

## CURRICULUM VITAE – Asst. Prof. Dr. N. RIZANER

**Full Name:** Nahit RIZANER

**Title:** Asst. Prof. Dr.

**Date of Birth:** 31<sup>st</sup> December 1980

**Nationality:** Turkish Republic of Northern Cyprus

**Marital Status:** Married

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**HIGHER EDUCATION:** 2006-11 - PhD in Physiology, Imperial College London, UK.  
2003-04 - MRes in Bioinformatics, University of Glasgow, UK.  
1998-2002 - BSc in Biology (Molecular Biology and Genetics Module),  
Istanbul University, Turkey.

**OTHER CERTIFICATES:** Principle of Radiation Protection, Imperial College London, UK. October 2009.

**CURRENT APPOINTMENT:** Founding Faculty Member and Lecturer of Faculty of Medicine,  
Cyprus International University (Since 2019)  
Director of Biotechnology Research Centre, Cyprus International  
University (Since 2014)  
Lecturer in Pharmacy and Bioengineering Programs, Cyprus  
International University. (Since 2013)  
Head of Cancer Laboratories, Biotechnology Research Centre,  
Cyprus International University. (Since 2011)  
Member of Purchase Comity, Cyprus International University (Since  
2015)

**PREVIOUS APPOINTMENT:** Coordinator of Biotechnology Research Centre, Cyprus International  
University (2011-2014)  
Lecturer in Psychology and Health Sciences Programs, Cyprus  
International University (2011-2017)  
Laboratory Assistant and Tutor, Animal Physiology and Cellular  
Signalling and Neurobiology in Department of Life Sciences Imperial  
College London, UK (2008-2011)

## TEACHING AND LEARNING RESPONSIBILITIES

### Undergraduate Teaching

Broad range of topics including physiology, electrophysiology, animal physiology (Imperial College London), cellular signalling and neurobiology (Imperial College London), medical biology, bioinformatics, molecular biology and genetics in the following undergraduate courses:

2018-2019 **Physiology** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Spring Semesters)

**Electrophysiology** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Spring Semesters)

**Genetic Engineering** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Fall Semester)

**Introduction to Molecular Biology and Genetics** course in Molecular Biology and Genetics Program, Faculty of Art and Sciences, Cyprus International University. (Fall Semester)

**Molecular Biology and Genetics** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Fall Semester)

**Bioinformatics** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Fall Semester)

2017-2018 **Electrophysiology** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Spring Semesters)

**Genetic Engineering** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Fall Semester)

**Molecular Biology and Genetics** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Fall Semester)

**Bioinformatics** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Fall Semester)

2016-2017 **Physiology** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Spring Semesters)

**Genetic Engineering** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Fall Semester)

**Molecular Biology and Genetics** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Fall Semester)

**Bioinformatics** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Fall Semester)

2015-2016 **Genetic Engineering** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Both Fall and Spring Semesters)

**Molecular Biology and Genetics** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Fall Semester)

**Bioinformatics** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Fall Semester)

- 2014-2015 **Molecular Biology and Genetics** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Spring Semester)
- Bioinformatics** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Fall Semester)
- Medical Biology** course in Pharmacy Program, Faculty of Pharmacy, Cyprus International University. (Fall Semester)
- 2013-2014 **Medical Biology** course in Pharmacy Program, Faculty of Pharmacy, Cyprus International University. (Both Fall and Spring Semesters)
- Modern Biology II** course in Psychology Program, Faculty of Art and Sciences, Cyprus International University. (Spring Semester)
- Introduction to Modern Biology** course in Psychology Program, Faculty of Art and Sciences, Cyprus International University. (Spring Semester)
- Molecular Biology and Genetics** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Spring Semester)
- 2012-2013 **Medical Biology** course in Pharmacy Program, Faculty of Pharmacy, Cyprus International University. (Both Fall and Spring Semesters)
- Modern Biology II** course in Psychology Program, Faculty of Art and Sciences, Cyprus International University. (Spring Semester)
- Modern Biology I** course in Psychology Program, Faculty of Art and Sciences, Cyprus International University. (Fall Semester)
- Medical Biology and Genetics** course in Nutrition and Dietetics Program, Faculty of Health Sciences, Cyprus International University. (Spring Semester)
- 2011-2012 **Medical Biology** course in Pharmacy Program, Faculty of Pharmacy, Cyprus International University. (Both Fall and Spring Semesters)
- Introduction to Modern Biology** course in Psychology Program, Faculty of Art and Sciences, Cyprus International University. (Both Fall and Spring Semesters)
- Biology** course in Biosystems Engineering Program, Faculty of Agricultural Sciences and Technologies, Cyprus International University. (Spring Semester)
- 2010-2011 **Cellular Signalling and Neurobiology** course in Department of Life Sciences, Imperial College London, UK (Spring Semesters).
- Animal Physiology** course in Department of Life Sciences, Imperial College London, UK (Fall Semesters).
- 2009-2010 **Cellular Signalling and Neurobiology** course in Department of Life Sciences, Imperial College London, UK (Spring Semesters).
- Animal Physiology** course in Department of Life Sciences, Imperial College London, UK (Fall Semesters).
- 2008-2009 **Cellular Signalling and Neurobiology** course in Department of Life Sciences, Imperial College London, UK (Spring Semesters).
- Animal Physiology** course in Department of Life Sciences, Imperial College London, UK (Fall Semesters).

## Postgraduate Teaching

Topics covering physiology, electrophysiology, diagnostic and research techniques including Embryonic Stem Cell technology, cell culture principles, extraction and manipulation of DNA/RNA/Protein in the following graduate courses:

- 2018-2019 **Physiology** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Spring Semesters)
- Electrophysiology** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Spring Semesters)
- Techniques in Molecular Bioengineering** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Spring Semesters)
- Techniques in Tissue Culture and Cellular Bioengineering** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Fall Semester)
- Genetic Engineering** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Fall Semester)
- 2017-2018 **Physiology** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Spring Semesters)
- Techniques in Molecular Bioengineering** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Spring Semesters)
- Techniques in Tissue Culture and Cellular Bioengineering** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Fall Semester)
- 2016-2017 **Physiology** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Both Fall and Spring Semesters)
- Techniques in Molecular Bioengineering** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Spring Semesters)
- Techniques in Tissue Culture and Cellular Bioengineering** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Fall Semester)
- Genetic Engineering** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Fall Semester)
- 2015-2016 **Techniques in Molecular Bioengineering** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Spring Semesters).
- 2014-2015 **Techniques in Molecular Bioengineering** course in Bioengineering Program, Faculty of Engineering, Cyprus International University. (Spring Semesters).

## Postgraduate Thesis Supervision

2 PhD thesis supervision in addition to 6 master's thesis supervision.

- The Effect of VGSC (nNAV1.5) INaP Blocker Eleclazine on Breast Cancer. Cyprus International University, 2018. (PhD)
- Studies of Metabolic Profiles in Model Cell Lines of Breast Cancer: Synthesis, Characterization and Anti-Metastatic Activity of Silver Nanoparticles Synthesized from Albizia Lebbeck Stem Bark Extract Against Breast Cancer Cell Lines. 2017 – 2019. Cyprus International University, (PhD)
- Synthesis of Silver Nanowires (AgNWs) Using Polyol Process (Hot Plate) and a Toxicity Test on MDA-MB-231 Breast Cancer Cells. Cyprus International University, 2017-2018. MSc

- Effect of Caffeine Treatment on MDA-MB-231 and MCF-7 Human Breast Cancer Cell Proliferation and Metastatic Profile. Cyprus International University, 2017-2018. MSc
- Comparative Effects of Different Ranolazine Treatments on Breast Cancer Cell Line MDA-MB-231 Morphology. Cyprus International University, 2017-2018. MSc
- The effect of Vernonia amygdalina plant extract on breast cancer cell models. Biotechnology Research Centre, Cyprus International University, 2016-2017. MSc
- Phytochemical screening, antimetastatic and antibacterial activities of Momordica balsamina leaf extracts. Biotechnology Research Centre, Cyprus International University, 2015-2016. MSc
- Anti-metastatic activity of Albizia lebeck Steam Bark Extract Against Breast Cancer Cell. Biotechnology Research Centre, Cyprus International University, 2015-2016. MSc

## EXTERNAL ACTIVITIES

### Memberships

- Turkish Society of Physiological Sciences

### Research Collaborations (International and National)

- Prof. Dr. Mustafa B.A. Djamgoz (Imperial College London, UK)
- Dr. Scott P. Fraser (Imperial College London, UK)
- Prof. Dr. Seyhan Altun (Istanbul Kultur Universitesi, Istanbul Universitesi, Turkey)

### Scientific charity work

- Pro Cancer Research Fund / PCRF (registered charity 1090822)
- Kanser Araştırma Vakfı (KAV)

### Conference Invitations - International & National

- 2nd International Cancer & Ion Channels Congress (Izmir, Turkey, 2019)
- Turkish Society of Physiological Sciences 44<sup>th</sup> National Physiology Congress (Antalya, Turkey, 2018)
- II. Health Law Symposium (Nicosia, Cyprus, 2017)
- 1<sup>st</sup> Winter Data Retreat of EMU Genetics Club (Famagusta, Cyprus, 2016).
- An International Meeting on Ion Channels, Transporters & Cancer 2015 (London, UK, 2015)
- Ion channels and Cancer symposium (Istanbul, Turkey, 2014)
- 1<sup>st</sup> EMU Genomics and Proteomics Research Meeting (Famagusta, Cyprus, 2014)
- 23<sup>th</sup> National Congress of Biochemistry (Adana, Turkey, 2011).
- Ringberg Colloquium on Ion Channels & Cancer (Ringberg, Germany, 2007)
- London Prostate Interest Group Meeting (London, UK, 2007).
- 6<sup>th</sup> European Biophysics Congress (London, UK, 2007)
- 12<sup>th</sup> International Conference on Intelligent Systems for Molecular Biology (ISMB) and 3<sup>rd</sup> European Conference on Computational Biology (ECCB) (Glasgow, UK, 2004).

## RESEARCH

- The Effect of VGSC (nNAV1.5) INaP Blocker Eleclazine on Breast Cancer. **KAV Project**, Biotechnology Research Centre, Cyprus International University, 2018

- Characterisation of Active Composition of Propolis Produced by Cyprus Honeybee and Investigation of Three Dimensional Anti-metastatic Effect in Human Lung Cancer Cell Models. **BAP Project**, Biotechnology Research Centre, Cyprus International University, 2018
- Breast Cancer MDA-MB-231 Cell Model: Enhancement of Metastatic Cell Behaviours by Hypoxia and Assessment of the Role of Functional Voltage-Gated Sodium Channel Expression, **TÜBİTAK**, 1001 - Bilimsel ve Teknolojik Araştırma Projelerini Destekleme Pr., Biotechnology Research Centre, Cyprus International University, 2013- 2018
- Synthesis of Silver Nanowires (AgNWs) Using Polyol Process (Hot Plate) and a Toxicity Test on MDA-MB-231 Breast Cancer Cells. Cyprus International University, 2017-2018.
- Effects of Legionella pneumophila and its bacterial products on Breast Cancer Cell model. Biotechnology Research Centre, Cyprus International University, 2015-2018
- Arsenic Distribution in Soils and Waters in Omorfo Region of TRNC, KAV, Biotechnology Research Centre, Cyprus International University, 2015-2019
- Anti-metastatic activity of *Albizia lebbek* Steam Bark Extract Against Breast Cancer Cell. Biotechnology Research Centre, Cyprus International University, 2015-2016
- Phytochemical screening, antimetastatic and antibacterial activities of Momordica balsamina leaf extracts. Biotechnology Research Centre, Cyprus International University, 2015-2016
- Development of Intelligent Lipid-based Nanoparticles For Cancer Therapy. Biotechnology Research Centre, Cyprus International University, 2015-2016
- Arsenic Distribution in TRNC Soils and Waters Preliminary Study, KAV, Biotechnology Research Centre, Cyprus International University, 2013–2014
- Toxicity, adhesion and invasion of highly and lowly metastatic human breast cancer cells by uropathogenic E.coli UTI-89 strain. DRD2015, Biotechnology Research Centre, Cyprus International University, 2013–2015
- Study of ionic mechanisms in model cell lines of prostate cancer. Pro Cancer Research Fund (PCRF), Imperial College London, UK, 2006-2011
- Citrate transport in plasma membrane of normal human prostate epithelial cells. The Wellcome Trust, Imperial College London, UK, 2007-2010.
- New tools for biological microarray analysis. Bioinformatics Research Center, University of Glasgow, 2004.

## LIST OF PUBLICATIONS

Total number of citations: 130

### Refereed / Archival Papers

Rizaner N, Uzun S, Fraser SP, Altun S & Djamgoz MB. (2019). Anti-invasive effects of voltage-gated sodium channel blockers on rat prostate cancer cells in vitro: 1. Riluzole. *Can J Physiol Pharmacol*. (Submitted)

Umar H, Kavaz D, Rizaner N. (2018) Biosynthesis of zinc oxide nanoparticles using *Albizia lebbek* stem bark, and evaluation of its antimicrobial, antioxidant, and cytotoxic activities on human breast cancer cell lines. *Int J Nanomedicine*.**14**:87-100.

Isbilen O, Rizaner N, Volkan E. (2018) Anti-proliferative and cytotoxic activities of *Allium autumnale* P. H. Davis (Amaryllidaceae) on human breast cancer cell lines MCF-7 and MDA-MB-231. *BMC Complement Altern Med.* **18**(1):30.

N Rizaner, R Onkal, SP Fraser, M Djamgoz (2018) Involvement of Intracellular Ca<sup>2+</sup> Stores in Spontaneous Ca<sup>2+</sup> Oscillations in a Human Strongly Metastatic Prostate Cancer Cell. *Acta Physiol.* **225**: 52-52. (Conference proceeding).

Djamgoz MBA, Akun E, Arslan B, Onbasi R, Nazif S, Besler HT & Rizaner N. (2017) Cancer in North Cyprus: 1. Current Status, an Overview. *Cyprus J Med Sci.* **2**: 9-12

Djamgoz MBA, Akun E, Arslan B, Onbasi R, Volkan E, Isbilen O, Kavaz D & Rizaner N. (2017) Cancer in North Cyprus: 2. Biomedical Research Activities. *Cyprus J Med Sci.* **2**:13-18

Rizaner N, Onkal R, Fraser SP, Pristerá A, Okuze K & Djamgoz MBA. (2016) Intracellular calcium oscillations in strongly metastatic human breast and prostate cancer cells: control by voltage-gated sodium channel activity. *Eur Biophys J.* **45**:735–748

Rizaner N. (2016) Voltaj Kapılı Sodyum Kanalı ve Kanser. *Kıbrıs Bilim ve Teknoloji Dergisi.* (Haziran)

Tetik S, Kiliç A, Aksoy H, Rizaner N, Ahmad S & Yardimci T. (2015) Oxidative stress causes plasma protein modification. *Indian J Exp Biol.* **53**(1): 25-30.

Tetik S, Ozaltun K, Ozakpınar O, Disbudak M, Rizaner N, Yavuz S & Yardimci KT. (2011) In vivo effect of colchicine, colchici and snti-aggregating agent on protein oxidation in Behcet's Disease. *Cumhuriyet Med J.* **33**: 435-42.

Mazurek MP, Prasad PD, Gopal E, Fraser SP, Bolt L, Rizaner N, Palmer CP, Foster CS, Palmieri F, Ganapathy V, Stühmer W, Djamgoz MBA & Mycielska ME (2010). Molecular origin of plasma membrane citrate transporter in human prostate epithelial cells. *EMBO Rep.* **11**: 431-7.

Mycielska ME, Patel E, Rizaner N, Mazurek MP, Keun H, Patel A, Ganapathy V & Djamgoz MBA (2009) Citrate transport and metabolism in mammalian cells: prostate epithelial cells and prostate cancer. *BioEssays*, **31**: 20-30.

## Conference Presentations

Rizaner N, Uzun S, Fraser SP, Altun S, Djamgoz MB. Riluzole: Anti-Invasive Effect of a Voltage-Gated Sodium Channel Blocker on Rat Prostate Cancer Cells. 2nd International Cancer & Ion Channels Congress, 22 – 24 September 2019, Izmir, Turkey.

N Rizaner, R Onkal, SP Fraser, M Djamgoz (2018) Involvement of Intracellular Ca<sup>2+</sup> Stores in Spontaneous Ca<sup>2+</sup> Oscillations in a Human Strongly Metastatic Prostate Cancer Cell. Turkish Society of Physiological Sciences 44th National Physiology Congress, 01-04 November 2018, Antalya, Turkey.

Rizaner N. Biyoetik: Güncel Tıbbi Araştırmalar ve Problemler. II. Sağlık Hukuku Sempozyumu 30 March 2017, Nicosia, North Cyprus. (Nicosia, Cyprus, 2017)

Rizaner N. Cancer Pathophysiology. European Pharmaceutical Students Association TWINNET Workshop, 17-20 May 2016 Nicosia, North Cyprus.

Rizaner N, Onkal R, Fraser SP, Djamgoz MB. Intracellular calcium oscillations in strongly metastatic human breast and prostate cancer cells: Control by voltage-gated sodium channel activity. 1<sup>st</sup> Winter Data Retreat of EMU Genetics Club, 29 January 2016, Famagusta, North Cyprus.

Rizaner N, Onkal R, Fraser SP, Djamgoz MB. Effects of long-term hypoxia on voltage-gated Na<sup>+</sup> channel expression and metastatic cell behaviours in rat prostate cancer. An International Meeting on Ion Channels, Transporters & Cancer 2015, 9-10 September 2015, London, UK.

Rizaner N, Onkal R, Fraser SP, Djamgoz MB. Güçlü Metastatik İnsan Meme ve Prostat Kanseri Hücrelerindeki Kalsiyum Osilasyonları: Voltaj-kapılı Sodyum Kanalı Aktivitesi ile Kontrol. İyon kanalları ve Kanser Sempozyumu, 29 May 2014, İstanbul, Turkey.

Rizaner N, Onkal R, Fraser SP, Djamgoz MB. Spontaneous intracellular calcium oscillations in strongly metastatic human breast and prostate cancer cells. 1st EMU Genomics and Proteomics Research Meeting, 21 November 2014, Famagusta, North Cyprus.

Rizaner N, Onkal R, Fraser SP, Djamgoz MB. Effects of long-term hypoxia on voltage-gated Na<sup>+</sup> channel expression and metastatic cell behaviours in rat prostate cancer. 23. Ulusal Biyokimya Kongresi, 29 November – 2 December 2011, Adana.

Rizaner N, Keun H, Mycielska ME, Djamgoz MB. Citrate transport in strongly metastatic human prostate cancer (PC-3M) cells: control by voltage-gated sodium channel activity. The first colloquium on 'Ion Channels and Cancer', 25 - 28 November 2007, the Schloss Ringberg, Tegernsee, Germany

Rizaner N. "Citrate transport mechanisms in human prostate epithelial cells", London Prostate Interest Group Meeting, 11 September, 2007, London, U.K.

### **Papers in preparation**

Rizaner N, Fraser SP, Altun S & Djamgoz MB. (2019). Anti-invasive effects of voltage-gated sodium channel blockers on rat prostate cancer cells in vitro: 2. Lidocaine. Can J Physiol Pharmacol.

Rizaner N, Onkal R, Fraser SP & Djamgoz MBA. Hypoxic regulation of metastatic cell behaviour of breast cancer cell model MDA-MB-231: role of voltage gated sodium channel persistent current.