CURRICULUM VITAE



Christine A. Klemens, PhD

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**ORCID ID:** <https://orcid.org/0000-0002-0812-824X>

**EDUCATION**

BS **University of Wisconsin,** Madison, WI (2001-2005)

Double Major in Molecular Biology and Russian Lit and Lang

PhD **University of Pittsburgh**, Pittsburgh, PA (2011-2017)

PhD in Cell Biology and Molecular Physiology

**TRAINING**

Postdoctoral Fellow 2017 – 2021 – Alexander Staruschenko Lab, Medical College of Wisconsin, Department of Physiology

Graduate Student 2011 – 2017 – Michael Butterworth Lab, University of Pittsburgh, Department of Cell Biology and Molecular Physiology

Research Technician 2008 – 2010 – Hanno Tan and Connie Bezzina Labs, University of Amsterdam, Academic Medical Center, Experimental Cardiology

Associate Research Specialist 2006 – 2007 – Craig January Lab, University of Wisconsin: Madison, School of Medicine, Department of Physiology

**ACADEMIC APPOINTMENTS**

8/2023 - present Assistant Professor, Department of Molecular Pharmacology and Physiology

Morsani College of Medicine, University of South Florida

9/2021 – 7/2023 Research Associate, Department of Molecular Pharmacology and Physiology

Morsani College of Medicine, University of South Florida

**RESEARCH SUPPORT**

**Current Funding:**

Type: R00HL153686, University of South Florida, 08/01/2023 – 07/31/2026 (R00 Phase)

Agency: NIH National Heart, Lung, and Blood Institute

Title: The Role of ClC-6 in Vascular Control of Blood Pressure

Role: PI

**Completed Funding:**

Type: K99HL153686, University of South Florida, 08/01/2021 – 07/31/2023 (K99)

Agency: NIH National Heart, Lung, and Blood Institute

Title: The Role of ClC-6 in Vascular Control of Blood Pressure

Role: PI

Type: T32 HL134643, Medical College of Wisconsin (MCW) 12/01/2017 – 11/30/2020

Agency: MCW Cardiovascular Center A.O. Smith T32 Training Grant

Title: The Role of CLC-6 in Blood Pressure Regulation

Role: PI

Type: Ben J. Lipps Fellowship, Medical College of Wisconsin, 07/01/2018 – 06/30/2020

Agency: American Society of Nephrology Postdoctoral Fellowship (declined for T32 overlap)

Title: Effect of Clcn6 on blood pressure, vasculature, and kidney function

Role: PI

Type: 18POST33990430, Medical College of Wisconsin, 07/01/2018 – 06/30/2020

Agency: American Heart Association Postdoctoral Fellowship (declined for T32 overlap)

Title: Effect of Clcn6 on vasculature function and blood pressure

Role: PI

Type: 15PRE25680068, University of Pittsburgh, 07/01/2015 – 06/30/2017

Agency: American Heart Association Predoctoral Fellowship

Title: Ankyrin G Regulation of the Epithelial Sodium Channel after Aldosterone Stimulation

Role: PI

**PATENTS**

January CT, Klemens CA, Delisle BP, Anson BD. “Constitutively open hERG (Kv11.1) mutant channels.” US Patent 7820437. 26 Oct. 2010.

**PROFESSIONAL SERVICE**

National and State Service:

10/2024 Moderator, ASN Kidney Week “Metabolic Communication and the Kidney Proximal Tubule”

06/2024 ASN Kidney Week Abstract Reviewer

05/2024 – Present Incoming Co-Chair, Basic Research Forum for Emerging Kidney Scientists

05/2024 – Present Steering Committee Member, APS Epithelial Transport Group

11/2023 Moderator, ASN Kidney Week “Big Roles for Thin Limbs”

11/2023 Co-Chair, Career Development Subcommittee, Basic Research Forum for Emerging Kidney Scientists

04/2023 Co-Chair, APS Summit Trainee Session “Harnessing Science Communication to Improve Your Career”

2022 – 2024 Creator/Organizer, APS Renal: Clash of the Kidneys SciArt Competition

2021 – 2024 Organizer, Posters & Professors APS Renal Section Trainee Networking Event

2021 – 2024 APS Graduate Student Ambassador Selection Committee

2021 – 2024 APS Dale Benos Service Award Selection Committee

04/2021 – 04/2024 Trainee Advisory Committee Chair, American Physiological Society, Renal Section

01/2018 – 04/2021 Member, APS Renal Section Trainee Subcommittee

09/2017 – 05/2018 Letters to a Pre-Scientist Pen Pal

05/2015 Set-up volunteer, Intel International Science and Engineering Fair

Departmental and University Service:

03/2024 Poster judge, University of South Florida Research Day

03/2023 Poster judge, University of South Florida Research Day

03/2023 Poster judge, Department of Molecular Pharmacology and Physiology Research Retreat

02/2023 Moderator, USF Heart Institute Trainee Research In Progress

01/2021 – 09/2021 Diversity and Inclusion Action Committee Liaison, Postdoctoral Advisory Committee, Medical College of Wisconsin

07/2019 – 09/2020 Co-Chair, Postdoctoral Advisory Committee Medical College of Wisconsin

10/2018 Trainee Chair, Cardiovascular Center Retreat, Medical College of Wisconsin

10/2018 Postdoctoral Excellence in Science Award Selection Committee, Postdoctoral Advisory Committee Medical College of Wisconsin

09/2018 Travel Award Selection Committee, Postdoctoral Advisory Committee, Medical College of Wisconsin

08/2018, 08/2019 Trainee Presentation Selection Committee, Cardiovascular Center Retreat, Medical College of Wisconsin

05/2018 – 06/2019 Social Committee Chair, Postdoctoral Advisory Committee Medical College of Wisconsin

07/2014 “Sciencepalooza” volunteer, University of Pittsburgh

07/2014 – 07/2016 Graduate Retreat Planning Committee, Department of Cell Biology, Univ. of Pittsburgh

10/2013 “Investing Now” Teaching Assistant, Microscopy unit, University of Pittsburgh Swanson School of Engineering

09/2013 – 09/2014 Cell Biology Representative, Biomedical Graduate Student Association, University of Pittsburgh

Journal Review and Editorial Service:

*Ad Hoc Reviewer* - Journal of Hypertension, AJP: Renal Physiology, Frontiers in Physiology: Renal and Epithelial Physiology, Physiological Reports, MDPI: Biomolecules, MDPI: Antioxidants, AJP: Advances in Physiology Education, AJP: Cell Physiology

02/2023 – 09/2023 Guest Editor, AJP Renal “Hypertension Mechanisms and Hypertension Target Organ Damage” Call for Papers

01/2022 – 06/2023 Early Career Reviewer Fellow, American Journal of Physiology: Renal Physiology

06/2023 – Present Member, AJP Renal Editorial Board

Grant Review:

10/2024 NIH PBKD, Early Career Reviewer

08/2024 Kidney Research UK, Ad Hoc Reviewer

02/2024 AHA Career Development Award, Ad Hoc Reviewer

11/2023 AHA Fellowship Awards, Ad Hoc Reviewer

02/2023 Kidney Research UK, Ad Hoc Reviewer

Graduate Student Thesis Committee Memberships:

2024 – current Melissa Lowe, PhD Candidate, Laboratory of Alexander Staruschenko

**Professional Society Memberships:**

2013 – Present American Physiological Society

2013 – Present American Society of Nephrology

2013 – 2015 University of Pittsburgh Biomedical Graduate Student Association

2014 – Present American Heart Association

2017 – 2021 National Postdoc Association

2017 – 2021 Medical College of Wisconsin Postdoctoral Advisory Committee

2023 – Present American Society of Cell Biology

## AWARDS AND HONORS

2023 1st Place, Faculty Category, APS Renal Clash of the Kidneys SciArt Contest

2022 Pre-ASN Kidney Week Basic Research Forum People’s Choice Award

2021 USF Dept. of Molecular Pharm and Phys Outstanding Junior Investigator Award

2021 APS Renal Section Postdoctoral Research Excellence Finalist

2020 APS Caroline Tum Suden Career Development Award (Postdoc)

2020 AHA Hypertension Kidney Council New Investigator Travel Award

2020 Medical College of Wisconsin Postdoctoral Excellence in Science Award

2019 Medical College of Wisconsin Postdoc Travel Award

2019 APS Epithelial Transport Group Meritorious Travel Award

2019 APS Aldosterone and ENaC Travel Award

2016 APS Epithelial Transport Group Meritorious Travel Award

2014 APS Caroline Tum Suden Career Development Award (Predoc)

2014 ASN Kidney STARS Travel Award

2013 University of Pittsburgh Cell Biology Retreat Best Grad Student Poster

2005 University of Wisconsin Honors Senior Thesis Research Grant

**PEER REVIEWED PUBLICATIONS**

1. Xu B, Levchenko V, Zietara A, **Klemens CA**, Staruschenko A. Role of Kir5.1 (Kcnj16) channels in regulating renal ammonia metabolism during metabolic acidosis in Dahl Salt-sensitive rats. *In Press. Am J Path.*
2. Bohovyk R, Kravtsova O, Levchenko V, **Klemens CA**, Palygin O, Staruschenko A. Effects of zinc in podocytes and cortical collecting duct in vitro and Dahl Salt-Sensitive rats in vivo. *In Press. JBC.*
3. Semenikhina M, Bohovyk R, Stefanenko M, Fedoriuk M, **Klemens CA**, Oates JC, Palygin O. RAS-mediated nitric oxide signaling in podocytes. *Am J Phys Renal Phys.* 2024 July 18. PMID: 39024356
4. Semenikhina M, Fedoriuk M, Stefanenko M, **Klemens CA**, Solanki AK, Lipshutz JH, Staruschenko A, Palygin O. β-arrestin pathway activation by selective ATR1 agonism promotes calcium influx in podocytes, leading to glomerular damage. *Clinical Science*. 2023 Dec;137(24):1789-1804. PMID: 38051199
5. Kravtsova O, Levchenko V, **Klemens CA**, Rieg T, Liu R, Staruschenko A. Effect of SGLT2 inhibition on salt-induced hypertension in female Dahl SS rats. *Sci Rep*. 2023 Nov 6;13(1):19231. PMID: 37932290
6. Bohovyk R, Khedr S, Levchenko V, Stefanenko M, Semenikhina M, Kravtsova O, Isaeva E, Geurts A, **Klemens CA**, Palygin O, Staruschenko A. Protease-Activated Receptor 1 Mediated Damage of Podocytes in Diabetic Nephropathy. *Diabetes.* 2023 Sep 18:db230032. PMID: 37722138
7. Zietara A, Palygin O, Levcheko V, **Klemens CA**, Geurts A, Denton JS, Staruschenko A. Effects of Kir7.1 knockout and inhibition on renal electrolyte handling and blood pressure development in Dahl salt-sensitive rats. *Am J Phys: Renal Phys*. 2023 Aug 1;325(2):F177-F187. PMID: 37318990
8. Zietara A, Spires DS, Juffre A, Costello HM, Levchenko V, Dissanayake LV, **Klemens CA**, Nikolaienko O, Geurts AM, Gumz ML, Staruschenko A. Knockout of the circadian clock protein PER1 exacerbates hypertension and causes circadian disruption in Dahl salt-sensitive rats. *Hypertension*. 2022 Nov;79(11):2519-2529. PMID: 36093781
9. **Klemens CA#**, Dissanayake LV, Levchenko V, Zietara A, Palygin O, Staruschenko A. Modulation of blood pressure regulatory genes in the Agtrap-Plod1 locus associated with a deletion in Clcn6. *Physiol Rep.* 2022Aug;10(15):e15417. PMID: 35927940

#Selected as August 2022 Editor’s Choice article, co-corresponding author

1. Kravtsova O, Bohovyk R, Levchenko V, Palygin O, **Klemens CA**, Rieg T, Staruschenko A. SGLT2 inhibition effect on salt-induced hypertension, RAAS, and Na+ transport in Dahl SS rats. *Am J Physiol: Renal Physiol*. 2022 Jun 1;322(6):F692-F707. PMID: 35466690.
2. Isaeva E, Bohovyk R, Fedoriuk M, Shalygin A, **Klemens CA**, Zietara A, Levchenko V, Denton DS, Staruschenko A, Palygin O. Crosstalk between ENaC and the basolateral Kir4.1/Kir5.1 channel in the cortical collecting duct. *Br. J. Pharmacol.* 2022 Jun;179(12):2953-2968. PMID: 34904226.
3. **Klemens CA**, Staruschenko A, Palygin O. The mechanisms of cellular plasticity in collecting duct cells: intermediate cell type and Notch-mediated transdifferentiation. *Function.* 2021 Jun25;2(4)*.* PMID: 34223174
4. **Klemens CA**, Chulkov EG, Wu J, Hye Khan MA, Levchenko V, Flister MJ, Imig JD, Kriegel AJ, Palygin O, Staruschenko A. Loss of ClC-6 Affects Vascular Smooth Muscle Contractility and Arterial Stiffness Via Alterations to Golgi Calcium Stores. *Hypertension.* 2021 Feb;77(2):582-593. PMID: 33390052
5. Palygin O\*, **Klemens CA**\*, Isaeva E\*, Levchenko V, Spires DR, Dissanayake LV, Nikolaienko O, Ilatovskaya DV, Alexander Staruschenko. Characterization of purinergic receptor 2 signaling in podocytes from diabetic kidneys. *iScience.* 2021 May 11;24(6):102528*.* PMID: 34142040

\*Equal contribution

1. Spires, DR, Palygin O, Levchenko V, Isaeva E, **Klemens CA**, Khedr S, Nikolaienko O, Kriegel AJ, Cheng X, Yeo JY, Joe B, Staruschenko A. Sexual dimorphism in the progression of type 2 diabetic kidney disease in T2DN rats. *Physiol Genomics*. 2021 Jun 1;53(6):223-234. PMID: 33870721

\*APSselect featured article

1. **Klemens CA**, Staruschenko A. AJP-Renal Collections: Hypertension. *Am J Physiol Renal Physiol*. 2020 Dec 1;319(6):F1001-F1002. PMID: 33166184
2. Golosova D, Palygin O, Bohovyk R, **Klemens CA**, Levchenko V, Spires DR, Isaeva E, El-Meanawy A, Staruschenko A. Role of opioid signaling in kidney damage during the development of salt-induced hypertension. *Life Sci Alliance*. 2020 Oct 12;3(12):e202000853. PMID: 33046522
3. Isaeva E, Fedoriuk M, Bohovyk R, **Klemens CA**, Khedr S, Golosova D, Levchenko V, El-Meanawy A, Palygin O, Staruschenko A. Vibro-Dissociation Method for Isolation of Defined Nephron Segments from Human and Rodent Kidneys. *Am J Physiol Renal Physiol*. 2019 Nov 317(5):F1398-F1403. PMID: 31588797
4. Palygin O, Spires D, Levchenko V, Bohovyk R, Fedoriuk M, **Klemens CA**, Sykes O, Bukowy JD, Cowley AW, Lazar J, Ilatovskaya DV, Staruschenko A. Progression of diabetic kidney disease in the T2DN rats. *Am J Physiol Renal Physiol*. 2019 Dec 317(6):F1450-1461. PMID: 31566426
5. **Klemens CA**, Brands MW, Staruschenko A. Postprandial effects on electrolyte homeostasis in the kidney. *Am J Physiol Renal Physiol*. 2019 Dec 317(6):F1405-F1408. PMID: 31566434
6. Blass G\*, **Klemens CA**\*, Brands MW, Palygin O, Staruschenko A. Postprandial Effects on ENaC-Mediated Sodium Absorption. *Sci Rep*. 2019 Mar 12;9(1):4296. PMID: 30862903

\*Equal contribution

1. Ilatovskaya DV, Levchenko V, Pavlov TS, Isaeva E, **Klemens CA**, Johnson J, Liu P, Kriegel, Staruschenko A. Salt-deficient diet exacerbates cystogenesis in ARPKD via epithelial sodium channel (ENaC). *EBioMedicine*. 2019 Feb;40:663-674. PMID: 30745171
2. Palygin O, Ilatovskaya DV, Levchenko V, **Klemens CA**, Dissanayake L, Williams AM, Pavlov TS, Staruschenko A. Characterization of purinergic receptor expression in ARPKD cystic epithelia. *Purinerg Signal*. 2018 Dec;14(4):485-497. PMID: 30417216
3. **Klemens CA**, Edinger RS, Kightlinger L, Liu X, Butterworth MB. Ankyrin G Expression Regulates Apical Delivery of the Epithelial Sodium Channel (ENaC). *J Biol Chem*. 2017 Jan 6;292(1):375-385. PMID: 27895120
4. Liu X, Edinger RS, **Klemens CA**, Phua YL, Bodnar AJ, LaFramboise WA, Ho J, Butterworth MB. A MicroRNA Cluster miR-23-24-27 Is Upregulated by Aldosterone in the Distal Kidney Nephron Where it Alters Sodium Transport. *J Cell Physiol*. 2017 Jun;232(6):1306-1317. PMID: 27636893
5. Veerman CC, Verkerk AO, Blom MT, **Klemens CA**, Langendijk PN, van Ginneken AC, Wilders R, Tan HL. Slow Delayed Rectifier Potassium Current Blockade Contributes Importantly to Drug-Induced Long QT Syndrome. *Circ Arrhythm Electrophysiol.* 2013 Oct 1; 6(5):1002-9. PMID: 23995305
6. Bardai A, Amin AS, Blom MT, Bezzina CR, Berdowski J, Langendijk PN, Beekman L, **Klemens CA**, Souverein PC, Koster RW, de Boer A, Tan HL. Sudden cardiac arrest associated with use of a non-cardiac drug that reduces cardiac excitability: evidence from bench, bedside, and community. *Eur Heart J*. 2013 Feb;34(20):1506-1516. PMID: 23425522
7. Amin AS, Giudicessi JR, Tijsen AJ, Spanjaart AM, Reckman YJ, **Klemens CA**, Tanck MW, Kapplinger JD, Hofman N, Sinner MF, Müller M, Wijnen WJ, Tan HL, Bezzina CR, Creemers EE, Wilde AA, Ackerman MJ, Pinto YM. Variants in the 3' untranslated region of the KCNQ1-encoded Kv7.1 potassium channel modify disease severity in patients with type 1 long QT syndrome in an allele-specific manner. *Eur Heart J*. 2012 Mar;33(6):714-23. PMID: 22199116
8. Hardziyenka M, Campian ME, Reesink HJ, Surie S, Bouma BJ, Groenink M, **Klemens CA**, Beekman L, Remme CA, Bresser P, Tan HL. Right ventricular failure following chronic pressure overload is associated with reduction in left ventricular mass evidence for atrophic remodeling. *J Am Coll Cardiol*. 2011 Feb 22;57(8):921-8. PMID: 21329838
9. Amin AS, **Klemens CA**, Verkerk AO, Meregalli PG, Asghari-Roodsari A, de Bakker JM, January CT, Wilde AA, Tan HL. Fever-triggered ventricular arrhythmias in Brugada syndrome and type 2 long-QT syndrome. *Neth Heart J*. 2010 Mar;18(3):165-9. PMID: 20390067
10. Amin AS, Herfst LJ, Delisle BP, **Klemens CA**, Rook MB, Bezzina CR, Underkofler HA, Holzem KM, Ruijter JM, Tan HL, January CT, Wilde AA. Fever-induced QTc prolongation and ventricular arrhythmias in individuals with type 2 congenital long QT syndrome. *J Clin Invest*. 2008 Jul;118(7):2552-61. PMID: 18551196
11. Rajamani S, Eckhardt LL, Valdivia CR, **Klemens CA**, Gillman BM, Anderson CL, Holzem KM, Delisle BP, Anson BD, Makielski JC, January CT. Drug-induced long QT syndrome: hERG K+ channel block and disruption of protein trafficking by fluoxetine and norfluoxetine. *Br J Pharmacol*. 2006 Nov;149(5):481-9. PMID: 16967046

**Publications under review**

1. **Klemens CA#**, Fedoriuk M, Semenikhina M, Stefanenko M, Zietara A, Dissanayake LV, Levchenko V, Palygin O, Staruschenko A. Electrolyte and Metabolite Composition of Cystic Fluid from a Rat Model of ARPKD. *In revision Communications Bio.*

**#**co-corresponding author

1. Zietara A, Dissanayake LV, Lowe M, Xu B, Levchenko V, **Klemens CA**, Palygin O, Staruschenko A. Effects of potassium supplementation and depletion on the development of salt-sensitive hypertension in male and female Dahl SS rats. *In revision JCI Insight.*

**Non-Peer Reviewed Publications**

Klemens, CA. “Tips to Give a Stellar Oral Presentation!” Spring 2023 APS Trainee Newsletter.

Klemens, CA. “Reasons to Attend a Conference.” Fall 2022 APS Trainee Newsletter.

Klemens, CA. “Passing the Membership Committee Torch.” AHA Connections Summer 2018 Newsletter.

**ORAL PRESENTATIONS**

2025 78th Society of General Physiologists Annual Meeting on Chloride Channels “TBD” \*invited guest speaker

2024 APS Summit “Sex differences in amino acid composition in a rodent model of ARPKD, the PCK rat”

2023 Southern Salt and Water Kidney Society Meeting “Electrolytes, Metabolites, and Sex Differences in Cyst Fluid Composition”

2023 University of South Florida Molecular Pharmacology and Physiology Fall Seminar Series “Cyst Fluid Composition in a Rat model of Autosomal Recessive Polycystic Kidney Disease”

2023 Medical College of Georgia, Augusta University Department of Physiology “PKD, ClC, and Other Alphabet Soup in Cardiorenal Physiology” \*invited guest speaker

2023 Medical University of South Carolina Division of Nephrology Grand Rounds “Electrolyte and Metabolite Composition of Cystic Fluid from a Rat Model of ARPKD” \*invited guest speaker

2023 University of Mississippi Medical Center Department of Physiology & Biophysics “PKD, ClC and Other Alphabet Soup in Cardiorenal Physiology” \*invited guest speaker

2023 Hypertension and Kidney Research Center Seminar “Electrolytes, Metabolites, and Sex Differences in Polycystic Kidney Cyst Fluid”

2022 ASN and APS: Basic Research Forum for Emerging Kidney Scientists 2022 “Ion and Metabolite Composition of Cystic Fluid from a Rat Model of ARPKD” \*People’s Choice Award for best presentation in section

2022 University of South Florida Hypertension and Kidney Research Center Pre-ASN Meeting 2022 “Electrolyte and Metabolite Composition of Cystic Fluid from a Rat Model of ARPKD”

2021 University of South Florida Molecular Pharmacology and Physiology Research Retreat “The Role of ClC-6 in Cardiovascular and Renal Function” \*Awarded outstanding junior investigator presentation

2021 Experimental Biology Renal Section: Posters and Professors “Remodeling of Purinergic Receptor 2 Signaling in Podocytes In Diabetic Kidney Disease” \*Renal Section Postdoctoral Award Finalist

2019 APS Aldosterone and ENaC in Health and Disease “Postprandial Effects on ENaC-Mediated Sodium Absorption” \*Selected for travel award

2019 Experimental Biology “Postprandial Effects on ENaC-Mediated Sodium Absorption” \*Invited to publish mini-review in AJP: Renal Physiology

2016 Experimental Biology “Ankyrin-G Alters ENaC Membrane Delivery to Increase Na+ Transport in the Distal Kidney Nephron” \*Selected for travel award

**CURRENT AND PREVIOUS (GRAY) TRAINEES:**

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| --- | --- | --- | --- | --- |
| **NAME** | **MENTOR ROLE** | **TRAINING STAGE / POSITION** | **YEARS** | **CURRENT POSITION** |
| Adrian Zietara | Direct Research Advisor | Postdoctoral Fellow | 2023 – Present | Postdoctoral Fellow |
| Vineetha Garimella | Direct Research Advisor | Research Technician | 2024 – Present | Master Student |
| Melissa Lowe | Thesis Committee Member | Graduate Student | 2024 – Present | Graduate Student |
| Maha Ahmed | Direct Research Advisor | Undergraduate Researcher | 2023 – Present | Undergraduate Researcher |
| Jazmine Pope | Direct Research Advisor | Undergraduate Researcher | Summer 2024 –  Biomedical Engineering | Undergraduate Researcher |
| Jacob Yudiono | Direct Research Advisor | Medical Student | Summer 2024 -RENUM-FL program | Medical Student (USF) |
| Ciara Jarmain | Daily Supervisor | MCW Summer Undergraduate Research Student | 2019 | Technology Engineer |
| Tessa Shankey | Daily Supervisor | MCW Summer Undergraduate Research Student | 2021 | Medical Student (MCW) |

**TEACHING EXPERIENCE**

2024 Lecturer, Med students, “Gastrointestinal, Endocrine, Renal, Reproductive Systems”

Morsani College of Medicine, University of South Florida

2024 Lecturer, Med students, “Renal Handling of Organic Solutes”

Foundations in Physiology III, Morsani College of Medicine, University of South Florida

2020, 2021 Teaching Assistant (Masters and PhD students)

Special Topics in Physiology

Medical College of Wisconsin

2012 – 2015 Graduate Teaching Fellow (Med students)

Cellular and Pathological Basis of Disease

Normal Histology Lab

University of Pittsburgh, School of Medicine

2008 English as a Second Language Teacher (children and adults)

German Culture Center, Biysk, Russia

2008 English as a Second Language Teacher (children)

American Village, various locations, France

2005 Undergraduate Teaching Assistant (Undergraduates)

BIOCORE 324

University of Wisconsin: Madison

**WORKSHOPS, TRAINING, AND WEBINARS**

05/2024 MCOM Promotion and Tenure Workshop, University of South Florida

04/2024 “Top 3 Mistakes Researchers Make Pursuing NIH Grants: What to Do Instead” – Proteintech

03/2024 “RCR Workshop – Biosafety” Research Integrity and Compliance Office, University of South Florida

03/2024 “Mentoring the Mentor: Effective Communication” Morsani College of Medicine Faculty Affairs Workshop, University of South Florida

03/2024 “Mentorship: Providing Support, Development and Advancement” Enlightenment Workshop Series, Diversity, Equity and Inclusion University of South Florida

06/2023 Qiagen Ingenuity Pathways Analysis (IPA) Workshop, QIAGEN Digital Insights team, in person, organized by the Morsani College of Medicine: Proteomics Core

06/2021 “Creating an Inclusive Lab and Work Environment” APS DEI Webinar Series

04/2021 “Staying Organized: Grant Management” Experimental Biology Career Symposium, APS Career Gateway Webinar

04/2021 “Navigating the Promotion and Tenure Landscape” Experimental Biology Career Symposium, APS Career Gateway Webinar

**ABSTRACTS**

1. Lowe M, Bohovyk R, Levchenko V, **Klemens CA**, Staruschenko A. Effect of a High-Fat Diet on the Progression of Diabetic Nephropathy and End-Organ Damage. ASN Kidney Week. *JASN* Oct 2024. Abstract PUB106.
2. Dissanayake LD, Zietara A, Levchenko V, **Klemens CA**, Palygin O, Staruschenko A. Mild Hyperuricemia Is Beneficial for Males with Salt-Sensitive Hypertension and Associated Kidney Damage. ASN Kidney Week. *JASN* Oct 2024. Abstract TH-OR80
3. **Klemens CA**, Semenikhina M, Fedoriuk M, Zietara A, Amed MA, Palygin O, Staruschenko A. Sex differences in amino acid composition in a rodent model of ARPKD, the PCK rat. APS Summit. *Physiology*. 2024.
4. Lowe M, Bohovyk R, Levchenko V, **Klemens CA**, Staruschenko A. The Effect of a High-Fat Western Diet on Diabetic Nephropathy and the Pathogenesis of Type 2 Diabetes. APS Summit. *Physiology*. 2024
5. Zietara A, Dissanayake LV, Xu B, Lowe M, Levchenko V, Palygin O, **Klemens CA**, Staruschenko A. Effects of potassium supplementation and deficiency on the progression of salt-sensitive hypertension. APS Summit. *Physiology.* 2024
6. Lowe M, Bohovyk R, **Klemens CA**, Staruschenko A. Effect Of A High Fat Western Diet On The Progression Of Diabetic Kidney Disease In Type 2 Diabetic Nephropathy (T2DN) Rats. AHA Hypertension Council. *Hypertension*. September 2023. Abstract P135.
7. Xu B, Mutig K, **Klemens CA**, Palygin O, Staruschenko A. Hypokalemia induced by loss of Kir5.1 initiates WNK-SPAK/OSR1 signaling in Dahl salt-sensitive rats. APS Summit. *Physiology*. May 2023.
8. Stefanenko M, Semenikhina M, Fedoriuk M, **Klemens CA**, Staruschenko A, Lipschutz J, Palygin O. Beta-arrestin-biased agonism promotes TRPC6-mediated calcium influx in human podocytes. APS Summit. *Physiology*. May 2023.
9. **Klemens CA**, Semenikhina M, Fedoriuk M, Dissanayake LV, Palygin O, Staruschenko A. Cyst Fluid From a Rat Model of ARPKD Has a Unique Electrolyte Composition and Sexually Dimorphic Metabolite Profile. APS Summit. *Physiology*. May 2023
10. McClenahan, SJ, Isaeva E, **Klemens CA**, Staruschenko A, Denton JS. Discovery and Characterization of VU0493206, the First Small-Molecule Activator of Kir4.1/Kir5.1 Channels. ASN Kidney Week. *JASN.* November 2022. Abstract TH-PO325.
11. **Klemens CA**, Semenikhina M, Dissanayake LV, Palygin O, Staruschenko A. Ion and Metabolite Composition of Cystic Fluid From a Rat Model of Autosomal Recessive Polycystic Kidney Disease (ARPKD). ASN Kidney Week. *JASN.* November 2022. Abstract FR-PO277.
12. Semenikhina M, Bohovyk R, **Klemens CA**, Russel DAL, Oates JC, Staruschenko A, Palygin O. RAS‐mediated nitric oxide signaling in podocytes. Experimental Biology. *FASEB*. May 2022.
13. **Klemens CA**, Dissanayake LV, Levchenko V, Palygin O, Staruschenko A. Loss of Clcn6 Alters Expression of Nearby Regulatory Blood Pressure Genes but Does Not Affect High Salt Induced Mortality in Dahl Salt‐Sensitive Rats. Experimental Biology. *FASEB*. May 2022.
14. Isaeva E, Bohovyk R, Fedoriuk M, Shalygin A, **Klemens CA**, Zietara A, Levchenko V, Denton JS, Staruschenko A, Palygin O. Crosstalk between ENaC and basolateral Kir 4.1/Kir 5.1 channels in the cortical collecting duct. Experimental Biology. *FASEB*. May 2022.
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