CURRICULUM VITAE

BIOGRAPHICAL

Name: Crystal Dawn Chrysavgi Kamilaris

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EDUCATION & TRAINING

GRADUATE:

2004-2011	University of Patras School of Health Sciences	MD, 2011

POSTGRADUATE:

2014-2017	University of Connecticut Department of Internal Medicine Farmington, Connecticut	Internal Medicine Residency Program Director: Steven V. Angus, M.D. (2014-11/2016) Program Director: Robert J. Nardino, M.D., FACP (11/2016-6/2017)
2017-Present	Inter-Institute Endocrinology Fellowship Program National Institutes of Health (NIH) Bethesda, Maryland	Adult Endocrinology Fellowship Program Director: Ranganath Muniyappa, M.D., Ph.D.

HONORS & ACHIEVEMENTS

Pituitary Society Pituitary Master Course Travel Award	2019
Endocrine Society Outstanding Abstract Award	2017
USMLE Step 3 Score: 260	2015
USMLE Step 2 CK Score: 265	2013
USMLE Step 1 Score: 255	2013
Graduated in top ten percent of medical school class	2011
Accepted to the University of Patras School of Health Sciences under the category “Greek from Abroad,” as one of fourteen students accepted to medical school in Greece from over three thousand students taking the entrance examinations for a position in a Greek institution of higher education.	2004

PUBLICATIONS & PRESENTATIONS

PEER-REVIEWED JOURNAL ARTICLES/ABSTRACTS:

1. Wurth R, Kamilaris CDC, Nilubol N, Sadowski S, Berthon A, Faucz FR, Stratakis CA, Hannah-Shmouni F. Inhibin A as a Tumor Marker for Primary Bilateral Macronodular Adrenal Hyperplasia. (Submitted).
2. Maria AG, Suzuki M, Berthon A, Kamilaris C, Demidowich A, Lack J, Zilbermint M, Hannah-Shmouni F, Faucz FR, Stratakis CA. Mosaicism for KCNJ5 causing early-onset primary aldosteronism due to bilateral adrenocortical hyperplasia. Am J Hypertens. 2019 Oct 22. (Epub ahead of Print).
3. Kamilaris CDC, Stratakis CA. Early genetic and clinical diagnosis in multiple endocrine neoplasia type 1 (MEN1). Front Endocrinol (Lausanne). 2019; 10:339.
4. Kamilaris CDC, Faucz FR, Voutetakis A, Stratakis CA. Carney Complex. Exp Clin Endocrinol Diabetes. 2019; 127(2-03): 156-164.
5. Kamilaris CDC, Stratakis CA. An update on adrenal endocrinology: significant discoveries in the last 10 years and where the field in heading in the next decade. Hormones (Athens). 2018;17(4):479-490.
6. Considine B, Kamilaris CDC, Bailey UV, Bauer FA, Lassman MN. Coronary Vasospasm and Bowel Ischemia in a patient with Metastatic Gastrointestinal Carcinoid. Connecticut Medicine. 2016;80:463-466.

POSTER PRESENTATIONS:

1. Kamilaris CDC, Gkirgkinoudis A, Tatsi C, Pitsava C, Sinaii N, Hannah-Shmouni Stratakis, CA. (2020). Prevalence of Renal Cysts in Patients with Carney Complex.
   Poster to be presented at: ENDO 2020; San Francisco, CA.
2. Demidowich AP, Camacho J, Sierra M, Belyavskaya E, Lyssikatos C, Kamilaris C, Hannah-Shmouni F, Stratakis C. (2020). Human hair aldosterone measurements for evaluation of primary aldosteronism.
   Poster to be presented at: ENDO 2020; San Francisco, CA.
3. Kamilaris CDC, Maria AG, Suzuki M, Berthon A, Camacho J, Demidowich A, Hannah-Shmouni F, Faucz FR, Stratakis CA. (2020). *KCNJ5* Mosaicism: A Novel Clinical Phenotype of Primary Aldosteronism.
   Abstract submitted for: International Aldosterone Conference 2020; San Francisco, CA.

4. Settas N, Drougat L, Berthon A, Kamilaris C, Salpea P, Faucz FR, Stratakis CA. (2019). Copy number variations of the PKA catalytic subunits *PRKACA* and *PRKACB* are present in isolated micronodular adrenocortical disease (iMAD).
   Poster presented at: ASHG 2019; Houston, TX.
5. Marx SJ, Camacho J, Suzuki M, Kamilaris CDC, Leahu A, Sinaii N, Stratakis CA. (2019). Neonatal Severe Primary Hyperparathyroidism (NSHPT): Striking Biochemical Differences Between Mono- and Di-allelic Mutations of the CASR.
   Poster presented at: 16th International Workshop on Multiple Endocrine Neoplasia; Houston, TX.
6. Kamilaris CDC, Mandl A, Simonds WF, Weinstein LS, Agarwal SK, Blau JE. Metastatic Melanoma with Unknown Primary Site in a Patient with Multiple Endocrine Neoplasia Type 1. (2019).
   Poster presented at: Annual Endocrine Society Meeting; New Orleans, LA.
7. Kamilaris CDC, Sinaii N, Stratakis CA. (2019). The Effects of Selective Serotonin Reuptake Inhibitors on Urinary Free Cortisol in Patients with Carney Complex and Primary Pigmented Nodular Adrenocortical Disease.
   Poster presented at: Annual Endocrine Society Meeting and Pan American Neuroendocrine Society Meeting; New Orleans, LA.
8. Suzuki M, Kamilaris CDC, Sinaii N, Stratakis CA. (2019). Six Day Liddle Test in Detection of Cortisol Dysregulation in Primary Aldosteronism.
   Presented at: International Aldosterone Conference 2019; New Orleans, LA.
9. Kamilaris CDC, Demidowich AP, Stratakis CA. (2018). A Patient with Carney Complex, Hypercalcemia, and High PTH.
   Poster presented at: Annual Endocrine Society Meeting; Chicago, IL.
10. Kamilaris CDC, Ohri P, Malchoff C. (2017). Beckwith-Wiedemann Syndrome with Bilateral

Pheochromocytomas.
Poster presented at: Annual Endocrine Society Meeting; Orlando, FL.
Received: Outstanding Abstract Award.

11. Kamilaris CDC, Kost A, Alaigh V, Udelsman R., Tendler BR. (2016). Hobnail Variant Papillary Thyroid Carcinoma Presenting as Superior Vena Cava Syndrome.
    Poster presented at: Annual Meeting of the American Thyroid Association; Denver, CO.
12. Alaigh, V, Kost A, Kamilaris CDC, Tendler BR. (2016). Anaplastic Thyroid Cancer 50 Years After Thyroidectomy.
    Poster presented at: Annual Meeting of the American Thyroid Association; Denver, CO.
13. Wang X, Kowlgi NG, Kapila N, Kamilaris C, Considine B, Mangardich A, Patel N, Snayd M., Puri S, Nadler E, Perucki W, Wade S, Ozimek J, Cruz L, Chabra J, Premkumar P. (2016). Electronic Sepsis Alerts and a Supplemental Care Team and its Impact on Patient Outcomes: A prospective study.
    Poster presented at: University of Connecticut Annual Dean's Symposium on Continuous Quality Improvement (first prize); Farmington, CT.
14. Wang X, Kowlgi NG, Kapila N, Kamilaris C, Considine B, Mangardich A, Patel N, Snayd M, Puri S, Nadler E, Perucki W, Wade S, Ozimek J, Cruz L, Chabra J, Premkumar P. (2016). The Influence of Electronic Sepsis Alerts on Length of Stay and Mortality: A Retrospective Analysis.
    Poster presented at: University of Connecticut Annual Dean's Symposium on Continuous Quality Improvement (first prize); Farmington, CT.
15. de la Portilla L, Kamilaris CDC, Gkrouzman E, Forouhar F, Kantorovich V. (2016). Ectopic ACTH Secretion due to Recurrent Metastatic Bronchial Carcinoid Causing Cushing Syndrome.
    Poster presented at: Annual Endocrine Society Meeting; Boston, MA.

ORAL PRESENTATIONS:

1. Kamilaris CDC, Rosing D, Chen M, Lee L, Stratakis CA. (2019). The Case of the Surprise Aortic Dissection: Optimizing Care and Assuring Safe Transport when Clinical Center Resources Are Not Sufficient.
   Presented at: NIH Clinical Center Systems-based Morbidity and Mortality Rounds, Bethesda, MD.
2. Kamilaris CDC, Stratakis CA. (2018). Carney complex.
   Presented at: Annual NIH Clinical Endocrinology Course, Bethesda, MD.

3. Kamilaris CDC, Tendler BR. (2016). Hobnail Variant Papillary Thyroid Carcinoma Presenting as Superior Vena Cava Syndrome.
   Presented at: The Fourth Annual New England Endocrine Tumor Symposium at Yale, New Haven, CT.
4. Kamilaris, C.D.C., Tendler, BR. (2016). Diffuse Idiopathic Pulmonary Neuroendocrine Cell Hyperplasia (DIPNECH).
   Presented at: University of Connecticut Department of Endocrinology Grand Rounds, Farmington, CT.

PROFESSIONAL ACTIVITIES

RESEARCH EXPERIENCE

1. Title**: "**Clinical and Molecular Characteristics of Primary Aldosteronism in Blacks" 2018-present
Section on Endocrinology and Genetics (SEGEN), *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD), NIH, Bethesda, MD

Brief description: Primary aldosteronism (PA) is the most common cause of secondary hypertension and growing evidence supports that excess aldosterone, in the presence of elevated blood pressure, leads to morbidity via accelerated cardiovascular remodeling, worsened insulin sensitivity, and impaired bone formation. Recent studies have identified several new pathogenic genetic variants, both germline and somatic, as causes of PA, including mutations in *KCNJ5*, *ATP1A1*, *ATP2B3*, *CACNA1D*, and *ARMC5*. As the effects of chronic hyperaldosteronism differ between races, it is not surprising that the relative prevalence of these mutations differs among cohorts. African Americans (AA) in particular have increased susceptibility to end-organ damage from aldosterone excess-induced cardiovascular remodeling. They are more likely to have congestive heart failure, end-stage renal disease, and atherosclerotic events than age-matched Caucasians. However, prior to the initiation of this study no comprehensive analysis of mutations in PA had been performed in AA. The aims of this study are to identify the germline and/or somatic mutations causing PA in AA, define the effects of these mutations on aldosterone production in AA, and to identify effective pharmacologic agents that will inhibit inappropriate aldosterone production in target cells. Furthermore, we aim to evaluate for a possible genotype-phenotype correlation in the development of certain clinical complications of PA, such as uncontrolled hypertension, cardiovascular disease, renal cysts, osteoporosis, hyperparathyroidism, obesity, insulin resistance, and/or hypercortisolemia, and their response to treatment with unilateral adrenalectomy or mineralocorticoid receptor antagonist.

Role: Associate Investigator.

2. Title: "The effects of Selective Serotonin Reuptake Inhibitors on Urinary Free Cortisol in Patients with Carney Complex and Primary Pigmented Nodular Adrenocortical Disease" 2018-present
SEGEN, NICHD, NIH, Bethesda, MD

Brief description**:** Primary pigmented Nodular Adrenocortical Disease (PPNAD) is a rare cause of ACTH-independent Cushing syndrome mainly associated with Carney complex (CNC), and caused primarily by inactivating germline *PRKAR1A* defects. PPNAD can be diagnosed by histologic examination or a 6-day Liddle test (LT) that shows a paradoxical increase of >50 % in 24-hour urinary free cortisol (UFC) on the 2nd day of high-dose dexamethasone administration (Day 6 [D6]). PPNAD tissue has neuroendocrine features and can overexpress the serotonin synthesizing enzyme tryptophan hydroxylase type 2 and the serotonin receptors types 4, 6, and 7, with formation of an illicit stimulatory serotonergic loop whose pharmacological inhibition *in vitro* decreases cortisol production. SSRIs inhibit the reuptake of serotonin and are used as first-line antidepressants. This is a retrospective cohort study of patients with CNC and PPNAD that underwent a LT with the objective to evaluate the effect of SSRIs on UFCs in these patients. Of the 34 patients (4-65 years-old) with CNC and PPNAD that had a LT at the NIH between 2004 and 2018, 4 patients were taking an SSRI during testing. No statistically significant differences were demonstrated between the SSRI (S) group and the non-SSRI (NS) group in baseline UFCs and 17-hydroxycorticosteroids (17OHS) and the percent increase in UFC and 17OHS on D6. However, further data analysis demonstrated a statistically significant difference in overall UFC in the S group when compared to the NS group ($P<0.05$). These data suggest an effect of SSRIs and serotonin on UFC and ultimately cortisol production in PPNAD *in vivo*. The data are limited by the small number of patients in the S group (n=4). In addition, 50% of patients in the S group vs 77% in the NS group underwent adrenalectomy, which is indicative of more severe disease in the NS group.

Role**:** Patient data collection, statistical analysis, abstract submission, manuscript preparation.

3. Title: Prevalence of Renal Cysts in Patients with Carney Complex 2019-present
SEGEN, NICHD, NIH, Bethesda, MD

Brief description: In the general population renal cysts appear most commonly in patients >50 y and in men. Among published studies, the prevalence of renal cysts detected by MRI was 27%, detected by CT was 20-41%, and detected by US was 4-17%. In these studies, the male to female ratio in patients with renal cysts ranged from 1.4:1 to 2.93:1. In a small retrospective study, 5 of 9 subjects with Carney complex (CNC) had renal cysts on MRI or CT. This same study evaluated the development of renal cysts in kidney-specific *Prkar1a* knockout mice, where all mice developed a renal cystic phenotype. To determine the prevalence of renal cysts, we performed a retrospective cohort study of patients with CNC evaluated at our institution between 1984 and 2019 who underwent renal imaging with MRI, CT, and/or US. We hypothesized that CNC leads to renal cystogenesis in humans, with increased prevalence of renal cysts and earlier age at diagnosis. 117 patients with CNC (69 female [59%], 48 male [41%]) were evaluated with renal imaging (56% MRI, 41% CT, 3% US). Of these, 39 (33%) patients had renal cysts that were first detected on imaging between the ages of 13 and 58 years (y) (mean age at diagnosis 37.1 ±12.7 y; 5 [13%] 12-19 y, 5 [13%] 20-29 y, 10 [26%] 30-39 y, 11 [28%] 40-49 y, and 8 [21%] 50-59 y). The mean number of cysts was 1.3 ±0.7, and mean dominant cyst size was 1.2 ±0.9 cm. Average creatinine at diagnosis was 0.8 ±0.2 mg/dl. Of the patients with renal cysts, 22 were female (56% of patients with renal cysts, 32% of females with CNC that underwent renal imaging) and 17 were male (44% of patients with renal cysts, 35% of males with CNC that underwent renal imaging). There was no difference in the prevalence of renal cysts between males and females (35% vs 32%, p=.70, for a 1.1:1 ratio). Age, number, and dominant cysts size were also not different between sexes (p=.51, p=.84, and p=.26, respectively). All 39 patients with renal cysts had *PRKAR1A* mutations. In conclusion, our data demonstrate that there is a high prevalence of renal cysts in patients with CNC with both males and females being affected equally, in contrast to the majority of previously reported population studies. They also suggest that renal cysts may develop in patients with CNC at a younger age. These results will be further validated by comparison to a cohort of healthy controls.

Role**:** Patient data collection, statistical analysis, abstract submission, manuscript preparation.

4. Title: "Electronic Sepsis Alerts and a Supplemental Care Team and its Impact on Patient Outcomes" (Quality Improvement Project) 2016
Department of Internal Medicine, University of Connecticut, Farmington, CT

Brief Description: Single site prospective study of 156 patients admitted to the medical floors from 1/2016 to 6/2016. The objective was to determine whether length of stay, upgrade in level of care and/or in-hospital mortality differed between patients who generated a sepsis alert through the EMR system and were evaluated by a sepsis team with supplemental follow up care vs. patients who generated a sepsis alert and were not evaluated by a sepsis team, receiving standard of care.

Role: Associate Investigator

LEADERSHIP EXPERIENCE

NIH Inter-Institute Endocrinology Training Program 2018-2019
Position: Fellows' Representative
NIH Clinical Fellows Committee 2018-2019
Position: Endocrinology Fellowship Representative

University of Connecticut Graduate Medical Education Committee Resident Forum 2014-2015
Position: Internal Medicine Residency Representative 2016-2017

TEACHING EXPERIENCE

NIH Inter-Institute Endocrinology Training Program 2018-present
Position: Senior Clinical Fellow
Description: Assisted faculty in the teaching and supervision of first-year endocrinology fellows in topics of adrenal and pituitary disease during daily teaching rounds both in the inpatient ward and outpatient endocrine clinic. Assisted faculty in teaching and supervision of second-year endocrinology fellows at the MobileMed/NIH Endocrine Clinic at Suburban Outpatient Medical Center.

University of Connecticut Clinician Educator Track 2014-2017
Position: Clinician Educator
Description: The clinician-educator track at the University of Connecticut's Internal Medicine Program provides future educators with the opportunity to develop the skills required to become clinician-educators, role models and mentors for younger generations of physicians. Residents participate in all teaching programs offered by the residency program and get advanced training in educational methodologies. In addition, residents complete an Introduction to Clinical Research course.

University of Patras School of Health Sciences 2009-2011
Patras, Greece
Position: Teaching Assistant
Description: Assisted faculty and residents in the training of fifth year medical students in history taking, physical examination, clinical skills and differential diagnosis in the Departments of Internal Medicine, Pediatrics, and Surgery at the University General Hospital of Patras.

ADDITIONAL WORK EXPERIENCE

NIH 2016
Department of Endocrinology
Bethesda, MD
Position: Rotating Resident
Duration: Four-week rotation

University of Miami/Miller School of Medicine, Jackson Memorial Hospital 2014
Department of Internal Medicine
Miami, FL
Position: Clinical Observer, Internal Medicine
Duration: Six-week rotation

Kings County Hospital Center and New York Methodist Medical Associates/Flatbush 2013-2014
Brooklyn, NY
Position: Clinical Volunteer, Internal Medicine
Duration: 10-week rotation

Internal Medicine Private Practice 2012-2014
Lindenhurst, NY
Position: Clinical Observer

CERTIFICATIONS & LICENSURE

American Board of Internal Medicine Certification in Endocrinology, Diabetes, and Metabolism	2019-present
American Board of Internal Medicine Certification in Internal Medicine	2017-present
Maryland Board of Physicians Medical License	2017-present

CITI (Collaborative Institutional Training Initiative)	2014-present
Educational Commission for Foreign Medical Graduates (ECFMG) Certification	2013-present

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MEMBERSHIPS IN PROFESSIONAL & SCIENTIFIC SOCIETIES

Endocrine Society
American Association of Clinical Endocrinologists
American Thyroid Association
American College of Physicians
American Medical Association
Hellenic Medical Society of New York
Athens Medical Association