Testosterone may have side effects that lead to certain physiological changes in patients. Examples are clitoral enlargement and increased perspiration.

33. It is essential to monitor blood levels after hormone therapy begins. In addition to safety concerns, if the patient starts on the lower end of the range of a recommended dosage and gender dysphoria persists or worsens, it may be medically necessary to increase the dosage within the range to achieve the desired therapeutic outcome.

Monitoring in Transgender Females and Related Health Concerns

34. The recommended therapeutic range of testosterone levels for transgender females is less than 50 ng/dL. Guidelines at 3890.

35. The recommended estradiol levels for transgender females should rest within the physiologic range, which is between 100 to 200 pg/mL. Guidelines at 3890. However, if symptoms of Gender Dysphoria are not alleviated in this range, then a higher dosage of hormones should be provided, since estradiol levels higher than 200 pg/mL are safe for someone under qualified supervision for so long as they do not exceed 400 pg/mL. *See* Tangpricha Lancet Article at 5.

36. Transgender females on spironolactone should have their electrolytes tested as part of their regular evaluations, with potassium levels being particularly important. Potassium levels in excess of 5 mmol/L put patients at increased risk for cardiac arrhythmia/hyperkalemia, which can lead to cardiac arrest and even death.

37. Creatinine should also be monitored in these patients since spironolactone is a diuretic. Levels outside the acceptable range may indicate potential danger to kidney function that can lead to serious injury or even death in severe cases. Spironolactone also may cause dry skin, which should be addressed by lotions and moisturizing products.

38. Transgender females' prolactin levels should be monitored periodically as well. Without proper monitoring of prolactin levels, there is a risk of unchecked growth of the pituitary gland, which can cause serious complications, including loss of eyesight.

39. In addition to the potential adverse health effects described above relating to hormone levels outside of therapeutic ranges, it is also important to monitor hormone levels to know whether existing therapy is effectively treating gender dysphoria. For example, it may be necessary to increase a patient's estradiol dosage in order to induce the desired changes to secondary sex characteristics and to increase the patient's mental well-being. Guidelines at 3886.

40. Furthermore, certain formulations of hormones—namely, conjugated forms of estrogen—are inconsistent with the standards of care for treatment of gender dysphoria. Conjugated estrogens such as Premarin and Menest are not recommended because of the inability to regulate doses by measuring serum levels and the risk of thromboembolic disease (also known as blood clots). *See, e.g.*, Guidelines at 3889; *id.* at Table 11 (recommended hormone regimens in transgender persons, reflecting variations of oral, transdermal, and parenteral estradiol, but no conjugated hormones); L. J. Seal et al., *Predictive Markers of Mammoplasty and a Comparison of Side Effect Profiles in Transwomen Taking Various Hormonal Regimens, in* 2012 J. CLINICAL ENDOCRINOL METABOLISM 4422; Yana Vinogradova et al., *Use of Hormone Replacement Therapy and Risks of Venous Thromboembolism: Nested Case-control Studies Using the QResearch and CPRD Databases*, 2019 BMJ 1, 13. Blood clots pose significant risk that can result in death. Thus, transgender female patients should not be treated with conjugated estrogens because of the serious risks caused by their use, and the lack of any countervailing benefit as compared with estradiol. Oral estradiol also happens to be much less expensive than conjugated estrogens.

Monitoring for Transgender Males

41. For transgender males, blood tests should measure levels of testosterone, in addition to hemoglobin. The physiological range for testosterone is 400-700 ng/dL.

42. Testosterone has a stimulating effect on hemoglobin (red blood cells). High hemoglobin can lead to severe adverse health outcomes, including blood clots, heart attack and stroke. These conditions can be fatal. It is therefore important to monitor testosterone levels to ensure they do not exceed the high end of the physiologic range, and to monitor hemoglobin specifically in transgender males.

Treatment of Named Plaintiffs

43. I have reviewed the medical records of the named plaintiffs, and observed severely inadequate provision of hormone therapy in many respects. I also conducted phone interviews of each named plaintiff during which we discussed their gender dysphoria, their medical histories, and the related medical care they were receiving while incarcerated. IDOC is providing each with hormone therapy that does not meet the Guidelines for treatment set forth by the Endocrine Society, which are the authoritative reference in the medical community regarding hormone therapy for transgender persons. Indeed, the treatment falls well outside of accepted medical practice standards. IDOC delayed providing hormone therapy to the named plaintiffs for reasons that are not medically accepted, and are not contraindications to treatment. Several plaintiffs are receiving inappropriate forms of hormones (conjugated hormones) that carry increased risks of serious adverse health consequences. Others are receiving appropriate forms of hormones but at inadequate dosages that are failing to provide effective treatment. Moreover, hormone level monitoring is not being provided in accordance with the Guidelines for any named plaintiff, meaning that clinicians will remain unaware of the appropriate therapeutic dose, thereby placing all plaintiffs at risk of extremely harmful health consequences.

Janiah Monroe

44. Ms. Monroe was diagnosed with gender dysphoria in November 2011 as recognized by IDOC's "Gender Identity Disorder" Committee. However, initiation of hormone therapy was delayed, resulting in extreme suffering and attempts at autocastration, as reflected in Ms. Monroe's medical records. Ms. Monroe was not approved for hormone therapy until mid-2012, without any explanation. I have not seen anything in Ms. Monroe's medical records that provides an accepted medical rationale for this delay. The Committee's stated reasoning that if

Ms. Monroe were to obtain treatment, other prisoners might also seek treatment, is not a medically accepted rationale for denying or delaying necessary treatment.

45. Ms. Monroe's medical records indicate that her hormone prescriptions have been constant over time: namely, 3 mg/d of estradiol; and 150 mg/d of spironolactone, which is below the typical therapeutic dosage of 4 mg estradiol and at the lower end of the recommended dosage for spironolactone.

46. Ms. Monroe's medical records show that her hormone levels have not been monitored in accordance with the Guidelines since she initiated therapy. In fact, over the course of six years, monitoring of her levels has been rare.

47. I have been provided and reviewed the medical records for Ms. Monroe as I understand they are maintained by IDOC. Based upon that review, I identified a few instances in which Ms. Monroe's bloodwork was checked for hormone levels. The first was done on April 23, 2015—roughly 3 years after she began her hormone regimen. Ms. Monroe's second hormone level test was on June 3, 2016, more than a year after the first test. The June 3, 2016 records indicate an estradiol level of 86.9 pg/ml, below the recommended physiologic range for transgender females of 100-200 pg/ml. Ms. Monroe's next blood test measuring hormone levels was on November 4, 2016. This record indicates an even lower estradiol level of 66.3 pg/ml, well below the recommended range for transgender females. The next hormone level test occurred on April 21, 2017. The relevant records indicate an estradiol level of 95.8 pg/ml, still below the recommended range for transgender females of 100-200 pg/ml. The final record of a blood test that I reviewed measuring Ms. Monroe's hormone levels was from October 20, 2017. This time her estradiol levels were even lower than in April, at 87 pg/ml. Despite consistently low readings,

and continued documented symptoms of gender dysphoria, Ms. Monroe's hormone prescriptions remained unchanged.

48. The amount and frequency of Ms. Monroe's testing falls well outside of recommended and accepted practice, which counsels for laboratory monitoring of hormone levels at least once every 3 months during the first year of treatment, and afterwards at least once or twice yearly. Ms. Monroe received no tests for years after initiating hormone therapy, and went for over a year without being tested after her initial test. The irregular testing of her hormone levels represents a serious departure from the Guidelines and puts Ms. Monroe's physical health at serious risk.

49. Despite estradiol levels consistently measuring below the low end of the recommended physiologic range under Endocrine Society Guidelines, Ms. Monroe's hormone prescriptions were not altered. She continued to receive 3mg/d of estradiol, which is below the recommended therapeutic dose of 4 mg/d. *See* Cross-Sex Hormone Therapy at 2008.

50. Ms. Monroe's labs show a consistent and grossly inadequate estradiol concentration that shows her hormone therapy is failing to adequately treat her gender dysphoria. Ms. Monroe's medical records demonstrate that she has experienced continued depression, anxiety, and increasing potential risks of suicidality that are likely the result of her gender dysphoria, further indicating that her hormone dosage is inadequate to effectively treat her gender dysphoria. The inadequate dosage in the face of persistent gender dysphoria, and IDOC's failure to react by increasing her dose, is another severe departure from the Guidelines and puts Ms. Monroe's physical and mental health at substantial risk. Indeed, Ms. Monroe's symptoms have actually worsened, and according to her medical records she continues to experience suicidal

ideation and self-harm because of her gender dysphoria. Given the fact that she has been on hormone therapy for roughly six years, and especially in light of her persistent acts of self harm, including attempts at auto-castration and suicide, IDOC health care staff should have addressed her low estradiol and irregular testing a long time ago.

51. Not addressing these deficiencies, especially in light of her ongoing gender dysphoria, is so far outside the clinical standards for treatment of this condition that I fear for Ms. Monroe's life. The quality of her care is among the worst cases I have encountered for an individual with gender dysphoria, and shows either a profound lack of knowledge about providing hormone therapy or indifference about treating gender dysphoria.

Marilyn Melendez

52. I have been provided and reviewed the medical records for Ms. Melendez as I understand they are maintained by IDOC. IDOC personnel officially diagnosed Ms. Melendez with gender dysphoria in March of 2015. After a delay of several months, IDOC personnel finally initiated hormone therapy to treat Ms. Melendez's gender dysphoria in August 2015. I have not seen anything in Ms. Melendez's medical records that offers an accepted medical rationale for this months-long delay. The rationale provided by the GID Committee—that Ms. Melendez first needed counseling about living as the opposite gender—is not a medically-accepted reason to deny or delay treatment.

53. IDOC personnel have prescribed Ms. Melendez Menest and Premarin, both conjugated estrogens. Her doses of Menest and Premarin have ranged from 1.25 mg/d to 5.0 mg/d. She also currently also takes spironolactone at 200 mg/d. As noted previously, conjugated

estrogens are not a recommended treatment for any transgender individual, and pose significant risks that estradiol does not.

54. Ms. Melendez's hormone levels have been tested irregularly and not in accordance with the Guidelines. A blood test in April 2017 indicates an estradiol level of 82.9 pg/ml, below the low end of the acceptable therapeutic range. However, because Ms. Melendez is on a conjugated estrogen, it is impossible to know if this result is accurate, meaning her estradiol levels could be even lower than this number or very far above the safe range, including dangerously high. I have seen no subsequent bloodwork done for Ms. Melendez, despite the fact that hormone levels should be monitored once or twice per year. I understand that Ms. Melendez has reported frequent erections in the morning and excessive face and body hair—which suggest that her testosterone is not adequately suppressed and her current dosage is failing to treat her gender dysphoria.

Sora Kuykendall

55. I have been provided and reviewed the medical records for Ms. Kuykendall as I understand they are maintained by IDOC. After an auto-castration attempt, IDOC diagnosed Ms. Kuykendall with gender dysphoria and began hormone therapy around February 2015. Ms. Kuykendall was prescribed Premarin, a conjugated estrogen, at 5 mg/d, and eventually spironolactone at 200 mg/d.

56. Initially, Ms. Kuykendall received no blood testing of her hormone levels. It was not until May 2017 that IDOC appears to have ordered laboratory work for her blood. The tests showed an estradiol level of 112 pg/ml. However, it is impossible to know if the estradiol level of 112 pg/ml is within the acceptable therapeutic range because Ms. Kuykendall is being treated with a conjugated estrogen, a departure from the Guidelines that puts her health and safety at risk.

Sasha Reed

57. I have been provided and reviewed the medical records for Ms. Reed as I understand they are maintained by IDOC. Ms. Reed was diagnosed by IDOC personnel with gender dysphoria in November of 2015. Despite well-documented and persistent gender dysphoria in her records, Ms. Reed was not provided hormone therapy for almost a year and a half until April of 2017. I have not seen anything in Ms. Reed's medical records that provides an accepted medical rationale for this long delay. The Transgender Committee's explanation that doctors first needed to investigate her conceptualization of gender identity is not a medically-recognized reason to deny or delay treatment. This unjustified delay represents an easily preventable failure to initiate much-needed medical treatment for Ms. Reed's recognized and serious medical need.

58. Ms. Reed was prescribed estradiol at 2 mg/d and spironolactone at 200 mg/d. The first records of a blood test are from July of 2017 and show a very low estradiol level at 45 pg/ml that is well below the recommended therapeutic range of 100-200 mg/pl, and her testosterone levels were at 400 ng/ml, well above the recommended therapeutic level of 50 ng/ml for patients with gender dysphoria.

59. In October of 2018—15 months after her initial blood test showed hormone levels far outside the therapeutic range—IDOC finally increased Ms. Reed's prescription to 3 mg/d of estradiol and 300 mg/d of spironolactone. A follow-up blood test a week later showed her estradiol at 281 pg/ml and her testosterone at 234 ng/ml. Thus even after the long delay in titrating her dosages, Ms. Reed's testosterone levels remained far above the 50 ng/ml recommended therapeutic level. The failure to regularly monitor Ms. Reed's bloodwork, and the failure to bring her levels within the therapeutic range, along with the long delay in starting her hormone treatment, amount

to grossly inadequate treatment of her gender dysphoria and needlessly put her health at serious risk.

Lydia Helena Vision

60. I have been provided and reviewed the medical records for Ms. Vision as I understand they are maintained by IDOC. Ms. Vision was diagnosed with gender dysphoria by IDOC in March of 2016. Despite repeated requests for hormone treatment, she was denied it for over two years. I have not seen anything in Ms. Vision's medical records that provides an accepted medical rationale for this long delay. Ms. Vision was denied hormones for numerous reasons that have no medical foundation and are not contraindications to treatment: that her gender dysphoria "may not fully manifest itself in the correctional environment"; that she had "potential for further victimization and isolation as the physical effect of feminizing hormones become apparent"; that she had insufficient support to "undergo the physiologic changes associated with feminizing hormones"; and a suggestion that she experienced post-traumatic stress syndrome as a result of prior sexual abuse. The delay in providing Ms. Vision with hormone therapy is entirely unjustified, and is a remarkable departure from accepted medical practice.

61. In November of 2018, IDOC finally prescribed Ms. Vision hormone therapy. I have not yet seen subsequent records to show whether the regimen prescribed to Ms. Vision places her in an appropriate hormone range to treat her gender dysphoria and avoid risks from hormone imbalances.

Conclusions Regarding Named Plaintiffs

62. None of the named plaintiffs has received even a baseline of medical care adequate to alleviate their gender dysphoria. The care, and specifically the hormone therapy, administered

by IDOC personnel is grossly inadequate in a number of ways and constitutes a severe departure from guidelines widely accepted by medical professionals in the field for treating patients with gender dysphoria. Not only does this poor treatment fail to treat plaintiffs' gender dysphoria, it puts their lives at risk, most notably by increasing their risk for blood clots and cardiac arrhythmia.

63. The named plaintiffs experienced unjustified delays in initiation of hormone therapy. Delays of months, or in some cases over a year, are completely unjustified. Generally, hormone therapy should immediately follow a gender dysphoria diagnosis. The presence of mental health issues typically should not preclude access to hormone therapy for gender dysphoric individuals who otherwise fit the diagnostic criteria for hormone treatment. WPATH Standards at 34. The reasons provided by the Transgender Committee for delaying hormone therapy for the named plaintiffs are not medically-accepted.

64. The plaintiffs' hormone dosages are inadequate and not properly monitored or administered. For example, although research suggests that the most common optimal therapeutic dose of estradiol for treatment of gender dysphoria is 4 mg/d, and that this is a safe dosage under supervision, none of the named plaintiffs received this dosage. *See* Cross-Sex Hormone Therapy at 2008. After plaintiffs' bloodwork revealed levels outside of the therapeutically accepted levels, titrating was not performed. In addition, two named plaintiffs inexplicably were prescribed a conjugated estrogen compound that cannot be measured in bloodwork and thus is not an accepted form of estrogen.

65. Finally, inadequate, sporadic, and ineffective hormone level testing puts plaintiffs' safety at risk. None of the named plaintiffs had bloodwork done with the frequency recommended by the Guidelines. Even when bloodwork was performed, critical tests to ensure the absence of

dangerous side effects, such as testing electrolytes, potassium, creatinine and prolactin, was not done or done irregularly for all plaintiffs. This lack of testing reveals gross inadequacies of the medical care for gender dysphoria.

Conclusions Regarding Putative Class Members

66. My review of the named plaintiffs' files revealed patterns of treatment: that IDOC delayed or denied hormone therapy for reasons that are not recognized by medical professionals; that IDOC failed to monitor hormone levels with anywhere near the regularity that is necessary to ensure that gender dysphoria is treated and that dangerous side effects are avoided; that IDOC failed to titrate plaintiffs' dosages to ensure that they were within therapeutically appropriate and effective ranges; and that IDOC prescribed to at least some patients outdated and unaccepted forms of estrogen.

67. In order to evaluate whether these deficiencies persisted throughout the putative class, I reviewed the relevant medical records produced by IDOC from the putative class members and observed the same deficiencies described above as to the named plaintiffs in this case. My review principally focused on reviewing prescription records and bloodwork testing, which is useful in evaluating whether IDOC has prescribed an effective course of hormone therapy and whether it is testing to ensure proper dosages and to guard against hormone imbalances and side effects that can result therefrom.

68. As with the named class representatives, the records of the putative class members show hormone levels that are insufficient to treat gender dysphoria; the continued use of conjugated estrogens; and irregular and infrequent testing of hormone levels.

69. The significant majority of putative class members who were on hormone therapy ***never once*** had bloodwork testing that demonstrated levels of estrogen and/or testosterone within the therapeutic ranges recommended under the Guidelines. In other words, every time IDOC tested these plaintiffs' hormone levels, they were out of range. This would signal to any knowledgeable medical professional that the dosages required titration and that follow-up testing should be done promptly to bring the levels within effective ranges. However, I rarely observed any such corrective action—and even if adjustments were made to hormone dosages, the patient's hormone levels remained out-of-range in the subsequent test. The fact that the vast majority of gender dysphoric patients' hormone levels consistently fall outside of the therapeutic range demonstrates that IDOC is providing treatment that is not treating their gender dysphoria and would not be expected to treat their gender dysphoria. At least 15 putative class members were receiving dosages of 2mg estradiol or less—which practitioners familiar with gender dysphoria would not expect to be effective and thus would not prescribe.

70. At least eight putative class members, excluding the named plaintiffs, were at some point while under the care of IDOC prescribed a conjugated estrogen, either Menest or Premarin. IDOC continued to prescribe several of those inmates conjugated estrogen as of the date of their most recent medical records, demonstrating that its medical staff continues to prescribe this outdated and unaccepted form of estrogen.

71. The putative class members' records further indicated infrequent testing that did not meet the standards set out in the Guidelines. The Guidelines indicate that testing should be performed every 2-3 months in the first year of hormone or endocrine treatment and then 1-2 times per year thereafter. At least ten putative class members receiving hormones had no record of having ever received any blood test measuring hormone levels—a remarkable departure from the

Guidelines that poses significant risk to these patients. Testing for electrolytes, potassium, creatinine, and prolactin, while performed occasionally, was not performed with regularity. Roughly half of the putative class had no record of ever being tested for these levels. Of those who received testing, some demonstrated unsafe creatinine, potassium, and/or prolactin levels, yet seemingly no responsive action to bring the levels within a safe range. In the vast majority of cases (over 90 percent), testing was not performed with the regularity dictated by the Guidelines.

72. My observations concerning the putative class members are consistent with the severe deficiencies in care that I identified as to the named plaintiffs in this case. As with the named plaintiffs, the grossly inadequate treatment of their gender dysphoria puts their physical and mental health at substantial risk.

Pursuant to 28 U.S.C. § 1746, I declare that the foregoing is true and correct.

Dated: 4/26/19

Dr. Vin Tangpricha, M.D.

APPENDIX A

EMORY UNIVERSITY SCHOOL OF MEDICINE
STANDARD CURRICULUM VITAE FORMAT

1. Name: Vin Tangpricha

2. Office Address:
Division of Endocrinology, Metabolism and Lipids
101 Woodruff Circle NE-Woodruff Memorial Research Building 1301
Atlanta, GA 30322

Telephone: 404-727-7254
Fax: 404-727-1300

3. E-mail Address: vin.tangpricha@emory.edu

4. Citizenship: United States of America

5. Current Titles and Affiliations:

a. Academic Appointments:

i. Primary Appointments:

Professor of Medicine, Division of Endocrinology, Metabolism and Lipids, Department of Medicine, Emory University School of Medicine, September 1, 2017-Present

ii. Joint and Secondary Appointments:
Faculty in Nutrition Health Sciences, Laney Graduate School, Emory University, 2005-Present

Adjunct Clinical Associate Professor, Department of Medicine, Morehouse School of Medicine, 2011-Present

b. Clinical Appointments:
i. Associate Director, Osteoporosis Clinic, The Emory Clinic, 2004-Present
ii. Director, Transgender Clinic, The Emory Clinic, 2004-Present
iii. Staff Physician, The Emory Clinic, 2004-Present
iv. Staff Physician, Veterans Administration (VA) Hospital, Atlanta, GA, 2006-Present
v. Director, Adult Endocrinology, Emory Cystic Fibrosis Center, 2007-Present

c. Other Administrative Appointments:
i. Director, Clinical Research Unit, Division of Endocrinology, Diabetes & Lipids, Emory Department of Medicine, 2004-2009
ii. Associate Program Director, Emory Endocrinology Fellowship Program, Division of Endocrinology, Diabetes & Lipids, Emory Department of Medicine,2007-2009
iii. Recruitment Coordinator, Nutrition Health Sciences Program, Graduate Division of Biological & Biomedical Sciences, 2009-2013
iv. Course Director, Translation to Clinical Medicine (EPI 501M), HHMI Med into Grad Program, Laney Graduate School, 2010-Present
v. Program Director, Emory Endocrinology Fellowship, Division of Endocrinology, Diabetes & Lipids, Emory Department of Medicine, 2011-Present
vi. Program Director, ABIM Clinician Scientist Pathway (Research Track), Internal Medicine Residency, Emory Department of Medicine, 2013-Present

6. Previous Academic and Professional Appointments:
   a. Instructor in Medicine, Boston University, 2002-2003
   b. Assistant Professor of Medicine, Division of Endocrinology, Metabolism and Lipids, Emory University, 2004-2009
   c. Associate Professor of Medicine, Division of Endocrinology, Metabolism and Lipids, Department of Medicine, Emory University School of Medicine, 2009-2017

7. Previous Administrative and/or Clinical Appointments:
   a. Staff Physician, Boston Medical Center, 2002-2003

8. Licensures/Boards:
   a. Massachusetts Medical License, 1998
   b. Georgia Medical License, 2003

9. Specialty Boards:
   a. ABIM, Board Certified in Internal Medicine, 1999
   b. ABIM, Board Certified in Endocrinology, Diabetes and Metabolism, 2001, Recertified 2011
   c. Certified Clinical Densitometrist, International Society for Clinical Densitometry, 2003

10. Education:
    1989 - 1992 **B.A.** (Anthropology and Biology, double major)
    Case Western Reserve University, Cleveland, Ohio

    1992 – 1996 **M.D.**
    Tufts University School of Medicine, Boston, Massachusetts

    2000 – 2003 **Ph.D.** (Molecular Medicine, Advisor Michael F. Holick)
    Boston University School of Medicine, Boston, Massachusetts

11. Postgraduate Training:
    1996 – 1999 Intern & Resident, Internal Medicine, Boston University/Boston Medical Center, Boston, MA, (Program Director: David Battinelli, M.D., Chair of Medicine: Joseph Loscalzo, M.D., Ph.D.)

    1999 – 2001 Clinical Fellow, Endocrinology, Diabetes & Nutrition, Boston University School of Medicine, Boston, MD, (Program Director: Alan Malabanan, M.D., Chief of Endo. Lewis E. Braverman, M.D.)

12. Continuing Professional Development Activities:
    Physician Executive Program, Emory University, 2008-2009

13. Committee Memberships:

    a) National and International

    i) Member, Endocrine Society Task Force for Transgender Health Guidelines, 2007-2009
    I served as one of 8 authors on the first hormone guidelines for transgender persons released by a professional society. This task force published guidelines in 2009 for the hormone treatment of transgender persons, which is the current authoritative reference for hormone therapy.

    ii) Member, American Association of Clinical Endocrinologists, Publications Committee, 2008- 2017
    I served on this committee for 9. We reviewed all official position statements and guidelines of the American Association of Clinical Endocrinologists prior to publication.

iii) Member, National Council, American Federation for Medical Research, 2008-2010
I served on the national council for AFMR for 2 years.

iv) Co-chair, Vitamin D Guidelines Committee, Cystic Fibrosis Foundation, 2010-2012
I was the co-chair of the vitamin D guidelines that updated and revised recommendations on the diagnosis and treatment of vitamin D deficiency in children and adults with CF. This resulted in a guidelines publication for the CF Foundation.

v) Member, American Association of Clinical Endocrinologists (AACE), Reproductive Hormone Committee, 2010-2017
I was a member of this committee for 7 years. We provide input on behalf of AACE the on topics related to sex steroid hormones

vi) Member American Association of Clinical Endocrinologists, Nutrition Committee, 2010-2017
I have served on the nutrition committee for AACE for over 7 years. I was the expert on the committee focused on vitamin D and calcium. We provide educational modules for the association by publishing white papers and creating online learning modules on nutrition.

vii) Member, Cystic Fibrosis Therapeutics Development Network (TDN), Publications Committee, 2011-2014
I served a 3 year term on the CF TDN Publications committee. My role was to review manuscripts from clinical trials supported by the CF TDN (a clinical trials network) prior to their publication. We provided our input to these manuscripts to increase their chance for publication at national journals.

viii) Councilor, Association of Program Directors in Endocrinology and Metabolism (APDEM), 2012-2014
I was elected to a 3-year term as a councilor to this group that represents all of the endocrinology program directors in the United States.

ix) Member, Academic Endocrinologists Committee, American Association for Clinical Endocrinologists, 2012-2013, Chair, 2014-2015
I served as a member then chair of this committee that met quarterly for AACE to provide input to the association on topics related to academic endocrinology.

x) Chair, Communication and Technology Committee, World Professional Assoc. for Transgender Health, 2012-2013
I was appointed chair to this committee to help improve communications to the members of WPATH.

xi) Member, Endocrine Society Continuing Medical Education and Maintenance of Certification Committee, 2013-2016
I was appointed to 8 person committee to help with the medical education activities for the members of the Endocrine Society.

xv) Member, Domestic Membership Committee, American Association of Clinical Endocrinologists, 2015-2108
I served as a member of this committee for AACE which meets every 3 months by teleconference to discuss ways to recruit members and enhance benefits for members.

xvi) Member, Revision Committee for Guidelines for Hormone Therapy in Gender Dyphoria and Gender Incongruent Persons, Endocrine Society, 2015-2017
I was reappointed to the guidelines committee to update and revise the hormone therapy guidelines for the Endocrine Society. The new guidelines were published September

2017.

Chair, Education Oversight Committee, American Association for Clinical Endocrinologists, 2017-
I was appointed by the AACE president to serve a 3 year term to oversee all of the educational activities of our society.

b) Regional and State

i) Chairman, Southern Section, American Federation for Medical Research, 2008-2010
I served as the chairman of the Southern Section of the AFMR for 2 years. My role was to help with the membership of AFMR and to coordinate the planning of the Southern Regional Meeting.

ii) Vice-President, 2008-2009 then President, Georgia Chapter, American Association of Clinical Endocrinologists, 2009-2010
I have been active in my local endocrinology community as well as nationally.

iii) Chair, Website Committee, Southern Society for Clinical Investigation, 2015-Present
I was asked by the president of this society to chair the website committee to completely overhaul the society website which was successfully implemented in January 2016.

c) Institutional

i) Member, Emory Atlanta Clinical and Translational Institute Scientific Advisory Committee (ACTSI), 2005-Present
I have served on the SAC (formally GCRC) review committee for over 10 years. We review, discuss and approval protocols that are conducted in the ACTSI.

ii) Member, Endocrinology Fellow Curriculum and Selection Committee, 2005-Present
I have been involved in the endocrinology fellow selection committee for over 10 years. I interview 15-20 fellow candidates each year for our program.

iii) Enrichment Coordinator, Emory Center for Clinical and Molecular Nutrition, 2006-2009
I was the past coordinator for this monthly seminar series

iv) Emory World AIDS Day, Organizing Committee, 2007
I was a member of this committee and hosted former Surgeon General Jocelyn Elders as a guest speaker to speak at the event.

v) Member, Department of Medicine, Medical Student Education Committee, 2007-2010
I served as a member of this committee under Dr. Erica Brownfield. We reviewed and arbitrated academic cases related to students

vi) Member, Faculty Development Committee, Department of Medicine, 2008-2010
I served as a member of this committee under Dr. Kathy Griendling

vii) Chair, Awards Sub-Committee, Department of Medicine 2008-2010
I was the chair of the committee to recognize faculty in the DOM

viii) Member, Executive Committee, Emory Nutrition and Health Sciences Program, 2009-2013, I served for 4 years on the Executive committee for NHS

ix) Member, Rheumatology and Immunology Division Director Search Committee, 2010-

2011
I served on the DOM committee that led to the hiring of Dr. Sanz

x) Chair, Clinical Interactions Network (CIN), Scientific Review Panel, Emory ACTSI, 2010-Present
I am currently 1 or 3 co-chairs that review, triage and approve research protocols for the ACTSI.

xi) Member, Medical Student Research Committee, 2010-2015, I reviewed Discovery project proposals and final papers for 5 years

xii)Emory Physician Scientist Training Program (M.D./Ph.D.) Admissions Committee, 2015-Present
I am currently serving on the physician-scientist (M.D./Ph.D.) admissions committee.

xiii) Emory Department of Medicine, Promotions and Tenure Committee. 2018- present, We review all promotions packets for the DOM.

14. Peer Review Activities:

a. Grants:

i. National and International:

a) Ad Hoc Reviewer, NIH Special Emphasis Section, Chemo-Dietary Prevention (CDP), 2006
b) Ad Hoc Reviewer, Thrasher Foundation, 2009
c) Ad Hoc Reviewer, Diabetes UK, 2009
d) Ad Hoc Reviewer, UAB Diabetes Research Training Center, Pilot Grant Program, 2010
e) Ad Hoc Reviewer, Arthritis Research UK, 2010
f) Ad Hoc Reviewer, NIH Special Emphasis Section, Ancillary Studies in Clinical Trials, 2010-2011
g) Ad Hoc Reviewer, American Association for the Advancement of Science's Research Competitiveness Program, 2011
h) Regular reviewer, Clinical Research Awards, Cystic Fibrosis Foundation, 2011-Present, I have been a regular reviewer for the CF Foundation for their clinical research awards. We review letters of intent twice a year and then meet in person at the national CF Foundation headquarters to discuss grants in person.
i) Ad Hoc Reviewer, NIH/NHLBI SEP, Low Cost Pragmatic Clinical Trials, 2014
j) Ad hoc reviewer, NIH/SEP, Neurological, Aging and Musculoskeletal Epidemiology, 2014

ii. Institutional:
a) Reviewer, Emory University KL2 Grant Review Committee, 2008-2009
b) Reviewer, University Research Committee (URC), 2009 – 2010
c) Reviewer, Emory Egleston Children's Research Center, 2011

b. Manuscripts reviewer:

Endocrine Practice, 2004-present
American Journal of the Medical Sciences, 2008-present
European Journal of Clinical Nutrition, 2008-present
Journal of Nutrition, 2008-2013
Chest, 2008-2014
American Journal of Clinical Nutrition, 2008 - present

Journal of Sexual Medicine, 2009- present
Clinical Endocrinology, 2009-2011
Journal of Clinical Endocrinology and Metabolism 2011-present
Journal of Cystic Fibrosis, 2014-present

c. Conference Abstracts:
   i. National and International:
   1. Abstract reviewer, North American Cystic Fibrosis Conference Annual meeting, 2009-Present
   I have been a regular reviewer of the endocrine and/or diabetes abstracts submitted to the North American CF Conference for many years.

   2. Abstract reviewer, American Society of Nutrition, Experimental Biology Annual meeting, 2009-2011
   I reviewed abstracts for the American Society of Nutrition for 3 years for presentation at the Experimental Biology Meeting.

   3. Abstract reviewer, American Association for Clinical Endocrinologists (AACE) Annual Meeting, 2013-Present
   I review abstracts annually for the AACE annual meeting

   3. Abstract reviewer, National Transgender Health Summit, Oakland, CA, 2013, I served as an abstract reviewer for this transgender meeting

   4. Abstract reviewer, World Professional Association for Transgender Health (WPATH), Biennial Meetings, 2011, 2014, 2016. I have been a regular abstract reviewer for the Biennial Meeting for WPATH.

   ii. Regional:
   1. Abstract reviewer, Southern Society for Clinical Investigation, Annual Meeting, 2008-Present
   I have reviewed abstracts in endocrinology and nutrition topics for the SSCI/Southern Regional Meeting.

15. Consultantships:

   1. Member, AquADEK advisory Committee, Cystic Fibrosis Foundation, 2012-2014
   I was asked by the CF Foundation to become a member of a committee to advise the foundation on what vitamins should be included in their multivitamin preparations. We met at the foundation for the kick off meeting and regularly by telephone and email.

   2. World Anti-Doping Agency (WADA) Therapeutic Use Exemptions Expert Group, Testosterone use in transgender athletes, 2012
   I was asked by WADA to provide input regarding hormone use in transgender athletes and edit their policy manual.

16. Editorships and Editorial Boards:

   a. Editorships

   1. Guest Editor, Special Issue on “Vitamin D”, International Journal of Endocrinology, 2008
   I was invited to coordinate a special issue on vitamin D. This was the first special issue for this journal. I oversaw the review of 15 manuscripts that were eventually published. Our rejection rate was approximately 50%.

   2. Associate Editor, Journal of Sexual Medicine, 2008-2014

I was appointed by Editor in Chief, Irwin Goldstein, to be the Associate Editor to oversee the review of all manuscripts submitted on the topic of transgender or differences of sexual development (formally known as disorders of sexual development or DSD). During my term, I oversaw the review of over 100 manuscripts submitted to the journal.

3. Section Editor, Annual December issue on Disorders of Calcium and Bone, Current Opinion in Endocrinology, Diabetes, and Obesity, 2009-Present
I was appointed by Dr. Lewis Braverman, Editor in Chief, to oversee the December issue of Current Opinion in Endocrinology, Diabetes and Obesity. My role is to organize and invite authors to write reviews for this yearly issue focused on disorders of calcium, vitamin D and bone.

4. Guest Editor, Special Issue on "Vitamin D", Dermato-endocrinology, 2012
I was a special guest editor for this issue on vitamin D.

5. Editor in Chief, Journal of Clinical and Translational Endocrinology, 2013-Present
I was appointed by Elsevier to be the Editor in Chief of this new open access journal in endocrinology. This was one of the publisher's first open access endocrinology journals. We have published over 100 original research and review manuscripts over the past 3 years. We expect to have an ISI Impact Factor in the next 1-2 years.

6. Associate Editor, Sexual Medicine Reviews, 2015-Present
I am currently an associate editor for Sexual Medicine Reviews and oversee manuscripts dealing with transgender, hormone therapy or DSD.

7. Guest Editor, Reviews in Endocrine & Metabolic Disorders, 2018-
I am an invited guest editor for a special issue on transgender medicine.

8. Guest Editor, Endocrinology & Metabolism Clinics, 2018-
I am an invited guest editor for a special issue on transgender medicine.

b. Editorial Boards

1. Endocrine Practice, The Official Journal of the American Association for Clinical Endocrinologists, 2007-Present

2. International Journal of Endocrinology, 2009-2013

3. Nutrition and Food Science, 2015-Present

4. Transgender Health, 2017- Present

17. Honors and Awards:

2004	Fellow of the American Association of Clinical Endocrinologists (FACE)
2006	New Investigator Award, Emory Center for Clinical and Molecular Nutrition
2007	NIH K23 Mentored Physician-Scientist Award
2009	Gender Identity Research and Education Society, Scientific Citation Award
2011	Transgender Advocate Award, Emory University
2011	"We are Emory", 100 community builders at Emory University (only DOM awardee)
2011	U.S. News and World Report, Top Endocrinologist (top 10% of endocrinologists voted by peers)
2011	Gender Identity Research and Education Society, Scientific Citation Award
2012	Best Mentor Award, Thai-American Physicians Foundation
2013	One in 100, Outstanding Post-Doctoral Fellow Mentor, Emory University
2013	Academy of Medical Educators, Emory University Department of Medicine
2016	Outstanding Service Award for the Promotion of Endocrine Health of an Underserved

	Population (Transgender), American Association for Clinical Endocrinologists
2016	Top 90th percentile, Patient Satisfaction, Press Ganey, Atlanta VA Medical Center
2016-2018	"Top Doctors in Atlanta", Castle Connolly, Atlanta Magazine
2017	Distinguished Emory Physician
2017	Top 90th percentile, Patient Satisfaction, Press Ganey, Atlanta VA Medical Center
2018	Best Endocrinology Fellowship Mentor
2018	Top 99th percentile, Patient Satisfaction, Press Ganey, Emory Healthcare

18. Society Memberships:

1. Massachusetts Medical Society, 1996 – 2007

2. Endocrine Society, 2000-Present

3. American Association of Clinical Endocrinologists, 2000-Present

Advisory Member, Board of Directors, American Association for Clinical Endocrinologists, 2013. I served a 1 year term as an advisory member to AACE prior to my election to a full board member

Member, Board of Directors, American Association for Clinical Endocrinologists, 2014-present
I am currently serving a 3 year term as a member of the Board of Directors for AACE, an association that represents over 7,000 clinical endocrinologists in the U.S. and internationally (aace.com). We have in person meetings every 3 months across the United States to discuss important topics related to clinical endocrinology. I was re-elected for a second 3-year term in 2017 and will complete my term on the board in 2020.

4. World Professional Association for Transgender Health, 2000-Present

Secretary/Treasurer, World Professional Association for Transgender Health, 2014-2016
I was elected as an officer for WPATH as Secretary/Treasurer. In my position, I also served on the Executive Committee for WPATH

President Elect then President, World Professional Association for Transgender Health, 2016-Present
I was elected to become president of WPATH. My presidency term started in November 2018.

5. International Society for Clinical Densitometry, 2003-2006

6. American Society for Bone and Mineral Research, 2004-2016

7. American Society for Nutrition, 2007-2017

8. Southern Society of Clinical Investigation, 2008-Present

Councilor, Southern Society of Clinical Investigation, 2013-Present
I have served as a councilor for SSCI for the past 4 years

19. Organization of Conferences:

a. National and International:

Administrative positions:

2007 Member, Local Organizing Committee, 20th Biennial Symposium, World Professional Association for Transgender Health, **Chicago, IL**, September 5-10, 2007
Course Director, Contemporary Management of Transgender Patients, Emory CME,

Chicago, IL, September 5, 2007, As member of the local organizing committee of this international conference, I oversaw the CME program and the planning of the conference of this meeting. This conference was attended by over 600 people from around the world.

2008 Co-Program Chair, Annual Meeting, Georgia Chapter, American Association of Clinical Endocrinologists, February 1-3, 2008, **Atlanta, GA**

2009 Program Chair, Annual Meeting, Georgia Chapter, American Association of Clinical Endocrinologists, **Atlanta, GA**, Feb 14-15, 2009

2011 Chair, Local Organizing Committee, 22nd Biennial Symposium, World Professional Association for Transgender Health, **Atlanta, GA**, September 24 – 28, 2011
I received the winning bid to host the Biennial WPATH symposium at Emory. This was attended by over 1000 professionals from all over the world. President Wagner was the keynote speaker at this conference.

2012 Course Faculty and Judge, SSCI Osteoporosis & Bone Health Young Investigators' Forum, **New Orleans, LA,** February 8, 2012

2014 Scientific Co-Chair, World Professional Association for Transgender Health, **Bangkok, Thailand**, February 14-18, 2014
I was honored to be appointed as the scientific co-chair for this international meeting. My role was to organize the scientific programming for this meeting.

2015-present Member, Annual Program Committee, American Association of Clinical Endocrinologists
I was invited to be a member of the annual program committee in 2015 and 2016. The role of the committee members is to plan and organize the AACE annual meeting held in **Nashville and Orlando**, respectively.

2017 Annual Meeting Program, 2016-Present, Vice-Chair, American Association of Clinical Endocrinologists, **Austin, TX**.
I was invited to serve as 1 of 3 vice-chairs for the AACE annual meeting. The job of the vice-chairs is to oversee programming for the 2017 annual meeting. My specific task for this year has been to oversee the plenary talks at the annual meeting.

2017 U.S. Professional Association of Transgender Health (USPATH), annual program committee.
I served on the inaugural annual program committee for the USPATH annual meeting held in **Los Angeles, CA**. This was attended by over 600 professionals from all over the U.S.

2018 Annual Meeting Program, 2017-2018, Chair, American Association of Clinical Endocrinologists.
I was appointed by the president of the organization to serve as the annual program meeting chair for my clinical endocrinology association for the meeting in **Boston, MA** in May 2018.

Sessions as Chair

2007 and 2009 Course Director, Advances in Endocrinology for the Practicing Physician, Emory CME, **Atlanta, GA**
I raised funds and organized a CME program for practicing physicians in the Southeast United States. This was a full day program comprised of lectures from Emory Faculty in the endocrine division.

2008 Course Director, Comprehensive Review of Vitamin D for Optimal Health, Emory CME, **Atlanta, GA**

I raised funded and organized a special full day CME meeting on vitamin D attended by over 100 participants from all over the Southeast.

2009 Chair, World Professional Association for Transgender Health, Bi-ennial meeting, Endocrinology, Gynecology and Urology Session, June 17-20, 2009, **Olso, Norway**

2009 Co-Chair, North American Cystic Fibrosis Conference, Endocrinology and Bone Session, **Minneapolis, Minnesota**, October 21-23, 2009

2010 Co-Chair, Vitamin D Symposium, Experimental Biology Meeting, April 28, 2010, **Anaheim, CA**

2010 Course Director, Physician Career Development Conference, Emory CME**, Stone Mountain, GA**
This was a very special Emory CME career development program that I organized and raised funds that focused on early career physicians.

2011 Course Director, Advances in Pediatrics and Medicine (CME), Emory CME, **San Diego, CA**

2012 Course Director, Update in Medicine and Pediatrics (CME), Emory CME**, Las Vegas, NV**

2012 Co-chair, Adult Bone and Mineral Working Group, American Society for Bone and Mineral Research Annual Meeting, October 12, 2012, **Minneapolis, MN**

2013 Co-Chair, Transgender Medicine, 2013 Endocrine Society Annual Meeting, June 15 – 18, 2013, **San Francisco, CA**

2013 Co-chair, Adult Bone and Mineral Working Group, American Society for Bone and Mineral Research Annual Meeting, October 6, 2013, **Baltimore, MD**

2013 Co-Chair, North American Cystic Fibrosis Conference, Sex Steroids in Cystic Fibrosis, October 16 – 19, 2013, **Salt Lake City, UT**

2013 Course Director, Update in Medicine and Global Health (CME), Emory CME, **St. Louis, MO**

2014 Course Director, Advances in Medicine and Pediatrics (CME), Emory CME, **Anaheim, CA,**

2014 Co-Chair, Transgender Medicine, 2014 Endocrine Society Annual Meeting, June 20 – 24, 2014, **Chicago, IL**.

2014 Co-chair, Adult Bone and Mineral Working Group, American Society for Bone and Mineral Research Annual Meeting, September 14, 2014, **Houston, TX**

2014 Co-Chair, North American Cystic Fibrosis Conference, Endocrine and Diabetes Workshop, October 9-11, 2014, **Atlanta, GA**

2015 Course Director, Advances and Research in Medicine & Pediatrics, **Atlantic City, NJ**
I have organized an annual meeting focused on general topics in medicine and pediatrics for Emory CME for several years.

2015 Co-Chair, North American Cystic Fibrosis Conference, Endocrine and Bone Workshop, October 8-10, 2015, **Phoenix, AZ**

2016 Chair, Transgender Symposium: What an Endocrinologist Should Know, Annual Meeting for the American Association of Clinical Endocrinologists, May 27, 2016, **Orlando, FL**.

2016 Co-Chair, North American Cystic Fibrosis Conference, Endocrine Workshop, October 27-29, 2016, **Orlando, FL**

2017 Chair, Community Based Care Workshop, U.S. Professional Association of Transgender Health, February 2-5, 2017, **Los Angeles, CA.**

2018 Co-Chair, Endocrine Society, Adult Transgender, Sex Determination, and Reproductive Axis Development, March 19, 2018**, Chicago, IL.**

b. Regional
Administrative position:

2009 – 2016 Moderator, Endocrine Club, Annual Southern Regional Meeting
I was responsible for the Endocrine Club for several years. I organize the endocrine meeting with speaker as part of the SSCI/Southern Regional meeting.

Sessions as Chair

2009 Co-Chair, Endocrinology Session, Southern Regional Meeting, Southern Society for Clinical Investigation Annual Meeting, February 14, 2009. **New Orleans, LA**

2010 Co-Chair, Endocrinology Session, Southern Regional Meeting, Southern Society for Clinical Investigation Annual Meeting, February 26, 2010, **New Orleans, LA**

2012 Judge, Osteoporosis Young Investigators Forum, Southern Society for Clinical Investigation Annual Meeting, February 8, 2012, **New Orleans, LA**

c. Institutional
2008 - present Division of Endocrinology, Weekly Grand Rounds Conference
I have been the coordinator for our division's grand rounds since 2008. I am responsible for the schedule, obtaining CME credits for the course and evaluations.

2008 - 2009 Faculty Development, Monthly Seminar Series
As part of the DOM faculty development committee, I was a coordinator of a monthly seminar series focused on faculty development of junior faculty

2009 - 2013 Monthly Atlanta Vitamin D Research Group Seminars
I organized a monthly seminar on various topics on vitamin D for 4 years.

2009 – 2013 Coordinator, Department of Medicine Faculty Research Day, 2009-2013, I served 4 years as the DOM coordinator for research day

20. Clinical Service Contributions:

1. Transgender Medicine Clinic: I started the first transgender medicine clinic at Emory in 2004. We now service over 200 patients who are seeking gender reaffirming therapies. I have assisted the Grady Memorial Hospital in starting their own dedicated multi-specialty transgender clinic which will open in 2017. I have also started a smaller clinic at the Atlanta VA Medical Center in 2006 and at Emory Midtown in 2017.

2. Endocrinology Clinic in the Emory Cystic Fibrosis Clinic: I am one of the only adult trained endocrinologists in the United States who focuses on the care of endocrine issues in cystic fibrosis. I was recently awarded a grant from the CF Foundation to train other adult endocrinologists around the country.

21. Community Outreach:

1. Little League Baseball Head Coach, Druid Hills Youth Sports (Spring and Fall seasons), 2012-current, I have coached over 12 seasons of baseball and over 100 boys and girls

2. Basketball Coach, Glenn Memorial and Clairmont Presbyterian Church Leagues, 2012- 2017, I have coached over 4 seasons of baseball and over 40 boys and girls

3. Baseball League Director, Druid Hills Youth Sports, 2013-2014, I was responsible for organizing 3 seasons of baseball for children aged 7 years old

4. Registrar, Druid Hills Youth Sports, 2013-2015, I served as the registrar for the baseball program and oversaw registration of over 1000 children

5. Board of Directors, Druid Hills Youth Sports, 2013- 2017, I am a very active member of this local board of directors who organize youth baseball for children in Dekalb county

6. Chair, External Boosters, Druid Hills Youth Sports, 2015-2017, I have raised over $50,000 in sponsorships to help support youth baseball in Dekalb county

7. Atlanta Braves Fan Council (Appointed position by the Atlanta Braves), 2014-2017. I have been a critical member of this committee who provides input to the Atlanta Braves front office in terms of the move from Turner Field to Suntrust Park. I completed my term on opening day 2017 for the Braves.

8. Atlanta Hawks Diversity Committee (Appointed position by the Atlanta Hawks), 2015-Present, I was appointed by Atlanta Hawks CEO Steve Koonin to serve on this committee to help provide input to the team regarding issues surrounding diversity. We meet monthly on conference calls and quarterly in person and participate in community events. I was reappointed again in 2017.

22. Formal Teaching:

a. Undergraduate

1. Problem Based Learning (MEDI 556), small group leader, Emory M2 medical students, 3 hours of small group instruction monthly, 2005-2007
2. Endocrine section, Clinical Pharmacology (MED 640), small group leader, Emory M2 medical students, annually, 2 hours of small group instruction, 2005-2006
3. "Vitamin D", Course: Introduction to Predictive Health (Course Director: Dr. Michelle Lambl), upper class Emory undergraduate students, annually, 2 hour lecture, 2009-Present
4. Evidence Based Medicine, Emory 2nd year medical students, 2 hour group session, annually, 2016-Present

b. Graduate Program

1. "Vitamin D and Calcium", Course: Clinical Nutrition II, (Core course for Emory Ph.D. students in nutrition), annually, 2 hour lecture, 2006-Present

c. Medical Student Teaching

1. "Vitamin D", Course: Medical Nutrition (MEDI 651), required course for Emory M2 medical students, annually, 1 hour lecture, 2005-2008
2. "Disorders of Calcium/Parathyroid", Course: Medical Pathophysiology (MEDI 650), required course for Emory M2 medical students, annually, 1 hour lecture, 2005-2008
3. "Disorders of Endocrinology", Course: Introduction to Emory Third Year Clerkships (Course Director: Ercia Brownfield, MD), annually, 1 hour lecture, 4 times a year, 2006-2007.
4. "Disorders of Calcium", Course: Foundations Abnormal (MEDI111), Emory M2 medical students, annually, 2 hour lecture, 2008-2011

d. Residency Program
1. "Disorders of Vitamin D and Calcium", Emory Residency Noon conference, 1 hour lecture, annually, 2006-2010

e. Endocrinology Fellowship Program
1. Rotating topics on Vitamin D, Calcium, Transgender, Emory Endocrinology Fellowship Core Curriculum Lectures, 1 hour lecture annually, 2004-Present

f. Other: Examination Preparation and Grading
1) Emory Nutrition Health Sciences Program, Ph.D. Program, Qualifying examination, 2005-Present
2) Prepared, administered, and graded the Observed Structured Clinical Examinations for all Emory endocrinology fellows on an annual basis, 2011-Present

23. Supervisory Teaching:

Advisee	*Degree earned*	*Current Position*	*Years Mentored*
Ph.D. Thesis Mentor			
1. Suzanne E. Judd	Ph.D.	Associate Professor, and Assistant Dean of Undergraduate Education at UAB, 2006-2008	
2. Ruth E. Grossmann	Ph.D.	Assistant Professor, College of Nursing, University of Iowa, 2009-2012	
3. Ellen M. Smith	Ph.D.	Completed Ph.D., Defended Ph.D. 10/12, 2016; now working as a nutrition scientist at Kellogg	
Ph.D. Committee Member			
1. Veronika Fedirko	Ph.D.	Assistant Professor, Emory, 2008-2009	
2. Juna Konomi	Ph.D.	Post-Doc, Emory, 2012-2014	
3. Jennifer Frediani	Ph.D.	Post-Doc, Emory, 2012-present.	
4. Kathryn Coakley	Ph.D.	Assistant Professor, Univ of NM, 2013-2015	
Master's Students			
1. Prakash Chandra	M.S.	Private Practice, Canada	2005-2007
2. Wendy Hermes	M.S.	Registered Dietician, CA	2012-2015

Undergraduate, medical students, post-doctoral fellows, medical residents and fellows directly mentored. Number of publications in brackets.

Undergraduate Students:

Dates	*Trainee*	*Program*	*Current Position*
2006	Tia Renee Sides	SURE program	Technician, U of Maryland
2008 - 2009	Sara Raiser (1)	SURE program	Resident, University of Virginia
2008 - 2009	Cynthia Michael	Research Elective	Dentist
2009	Jim Lu	Research Elective	Dentist
2009 - 2010	Lindsey Colman	SURE program	Research Coordinator
2009 - 2010	Eric Gottlieb (2)	Research elective	Internist, Providence, RI
2010 - 2013	Aneesha Thobani (1)	SIRE program	Intern, Emory DOM
2011	Breanne Wright	SURE program	Ph.D. Graduate Student, Purdue
2012 - 2015	Moon Lee (4)	Student research	Medical Student, Hopkins
2013	Ivana Stojkic	Summer research	Senior, Emory University
2014 - 2015	Emily Galdun	Research elective	Medical Student, UT, Memphis
2015 - 2018	Shiven Patel	Research elective	Recent Emory Graduate

2016 –	Nick Lee	Research elective	Emory Undergrad

Medical Students:

2004 - 2007	Arun Krishnamoorthy, M.D.	Medical student	Cardiologist, Piedmont
2005 - 2013	Ken Sutha, M.D., Ph.D.	Medical student	Pediatric fellow, Univ of Wash
2012 - 2015	Malcolm Kearns, M.D. (5)	Medical student	Medicine resident, UPenn
2012 - 2015	Jennifer Whitehead, M.D.	Medical student	Medicine resident Northwestern
2014 - 2015	Supavit Chesdachai, M.D (4).	Medical student	Intern, University of MN
2017 -	Marta Bean M'2019	Medical student	

School of Public Health:

2013 - 2014	Daud Lodin (2)	M.P.H. Candidate	Medical student
2015 - 2017	Jiabei He	M.P.H. Candidate	Graduate student

Post-doctoral fellows directly supervised:

2006 - 2007	Era Shah, M.D. (1)	Fellow (NRSA)	Private Practice, Endocrinology
2006 - 2008	Natasha Khazai, M.D.(4)	Endocrine fellow	Instructor, Harvard, Joslin Clinic
2007 - 2009	Sasha Yamshchikov, M.D.(4)	ID fellow (NRSA)	Assistant Professor, Rochester
2007 - 2010	Meena Kumari, M.D. (10)	Fellow (NRSA)	Faculty, Morehouse Sch of Med
2008 - 2009	Yevgeniy Kantor, M.D.	Endocrine fellow	Private Practice, Endocrinology
2009 - 2011	Shabnam Seydafkan M.D.(6)	Research fellow	Post-Doctoral Fellow, Cardiology
2009 - 2012	Russell Kempker, M.D. (7)	ID fellow	Assistant Professor, Emory SOM
2009 - 2012	John Payne, M.D. (2)	Opthalmol. Fellow	Private Practice
2009 - 2012	Michael Witkamp, M.D. (1)	Peds Pulm Fellow	Instructor, University of Kentucky
2010 - 2012	James D. Finklea, M.D. (1)	Pulmonary fellow	Assistant Professor, UTSW
2011 - 2014	Saira Adeel, M.D. (2)	Endocrine fellow	Private Practice, Atlanta
2011 - 2014	Jessica Alvarez, Ph.D. (24)	Fellow (NRSA)	Assistant. Prof. Emory SOM
2011 - 2013	Jordan Kempker, M.D. (3)	Pulmonary fellow	Assist Professor, Emory SOM
2011 - 2014	Julia Rosebush, M.D. (1)	Peds ID fellow	Assist. Prof., Univ of Chicago
2012 - 2014	Shahid Nadeem, M.D.	Peds renal fellow	Assist. Prof., LSU Shreveport
2012 - 2014	Robert Simek, M.D. (1)	Peds GI fellow	Private Practice, Lubbock
2014 - 2016	Kelly Stephens, M.D. (1)	Endocrine fellow	Instr Harvard Brigham&Womans
2015 – 2017	Mansi Kanhere, M.D.	Peds Endo fellow	Assist. Prof. Virginia Comm. Univ
2017 -	Mary Stevenson	Endocrine fellow	Endocrine fellow
2017 -	Malinda Wu	Peds Endo fellow	Pediatric endocrine fellow

Internal Medicine Residency Program:

2006 - 2008	Kara Pepper, M.D. (2)	Research elective	Private Practice, Atlanta
2007 - 2008	Reshma Shah, M.D. (2)	Research elective	Private Practice, Atlanta
2007 - 2009	Aliya Heliyer, M.D. (1)	Research elective	Private Practice, Annapolis
2007 - 2009	Leo Jeng, M.D. (2)	Research elective	Private Practice, Dallas
2008 - 2010	Jennie Law, M.D. (1)	Research elective	Faculty, Emory St. Josephs
2008 - 2010	Nirali Desai, M.D.(2)	Research elective	Medicine Faculty, UPenn

Mentoring of Faculty:

2008 - 2013	Marian Evatt, M.D., M.S., Assistant Professor of Neurology
2008 - 2013	Ify Osunkwo, M.P.H., M.D., Assistant Professor of Pediatrics
2007 - 2010	Lindy Wolfenden, M.D., Assistant Professor of Medicine
2009 - 2014	Allison Ross, M.D., Assistant Professor of Pediatrics, NIH K grant award, co-sponsor
2010 - 2013	Susu Zughaier, Ph.D., Instructor of Pediatrics
2011 - 2013	Laura Delong, M.D., Assistant Professor of Dermatology
2011 - 2013	Oranan Siwamogsatham, M.D., Faculty on Sabbatical from Thailand
2013 – 2018	Corrilynn Hileman, M.D., Assistant Professor of Medicine, Case Western, NIH K-award, co-sponsor
2017 -	Jessica Abramowitz, M.D., Assistant Professor of Medicine, UTSW

Bedside Teaching
Endocrinology consult attending at Emory University Hospital and the Atlanta VA Medical Center, 8-12 weeks/year, student, residents and fellows, 2004-present

24. Lectureships, Seminar Invitations, and Visiting Professorships:

a. National and International:

1. Thammasat University, Visiting Professor, "Osteoporosis and Vitamin D", January 17-20, 2006, **Bangkok, Thailand.**

2. Mahidol University, Ramathibodi Hospital, Visiting Professor, "Vitamin D and Colon Cancer Prevention", January 21, 2006, **Bangkok, Thailand**.

3. Mahidol University, Siriraj Hospital, Visiting Professor, "Osteoporosis Update: 2006", January 23, 2006, **Bangkok, Thailand.**

4. Mahidol University, Siriraj Hospital, Visiting Professor, "T-cells and the RANKL Signaling System in Osteoporosis", July 2, 2007, **Bangkok, Thailand.**

5. Thammasat University, Visiting Professor, "Update in Vitamin D", July 4, 2007, **Bangkok, Thailand.**

6. Theptarin Hospital, Guest speaker, "Current Opinion in Osteoporosis", July 5, 2007, **Bangkok, Thailand.**

7. Mahidol University, Ramathibodi Hospital, Visiting Professor, "Role for T-cells and RANKL in Osteoporosis", July 6, 2007 **Bangkok. Thailand.**

8. Beth Israel Deaconess Medical Center, Harvard University, Visiting Professor, Endocrinology Grand Rounds, "Vitamin D and Cardiovascular Disease", September 19, 2008, **Boston, MA.**

9. Brown University, Visiting Professor, Endocrinology Grand Rounds, "Vitamin D Insufficiency: Importance to Cystic Fibrosis", October 15, 2008, **Providence, RI.**

10. Boston University, Visiting Professor, Endocrinology Grand Rounds, "Vitamin D Insufficiency: Importance to Cystic Fibrosis", October 20, 2008, **Boston, MA.**

11. Tufts University School of Medicine, Endocrinology Grand Rounds, "Vitamin D Deficiency and Risk for Cardiovascular Disease", March 23, 2009, **Boston, MA.**

12. Massachusetts Institute of Technology, Knight Science Journalism Program, Medical Evidence Boot Camp, Guest Speaker, "Advances in the Field of Vitamin D", March 24, 2009, **Cambridge, MA.**

13. Vitamin D Deficiency and Risk of TB, US-Georgia Workshop: Infectious Disease Research Conference, "Implementation Science and Strengthening In-Country Partnerships", May 27-28, 2009. **Tbilisi, Republic of Georgia.**

14. Endocrinology Grand Rounds, Case Western Reserve University, Guest Speaker, "Vitamin D: An update in the guidelines and importance for cystic fibrosis", October 12, 2011, **Cleveland, OH.**

15. Weekly Cystic Fibrosis Conference, Case Western Reserve University, Guest Speaker, "An Overview of Vitamin D Metabolism in Cystic Fibrosis", October 14, 2011, **Cleveland, OH.**

16. Monthly HIV/AIDS Conference, Dartmouth Medical School, Guest Speaker, "Vitamin D in HIV Infection", May 14, 2012, **Lebanon, NH.**

17. Endocrinology Grand Rounds, Guest Speaker, Henry Ford Hospital, "Transgender Medicine", January 9, 2015, **Detroit, MI.**

18. Endocrinology Grand Rounds, Guest Speaker, Boston University School of Medicine, "Update on Vitamin D Clinical Trials", April 13, 2015, **Boston, MA**.

19. Endocrinology Conference, Guest Speaker, Mahidol University, Division of Endocrinology, Ramathibodi Hospital, "Update on Transgender: 2016", January 26, 2016, **Bangkok, Thailand**.

20. Prince Mahidol Scholars Award Program, "Vitamin D in Infections", January 27, 2016, **Bangkok, Thailand**
I was honored to be invited to provide seminars in a conference in the name of the grandfather of the King of Thailand and was hosted at the Grand Palace by the Thai Royal family

22. University of Texas, Southwestern, Endocrinology Grand Rounds, "Transgender Medicine: What An Endocrinologist Needs to Know", March 10, 2017, **Dallas, TX**.

23. Brown University, Endocrinology Grand Rounds, "Transgender Medicine 2018", March 19, 2018, **Providence, RI.**

23. Robert M. Levin Memorial Lecture, Boston University Medical Grand Rounds, "Vitamin D: A Bright Future For Cystic Fibrosis?", September 15, 2017, **Boston, MA.**

b. Regional:

1. The Medical Center, Visiting Professor, Medical Grand Rounds, "Vitamin D: An Update". August 17, 2004. ***Columbus, GA.***

2. Atlanta Bone Club, Guest Speaker (CME). "Clinical Uses of BMD 2005", July 22, 2005, ***Atlanta, GA.***

3. The University of Tennessee, Visiting Professor, Metabolic Bone Conference, "Vitamin D and Skeletal Health", July 13, 2005, ***Memphis, TN.***

4. Atlanta Medical Center, Visiting Professor, Internal Medicine Residency, "Osteoporosis: Diagnosis, Treatment and Therapy". August 2, 2005, ***Atlanta, GA.***

5. Southern Comfort Conference Guest speaker, "Osteoporosis Prevention and Treatment in the Transgendered Community", September 22, 2005, **Atlanta, GA.**

6. Medical University of South Carolina, Visiting Professor, Endocrine Grand Rounds, "Vitamin D: Skeletal and Non-Skeletal Health", May 18, 2006, ***Charleston, SC.***

7. Ochsner Clinic, Visiting Professor, Weekly Endocrinology Conference, "Vitamin D: Skeletal and Non-Skeletal Health", November 29, 2006, ***New Orleans, LA.*** .

8. Ochsner Clinic, Visiting Professor, Rheumatology Grand Rounds, Vitamin D: Skeletal and Non-Skeletal Health", November 29, 2006, ***New Orleans, LA.***

9. Wake Forest University, Symposium on Vitamin D: Classical and Emerging Roles in Health, May 18, 2007, **Asheville, NC.**

10. Solvay Pharmaceucticals, Guest Speaker, Annual Meeting, "Endocrine and Exocrine Dysfunction in

Cystic Fibrosis", June 29, 2007, **Stone Mountain, GA**.

11. Mercer University School of Medicine, Obstetrics and Gynecology Grand Rounds, Guest Speaker, "Osteoporosis Update 2008", September 19, 2008. **Macon, GA**.

12. Georgia State Nutrient Fortification Group, "Challenges in Improving Vitamin D Status by Fortification and Supplementation", April 22, 2011, **Atlanta, GA.**

c. Institutional:

1. Wesley Woods Hospital, weekly conference, Guest speaker, "Vitamin D Deficiency: A Silent Epidemic in the Elderly", February 8, 2006, **Atlanta, GA**.

2. Emory University School of Medicine. Annual Internal Medicine Board Review (CME) Course, Disorders of Calcium, August 2, 2006, **Atlanta, GA.**

3. Understanding Bone Imaging and Bone Strength, Atlanta Bone Club Symposium moderator, November 16, 2006, **Atlanta, GA.**

4. Emory University School of Medicine. Annual Internal Medicine Board Review (CME) Course, Disorders of Calcium, August 8, 2007, **Atlanta, GA.**

5. Cystic Fibrosis Family Education Day, Emory University, Guest Speaker, "Cystic Fibrosis Related Diabetes", February 10, 2007, **Atlanta, GA.**

6. Emory Rheumatology Grand Rounds, Guest speaker, "Vitamin D: Bones and More". March 7, 2007, **Atlanta, GA.**

7. Emory Department of Pediatrics, Division of Pulmonary, Monthly Research Conference. Guest speaker, "Translational Vitamin D Research: Importance in Cystic Fibrosis and Respiratory Diseases", February 20, 2008, **Atlanta, GA.**

8. Emory University Hospital Nursing Staff, Guest speaker, "Cystic Fibrosis Related Diabetes", July 30, 2008, **Atlanta, GA.**

9. Emory University School of Medicine. Annual Internal Medicine Board Review (CME) Course, Disorders of Calcium, August 6, 2008, **Atlanta, GA.**

10. Emory Clinical Outcomes and Epidemiology Conference, Guest speaker, "Vitamin D and Cardiovascular Diseases", August 15, 2008, **Atlanta, GA**.

11. Southern Comfort Conference, Guest speaker, "Low dose hormone therapy for MTF and FTM transgendered individuals", October 3, 2008, **Atlanta, GA.**

12. Emory University, Division of General Medicine, 1525 Practice, Guest Speaker, "Vitamin D: Skeletal and Extra-skeletal Health", October 28, 2008, **Atlanta, GA.**

13. Morehouse School of Medicine, Department of Family Medicine, Grand Rounds, "Vitamin D for Optimal Health", April 28, 2009, **Atlanta, GA.**

14. Emory Rheumatology Grand Rounds, "Vitamin D: Skeletal and Extra-Skeletal Health", May 6, 2009, **Atlanta, GA.**

15. Emory University Medicine Grand Rounds, “Vitamin D Insufficiency Increases the Risk of Chronic Medical Disease: Fact or Fiction”, May 12, 2009, **Atlanta, GA.**

16. Geriatric Medicine Updates, Emory/VA Weekly Geriatric Conference, “Vitamin D and Its Implications in the Elderly”, September 24, 2009, **Atlanta, GA.**

17. Emory Division of Infectious Diseases Weekly Research Conference, “Vitamin D Deficiency and Risk of Infections”, March 11, 2010, **Atlanta, GA.**

18. Centers for Disease Control, Influenza Division, “Vitamin D Deficiency and Risk for Infections”, June 9, 2010, **Atlanta, GA**.

19. Emory Rheumatology Grand Rounds, “Vitamin D Update on Clinical Trials at Emory”, May 27, 2015, **Atlanta, GA.**

20. Emory Geriatrics Grand Rounds, “Vitamin D Update on Clinical Trials at Emory”, August 20, 2015, **Atlanta, GA.**

21. Emory GI Grand Rounds, “"Clinical Trials in Vitamin D at Emory: What have we learned?", September 28, 2015, **Atlanta, GA.**

22. Emory Endocrinology Grand Rounds, “Transgender Medicine: 2015”, October 19, 2015, **Atlanta, GA**.

23. Emory DOM Grand Rounds, “Transgender Medicine: What an Internist Needs to Know”, April 11, 2017, **Atlanta, GA**.

24. Emory Endocrinology Grand Rounds, “Vitamin D for Cystic Fibrosis, September 18, 2017**, Atlanta, GA.**

25. 25th Anniversary of the Emory Nutrition Health Sciences Program, Faculty Speaker, “Vitamin D for Cystic Fibrosis: A Bright Future”, February 1, 2018, **Atlanta, GA.**

25. Invitations to National/International, Regional, and Institutional Conferences:

a. National and International:

1. Society of Nuclear Medicine 53rd Annual Meeting, Update in Diagnosis and Treatment of Osteoporosis: Beyond T-scores and New Therapies, June 6, 2006, **San Diego, CA.**

2. North American Cystic Fibrosis Conference, Vitamin D and Mineral Workshop, Invited speaker, “Evaluation of ergocalciferol, cholecalciferol and UV light to treat vitamin D insufficiency in CF patients”, October 23, 2008, **Orlando, FL.**

3. North American Cystic Fibrosis Conference, Bone Symposium, “Re-thinking the Vitamin D guidelines: What was right and what was wrong?”, October 14, 2009, **Minneapolis, MN.**

4. American Academy of Physician Assistants, 38th Annual Meeting, “Review of Hypercalcemia and Hypocalcemia”, June 2, 2010, **Atlanta, GA**.

5. American Academy of Physician Assistants, 38th Annual Meeting, “Medical Therapy of Transgender Patients”, June 2, 2010, **Atlanta, GA**.

6. Infectious Disease Society of America, 48th Annual Meeting, "Vitamin D Deficiency and Risk for Infections", October 24, 2010, **Vancouver, Canada**.

7. American Society of Nutrition, Advances and Controversies in Nutrition, "Assessment and Management of Vitamin D", February 25, 2011, **San Francisco, CA**.

8. North American Cystic Fibrosis Conference, 25th Annual Meeting, "An Overview of Vitamin D Metabolism", November 3, 2011, **Anaheim, CA.**

9. Killarney 13th Annual Cystic Fibrosis Meeting, "Vitamin D in Cystic Fibrosis: A review of the guidelines and future directions", January 31, 2013, **Killarney, Ireland**.

10. 7th Annual Cystic Fibrosis Nutrition & Social Work Consortium, Cystic Fibrosis Foundation, "Vitamin D for Cystic Fibrosis", March 22, 2013, **Atlanta, GA.**

11. 12th Colombian Congress of Endocrinology, "Vitamin D for Skeletal and Extra-Skeletal Health", "Drug Combinations for the Treatment of Osteoporosis", "Endocrine Management of the Transgender Patient", May 30-31, 2013, **Medellin, Colombia**.

12. Endocrine Society, 2015 Annual Meeting, Transgender Symposium, "Challenging Transgender Cases", March 8, 2015, **San Diego, CA**.

13. European Professional Association for Transgender Health, Annual Meeting, "Update on the Endocrine Standards of Care", Panelist, March 13, 2015, **Ghent, Belgium**.

14. 18th Vitamin D Workshop, "Vitamin D in Cystic Fibrosis", April 22, 2015, **Delft, The Netherlands**.

15. 5th Annual International Conference on Vitamin D Deficiency, "Vitamin D in Infections" and "Vitamin D in Chronic Kidney Disease", March 23-24, 2016**, Abu Dhabi, United Arab Emirates**.

16. American Academy of Insurance Medicine, 126th annual meeting, "Transgender Medicine", October 18, 2017, **Atlanta, GA**

17. North American Cystic Fibrosis Conference, "Vitamin D in Cystic Fibrosis", November 2, 2017, **Indianapolis, IN**.

18. Brazilian Association for Transgender Health, "Update on Endocrine Guidelines for Transgender Medicine", November 4, 2017, **Sao Paolo, Brazil.**

19. Endocrine University, American Association of Clinical Endocrinologists, "Transgender Medicine", March 6, 2018, Mayo Clinic, **Rochester, MN**.

20. Endocrine Society, "Guidelines for Gender Dysphoria/Gender Incongruence", March 19, 2018, **Chicago, IL**.

21. American Society for Colposcopy and Cervical Pathology Annual Meeting 2018, "Transgender Medicine: How to Provide Gender Affirming Care", Keynote Plenary Address, April 20, 2018, **Las Vegas, NV**.

22. American Society of Andrology Annual Meeting 2018, "Transgender: Epidemiology, Etiology, and Endocrinology", April 21, 2018, **Portland, OR**.

23. National Lipid Association Annual Meeting 2018, "Management of Lipids and CVD in Transgender Populations", April 27, 2018, **Las Vegas, NV**.

24. Cleveland Clinic Board Review Course, "Transgender Medicine", September 22, 2018, **Cleveland, OH.**

b. Regional:

1. Houston Bone Club, Guest Speaker, "Vitamin D: Bones and More", March 5, 2007, ***Houston, TX.***

2. Georgia Chapter, American Association of Clinical Endocrinologists, Guest Speaker (CME), "An update in vitamin D: Skeletal and Non-Skeletal Health", September 27, 2007, **Atlanta, GA.**

3. Southern States Chapter Annual Meeting, American Association for Clinical Endocrinologists, Guest Speaker, "Vitamin D for Health", March 13-15, 2008, **Birmingham, AL.**

4. Internal Medicine News®: Endocrinology in the News, "Differential Diagnosis of Osteoporosis: How to Evaluate Low Bone Mineral Density in Adults", April 13, 2008, **Philadelphia, PA.**

5. Boston University, 24th Annual Controversies in Internal Medicine, "Vitamin D: Is there an epidemic?", "Paget's Disease of Bone", "Osteoporosis", "Chronic Kidney Disease: an Endocrine Perspective", May 5-7, 2008, **Hilton Head Island, SC.**

6. Genzyme Corporation, Medical Education Partners Program, Guest Speaker, "Vitamin D and Cardiovascular Disease", September 4, 2008, **Cambridge, MA.**

7. Southern Regional Meeting, "State of the Art: Vitamin D and the Heart". February 12-14, 2009, **New Orleans, LA.**

8. 53rd Annual Greenville Postgraduate Seminar: A Primary Care Update (CME course), Guest Speaker, "What is New in Osteoporosis", April 23, 2009, **Greenville, SC.**

9. Delaware Chapter, American College of Physicians Annual Meeting, Guest Speaker, "Vitamin D Increases Risk for Chronic Disease: Fact or Fiction", February 20, 2010, **Wilmington, DE.**

10. Southern Regional Meeting, Mentored Abstract Discussion, "Vitamin D Deficiency in Children: What are the Long Term Implications", February 26, 2010, **New Orleans, LA**.

11. 54rd Annual Greenville Postgraduate Seminar: A Primary Care Update (CME course), Guest Speaker, "Vitamin D Deficiency: How Common Is It?", April 14, 2010, **Greenville, SC.**

12. Georgia Chapter, American Society for Enteral and Parenteral Nutrition, Guest Speaker, "Vitamin in Health and Disease: 2010 Update", June 3, 2010, **Atlanta, GA.**

13. 55nd Annual Greenville Postgraduate Seminar: A Primary Care Update (CME course), Guest Speaker, "Osteoporosis: Update Diagnosis and Treatment", April 13, 2011, **Greenville, SC.**

14. Greater Atlanta Dietetic Association, "Vitamin D: 2011 Update", September 21, 2011, **Atlanta, GA.**

15. Southern States Chapter of the American Association of Clinical Endocrinologists, Annual Meeting, "Vitamin D: Hope or Hype", March 4, 2012, **New Orleans, LA.**

16. 56th Annual Greenville Postgraduate Seminar: A Primary Care Update (CME course), Guest Speaker, "Vitamin D Deficiency and Treatment", April19, 2012, **Greenville, SC.**

17. Division of Laboratory Science Summer Symposium, Centers for Disease Control, Keynote speaker, "Vitamin D Testing: Is this just a fad?", August 14, 2013, **Atlanta, GA**.

18. Southern Comfort Conference, Guest speaker, "Guidelines for Treatment of Transgendered Individuals", September 5, 2013, **Atlanta, GA.**

19. Michigan Chapter Annual Meeting, American Association of Clinical Endocrinologists, "Transgender Medicine: What an Endocrinologist Should Know", October 31, 2015, **Lansing, MI**.

20. World Professional Associate for Transgender Health, Certified Training Course for Healthcare Providers, "Advanced Hormones Therapy", November 6, 2015, **Chicago, IL**.

21. World Professional Associate for Transgender Health, Certified Training Course for Healthcare Providers, "Introduction and Advanced Hormones Therapy", January 20, 2016, **Atlanta, GA**.

22. Rheumatology Alliance of Louisiana, 4th Annual Meeting, "Vitamin D for the Skeleton and Beyond", August 28, 2016, **New Orleans, LA**.

23. Wake Forest School of Medicine, Transgender Health Conference, "Hormone Therapy for Trans* Populations", September 29, 2017, **Winston-Salem, NC.**

24. Georgia Chapter, American Association of Clinical Endocrinologists, Guest Speaker (CME), Transgender Medicine 2018: What an Endocrinologist Needs to Know", January 26, 2018, **Atlanta, GA.**

26. Abstract Presentations at National/International, Regional, and Institutional Conferences:

a. National and International:

1. Endocrine Society Annual Meeting, Turner A, Chen TC, Barber TW, Malabanan AO, Holick MF, **Tangpricha V***. Testosterone Increases Bone Mineral Density at the Hip and Spine in Female to Male Transsexuals, June 16-19, 2004, **New Orleans, LA.**

2. **Tangpricha V***. Harris M. Harry Benjamin International Gender Dysphoria Association Annual Meeting, Congenital Adrenal Hyperplasia in a FTM transsexual patient, April 6-9, 2005, **Bologna, Italy.**

27. Research Focus:

My research focus is translational research in areas of vitamin D, chronic kidney disease and cystic fibrosis. I am interested in the impact of vitamin D supplementation on extra-skeletal diseases such as infections and anemia. I am also interested in the endocrine care of patients with gender dysphoria and non-conforming gender identity.

28. Grant Support:

ACTIVE

Federally funded:

Source and Title	**Dates, yearly direct costs, % effort**
UL1 RR025008 (PI: David Stephens)	09/17/2007 - 05/31/2022*
NIH/NCRR, Atlanta Clinical and Translational Science Institute (ACTSI), $5,147,598,	13%

Dr. Tangpricha serves as a scientific advisory committee chair. His committee reviews protocols submitted to the ACTSI Clinical Interactions Network sites for approval.
Role: **Scientific Advisory Committee Co-Chair**
*renewed in 2017

NIH/1R01DK115473 (PI: Markland) 04/01/2018-03/31/2019
Role of Vitamin D in the Prevention and Progression of Urinary Incontinence
The aim of this grant is to investigate the role of vitamin D on the risk of urinary incontinence using two large prospective cohorts, including the Nurses Health Study and the VITAL trial.
Role: **Co-investigator**

NIH/R01HD079603-01A1 (PI: Walter Bockting) 09/25/2014 – 06/30/2019
Identity Development, Risk and Resilience among Gender Diverse Populations, $2000 per annum
The goal of this study is to describe the process of transgender identity development based on qualitative lifeline interviews with a sample of 90 transgender individuals ages 16 and older, and identify periods of acute vulnerability and characteristics of resilience.
Role: **Consultant**

Private foundation funded:
Cystic Fibrosis Foundation Center Grant (PI: Hunt) 07/01/2007 – 06/30/2017
"Emory University Cystic Fibrosis Center" $310,320 4.5%
Dr. Tangpricha serves as a co-investigator on this center grant. He is the director of adult endocrinology for the Emory CF center.
Role: **Co-Investigator**

Cystic Fibrosis Foundation (PI:Tangpricha) 10/01/2016 – 09/30/2019
Emerging Leaders in CF Endocrinology Program $48,546 10%
The purpose of this award is to provide support for Dr. Tangpricha to train early career academic endocrinologists in research and clinical care of patients with CF across the United States. He has been assigned three mentees from VCU, Harvard, and University of Kansas.
Role: **Co-Investigator**

PREVIOUS SUPPORT (in chronological order)
NIH T32DK007201 (PI Ruderman) 4/1/00 – 3/1/03
Metabolism, Endocrinology and Obesity Training Grant
Boston University School of Medicine,
Role: **Trainee**

Clinical Research Feasibility Funds (CReFF) Award 10/1/03 – 12/31/03
Boston University/GCRC $10,000
"Vitamin D Deficiency in Cancer Patients"
The aim of this grant was to determine the prevalence of vitamin D insufficiency in patients with cancer
Role: **Principal Investigator**

UV Foundation 05/01/05 – 12/31/07
Physician-Scientist Research Career Development Award $45,000
The aim of this grant was to support the research career of Dr. Tangpricha in becoming a physician-scientist
Role: **Principal Investigator**

Novartis Pharmaceuticals 11/01/04 – 04/30/07
"Study to Compare the Effect of 24 weeks Treatment with Vildagliptin to Placebo as Add-On Therapy" $19,038
Role: **Site Principal Investigator**

Atlanta Research and Education Foundation 07/01/2006 –6/30/2008
"A Randomized Controlled Double Blinded Trial to Evaluate Cholecalciferol Treatment on Reducing Blood Pressure in Middle Aged Men with Stage I Hypertension and Vitamin D Deficiency" $50,000 5%
The aim of this grant was to examine the effect of vitamin D treatment on blood pressure
Role: **Principal Investigator**

Proctor and Gamble Pharmaceuticals 12/01/06 – 11/30/07
"Prevalence of osteoporosis and vertebral fractures and its impact on pulmonary function in cystic fibrosis patients: A cross sectional study" $13,000
The aim of this grant was to determine the prevalence of vitamin D insufficiency and osteoporosis in patients with CF
Role: **Principal Investigator**

Emory University Research Committee 07/01/2007 –6/30/2008
"Optimizing Vitamin D Status in Cystic Fibrosis Patients" $30,000
The aim of this grant was to determine the optimal replacement strategy for vitamin D in cystic fibrosis patients.
Role: **Principal Investigator**

Emory Center for Clinical and Molecular Nutrition 01/1/07 – 12/31/07
"Tumor Necrosis Factor α induces vitamin D resistance in small intestinal calcium absorption" $15,000
The aim of this grant was to determine the effect of inflammation that occurs in IBD on calcium absorption
Role: **Principal Investigator**

K23 AR054334 02/01/2007 – 1/31/2013
NIH/NIAMS $641,250 75%
Mentored Research Career Development Award, "Role of T-cells in Post-Menopausal Osteoporosis in Women Undergoing Surgical Menopause"
The aims of this grant are to examine the role of T-cells in post-menopausal osteoporosis and to support Dr. Tangpricha's career as a physician scientist
Role: **Principal Investigator**

Emory University Research Committee (PI: Evatt) 03/01/2008 –2/28/2009
Emory University $30,000 1%
"Vitamin D Repletion for Optimal Health in Patients with Parkinson's disease"
The aims of this grant are to 1) to determine the prevalence of vitamin D insufficiency in patients with Parkinson's disease 2) to perform a randomized placebo controlled trial to determine whether optimal vitamin D status improves neurocognitive function in patients with Parkinson's disease
Role: **Co-Investigator**

Parkinson Study Group (PI: Evatt) 07/01/2008 – 06/30/2009
"Vitamin D Insufficiency: Prevalence & Clinical Correlates in DATATOP Cohort" $50,000 1%
The aims of this grant is to correlate vitamin D status with clinical outcomes in a cohort of subjects with Parkinson's disease.
Role: **Co-Investigator**

Emory Global Health Institute (PI: Ziegler) 07/01/2008 – 6/30/2011
Emory University $250,000 2.5%
Impact of Vitamin D Supplementation on Host Immunity to Mycobacterium Tuberculosis and Response to Treatment: Building Translational Research Capacity in Nutrition and Infectious Diseases in the Republic of Georgia"
The aims of this grant are to: 1) evaluate the role of vitamin D as an adjunctive therapy in patients

infected with TB and 2) enhance the research infrastructure in the Republic of Georgia
Role: **Co-Principal Investigator**

Emory University Research Committee (PI: Wasse) 02/01/2009– 1/31/2010
Emory University $30,000 1%
"Impact of Extra-renal 1-alpha hydroxylase expression and vitamin D polymorphisms on arteriovenous fistula maturation"
The aims of this grant are to 1) to demonstrate that serum vitamin D predicts AVF maturation, 2) to demonstrate that greater local expression of vitamin D activity and responsiveness increases likelihood of AVF maturation, to demonstrate that patients with activating VDR polymorphisms are more likely to experience AVF maturation.
Role: **Co-Investigator**

Emory Center for Aids Research (CFAR) (PI: Ross) 03/15/2010 – 3/14/2011
Emory University
"Prevalence and predictors of vitamin D deficiency and vitamin D's relationship to inflammatory and endothelial activation markers in a cohort of HIV-infected children and young adults."
The aims of this grant are to examine vitamin D status and their relationship to CVD risk factors in HIV infected children and adults
Role: **Co-Investigator**

GlaxoSmithKline (PI: Ross) 06/01/10-05/31/11
HIV Collaborative Investigator Research Award
Vitamin D and cardiovascular biomarkers in HIV-infected children and young adults.
This study evaluates the relationship between vitamin D levels and cardiovascular biomarkers in HIV-infected children and young adults from 1-25 years of age.
Role: Co-investigator

Emory University Research Committee (PI: Ross) 07/01/2011 – 6/30/2012
Emory University
Establishing Optimal Vitamin D Repletion Strategies in HIV-Infected Children and Young Adults: a Pilot Study
Role: **Co-Investigator**

R21HL110044-01/NIH/NHLBI (PI: Gregory Martin) 08/01/2011– 07/31/2014
High-dose vitamin D and antimicrobial peptide expression in lung failure
The major aim of this grant is to demonstrate a beneficial effect of high dose vitamin D given to subjects admitted to intensive care units with critical illness.
Role: **Co-Investigator**

R01HD070490 09/01/2011 – 08/30/2016
NIH/NICHD (PI: Grace McComsey) $1,709,989 5%
Vitamin D, drug metabolism, and cardiovascular complications in pediatric HIV
The aims of this grant are to examine the role of vitamin D on cardiovascular risk in adolescents with HIV disease
Role: **Sub-Contract to Emory, Co-investigator**

P30AR047363 (PI: Susan Thompson, Site-PI: Angela Robinson)
"Vitamin D and Response to Atorvastatin in Pediatric SLE" 4/1/2012 – 6/30/2016
The aims of this subaward are to determine the relationship between vitamin D status and markers of innate immunity in pediatric subjects with SLE.
Role: **Sub-contract awardee**

R21DK096201 (PI: Alayne Markland) 09/19/2013 – 05/31/2015

Vitamin D Supplementation in Older Adults with Urinary Incontinence
The aims of this grant are to examine the role of vitamin D treatment in elderly patients and its impact on urinary incontinence.
Role: **Co-Investigator**

R21HD076387-01 (PI: Michael Goodman) 08/01/2013 – 05/31/2015
Cohort study of mortality and morbidity in transgender persons $261,359 2%
The goal of this study is to establish a cohort of transgender persons in the VA and Kaiser Healthcare systems and to determine the risk of a number of co-morbid conditions and to obtain data on the rates of mortality.
Role: **Co-Investigator**

PCORI (PI: Michael Goodman) 01/01/2013 – 12/31/2016
Comparative Risks and Benefits of Gender Reassignment Therapies $2,103,856 5%
The goal of this study is to understand the short- and long-term health issues among transgender persons who had or are planning to have a sex change treatment.
Role: **Co-Investigator**

Cystic Fibrosis Foundation 07/01/2011 – 06/30/2018
Clinical Research Award $780,000 25%
"Vitamin D for enhancing the immune system in cystic fibrosis"
The aims of this grant are to examine the role of vitamin D in improving the host defense system in adult and adolescent patients with CF and who are admitted with an acute pulmonary exacerbation in a randomized, multi-center trial design.
Role: **Principal Investigator**

26. Bibliography:

Published and accepted research articles in refereed journals:

1. Tangpricha V. Hariram SD. Chipkin SR. Compliance with Guidelines for Thyroid Nodule Evaluation. Endocrine Practice. 1999; 5: 119-123.
2. Tangpricha V. Flanagan JN. Whitlatch LW. Tseng CC. Chen TC. Holt PR. Lipkin MS. Holick MF. 25-hydroxyvitamin D-1α-hydroxylase in normal and malignant colon tissue. The Lancet. May 26, 2001. 357 (9269):1673-4
3. Tangpricha V. Chen BJ. Swan NC. Sweeney AT. de las Morenas A. Safer JD. Twenty-One-Gauge Needles Provide More Cellular Samples than Twenty-Five-Gauge Needles in Fine-Needle Aspiration Biopsy of the Thyroid but may not Provide Increased Diagnostic Accuracy. Thyroid 2001. 11 (10) 973-976.
4. Tangpricha V. Pearce EN. Chen TC. Holick MF. Vitamin D Insufficiency Among Free-Living Young Healthy Adults. American Journal of Medicine. 2002 Jun 1;112(8):659-62.
5. Tangpricha V. Koutkia P. Rieke SA. Chen TC. Holick HF**.** Fortification of orange juice with vitamin D: a novel approach for enhancing vitamin D nutritional health American Journal of Clinical Nutrition 2003 77: 1478-1483.
6. Flanagan JN. Wang L. **Tangpricha V**. Reichrath J. Chen TC. Holick MF. Regulation of the 25-hydroxyvitamin D-1alpha-hydroxylase gene and its splice variant. Recent Results in Cancer Research. 2003;164:157-67.
7. Tangpricha V. Colon NA. Kaul H. Wang SL. Decastro S. Chen TC. Blanchard R. Holick MF. Prevalence of Vitamin D Deficiency in Patients Attending a Cancer Care Clinic in Boston. Endocrine Practice. 2004; 3:163-164.
8. Turner A. Chen TC. Barber TW. Malabanan AO. Holick MF. **Tangpricha V.** Testosterone increases BMD of the Hip and Spine in Female to Male Transsexuals: A Case Series. Clinical Endocrinology (Oxf) 2004 Nov;61(5):560-6. PMID: 15521957
9. Tangpricha V. Turner A. Spina C. Chen TC. Holick MF. Tanning is associated with optimal vitamin D status (Serum 25-Hydroxyvitamin D) and higher bone mineral density. American J Clinical Nutrition. 2004 Dec;80(6):1645-1649.

10. Spina C. **Tangpricha V**. Min M. Zhou W. Wolfe MM. Maehr H. Uskokovic M. Holick MF. Colon Cancer and Ultraviolet B Radiation and Prevention and Treatment of Colon Cancer in Mice with Vitamin D and its Gemini Analogues. J Steroid Biochem Mol Biol. 2005 Oct;97(1-2):111-20.
11. Tangpricha V. Spina C. Yao M. Chen TC. Wolfe MM. Holick MF. Vitamin D Deficiency Enhances Growth of MC-26 Xenografts in Balb/c Mice. Journal of Nutrition 2005 Oct;135(10):2350-4.
12. Spina CS. **Tangpricha V**. Uskokovic M. Adorinic L. Maehr H. Holick MF.Vitamin D and Cancer. Anticancer Res. 2006 Jul-Aug;26(4A):2515-24.
13. Friedrich M. Diesing D. Cordes T. Fischer D. Becker S. Chen TC. Flanagan JN. **Tangpricha V.** Gherson I. Holick MF. Reichrath J. Analysis of 25-hydroxyvitamin D3-1alpha-hydroxylase in normal and malignant breast tissue. Anticancer Res. 2006 Jul-Aug;26(4A):2615-20.
14. Sweeney AT. **Tangpricha V.** Weinberg J. Malabanan AO. Chimeh FN. Holick MF. Comparison of the Effects of a New Conjugated Oral Estrogen, Estradiol-3β-Glucoside, With Oral Micronized 17β-Estradiol in Postmenopausal Women. Translational Research. 2006 Oct;148(4):164-170.
15. Tangpricha V. Luo M. Fernandez-Estivariz C. Gu LH. Bazargan N. Klapproth JM. Sitaraman SV. Galloway JR. Leader JM. Ziegler TR. Effects of Growth Hormone Therapy on Bone Density and Bone Turnover in Short Bowel Syndrome. Journal of Parenteral and Enteral Nutrition. 2006 November/December; 30 (6): 480-486.
16. Chandra P. Wolfenden LL. Ziegler TR. Shepherd J. Stecenko A. Chen TC. Holick MF. **Tangpricha V**. Treatment of Vitamin D Deficiency With UV Light in Patients With Malabsorption Syndromes: A Case Series. Photodermatology, Photoimmunology & Photomedicine 2007: 23 (5), 179–185.
17. Chandra P. Binongo JNG. Ziegler TR. Schlanger LE. Someren JT. **Tangpricha V**. Efficacy of Cholecalciferol (Vitamin D3) Therapy in Correcting Vitamin D Insufficiency and Secondary Hyperparathyroidism in Subjects with Stage 3 & 4 Chronic Kidney Disease. Endocrine Practice. 2008 Jan-Feb;14(1):10-7.
18. Judd SE. Blank H. Ziegler TR. Wilson PW. Nanes MS. **Tangpricha V**. Vitamin D Status is Inversely Associated with Blood Pressure: Results from the Third National Health and Nutrition Examination Survey. American Journal of Clinical Nutrition. 2008 Jan;87(1):136-41.
19. Kumari M. Judd SE. **Tangpricha V.** Vitamin D Status in U.S. War Veterans. Endocrine Practice. 2008 Jan-Feb;14(1):127-8.
20. Wolfenden LL. Judd SE. Shah R. Ziegler TR. **Tangpricha V.** Vitamin D Status and Bone Health in Cystic Fibrosis Patients. Clinical Endocrinology (Oxf) 2008 Sept;69(3):374-381.
21. Evatt ML, DeLong MR, Khazai N, Rosen A, Triche S, **Tangpricha V.** Prevalence of Vitamin D Insufficiency in Subjects with Parkinson's disease and Alzheimer's disease. Archives of Neurology. 2008 Oct;65(10):1348-52. PMC2746037
22. Pepper KJ, Judd SE, Nanes MS, **Tangpricha V.** Evaluation of Vitamin D Repletion Regimens to Correct Vitamin D Status in Adults. Endocrine Practice. 2009 Mar-Apr;15(2):95-103. PMID: 19342361
23. Yamshchikov A, Oladele A, Leonard M, Blumberg HM, Ziegler TR, **Tangpricha V**. Vitamin D as Adjunctive Therapy in Refractory Pulmonary Tuberculosis: A Case Report. Southern Medical Journal. 2009 June 102 (6): 649-652. PMID: 19434014
24. Khazai N. Judd SE. Jeng L. Wolfenden LW. Stecenko A. Ziegler TR. **Tangpricha V.** Treatment of Vitamin D Insufficiency in Cystic Fibrosis Patients: Comparative Efficacy of Ergocalciferol, Cholecalciferol and UV Light. Journal of Clinical Endocrinology and Metabolism. 2009 Jun;94(6):2037-43. PMID 19336509
25. Jeng L, Yamshchikov A, Martin GS, Blumberg H, Ziegler TR, **Tangpricha V.** Alterations in Vitamin D Status and Vitamin D Binding Protein in Patients in the ICU . Journal of Translational Medicine. 2009 Apr 23;7:28. PMID: 19389235
26. Cole CR. Grant FK. **Tangpricha V.** Ziegler TR. 25-hydroxyvitamin D status of healthy low-income minority children in Atlanta, Georgia. Pediatrics. 2010 Jul;121(1-2):445-7. PMID: 20420907
27. Heyliger A. Weber C. **Tangpricha V.** Sharma J. Parathyroidectomy Reduces Systolic Blood Pressure in Hypertensive Patients with Primary Hyperparathyroidism. Surgery. 2009 Dec;146(6):1042-7. PMID: 19958931
28. Kumari M. Khazai N. Ziegler TR. Nanes MS. Abrams SA. **Tangpricha V.** Vitamin D-Mediated Calcium Absorption in Patients with Clinically Stable Crohn's Disease. Molecular Nutrition and Food Science. 2010 Aug;54(8):1055-6. PMID: 20306476
29. Judd SE, Raiser SN, Kumari M, **Tangpricha V**. 1,25-Dihydroxyvitamin D3 reduces systolic blood

pressure in hypertensive adults: A pilot feasibility study. J Steroid Biochem Mol Biol. 2010 Jul;121(1-2):445-7.
30. Chandra P, Basra SS, Chen TC. **Tangpricha V**. Alterations in Lipids and Adipocyte Hormones in Female to Male (FTM) Transsexuals. International Journal of Endocrinology. Int J Endocrinol. 2010;2010. pii: 945053 PMID: 20706676
31. Yamshchikov AV, Kurbatova EV, Kumari M, Blumberg HM, Ziegler TR, Ray SM, **Tangpricha V**. Vitamin D status and antimicrobial peptide cathelicidin (LL-37) levels in patients with active pulmonary tuberculosis. American Journal of Clinical Nutrition. 2010 Sep;92(3):603-11. PMID: 20610636
32. Lin E, Armstrong D, Liang Z, Sweeney JF, Torres WE, Ziegler TR, **Tangpricha V**, Gletsu-Miller N. Contribution of Adipose Tissue to Plasma Vitamin D Concentrations During Weight Loss Following Gastric Bypass Surgery. Obesity 2011 Mar;19(3):588-94.
33. Delong LK, Wetherington S, Hill N, Kumari M, Gammon B, Dunbar S, **Tangpricha V**, Chen SC. Vitamin D levels, dietary intake, and photoprotective behaviors among patients with skin cancer. Semin Cutan Med Surg. 2010 Sep;29(3):185-9. PMID: 21051012
34. Karohl C, Su S, Kumari M, **Tangpricha V**, Veledar E, Vaccarino V, Raggi P. Heritability and seasonal variability of vitamin D concentrations in male twins. Am J Clin Nutr. 2010 Dec;92(6):1393-8. PMC2980965
35. Evatt ML, Delong MR, Kumari M, Auinger P, McDermott MP, **Tangpricha V**. High Prevalence of Hypovitaminosis D Status in Patients With Early Parkinson Disease. Arch Neurol. 2011 Mar;68(3):314-319. PMID: 21403017
36. Gottlieb ER, Smith EC, Wolfenden LL, Allman RM, **Tangpricha V.** Life-space mobility is associated with frequency of hospitalization in adults with cystic fibrosis. The Clinical Respiratory Journal. 2010 Oct 1. doi: 10.1111/j.1752-699X.2010.00225.x. [ePub ahead of print] PMID: 21801325
37. Osunkwo I, Hodgman EI, Cherry K, Dampier C, Eckman J, Ziegler TR, Ofori-Acquah S, **Tangpricha V**. Vitamin D deficiency and chronic pain in sickle cell disease. British Journal of Hematology. 2011 Jan 31 PMID: 21275953
38. Ross A, Judd SE, Hileman C, Labbato D, Storer N, **Tangpricha V**, McComsey G. Vitamin D is linked to carotid intima-media thickness and immune reconstitution in HIV-infected individuals. Antiviral Therapy. 2011;16(4):555-63. PMID: 21685543
39. Al Mheid I, Patel RS, Murrow J, Morris AA, Aznaourdis K, Rahman A, Fike L, Kavtaradze N, Ahmed Y, Uphoff I, Hooper C, **Tangpricha V**, Alexander RW, Brigham K, Quyyumi AA. Vitamin D Status is Associated with Arterial Stiffness and Vascular Dysfunction in Healthy Humans. Journal of the American College of Cardiology. 2011 Jul 5;58(2):186-92.
40. Izuora KE, Alazraki N, Byrd-Sellers J, **Tangpricha V**, Nanes MS. Inclusion of Fracture Assessment Tool Risk Scores and Treatment Recommendations in Bone Density Reports Does Not Change Physician Prescribing Behavior for Osteoporosis. Am J Med Sci. 2011 Jul;342(1):5-8. PMID: 21412137
41. Ganji V, Zhang X, Shaikh N, **Tangpricha V**. Serum 25-hydroxyvitamin D concentrations are associated with prevalence of metabolic syndrome and various cardiometabolic risk factors in US children and adolescents based on assay-adjusted serum 25-hydroxyvitamin D data from NHANES 2001-2006. Am J Clin Nutr. 2011 Jul;94(1):225-33. PMID: 21613551
42. Longenecker CT, Hileman CO, Carman TL, Ross AC, Seydafkan S, Brown TT, Labbato DE, Storer N, **Tangpricha V**, McComsey GA. Vitamin D supplementation and endothelial function in vitamin D deficient HIV-infected persons: a randomized placebo-controlled trial. Antiviral Therapy, 2011 Nov 17. doi: 10.3851/IMP1983.
43. Payne JF, **Tangpricha V**, Cleveland J, Lynn MJ, Ray R, Srivastava SK. Serum insulin-like growth factor-I in diabetic retinopathy. Mol Vis. 2011;17:2318-24. Epub 2011 Aug 27.
44. Payne JF, Ray R, Watson DG, Delille C, Rimler E, Cleveland J, Lynn MJ, **Tangpricha V**, Srivastava SK. Vitamin D Insufficiency in Diabetic Retinopathy. Endocr Pract. 2012 Mar-Apr;18(2):185-93.
45. Desai NS, Tuvadze N, Frediani JK, Kipiani M, Sanikidze E, Nichols MM, Hebbar G, Kempker RR, Mirtskhulava V, Kalandadze I, Seydafkan S, Sutaria N, Chen TC, Blumberg HM, Ziegler TR, **Tangpricha V.** Effects Of Sunlight And Nutrition On Vitamin D Status Of Pulmonary Tuberculosis Patients In Tbilisi, Georgia. Nutrition. 2012 Apr;28(4):362-6.
46. Ganji V, Zhang X, **Tangpricha V**. Serum 25-hydroxyvitamin D concentrations and prevalence estimates of Hypovitaminosis D in the US population based on assay-adjusted data. Journal of Nutrition. 2012 Mar;142(3):498-507.
47. Wasse H, Huang R, Long Q, Singapuri S, Raggi P, **Tangpricha V**. Efficacy and safety of a short

course of very-high-dose cholecalciferol in hemodialysis. Am J Clin Nutr. 2012 Feb;95(2):522-8.
48. Dunlop AL, Taylor RN, **Tangpricha V**, Fortunato S, Menon R. Maternal Vitamin D, Folate, and Polyunsaturated Fatty Acid Status and Bacterial Vaginosis during Pregnancy. Infect Dis Obstet Gynecol. 2011;2011:216217. Epub 2011 Dec 8.
49. Huang W. Shah S. Long Q. Crankshaw A. **Tangpricha V**. Improvement of pain, sleep, and quality of life in chronic pain patients with vitamin D supplementation. The Journal of Clinical Pain. Clin J Pain. 2013 Apr;29(4):341-7.
50. Levy H, Seydafkan S, Rice JD, Easley KA, **Tangpricha V**. Comparative Efficacy of Vertebroplasty, Kyphoplasty and Medical Therapy for Vertebral Fractures on Survival and Prevention of Recurrent Fractures. Endocr Pract. 2012 Jul-Aug;18(4):499-507.
51. Dunlop AL, Taylor RN, **Tangpricha V**, Fortunato S, Menon R. Maternal Micronutrient Status and Preterm Versus Term Birth for Black and White US Women. Reprod Sci. 2012 Sep;19(9):939-48.
52. Dean ED, Mexas LM, Cápiro NL, McKeon JE, DeLong MR, Pennell KD, Doorn JA, **Tangpricha V**, Miller GW, Evatt ML. 25-Hydroxyvitamin D depletion does not exacerbate MPTP-induced dopamine neuron damage in mice. PLoS One. 2012;7(7):e39227. PMID: 22768297
53. Alvarez JA, Law J, Coakley KE, Zughaier SM, Hao L, Shahid Salles K, Wasse H, Gutiérrez OM, Ziegler TR, **Tangpricha V**. High-dose cholecalciferol reduces parathyroid hormone in patients with early chronic kidney disease: a pilot, randomized, double-blind, placebo-controlled trial. Am J Clin Nutr. 2012 Sep;96(3):672-9. PMID: 22854402
54. Eckard AR, Judd SE, Ziegler TR, Camacho-Gonzalez AF, Fitzpatrick AM, Hadley GR, Grossmann RE, Seaton L, Seydafkan S, Mulligan MJ, Rimann N, **Tangpricha V**, McComsey GA. Risk factors for vitamin D deficiency and relationship with cardiac biomarkers, inflammation and immune restoration in HIV-infected youth. Antivir Ther. 2012 Aug 16. doi: 10.3851/IMP2318. PMID: 22894927
55. Grossmann RE, Zughaier SM, Liu S, Lyles RH, **Tangpricha V**. Impact of vitamin D supplementation on markers of inflammation in adults with cystic fibrosis hospitalized for a pulmonary exacerbation. Eur J Clin Nutr. 2012 Sep;66(9):1072-4. PMID: 22805498
56. Osunkwo I, Ziegler TR, Alvarez J, McCracken C, Cherry K, Osunkwo CE, Ofori-Acquah SF, Ghosh S, Ogunbobode A, Rhodes J, Eckman JR, Dampier C, **Tangpricha V**. High dose vitamin D therapy for chronic pain in children and adolescents with sickle cell disease: results of a randomized double blind pilot study. Br J Haematol. 2012 Oct;159(2):211-5. doi: 10.1111/bjh.12019. Epub 2012 Aug 28. PMID: 22924607
57. Grossmann RE, Zughaier SM, Kumari M, Seydafkan S, Lyles RH, Liu S, Sueblinvong V, Schechter MS, Stecenko AA, Ziegler TR, **Tangpricha V**. Pilot study of vitamin D supplementation in adults with cystic fibrosis pulmonary exacerbation: A randomized, controlled trial. Dermatoendocrinol. 2012 Apr 1;4(2):191-7. PMID: 22928076
58. Khadgawat R, Thomas T, Gahlot M, Tandon N, **Tangpricha V**, Khandelwal D, Gupta N. The Effect of Puberty on Interaction between Vitamin D Status and Insulin Resistance in Obese Asian-Indian Children. Int J Endocrinol. 2012;2012:173581. Epub 2012 Aug 16. PMID: 22966228
59. Karohl C, Bellasi A, Veledar E, Goldberg J, **Tangpricha V**, Vaccarino V, Paolo P.Vitamin D Status and Myocardial Blood Flow Reserve Measured by Positron Emission Tomography: A Co-Twin Control Study. Journal of Clinical Endocrinology and Metabolism. 2013 Jan;98(1):389-97. PMID:23144471
60. Eckard AR, **Tangpricha V**, Seydafkan S, O'Riordan MA, Storer N, Labbato D, McComsey GA. The Relationship between Vitamin D Status and HIV-Related Complications in HIV-infected Children and Young Adults. Pediatr Infect Dis J. 2013 Nov;32(11):1224-9. PMID:23360833
61. Alvarez JA, Zughaier SM, Law J, Hao L, Wasse H, Ziegler TR, **Tangpricha V**. Effects of high-dose cholecalciferol on serum markers of inflammation and immunity in patients with early chronic kidney disease. Eur J Clin Nutr. 2013 Mar;67(3):264-9. PMID:23361158
62. Frediani JK, Tukvadze N, Sanikidze E, Kipiani M, Hebbar G, Easley KA, Shenvi N, Ramakrishnan U, **Tangpricha V**, Blumberg HM, Ziegler TR. A culture-specific nutrient intake assessment instrument in patients with pulmonary tuberculosis. Clin Nutr. 2013 Mar 5. doi:pii: S0261-5614(13)00077-0. 10.1016/j.clnu.2013.02.013. PMID:23541173
63. Eckard AR, Leong T, Avery A, Castillo MD, Bonilla H, Storer N, Labbato D, Khaitan A, **Tangpricha V**, McComsey GA. High Prevalence of Vitamin D Deficiency in HIV-Infected and HIV-Uninfected Pregnant Women. AIDS Res Hum Retroviruses. 2013 Jun 15. [Epub ahead of print] PMID:23675655
64. Middleton JP, Bhagavathula AP, Gaye B, Alvarez JA, Huang CS, Sauer CG, Tenjarla G, Schoen BT, Kumar A, Prasad M, Okou DT, Ifeadike WC, Dhere TA, Conneely KN, Ziegler TR, **Tangpricha V**,

Kugathasan S. Vitamin D Status And Bone Mineral Density In African American Children With Crohn's Disease. J Pediatr Gastroenterol Nutr. 2013 Nov;57(5):587-93. PMID: 23760229
65. Zughaier SM, **Tangpricha V**, Leong T, Stecenko AA, McCarty NA. Peripheral Monocytes Derived From Patients With Cystic Fibrosis and Healthy Donors Secrete NGAL in Response to Pseudomonas aeruginosa Infection. J Investig Med. 2013 Aug;61(6):1018-25. PMID:23838697
66. Adeel S, Singh K, Vydareny KH, Kumari M, Shah E, Weitzmann MN, **Tangpricha V**. Bone loss in surgically ovariectomized premenopausal women is associated with T lymphocyte activation and thymic hypertrophy. J Investig Med. 2013 Dec;61(8):1178-83. PMID: 24141238
67. Roberts TK, Kraft CS, French D, Ji W, Wu AH, **Tangpricha V**, Fantz CR. Interpreting laboratory results in transgender patients on hormone therapy. Am J Med. 2014 Feb;127(2):159-62. PMID: 24332725
68. Wasse H, Huang R, Long Q, Zhao Y, Singapuri S, McKinnon W, Skardasis G, **Tangpricha V**. Very high-dose cholecalciferol and arteriovenous fistula maturation in ESRD: a randomized, double-blind, placebo-controlled pilot study. J Vasc Access. 2014 Mar-Apr;15(2):88-94. PMID: 24101420
69. Zughaier SM, Alvarez JA, Sloan JH, Konrad RJ, **Tangpricha V**. The role of vitamin D in regulating the iron-hepcidin-ferroportin axis in monocytes. Journal of Clinical and Translational Endocrinology. 2014 Mar 21;1(1):19-25. PMID: 25097830
70. Alvarez JA, Chowdhury R, Jones DP, Martin GS, Brigham KL, Binongo JN, Ziegler TR, **Tangpricha V**. Vitamin D status is independently associated with plasma glutathione and cysteine thiol/disulfide redox status in adults. Clinical Endocrinology. 2014 Sep;81(3):458-66. PMID: 24628365
71. Siwamogsatham O, Dong W, Binongo JN, Chowdhury R, Alvarez JA, Feinman SJ, Enders J, **Tangpricha V**. Relationship Between Fat-Soluble Vitamin Supplementation and Blood Concentrations in Adolescent and Adult Patients With Cystic Fibrosis. Nutr Clin Pract. 2014 Apr 17;29(4):491-497. PMID: 24743047
72. Robinson A, **Tangpricha V**, Yow E, Gurion R, Schanberg LE, McComsey G; APPLE Investigators. Vitamin D Status is a Determinant of the Effect of Atorvastatin on Carotid Intima Medial Thickening Progression Rate in Children with Lupus: An Atherosclerosis Prevention in Pediatric Lupus Erythematosus Substudy. Arthritis Rheumatol. 2014 Mar;66 Suppl 11:S47-8. PMID: 24677959
73. Gurion R, **Tangpricha V**, Yow E, Schanberg LE, McComsey G, Robinson A; APPLE Investigators. Low Vitamin D Status is Associated with Avascular Necrosis: An Atherosclerosis Prevention in Pediatric Lupus Erythematosus Substudy. Arthritis Rheumatol. 2014 Mar;66 Suppl 11:S49-50. PMID: 24677960
74. Tangpricha V, Judd SE, Ziegler TR, Hao L, Alvarez JA, Fitzpatrick AM, McComsey GA, Eckard AR. LL-37 concentrations and the relationship to vitamin D, immune status, and inflammation in HIV-infected children and young adults. AIDS Res Hum Retroviruses. 2014 Jul;30(7):670-6. PMID: 24798231
75. Hileman CO, Labbato DE, Storer NJ, **Tangpricha V**, McComsey GA. Is bone loss linked to chronic inflammation in antiretroviral-naive HIV-infected adults? A 48-week matched cohort study. AIDS. 2014 Jul 31;28(12):1759-67. PMID: 24871454
76. Ziegler TR, McComsey GA, Frediani JK, Millson EC, **Tangpricha V**, Eckard AR. Habitual Nutrient Intake in HIV-Infected Youth and Associations with HIV-Related Factors. AIDS Res Hum Retroviruses. 2014 Jul 16. [Epub ahead of print] PMID: 24953143
77. Zughaier SM, Alvarez JA, Sloan JH, Konrad RJ, **Tangpricha V**. The role of vitamin D in regulating the iron-hepcidin-ferroportin axis in monocytes. J Clin Transl Endocrinol. 2014 Mar 21;1(1):19-25. PMC4119757
78. Kearns MD, Binongo JN, Watson D, Alvarez JA, Lodin D, Ziegler TR, **Tangpricha V**. The effect of a single, large bolus of vitamin D in healthy adults over the winter and following year: a randomized, double-blind, placebo-controlled trial. Eur J Clin Nutr. 2014 Oct 1. doi: 10.1038/ejcn.2014.209. [Epub ahead of print] PMID: 25271011
79. Frediani JK, Jones DP, Tukvadze N, Uppal K, Sanikidze E, Kipiani M, Tran VT, Hebbar G, Walker DI, Kempker RR, Kurani SS, Colas RA, Dalli J, **Tangpricha V**, Serhan CN, Blumberg HM, Ziegler TR. Plasma metabolomics in human pulmonary tuberculosis disease: a pilot study.PLoS One. 2014 Oct 15;9(10):e108854. PMC4198093
80. Robinson AB, **Tangpricha V**, Yow E, Gurion R, McComsey GA, Schanberg LE; APPLE Investigators. Vitamin D deficiency is common and associated with increased C-reactive protein in children and young adults with lupus: an Atherosclerosis Prevention in Pediatric Lupus Erythematosus substudy. Lupus Sci Med. 2014 Apr 30;1(1):e000011. PMC4225734
81. Robinson AB, **Tangpricha V**, Yow E, Gurion R, Schanberg LE, McComsey GA; APPLE Investigators.

Vitamin D status is a determinant of atorvastatin effect on carotid intima medial thickening progression rate in children with lupus: an Atherosclerosis Prevention in Pediatric Lupus Erythematosus (APPLE) substudy. Lupus Sci Med. 2014 Sep 10;1(1):e000037. PMC4225736
82. Hebbar KB, Wittkamp M, Alvarez JA, McCracken CE, **Tangpricha V**. Vitamin D Deficiency in Pediatric Critical Illness. J Clin Transl Endocrinol. 2014 Dec 1;1(4):170-175. PMID: 25580380
83. Frediani JK, Sanikidze E, Kipiani M, Tukvadze N, Hebbar G, Ramakrishnan U, Jones DP, Easley KA, Shenvi N, Kempker RR, **Tangpricha V**, Blumberg HM, Ziegler TR. Macronutrient intake and body composition changes during anti-tuberculosis therapy in adults. Clin Nutr. 2015 Feb 26. pii: S0261-5614(15)00050-3. PMID: 25753551
84. Beveridge LA, Struthers AD, Khan F, Jorde R, Scragg R, Macdonald HM, Alvarez JA, Boxer RS, Dalbeni A, Gepner AD, Isbel NM, Larsen T, Nagpal J, Petchey WG, Stricker H, Strobel F, **Tangpricha V**, Toxqui L, Vaquero MP, Wamberg L, Zittermann A, Witham MD; D-PRESSURE Collaboration. Effect of Vitamin D Supplementation on Blood Pressure: A Systematic Review and Meta-analysis Incorporating Individual Patient Data. JAMA Intern Med. 2015 May;175(5):745-54. PMID: 25775274
85. Thobani A, Alvarez JA, Blair S, Jackson K, Gottlieb ER, Walker S, **Tangpricha V**. Higher mobility scores in patients with cystic fibrosis are associated with better lung function. Pulm Med. 2015;2015:423219. doi: 10.1155/2015/423219. PMC4348578
86. Kempker JA, West KG, Kempker RR, Siwamogsatham O, Alvarez JA, **Tangpricha V**, Ziegler TR, Martin GS. Vitamin D status and the risk for hospital-acquired infections in critically ill adults: a prospective cohort study. PLoS One. 2015 Apr 7;10(4):e0122136. PMC4388655
87. Smith EM, Alvarez JA, Martin GS, Zughaier SM, Ziegler TR, **Tangpricha V**. Vitamin D deficiency is associated with anaemia among African Americans in a US cohort. Br J Nutr. 2015 Jun;113(11):1732-40. PMC4465993
88. Ingersoll SA, Laval J, Forrest OA, Preininger M, Brown MR, Arafat D, Gibson G, **Tangpricha V**, Tirouvanziam R. Mature cystic fibrosis airway neutrophils suppress T cell function: evidence for a role of arginase 1 but not programmed death-ligand 1. J Immunol. 2015 Jun 1;194(11):5520-8. PMC4433848
89. Lee MJ, Alvarez JA, Smith EM, Killilea DW, Chmiel JF, Joseph PM, Grossmann RE, Gaggar A, Ziegler TR, **Tangpricha V**; Vitamin D for Enhancing the Immune System in Cystic Fibrosis (DISC) Investigators. Changes in Mineral Micronutrient Status During and After Pulmonary Exacerbation in Adults With Cystic Fibrosis. Nutr Clin Pract. 2015 Dec;30(6):838-43.
90. Simek RZ, Prince J, Syed S, Sauer CG, Martineau B, Hofmekler T, Freeman AJ, Kumar A, McElhanon BO, Schoen BT, Tenjarla G, McCracken C, Ziegler TR, **Tangpricha V**, Kugathasan S. Pilot Study Evaluating Efficacy of 2 Regimens for Hypovitaminosis D Repletion in Pediatric Inflammatory Bowel Disease. J Pediatr Gastroenterol Nutr. 2016 Feb;62(2):252-8.
91. Tukvadze N, Sanikidze E, Kipiani M, Hebbar G, Easley KA, Shenvi N, Kempker RR, Frediani JK, Mirtskhulava V, Alvarez JA, Lomtadze N, Vashakidze L, Hao L, Del Rio C, **Tangpricha V**, Blumberg HM, Ziegler TR. High-dose vitamin D3 in adults with pulmonary tuberculosis: a double-blind randomized controlled trial. Am J Clin Nutr. 2015 Nov;102(5):1059-69.
92. Lee MJ, Kearns MD, Smith EM, Hao L, Ziegler TR, Alvarez JA, **Tangpricha V**. Free 25-Hydroxyvitamin D Concentrations in Cystic Fibrosis. Am J Med Sci. 2015 Nov;350(5):374-9. PMC4629503
93. Stephens KI, Rubinsztain L, Payan J, Rentsch C, Rimland D, **Tangpricha V**. Dual X-ray absorptiometry and calculated FRAX risk scores may underestimate osteoporotic fracture risk in vitamin D deficient veterans with HIV infection. Endocr Pract. 2016 Apr;22(4):440-6.
94. Frediani JK Sanikidze E, Kipiani M, Tukvadze N, Hebbar G, Ramakrishnan U, Jones DP, Easley KA, Shenvi N, Kempker RR, **Tangpricha V**, Blumberg HM, Ziegler TR. Macronutrient intake and body composition changes during anti-tuberculosis therapy in adults. Clin Nutr. 2016 Feb;35(1):205-12.
95. Roblin D, Barzilay J, Tolsma D, Robinson B, Schild L, Cromwell L, Braun H, Nash R, Gerth J, Hunkeler E, Quinn VP, **Tangpricha V**, Goodman M. A novel method for estimating transgender status using electronic medical records. Ann Epidemiol. 2016 Feb 4. pii: S1047-2797(16)30035-7. doi: 10.1016/j.annepidem.2016.01.004. [Epub ahead of print]
96. Hermes WA, Alvarez JA, Lee MJ, Chesdachai S, Lodin D, Horst R, **Tangpricha V**. A Prospective, Randomized, Double-Blind, Parallel-Group, Comparative Effectiveness Clinical Trial Comparing a Powder Vehicle Compound of Vitamin D With an Oil Vehicle Compound in Adults With Cystic Fibrosis. JPEN J Parenter Enteral Nutr. 2016 Feb 22. pii: 0148607116629673. [Epub ahead of print]
97. Roblin D, Barzilay J, Tolsma D, Robinson B, Schild L, Cromwell L, Braun H, Nash R, Gerth J,

Hunkeler E, Quinn VP, **Tangpricha V**, Goodman M. A novel method for estimating transgender status using electronic medical records. Ann Epidemiol. 2016 Mar;26(3):198-203.
98. Vaughan CP, **Tangpricha V**, Motahar-Ford N, Goode PS, Burgio KL, Allman RM, Daigle SG, Redden DT, Markland AD. Vitamin D and incident urinary incontinence in older adults. Eur J Clin Nutr. 2016 Mar 16. doi: 10.1038/ejcn.2016.20. [Epub ahead of print]
99. Han JE, Jones JL, **Tangpricha V**, Brown MA, Brown LA, Hao L, Hebbar G, Lee MJ, Liu S, Ziegler TR, Martin GS. High Dose Vitamin D Administration in Ventilated Intensive Care Unit Patients: A Pilot Double Blind Randomized Controlled Trial. J Clin Transl Endocrinol. 2016 Jun;4:59-65.
100. Lee SY, Chesdachai S, Lee MJ, He XM, **Tangpricha V**, Braverman LE. Thyroid Function in Patients with Cystic Fibrosis: No Longer a Concern? Thyroid. 2016 Jul;26(7):875-9.
101. Alvarez JA, Grunwell JR, Gillespie SE, **Tangpricha V**, Hebbar KB.Vitamin D deficiency is associated with an oxidized plasma cysteine redox potential in critically Ill children. J Steroid Biochem Mol Biol. 2016 Sep 15. pii: S0960-0760(16)30249-7. doi: 10.1016/j.jsbmb.2016.09.013. [Epub ahead of print]
102. Chesdachai S, Zughaier SM, Hao L, Kempker RR, Blumberg HM, Ziegler TR, **Tangpricha V**. The Effects of First-Line Anti-Tuberculosis Drugs on the Actions of Vitamin D in Human Macrophages. Journal of Clinical and Translational Endocrinology. J Clin Transl Endocrinol. 2016 Dec;6:23-29.
103. Smith EM, Jones JL, Han JE, Alvarez JA, Sloan JH, Konrad RJ, Zughaier SM, Martin GS, Ziegler TR, **Tangpricha V**. High-Dose Vitamin D3 Administration Is Associated With Increases in Hemoglobin Concentrations in Mechanically Ventilated Critically Ill Adults: A Pilot Double-Blind, Randomized, Placebo-Controlled Trial. JPEN J Parenter Enteral Nutr. 2016 Nov 9. pii: 0148607116678197. [Epub ahead of print]
104. Braun H, Nash R, **Tangpricha V**, Brockman J, Ward K, Goodman M. Cancer in Transgender People: Evidence and Methodological Considerations. Epidemiol Rev. 2017 Jan 1;39(1):93-107.
105. Coakley KE, Felner EI, **Tangpricha V**, Wilson PW, Singh RH. Impact of Dietary Intake on Bone Turnover in Patients with Phenylalanine Hydroxylase Deficiency. JIMD Rep. 2017 Jan 28. doi: 10.1007/8904_2016_39. [Epub ahead of print]
106. Eckard AR, Thierry-Palmer M, Silvestrov N, Rosebush JC, O'Riordan MA, Daniels JE, Uribe-Leitz M, Labbato D, Ruff JH, Singh RJ, **Tangpricha V**, McComsey GA. Effects of cholecalciferol supplementation on serum and urinary vitamin D metabolites and binding protein in HIV-infected youth. J Steroid Biochem Mol Biol. 2017 Apr;168:38-48.
107. Constantin T, **Tangpricha V**, Shah R, Oyesiku NM, Ioachimescu OC, Ritchie J, Ioachimescu AG. Calcium and bone turnover markers in acromegaly: a prospective controlled study. J Clin Endocrinol Metab. 2017 Apr 12. doi: 10.1210/jc.2016-3693. [Epub ahead of print]
108. Hileman CO, **Tangpricha V**, Sattar A, McComsey GA. Baseline Vitamin D Deficiency Decreases the Effectiveness of Statins in HIV-Infected Adults on Antiretroviral Therapy. J Acquir Immune Defic Syndr. 2017 Apr 15;74(5):539-547.
109. Alvarez JA, Chong EY, Walker DI, Chandler JD, Michalski ES, Grossmann RE, Uppal K, Li S, Frediani JK, Tirouvanziam R, Tran VT, **Tangpricha V**, Jones DP, Ziegler TR. Plasma metabolomics in adults with cystic fibrosis during a pulmonary exacerbation: A pilot randomized study of high-dose vitamin D3 administration. Metabolism. 2017 May;70:31-41.
110. Han JE, Alvarez JA, Jones JL, **Tangpricha V**, Brown MA, Hao L, Brown LAS, Martin GS, Ziegler TR. Impact of high-dose vitamin D3 on plasma free 25-hydroxyvitamin D concentrations and antimicrobial peptides in critically ill mechanically ventilated adults. Nutrition. 2017 Jun;38:102-108.
111. Tangpricha V, Smith EM, Binongo J, Judd SE, Ziegler TR, Walker S, Tirouvanziam R, Zughaier SM, Lee MJ, Chesdachai S, Hermes WA, Chmiel JF, Gaggar A, Grossmann RE, Joseph PM, Alvarez JA. The Vitamin D for Enhancing the Immune System in Cystic Fibrosis (DISC) trial: Rationale and design of a multi-center, double-blind, placebo-controlled trial of high dose bolus administration of vitamin D3 during acute pulmonary exacerbation of cystic fibrosis. Contemp Clin Trials Commun. 2017 Jun;6:39-45.
112. Constantin T, **Tangpricha V**, Shah R, Oyesiku NM, Ioachimescu OC, Ritchie J, Ioachimescu AG. Calcium and Bone Turnover Markers in Acromegaly: A Prospective, Controlled Study. J Clin Endocrinol Metab. 2017 Jul 1;102(7):2416-2424.
113. Smith EM, Alvarez JA, Kearns MD, Hao L, Sloan JH, Konrad RJ, Ziegler TR, Zughaier SM, **Tangpricha V**. High-dose vitamin D3 reduces circulating hepcidin concentrations: A pilot, randomized, double-blind, placebo-controlled trial in healthy adults. Clin Nutr. 2017 Aug;36(4):980-985. doi: 10.1016/j.clnu.2016.06.015. Epub 2016 Jun 27.
114. Silverberg MJ, Nash R, Becerra-Culqui TA, Cromwell L, Getahun D, Hunkeler E, Lash TL, Millman

A, Quinn VP, Robinson B, Roblin D, Slovis J, **Tangpricha V**, Goodman M. Cohort study of cancer risk among insured transgender people. Ann Epidemiol. 2017 Aug;27(8):499-501.
115. Syed S, Michalski ES, **Tangpricha V**, Chesdachai S, Kumar A, Prince J, Ziegler TR, Suchdev PS, Kugathasan S. Vitamin D Status Is Associated with Hepcidin and Hemoglobin Concentrations in Children with Inflammatory Bowel Disease. Inflamm Bowel Dis. 2017 Sep;23(9):1650-1658.
116. Eckard AR, Raggi P, O'Riordan MA, Rosebush JC, Labbato D, Chahroudi A, Ruff JH, Longenecker CT, **Tangpricha V**, McComsey GA. Effects of vitamin D supplementation on carotid intima-media thickness in HIV-infected youth. Virulence. 2017 Sep 11:0. doi: 10.1080/21505594.2017.1365217. [Epub ahead of print]
117. Eckard AR, O'Riordan MA, Rosebush JC, Ruff JH, Chahroudi A, Labbato D, Daniels JE, Uribe-Leitz M, **Tangpricha V**, McComsey GA. Effects of Vitamin D Supplementation on Bone Mineral Density and Bone Markers in HIV-infected Youth. J Acquir Immune Defic Syndr. J Acquir Immune Defic Syndr. 2017 Dec 15;76(5):539-546.
118. Hyams JS, Davis S, Mack DR, Boyle B, Griffiths AM, LeLeiko NS, Sauer CG, Keljo DJ, Markowitz J, Baker SS, Rosh J, Baldassano RN, Patel A, Pfefferkorn M, Otley A, Heyman M, Noe J, Oliva-Hemker M, Rufo P, Strople J, Ziring D, Guthery SL, Sudel B, Benkov K, Wali P, Moulton D, Evans J, Kappelman MD, Marquis A, Sylvester FA, Collins MH, Venkateswaran S, Dubinsky M, **Tangpricha V**, Spada KL, Britt A, Saul B, Gotman N, Wang J, Serrano J, Kugathasan S, Walters T, Denson LA. Factors associated with early outcomes following standardised therapy in children with ulcerative colitis (PROTECT): a multicentre inception cohort study. Lancet Gastroenterol Hepatol. 2017 Sep 19. pii: S2468-1253(17)30252-2.
119. Eckard AR, O'Riordan MA, Rosebush JC, Lee ST, Habib JG, Ruff JH, Labbato D, Daniels JE, Uribe-Leitz M, **Tangpricha V**, Chahroudi A, McComsey GA. 2. Vitamin D supplementation decreases immune activation and exhaustion in HIV-1-infected youth. Antivir Ther. 2017 Oct 10. doi: 10.3851/IMP3199. [Epub ahead of print]
120. Quinn VP, Nash R, Hunkeler E, Contreras R, Cromwell L, Becerra-Culqui TA, Getahun D, Giammattei S, Lash TL, Millman A, Robinson B, Roblin D, Silverberg MJ, Slovis J, **Tangpricha V**, Tolsma D, Valentine C, Ward K, Winter S, Goodman M. Cohort profile: Study of Transition, Outcomes and Gender (STRONG) to assess health status of transgender people. BMJ Open. 2017 Dec 27;7(12):e018121.
121. Han JE, Alvarez JA, Staitieh B, **Tangpricha V**, Hao L, Ziegler TR, Martin GS, Brown LAS. Oxidative stress in critically ill ventilated adults: effects of vitamin D3 and associations with alveolar macrophage function. Eur J Clin Nutr. 2017 Dec 29. doi: 10.1038/s41430-017-0047-0. [Epub ahead of print]
122. Alvarez JA, Grunwell JR, Gillespie SE, **Tangpricha V**, Hebbar KB. Vitamin D deficiency is associated with an oxidized plasma cysteine redox potential in critically Ill children. J Steroid Biochem Mol Biol. 2018 Jan;175:164-169.
123. Kanhere M, He J, Chassaing B, Ziegler TR, Alvarez JA, Ivie EA, Hao L, Hanfelt J, Gewirtz AT, **Tangpricha V**. Bolus Weekly Vitamin D3 Supplementation Impacts Gut and Airway Microbiota in Adults With Cystic Fibrosis: A Double-Blind, Randomized, Placebo-Controlled Clinical Trial. J Clin Endocrinol Metab. 2018 Feb 1;103(2):564-574.
124. Sauer CG, Loop MS, Venkateswaran S, **Tangpricha V**, Ziegler TR, Dhawan A, McCall C, Bonkowski E, Mack DR, Boyle B, Griffiths AM, Leleiko NS, Keljo DJ, Markowitz J, Baker SS, Rosh J, Baldassano RN, Davis S, Patel S, Wang J, Marquis A, Spada KL, Kugathasan S, Walters T, Hyams JS, Denson LA. Free and Bioavailable 25-Hydroxyvitamin D Concentrations are Associated With Disease Activity in Pediatric Patients With Newly Diagnosed Treatment Naïve Ulcerative Colitis. Inflamm Bowel Dis. 2018 Feb 15;24(3):641-650.
125. Owen-Smith AA, Gerth J, Sineath RC, Barzilay J, Becerra-Culqui TA, Getahun D, Giammattei S, Hunkeler E, Lash TL, Millman A, Nash R, Quinn VP, Robinson B, Roblin D, Sanchez T, Silverberg MJ, **Tangpricha V**, Valentine C, Winter S, Woodyatt C, Song Y, Goodman M. Association Between Gender Confirmation Treatments and Perceived Gender Congruence, Body Image Satisfaction, and Mental Health in a Cohort of Transgender Individuals. J Sex Med. 2018 Apr;15(4):591-600.
126. Becerra-Culqui TA, Liu Y, Nash R, Cromwell L, Flanders WD, Getahun D, Giammattei SV, Hunkeler EM, Lash TL, Millman A, Quinn VP, Robinson B, Roblin D, Sandberg DE, Silverberg MJ, **Tangpricha V**, Goodman M. Mental Health of Transgender and Gender Nonconforming Youth Compared With Their Peers. Pediatrics. 2018 May;141(5). pii: e20173845.
127. Han JE, Alvarez JA, Staitieh B, **Tangpricha V**, Hao L, Ziegler TR, Martin GS, Brown LAS. Oxidative stress in critically ill ventilated adults: effects of vitamin D3 and associations with alveolar macrophage

function. Eur J Clin Nutr. 2018 May;72(5):744-751.
128. Forrest OA, Ingersoll SA, Preininger MK, Laval J, Limoli DH, Brown MR, Lee FE, Bedi B, Sadikot RT, Goldberg JB, **Tangpricha V**, Gaggar A, Tirouvanziam R. Frontline Science: Pathological conditioning of human neutrophils recruited to the airway milieu in cystic fibrosis. J Leukoc Biol. 2018 May 9. doi: 10.1002/JLB.5HI1117-454RR. [Epub ahead of print]
129. Nash R, Ward KC, Jemal A, Sandberg DE, **Tangpricha V**, Goodman M. Frequency and distribution of primary site among gender minority cancer patients: An analysis of U.S. national surveillance data. Cancer Epidemiol. 2018 Jun;54:1-6.
130. Gupta V, **Tangpricha V**, Yow E, McComsey GA, Schanberg L, Robinson AB. Analysis of relationships between 25-hydroxyvitamin D, parathyroid hormone and cathelicidin with inflammation and cardiovascular risk in subjects with paediatric systemic lupus erythematosus: an Atherosclerosis Prevention in Paediatric Lupus Erythematosus (APPLE) study. Lupus Sci Med. 2018 Jun 15;5(1):e000255.
131. Forrest OA, Chopyk DM, Gernez Y, Brown MR, Conrad CK, Moss RB, **Tangpricha V**, Peng L, Tirouvanziam R. Resistin is elevated in cystic fibrosis sputum and correlates negatively with lung function. J Cyst Fibros. 2018 Jun 21. pii: S1569-1993(18)30623-4. doi: 10.1016/j.jcf.2018.05.018. [Epub ahead of print]
132. Getahun D, Nash R, Flanders WD, Baird TC, Becerra-Culqui TA, Cromwell L, Hunkeler E, Lash TL, Millman A, Quinn VP, Robinson B, Roblin D, Silverberg MJ, Safer J, Slovis J, **Tangpricha V**, Goodman M. Cross-sex Hormones and Acute Cardiovascular Events in Transgender Persons: A Cohort Study. Ann Intern Med. 2018 Jul 10. doi: 10.7326/M17-2785. [Epub ahead of print]
133. Gerth J, Becerra-Culqui T, Bradlyn A, Getahun D, Hunkeler EM, Lash TL, Millman A, Nash R, Quinn VP, Robinson B, Roblin D, Silverberg MJ, **Tangpricha V**, Vupputuri S, Goodman M. Agreement between medical records and self-reports: Implications for transgender health research. Rev Endocr Metab Disord. 2018 Sep;19(3):263-269.

Guideline Publications
1. Hembree WC, Cohen-Kettenis P, Delemarre-van de Waal HA, Gooren LJ, Meyer WJ 3rd, Spack NP, **Tangpricha V**, Montori VM. Endocrine Treatment of Transsexual Persons: An Endocrine Society Clinical Practice Guideline. J Clin Endocrinol Metab. 2009 Sep;94(9):3132-54. PMID:19509099
2. Tangpricha V, Kelly A, Stephenson A, Maguiness K, Enders J, Robinson KA, Marshall BC, Borowitz D; for the Cystic Fibrosis Foundation Vitamin D Evidence-Based Review Committee. An Update on the Screening, Diagnosis, Management, and Treatment of Vitamin D Deficiency in Individuals with Cystic Fibrosis: Evidence-Based Recommendations from the Cystic Fibrosis Foundation. J Clin Endocrinol Metab. 2012 Apr;97(4):1082-1093.
3. Coleman E, Bockting W, Botzer M, Cohen-Kettenis P, DeCuypere G, Feldman J, Fraser L, Green J, Knudson G, Meyer WJ, Monstrey S, Adler RK, Brown GR, Devor AH, Ehrbar R, Ettner R, Eyler E, Garofalo R, Karasic DH, Lev AI, Mayer G, Meyer-Bahlburg H, Hall BP, Pfaefflin F, Rachlin K, Robinson B, Schechter LS, **V. Tangpricha**, van Trotsenburg M, Vitale A, Winter S, Whittle S, Wylie KR, Zucker K. Standards of Care for the Health of Transsexual, Transgender, and Gender-Nonconforming People, Version 7 International Journal of Transgenderism, Volume 13, Issue 4, 2012
4. Mechanick JI, Camacho PM, Garber AJ, Garber JR, Pessah-Pollack R, Petak SM, **Tangpricha V**, Trence DL. American Association of Clinical Endocrinologists and American College of Endocrinology Protocol for Standardized Production of Clinical Practice Guidelines, Algorithms, and Checklists - 2014 Update and the AACe G4G Program. Endocr Pract. 2014 Jul 1;20(7):692-702. PMID: 25057098
5. Camacho PM, Petak SM, Binkley N, Clarke BL, Harris ST, Hurley DL, Kleerekoper M, Lewiecki EM, Miller PD, Narula HS, Pessah-Pollack R, **Tangpricha V**, Wimalawansa SJ, Watts NB. American Association of Clinical Endocrinologists and American College of Endocrinology Clinical Practice Guidelines for the Diagnosis and Treatment of Postmenopausal Osteoporosis - 2016. Endocr Pract. 2016 Sep 2;22(Suppl 4):1-42.
6. Hembree WC, Cohen-Kettenis PT, Gooren L, Hannema SE, Meyer WJ, Murad MH, Rosenthal SM, Safer JD, **Tangpricha V**, T'Sjoen GG. Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society* Clinical Practice Guideline. J Clin Endocrinol Metab. 2017 Sep 13. doi: 10.1210/jc.2017-01658. [Epub ahead of print]
7. Tangpricha V, Hannema SE, Irwig MS, Meyer WJ 3rd, Safer JD, Hembree WC. 2017 AMERICAN ASSOCIATION OF CLINICAL ENDOCRINOLOGISTS/ENDOCRINE SOCIETY UPDATE ON

TRANSGENDER MEDICINE: CASE DISCUSSIONS. Endocr Pract. 2017 Dec;23(12):1430-1436.
8. Hurley DL, Binkley N, Camacho PM, Diab DL, Kennel KA, Malabanan A, **Tangpricha V**. THE USE OF VITAMINS AND MINERALS IN SKELETAL HEALTH: AMERICAN ASSOCIATION OF CLINICAL ENDOCRINOLOGISTS AND THE AMERICAN COLLEGE OF ENDOCRINOLOGY (AACE/ACE) POSITION STATEMENT. Endocr Pract. 2018 Jul 23. doi: 10.4158/PS-2018-0050.

Review Articles:
1. Tangpricha V. Ducharme S. Barber TW. Chipkin SR. Endocrinologic Treatment for Gender Identity Disorders. Endocrine Practice. 2003; 9:12-21.
2. Tangpricha V. Vitamin D deficiency is common in the Southern States of the United States. Southern Medical Journal. 2007 Apr;100(4):384-5.
3. Safer JD. **Tangpricha V.** Out of the Shadows: It is time to mainstream treatment for transgender patients. Endocrine Practice. 2008 Mar;14(2):248-50.
4. Khazai N, Judd SE, **Tangpricha V.** Calcium and vitamin D: skeletal and extraskeletal health. Curr Rheumatol Rep. 2008 Apr;10(2):110-7. PMC2669834
5. Judd SE. **Tangpricha V.** Vitamin D Deficiency and Risk for Cardiovascular Disease. American Journal of Medical Sciences. Am J Med Sci. 2009 Jul;338(1):40-4. PMID: 19593102
6. Yamshchikov AV. Desai NS. Blumberg HM. Ziegler TR. **Tangpricha V.** Vitamin D for Treatment of Infectious Diseases: A Systematic Review. Endocrine Practice. Jul-Aug;15(5):438-49. PMID: 19491064
7. Grossman R. **Tangpricha V.** Evaluation of Vehicle Substances on Vitamin D Bioavailability: A Systematic Review. Molecular Nutrition and Food Science. 2010 Aug;54(8):1055-61. PMID: 20425758
8. Kamen DL. **Tangpricha V.** Vitamin D and Molecular Actions on the Immune System: Modulation of Innate and Auto-Immunity. Journal of Molecular Medicine. 2010 May;88(5):441-50. PMID: 20119827
9. Judd SE, **Tangpricha V.** Vitamin D Therapy and Cardiovascular Health. Curr Hypertens Rep. 2011 Jun;13(3):187-91. PMID: 21298577
10. Finklea JD, Grossmann RE, **Tangpricha V**. Vitamin D and Chronic Lung Disease: A review of molecular mechanisms and clinical studies. Advances in Nutrition. 2011 May;2(3):244-53. PMID: 22332056
11. Gosmanova EO, **Tangpricha V**, Gosmanov AR. Endocrine-Metabolic Pathophysiology and Treatment Approaches Following Kidney Transplantation: a Review. Endocr Pract. 2012 Jul-Aug;18(4):579-90. PMID: 22849872
12. Kempker JA, **Tangpricha V**, Ziegler TR, Martin GS. Vitamin D in sepsis: from basic science to clinical impact. Crit Care. 2012 Jul 19;16(4):316. [Epub ahead of print]
13. Kempker JA, Han JE, **Tangpricha V**, Ziegler TR, Martin GS. Vitamin D and sepsis: An emerging relationship. Dermatoendocrinol. 2012 Apr 1;4(2):101-8. PMID: 22928065
14. Alvarez J, Wasse H, **Tangpricha V**. Vitamin D supplementation in pre-dialysis chronic kidney disease: A systematic review. Dermatoendocrinol. 2012 Apr 1;4(2):118-27. PMID: 22928067
15. Al Mheid I, Patel RS, **Tangpricha V**, Quyyumi AA. Vitamin D and cardiovascular disease: is the evidence solid? Eur Heart J. 2013 Jun 9. [Epub ahead of print] PMID:23751422
16. Kearns MD, Alvarez JA, **Tangpricha V**. Large, Single-Dose, Oral Vitamin D Supplementation in Adult Populations: A Systematic Review. Endocr Pract. 2014 Apr;20(4):341-51. PMID: 24246341
17. Siwamogsatham O, Alvarez JA, **Tangpricha V**. Diagnosis and treatment of endocrine comorbidities in patients with cystic fibrosis. Curr Opin Endocrinol Diabetes Obes. 2014 Oct;21(5):422-9. PMID: 25105995
18. Kearns MD, Alvarez JA, Seidel N, **Tangpricha V**. Impact of Vitamin D on Infectious Disease: A Systematic Review of Controlled Trials. Am J Med Sci. 2014 Oct 20. [Epub ahead of print] PMID: 25334038
19. Gurion R, **Tangpricha V**, Yow E, Schanberg LE, McComsey GA, Robinson AB; Atherosclerosis Prevention in Pediatric Lupus Erythematosus Investigators. Avascular necrosis in pediatric systemic lupus erythematosus: a brief report and review of the literature. Pediatr Rheumatol Online J. 2015 Apr 23;13(1):13. PMC4415214
20. Chesdachai S, **Tangpricha V**. Treatment of vitamin D deficiency in cystic fibrosis. J Steroid Biochem Mol Biol. 2015 Sep 10. pii: S0960-0760(15)30073-X. doi: 10.1016/j.jsbmb.2015.09.013. [Epub ahead of print]
21. Smith EM, **Tangpricha V**. Vitamin D and anemia: insights into an emerging association. Curr Opin Endocrinol Diabetes Obes. 2015 Dec;22(6):432-8. PMID: 26414080
22. Feldman J, Brown GR, Deutsch MB, Hembree W, Meyer W, Meyer-Bahlburg HF, **Tangpricha V**,

T'Sjoen G, Safer JD. Priorities for transgender medical and healthcare research. Curr Opin Endocrinol Diabetes Obes. 2016 Apr;23(2):180-7. doi: 10.1097/MED.0000000000000231.
23. Reisner SL, Deutsch MB, Bhasin S, Bockting W, Brown GR, Feldman J, Garofalo R, Kreukels B, Radix A, Safer JD, **Tangpricha V**, T'Sjoen G, Goodman M. Advancing methods for US transgender health research. Curr Opin Endocrinol Diabetes Obes. 2016 Apr;23(2):198-207. doi: 10.1097/MED.0000000000000229.
24. Collin L, Reisner SL, **Tangpricha V**, Goodman M. Prevalence of Transgender Depends on the "Case" Definition: A Systematic Review. J Sex Med. 2016 Apr;13(4):613-26.
25. Blackman SM, **Tangpricha V**. Endocrine Disorders in Cystic Fibrosis. Pediatr Clin North Am. 2016 Aug;63(4):699-708.
26. Kanhere M, Chassaing B, Gewirtz AT, **Tangpricha V**. Role of vitamin D on gut microbiota in cystic fibrosis. J Steroid Biochem Mol Biol. 2016 Nov 3. pii: S0960-0760(16)30296-5. doi: 10.1016/j.jsbmb.2016.11.001. [Epub ahead of print]
27. Tangpricha V, den Heijer M. Oestrogen and anti-androgen therapy for transgender women. Lancet Diabetes Endocrinol. 2017 Apr;5(4):291-300.
28. Berli JU, Knudson G, Fraser L, **Tangpricha V**, Ettner R, Ettner FM, Safer JD, Graham J, Monstrey S, Schechter L. What Surgeons Need to Know About Gender Confirmation Surgery When Providing Care for Transgender Individuals: A Review. JAMA Surg. 2017 Apr 1;152(4):394-400.
29. Kanhere M, Chassaing B, Gewirtz AT, **Tangpricha V**. Role of vitamin D on gut microbiota in cystic fibrosis. J Steroid Biochem Mol Biol. 2018 Jan;175:82-87.
30. Abramowitz J, **Tangpricha V**. Hormonal Management for Transfeminine Individuals. Clin Plast Surg. 2018 Jul;45(3):313-317.
31. Mattawanon N, Spencer JB, Schirmer DA 3rd, **Tangpricha V**. Fertility preservation options in transgender people: A review. Rev Endocr Metab Disord. 2018 Sep 15. doi: 10.1007/s11154-018-9462-3.
32. T'Sjoen G, Arcelus J, Gooren L, Klink DT, **Tangpricha V**. Endocrinology of Transgender Medicine. Endocr Rev. 2018 Oct 10. doi: 10.1210/er.2018-00011. [Epub ahead of print]

Case Reports:
1. Tangpricha V. Afdhal N. Chipkin SR. Autoimmune hepatitis in a male to female transsexual: a case report. International Journal of Transgenderism. 2001. 5(3).
2. Pepper KJ. Jaowattana U. Starsiak MD. Halkar R. Hornaman K. Wang W. Dayamani P. **Tangpricha V.** Renal Cell Carcinoma Presenting with Paraneoplastic Hypercalcemic Coma: A Case Report and Review of the Literature. Journal of General Internal Medicine. Journal of General Internal Medicine. 2007 Apr 19.
3. Mitri Z, **Tangpricha V**. Osteopetrosis, Hypophosphatemia and Phosphaturia in a Young Man: A Case Presentation and Differential Diagnosis. Case Reports in Endocrinology. 2012;2012:238364. Epub 2012 Feb 9. PMID: 22934198
4. Siwamogsatham O, Stephens KI, **Tangpricha V**. Evaluation of Teriparatide for Treatment of Osteoporosis in Four Patients with Cystic Fibrosis: A Case Series. Case Reports in Endocrinology. 2014. PMID: 24716008

Books and book chapters:
1. Tangpricha V. Flanagan JN. Beazley RM. Holt PR. Lipkin MS. Tseng CC. Chen TC. Holick MF. Vitamin D, Sunlight and Colon Cancer: The implications or the presence of the 1α-hydroxylase in normal and malignant colon cancer tissue. Biological Effects of Light 2001. Michael Holick (editer). Kluwer Academic Publishers.
2. Shewakramani S. **Tangpricha V**. Rakita D. Holick MF. Vitamin D Insufficiency Is Common and Under diagnosed in Africa-American Female Patients. Biological Effects of Light 2001. Michael Holick (editer). Kluwer Academic Publishers.
3. Ullah MI, Koch CA, **Tangpricha V**. Hypertension, Vitamin D deficiency, and Calcium Metabolism. in: Koch CA, Chrousos GP (eds.). Contemporary Endocrinology. Endocrine Hypertension. Springer, New York, 2012, in press
4. Tangpricha V. Vitamin D Deficiency. Tarascon Adult Endocrinology Pocketbook. Jones & Bartlett, Learning, LLC, Sudbury, MA.
5. Adeel S, **Tangpricha V**. Osteoporosis. World Rev Nutr Diet. 2015;111:136-40. PMID: 25418403
6. Hermes W. **Tangpricha V**. Vitamin D in Cystic Fibrosis. Diet and Exercise in Cystic Fibrosis. Elsevier,

Oxford, UK.
7. Tangpricha V. (Editor). Vitamin D: A Clinical Casebook, Springer International Publishers, Switzerland.

Manuals, videos, computer programs, and other teaching aids:
1. Sweeney AT. Blake M. **Tangpricha V.** Mulchahey E. Beazley R. Melby JC. Schranz M. An on-line adrenal imaging teaching program. MCQS.com website. 1999
2. **Tangpricha V,** Khazai NB. Vitamin D Deficiency and Related Disorders. eMedicine from WebMD. 2006- current. Updated December 10, 2012. Available at: http://emedicine.medscape.com/article/128762-overview.
3. **Tangpricha V.** Vitamin D Metabolism and Skeletal Health. Audiodigest. Vitamin D: The vital vitamin. Volume 57, issue 12, March 28, 2009.
4. **Tangpricha V.** Vitamin D Deficiency. Tarascon Adult Endocrinology Pocketbook 2013.

Other publications (Thesis/Editorials/Letters):
1. Tangpricha V (2004). Colon Cancer and Vitamin D. PhD Thesis. Boston University School of Medicine. Boston, MA.
2. Evatt ML, DeLong MR, Grant WB, Cannell JJ, **Tangpricha V**. Autism spectrum disorders following in utero exposure to antiepileptic drugs [letter to editor]. Neurology. 2009 Sep 22;73(12):997.
3. Bhasin S, Safer J, **Tangpricha V.** 2009. The hormone foundation's patient guide to the endocrine treatment of transsexual persons. Journal of Clinical Endocrinology and Metabolism 94(9).
4. Tangpricha V. Transsexuals and sexual health. Journal of Sexual Medicine, vol. 6, no. 11, pp. 2919–2920, 2009.
5. Tangpricha V. Vitamin D: Re-thinking the guidelines and future directions. Pediatric Pulmonology, vol. 44, no. SUPPL. 32, pp. 178–179, 2009.
6. Tangpricha V. Maternal Hypoparathyroidism Due to an Activating Mutation of the Calcium Sensing Receptor During Pregnancy and Lactation. Endocrine Practice. 2010 May-Jun;16(3):522-3.
7. Tangpricha V. Vitamin D in food and supplements. Am J Clin Nutr. 2012 Jun;95(6):1299-300.
8. Grant WB, **Tangpricha V**. Vitamin D: Its role in disease prevention. Dermatoendocrinol. 2012 Apr 1;4(2):81-3. PMID: 22928061
9. Tangpricha V, Wasse H. Vitamin D therapy in kidney disease: more vitamin D is necessary. Am J Kidney Dis. 2014 Nov;64(5):667-9. PMID: 25343995
10. Smith EM, **Tangpricha V**. Driving up the dose: Implications for high-dose vitamin D therapy. Endocr Pract. 2015 Oct;21(10):1178-80.
11. Tangpricha V. Vitamin D Supplementation In Obese Africian American Children. J Clin Transl Endocrinol. 2018 May 29;12:48-49.
12. Tangpricha V. Emerging topics in transgender medicine. Rev Endocr Metab Disord. 2018 Sep 25. doi: 10.1007/s11154-018-9468-x. [Epub ahead of print] No abstract available.
13. Koch CA, **Tangpricha V**. Gender dysphoria and transgender medicine in the year 2018. Rev Endocr Metab Disord. 2018 Sep;19(3):193-195.

Other on-line publications:
1. Transgender Hormone Therapy, Up to Date, 2010-Present
   I have written, edited, and updated the Up to Date section on Transgender for over 5 years.

2. Dyamed Plus, Scoping Document, Transgender Hormone Therapy for Adolescents and Adults and Osteoporosis, 2016-Present
   I have been asked to assist with the Dyamed Plus evidence based web search engine for topics related to transgender.

3. Vitamin D Deficiency and Related Disorders., Web MD (formally eMedicine), 2006-Present
   I have written, edited, and updated the section on vitamin D on Web MD for over 10 years