Irina Agoulnik, Ph.D.

Professor, Department of Molecular Medicine
Morsani College of Medicine, USF

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EDUCATION:

1999	Ph.D. in Molecular Genetics, Novosibirsk State University, Novosibirsk, Russia Dissertation title: "New mutation of progesterone receptor: effects on oncogenesis, fertility and receptor functions". Thesis project undertaken at Baylor College of Medicine
1987	B.S. in Biology, specialization in Biochemistry, Department of Natural Sciences, Novosibirsk State University, Novosibirsk, Russia

ACADEMIC APPOINTMENTS:

2024 – present	Professor, Department of Molecular Medicine, Morsani College of Medicine, USF
2018 – 2024	Professor, Department of Human and Molecular Genetics, Herbert Wertheim College of Medicine, FIU
2009 – 2018	Associate Professor, Department of Cellular Biology and Pharmacology, Herbert Wertheim College of Medicine, FIU
2009 – present	Associate Professor (secondary appointment), Department of Biomedical Engineering, FIU, College of Engineering and Computing
2011 – present	Associate Professor (secondary appointment), Department of Chemistry and Biochemistry, FIU, College of Arts and Sciences
2009 – present	Adjunct Associate Professor, Baylor College of Medicine, Houston, TX
2008 – 2009	Assistant Professor, Department of Molecular and Cellular Biology Baylor College of Medicine, Houston, TX
2004 – 2008	Instructor; Department of Molecular and Cellular Biology Baylor College of Medicine, Houston, TX
1998 – 2004	Postdoctoral Fellow; Department of Molecular and Cellular Biology Baylor College of Medicine, Houston, TX

RESEARCH SUPPORT

CURRENT

1. 1R21CA270712-01A1 (PI: Agoulnik I) 3/3/2023-12/31/2025

Agency: NCI/NIH
Role (PI)
Title: Targeting breast cancer microenvironment with small molecule agonist of relaxin receptor

COMPLETED

1 R41 DK131681-01 (PIs: AI Agoulnik, IU Agoulnik, PS Distefano) 2022-2023
Agency: NIDDK/NIH
Role (Co-PI)
Title: Engineering a long-acting relaxin agonist to treat liver fibrosis

1R01DK110167 (PI: AI Agoulnik) 3/1/2017-2/28/2022
Agency: NIDDK/NIH
Role (Co-PI)
Title: "Relaxin receptor agonists for treatment of liver fibrosis"
Total Award: $1,978,727
The goal of this project is to study the effects of relaxin receptor agonists as therapeutic agents in liver fibrosis.

National Center for Advancing Translational Sciences/NIH, Therapeutic Development Branch, TRND Program, 562502 (PI: Agoulnik AI) 6/1/2018 – 5/30/2022;
Role: Co-Investigator
Antifibrotic Therapy for the Treatment of Pulmonary Hypertension
The goal of this project is to find small molecule agonists of RXFP1 for treatment of pulmonary hypertension.

1R01AR070093-01 (role: co-investigator) 7/1/2016-6/30/2019
Agency: NIAMS/NIH
Role: Co-investigator
Title: "Small molecule agonists of insulin-like3 receptor for treatment of osteoporosis"
Total Award: $885,427

Community Foundation of Broward: AWD#10147 800011401
Total: $ 100,000
(co-PIs: Agoulnik IU, Liu Y, Tse-Dinh YC) 1/28/2019 – 1/27/2020
Novel Chemotherapeutic Treatment for Prostate Cancer
Using mouse models of prostate cancer we will test a combination of BER inhibitors and androgen deprivation

Community Foundation of Broward:
Total: $ 100,000
(co-PIs: Agoulnik IU, Liu Y, Tse-Dinh YC) 1/28/2015 – 1/27/2017
Novel Chemotherapeutic Treatment for Prostate Cancer
Using mouse models of prostate cancer we will test a combination of BER inhibitors and androgen deprivation

NCI/NIH: R15 CA179287-01A1 (PI: Agoulnik IU) May 2014 – April 2018
Total: $435,000
Regulation of metastases by tumor suppressor INPP4B

The goal of this proposal is to determine which metastatic pathways are activated due to loss of INPP4B.

Community Foundation of Broward: 20140129
Total: $ 125,000
(co-PIs: Agoulnik IU, Liu Y, Tse-Dinh YC) 1/28/2015 – 1/27/2017
Investigation of a Novel Treatment for Advanced Prostate Cancer
Using high throughput screening, we will identify DNA repair modulators that would synergize with advanced prostate cancer treatments.

Grants4Targets 2016-08-1711 1/1/2017-12/31/2017
Bayer Pharma Aktiengesellschaft
Role: Co-PI
Title: “Small molecule relaxin receptor agonists in the treatment of uterine fibroids"
Total Award: €30,000
The goal of the proposal to study the effects of relaxin signaling on the development of uterine leiomyomas.

NCI/NIH: 1U01CA177711-01, (PI: Agoulnik AI) 8/31/2013 – 9/1/2017
Role: Co-investigator
Total: $594,633
Small molecule antagonists of relaxin receptor
The goal of this project is to find small molecule antagonists of RXFP1 for use in cancer therapies.

Bristol-Myers Squibb
Cooperative Research and Development Agreement (CRADA) 5/1/ 2014 – 5/1/2016
(co-PIs: Agoulnik AI and Agoulnik IU)
Small Molecule RXFP1 Agonists as Novel Therapeutics
Total Award: $580,000
Small molecule compounds which activate RXFP1 were recently identified by NCATS/NIH and FIU. Using these compounds as potential leads, BMS will be collaborating with NCATS/NIH and FIU to develop a novel therapeutic suitable for the treatment of chronic heart failure and other fibrotic diseases.

HWCOM Pilot Award (PI: Agoulnik IU) April 2014 – March 2015
Total: $50,000
Metastases suppression in basal breast cancer by INPP4B
The goal of this proposal is to investigate signaling pathways in basal breast cancer that cause neoplastic transformation and metastases.

FRSP: 3970 Bridge Fund (PI: Agoulnik IU) December 1, 2013 –November 30, 2014
Total: $59,581
Role of NCoR in Antiandrogen Resistance in Prostate Cancer
NCOR1 is lost and mutated in advanced prostate cancer. In this proposal we examined how NCOR1 mediates response of prostate cancer to antiandrogen treatment using mouse models.

Private Donation (PI: Agoulnik IU) 2012-2014
Total: $100,000
Regulation of Metastases in Ovarian Cancer
Mechanism of suppression of ovarian cancer proliferation, invasion, and metastases by NR0B1 tumor suppressor.

Faculty Research Support Program
Internal Seed Award (PI: Agoulnik IU) August 1, 2011 –July 31, 2012
Total: $60,000

Structural studies of tumor suppressor INPP4B
The goal of this proposal was to characterize the structural domains of INPP4B tumor suppressor.

DOD: BC097064 (PI: Agoulnik IU) September 14, 2010 – September 13 2011
Total: $108, 750
Androgen Regulation of Novel Tumor Suppressor in Male and Female Breast Cancer.
In this proposal, we investigated the impact of AR expression on ERBB2-driven breast cancer incidence and progression using mouse models.

NCI/NIH: 1R21CA129265-01A1 (PI: Agoulnik IU) 13 April 2008 – 12 April 2010
Total: $412,500
Role of NCoR in Antiandrogen Resistance in Prostate Cancer
NCOR role in prostate development, homeostasis, and tumorigenesis was examined.

NIDDK/NIH (PI: Agoulnik IU) 1 June 2003 – 1 June 2005
NIDDK/BCM Biotechnology Center Pilot/Feasibility Award
Total: $20,000
"Role of Corepressors in Androgen Receptor Action"
Changes in AR transcriptome following loss of NCOR1 were described and functionally characterized.

DAMD17-01-1-0018 (PI: Agoulnik IU) 23 April 2001 – 22 May 2003
Department of Defense Postdoctoral Fellowship
"The Role of Coregulators in the Activation of Androgen Receptor by Androgen Independent Pathways"
The goal of this proposal was to investigate the role of DAX-1, NCOR1, and SMRT in AR transcriptional activity.

MEMBERSHIP IN PROFESSIONAL AND SCIENTIFIC SOCIETIES:

Association of Biochemistry Educators	2024 - present
American Association for Cancer Research (AACR)	1996 – 2024
Endocrine Society	1998 – 2024
Women in Endocrinology	2015 – 2024
National Academy of Inventors, Associate Member	2012

GRANT REVIEWS:

2026 NIH/NCI 2025 ZRG1 BTC-N(81) R Study Section

2025 NIH/NCI 2025 ZRG1 CDPT-F(80) S Study Section

2025 NIH/NCI 2025 ZRG1 CDPT-J(80) A Study Section

2024 NIH/NCI 2024 ZCA1 TCRB-D (M2) R Study Section

2023 NIH/NCI 2023/10 council NCI-J Study Section

2022 NIH/NCI NCI-J Study Section

2022 Department of Defense (CDMRP)-PCRP-CMB-3 Panel

2022 NIH/NCI 2022/05 ZCA1 TCRB-5 (M1) Panel

2021 NIH/NCI ZCA1 PCRB-W (J1) Panel

2020 Department of Defense (CDMRP)-PCRP-CMB-2 Panel

2020 NIH/NCI 2020/10 ZCA1 TCRB-Q (O1) S Study Section

2019 Department of Defense (CDMRP)-BCRP-CB4 Panel

2018 NIH/NCI 201810 ZCA1 TCRB-Q (O2) B Study Section

2018 NIH/NCI 201810 ZRG1 OTC-H (02) M Study Section

2018 HWCOM Pilot Fund RFA Review Committee

2017 Department of Defense (CDMRP)-BCRP-CB1 Panel

2017 NIH/NCI ZCA1 RPRB-Z (O1) Study Section

2017 Prostate Cancer UK Foundation

2017 NIH/NCI 2017/05 ZCA1 SRB-2 (M3) R Study Section

2017 Department of Defense (CDMRP)-BCRP-CB4 Panel

2016 Department of Defense (CDMRP)-PCRP DEV-MB-PB Panel

2016 NIH/NCI 2016/05 ZCA1 SRB-2 (M2) S Study Section

2016 Prostate Cancer UK Foundation

2015 Department of Defense (CDMRP)-BCRP-MBG Study Section

2014 Department of Defense (CDMRP)-PCRP - Endocrinology

2014 NIH/NIDDK ZRG1 DKUS-A 82 A Study Section

2013 Department of Defense (CDMRP)-PCRP-EHDA-END Study Section

2013 Prostate Cancer UK Foundation

2009-2017 Reviews for Republic of Italy, Ministry of Labor, Health and Social Policies, Department of Innovation General Directorate for Health and Technologies Research.

2012 Department of Defense (CDMRP)-PCRP-TRN-CET Panel

2012 Department of Defense (CDMRP)-PCRP-TRN-PBY Panel

2012 Department of Defense (CDMRP)-PCRP-EHDA-END Panel

2011 Department of Defense (CDMRP)-PCRP-EHD-END-IMM Panel

2011 Department of Defense (CDMRP)-PCRP-Pathobiology Panel

2011 FIU FRSP

2010 Department of Defense Prostate Cancer Research Program (PCRP), Pathobiology Section

2009 NIH/NCI ARRA Concept Révisons Review Study Section

2009 NIH/NCI RFA-OD-09-004, "Recovery Act Limited Competition for NIH Grants: Research and Research Infrastructure "Grand Opportunities" (RC2)" Study Section

EDITORIAL APPOINTMENTS:

2010 – 2023 Section Editor of PLoS ONE
2012 – 2023 Academic Editor of PeerJ
2021 – Present Academic Editor Steroids
2022 – Present Academic Editor Scientific Reports (Nature Publishing Group)

JOURNAL REFEREE ACTIVITY:

BBA - Molecular Cell Research
Cancer Epidemiology, Biomarkers & Prevention
Cancer Research
Cancer Medicine
Endocrinology
Molecular Cancer
Molecular Oncology
Molecular Endocrinology
Molecular and Cellular Endocrinology
Journal of Biomolecular Screening
Journal of Cellular and Molecular Medicine
Journal of Experimental & Clinical Cancer Research
International Journal of Cancer
International Journal of Gynecological Cancer
Laboratory Investigation
National Conference for Undergraduate Research
Nature Communications
Oncotarget
Journal of Clinical Endocrinology and Metabolism
Genes & Cancer
Stem Cell Reviews and Reports
PLOS Medicine
PLoS One

TEACHING:

2025	GMS6604, Human Structure and Function. Morsani College of Medicine, USF
2025	GMS6091, Responsible Conduct of Research. Morsani College of Medicine, USF
2025 - present	GMS 7939, Spring, Work in Progress / Signature Interdisciplinary Program in Allergy, Immunology & Infectious Disease. **Course Director.** Morsani College of Medicine, USF

2024 - present	BMS 6816, Cancer Biology. Morsani College of Medicine, USF
2024 - present	GMS 6201, 3 credits, Basic Medical Biochemistry. Morsani College of Medicine, USF
2024 - present	BMS 6633, Cardiovascular and Pulmonary Systems. Morsani College of Medicine, USF
2023	GMS 6904, 3 credits, The Scientific Writing, HWCOM, FIU
2017 – 2023	BMS 6013, 3 credits, Medical Cell Biology and Biochemistry, **Course Director**, HWCOM, FIU
2016 – 2023	BMS 6013, 3 credits, Medical Cell Biology and Biochemistry, HWCOM, FIU
2016 – 2023	BMS 6004, 3 credits, Medical Molecular Biology, HWCOM, FIU
2015 – 2023	CHM 5306, 3 credits, Special Topics in Biochemistry, FIU
2015 - 2016	CHM 4304, 3 credits, Biological Chemistry One, FIU
2013 - 2016	GMS 6220, 6 credits, Molecular Genetics and Cellular Biology, **Course Director**, PhD Graduate Program, HWCOM, FIU
2012 - 2023	CHM 6037, 3 credits, Advanced Biochemistry II, (Lectures on Cell Signaling I and II), Biochemistry PhD Graduate Program
2002 - 2004	Organization of the Cell, PhD Graduate Program, Department of Cellular and Molecular Biology, Baylor College of Medicine, Houston, TX
2001 - 2002	Steroid Receptor Action, MBL, Frontiers in Reproduction, Woods Hole, MA

GRADUATE STUDENT MENTORING

2017 – 2022 Dissertation Adviser for Yasemin Ceyhan,
The role of Inositol Polyphosphate-4-Phosphatase Type II b (INPP4B) in normal and neoplastic physiology of diet-induced obese mouse models.
Herbert Wertheim College of Medicine Ph.D. graduate student.

2018 –2022 Graduate Committee Member for Maria Esteban Lopez,
A novel RXFP2 small molecule agonist as a therapeutic candidate for the treatment of osteoporosis
Herbert Wertheim College of Medicine Ph.D. graduate student.

2017 – 2019. Graduate Committee Member for Luis Garbinski,
Bacterial Mechanisms of Toxicity and Resistance to Organoarsenicals,
Herbert Wertheim College of Medicine Ph.D. graduate student.

2015 – 2019. Dissertation Adviser for Manqi Zhang,
The Role of Inositol Polyphosphate-4-phosphatase Type II B (INPP4B) in obese models and endocrine cancers.
Department of Chemistry and Biochemistry, College of Arts and Sciences FIU

2015 – 2020. Graduate Committee Member for Ruipeng Lei.
Structure-Function Relationships in Hexacoordinate Heme Proteins: Mechanism of Globin X Interactions with Exogenous Ligands and Ligand Accessibility in Cytoglobin and Neuroglobin
Department of Chemistry and Biochemistry, College of Arts and Sciences FIU

2014 – 2018. Graduate Committee Member for Yaou Ren,
Trinucleotide Repeat Instability Modulated by DNA Repair Enzymes and Cofactors
Department of Chemistry and Biochemistry, College of Arts and Sciences FIU

2013 – 2019. Graduate Committee Member for Zhongliang Jiang,
Epigenetic Instability Induced by DNA Base Lesions via DNA Base Excision Repair
Department of Chemistry and Biochemistry, College of Arts and Sciences FIU

2012 – 2018. Graduate Committee Member for Steven Eichelbaum, Ph.D. graduate student
Department of Chemistry and Biochemistry, College of Arts and Sciences FIU

2012 – 2017. Graduate Committee Member for David Butcher, Ph.D. graduate student
Photo-induced Formation of DNA Structural Motifs.
Department of Chemistry and Biochemistry, College of Arts and Sciences, FIU

2011 – 2014. Committee Member for Meng Xu
The molecular mechanism of trinucleotide repeat deletion during DNA base excision repair.
Department of Chemistry and Biochemistry, College of Arts and Sciences, FIU

2009 – 2010. External Ph.D. Advisor for Shuyun Rao
Vav3 Potentiation of Androgen Receptor Activity in Prostate Cancer
Department of Molecular and Cellular Pharmacology, University of Miami Miller School of Medicine, Miami, FL

ADVISOR FOR UNDERGRADUATE AND MEDICAL STUDENTS:

Christian Hamrick, MSP^3, USFHealth, MS in Medical Sciences

Omar Dominguez, MS in biological sciences

Adrian Rodrigues, FIU Department of Biology, Honors College, College of Arts and Sciences
Major: Biology

Rana Elshami, FIU Department of Biology, Honors College, College of Arts and Sciences
Major: Biology

Nathalie Perez, HWCOM, Medical student

Anais Iglesias, HWCOM, Medical student

Carlos Sandoval, FIU Department of Biology, College of Arts and Sciences, QBIC/MARC U*STAR scholar
Major: Biology, BS

Amrita Barua, FIU Department of Biology, College of Arts and Sciences
Major: Biology, BS

Camila Sarcone, FIU Department of Biology, College of Arts and Sciences

Major: Biology, BS

Ricardo Collazo, FIU, Department of Chemistry, College of Arts and Sciences,
Majors: Biology BS, Honors College, QBIC scholar

Lisseth Guerra, FIU Department of Biology, College of Arts and Sciences
Major: Biology, BS

Chavely Valdez-Sanchez, FIU, Department of Biology, College of Arts and Sciences
Major: Biology, BS, MARC U*STAR Scholar, Honors College, Howard Hughes EXORP Awardee

Gregory Gandarillas, FIU, Department of Biology, College of Arts and Sciences
Major: Biology, BS, Honors College

Osmin Herrera, FIU, Department of Biology, College of Arts and Sciences
Major: Biology, BS, MARC U*STAR Scholar, Honors College

Ameer Hasan Quadri, FIU, Department of Biology, College of Arts and Sciences.
Major: Biology, BS

Ulugbeck Teshabaev, FIU, Department of Biology, College of Arts and Sciences.
Major: Biology, BS

Hannah Jazayri, FIU, Department of Biology, College of Arts and Sciences
Major: Biology, BS

Garrett VanOstran, FIU, Department of Biology, College of Arts and Sciences
Major: Biology, BS

Kobi Fogel, FIU, Herbert Wertheim College of Medicine,
Degree: MD

SERVICE:

2019 – 2023 Member of Medical Student Evaluation And Promotion Committee

2019 – 2021 Member of Faculty Assembly Steering Committee

2013 – 2018 Herbert Wertheim College of Medicine Senator at Florida International University Faculty Senate

2009 – 2023 Director of the FIU Histology Core

2009 – 2023 Director of the Cell Culture Core

2013 – 2016 FIU Dissertation Advisor Status Evaluation Committee (DASEC) member

2010 – 2016 Member of the Library Committee

2011 – 2013 Academic Policies and Personnel Committee

Herbert Wertheim College of Medicine Graduate Program:

2012-present Chair of the HWCOM Graduate School Admission Committee

2013-present Member of HWCOM Graduate School Curriculum Committee

2011-2013 Associate Chair of Student Affairs Committee

Biochemistry Ph.D. Program, Florida International University

2014-present Biochemistry Ph.D. Program, Executive Committee Member, Florida International University

PUBLICATIONS

1. Wilson KJ, Esteban-Lopez M, Myhr C, Ye W, Moore CE, Southall N, Hu X, Kapoor A, Afratis K, LeClair CA, Kotler SA, Shah P, Carvalho Padilha E, Fang Y, Calabrese D, George ER, Wang A, Xu X, Barnaeva E, Ferrer M, Henderson M, Agoulnik I, Agoulnik AI, Marugan JJ. Structure-Activity Relationship Studies toward the Optimization of First-In-Class Selective Small Molecule Agonists of the GPCR Relaxin/Insulin-like Family Peptide Receptor 2. J Med Chem. 2026 Feb 19. doi: 10.1021/acs.jmedchem.5c03387. Online ahead of print. PMID: 41710979

2. Lai Y, Diaz N, Armbrister R, Agoulnik I, Liu Y. DNA Base Damage Repair Crosstalks with Chromatin Structures to Contract Expanded GAA Repeats in Friedreich's Ataxia. Biomolecules. 2024 Jul 8;14(7):809. doi: 10.3390/biom14070809.

3. Agoulnik IU, Kaftanovskaya EM, Myhr C, Bathgate RAD, Kocan M, Peng Y, Lindsay RM, DiStefano PS, Agoulnik AI. Engineering a long acting, non-biased relaxin agonist using Protein-in-Protein technology. Biochem Pharmacol. 2024 Sep;227:116401. doi: 10.1016/j.bcp.2024.116401.

4. Zhang M, Ceyhan Y, Mei S, Hirz T, Sykes DB, Agoulnik IU. Regulation of EZH2 expression by INPP4B in normal prostate and primary prostate cancer. Cancers (Basel). 2023 Nov 15;15(22):5418. doi: 10.3390/cancers15225418.

5. Esteban-Lopez M, Wilson KJ, Myhr C, Kaftanovskaya EM, Henderson MJ, Southall NT, Xu X, Wang A, Hu X, Barnaeva E, Ye W, George ER, Sherrill JT, Ferrer M, Morello R, Agoulnik IU, Marugan JJ, Agoulnik AI. Discovery of small molecule agonists of the Relaxin Family Peptide Receptor 2. Commun Biol. 2022 Nov 4;5(1):1183. doi: 10.1038/s42003-022-04143-9. PMID: 36333465

6. Ivanova MM, Agoulnik IU, Leonard ME. Editorial: Sphingolipid metabolism and cancer. Front Oncol. 2022 Nov 3;12:1049494. doi: 10.3389/fonc.2022.1049494. eCollection 2022. PMID: 36408170

7. Ceyhan Y, Zhang M, Sandoval CG, Agoulnik AI, Agoulnik IU. Expression pattern and the roles of phosphatidylinositol phosphatases in testis. Biol Reprod. 2022 Jun 29:ioac132. doi: 10.1093/biolre/ioac132. Online ahead of print. PMID: 35766372

8. Zhang M, Ceyhan Y, Kaftanovskaya EM, Vasquez JL, Vacher J, Knop FK, Nathanson L, Agoulnik AI, Ittmann MM, Agoulnik IU. INPP4B protects from metabolic syndrome and associated disorders. Commun Biol. 2021 Mar 26;4(1):416. doi: 10.1038/s42003-021-01940-6. PMID: 33772116

9. Ceyhan Y, Zhang M, Guo J, Sandoval CG, Vacher J, Kaftanovskaya EM, Agoulnik AI, Agoulnik IU. Deletion of inositol polyphosphate 4-phosphatase type-II B affects spermatogenesis in mice. PLoS One. 2020 May 15;15(5):e0233163. PMID: 32413098

10. Zhang M, Lai Y, Vasquez JL, James DI, Smith KM, Waddell ID, Ogilvie DJ, Liu Y, Agoulnik IU. Androgen Receptor and Poly(ADP-ribose) Glycohydrolase Inhibition Increases Efficiency of Androgen Ablation in Prostate Cancer Cells. Sci Rep. 2020 Mar 2;10(1):3836. PMID: 32123273

11. Jiang Z, Lai Y, Beaver JM, Tsegay PS, Zhao ML, Horton JK, Zamora M, Rein HL, Miralles F, Shaver M, Hutcheson JD, Agoulnik IU, Wilson SH, Liu Y. Oxidative DNA Damage Modulates DNA Methylation Pattern in Human Breast Cancer 1 (BRCA1) Gene via the Crosstalk between DNA Polymerase β and a de novo DNA Methyltransferase. Cells 2020, 9(1), 225; PMID: 31963223

12. Vasquez JL, Lai Y, Annamalai T, Jiang Z, Zhang M, Lei R, Zhang Z, Liu Y, Tse-Dinh YC, Agoulnik IU. Inhibition of base excision repair by natamycin suppresses prostate cancer cell proliferation. Biochimie. 2019. Nov 19;168:241-250. PMID: 31756402

13. Kaftanovskaya EM, Ng HH, Soula M, Rivas B, Myhr C, Ho BA, Cervantes BA, Shupe TD, Devarasetty M, Hu X, Xu X, Patnaik S, Wilson KJ, Barnaeva E, Ferrer M, Southall NT, Marugan JJ, Bishop CE, Agoulnik IU, Agoulnik AI. Therapeutic effects of a small molecule agonist of the relaxin receptor ML290 in liver fibrosis. FASEB J. 2019 Nov;33(11):12435-12446. PMID: 31419161

14. Zhang M, Suarez E, Vasquez JL, Nathanson L, Peterson LE, Rajapakshe K, Basil P, Weigel NL, Coarfa C, Agoulnik IU. Inositol polyphosphate 4-phosphatase type II regulation of androgen receptor activity. Oncogene. 2019. Feb;38(7):1121-1135. PMID: 30228349

15. Zhang M, Krause WC, Agoulnik IU. Techniques for Evaluation of AR Transcriptional Output and Recruitment to DNA. Methods Mol Biol. 2018;1786:219-236. PMID: 29786796

16. Wilson KJ, Xiao J, Chen CZ, Huang Z, Agoulnik IU, Ferrer M, Southall N, Hu X, Zheng W, Xu X, Wang A, Myhr C, Barnaeva E, George ER, Agoulnik AI, Marugan JJ. Optimization of the first small-molecule relaxin/insulin-like family peptide receptor (RXFP1) agonists: Activation results in an antifibrotic gene expression profile. European Journal of Medicinal Chemistry, June 2018

17. Kaftanovskaya EM, Soula M, Myhr C, Ho BA, Moore SN, Yoo C, Cervantes B, How J, Marugan J, Agoulnik IU, Agoulnik AI. Human Relaxin Receptor Is Fully Functional in Humanized Mice and Is Activated by Small Molecule Agonist ML290. Journal of Endocr Soc. 2017 Jun. PMID: 28825052

18. Nagesettia A, Rodzinski A, Stimphil E, Stewart T, Khanal C, Wang P, Guduru R, Liang P, Agoulnik I, Horstmyer J, Khizroev S. Multiferroic coreshell magnetoelectric nanoparticles as NMR sensitive nanoprobes for cancer cell detection. Scientific Reports, May 2017. PMID: 28487517

19. Agoulnik AI, Agoulnik IU, Hu X, Marugan J. Small molecule agonists of relaxin receptor. Br J Pharmacol. Oct 23. 2016. PMID: 27771940

20. Lopez SM, Agoulnik AI, Zhang M, Peterson LE, Suarez E, Gandarillas GA, Frolov A, Li R, Rajapakshe K, Coarfa C, Ittmann M, Weigel N, Agoulnik IU. Nuclear Receptor Corepressor 1 expression and output declines with prostate cancer progression. Clinical Cancer Res. Mar 11. 2016. PMID: 26968201

21. Hu X, Myhr C, Huang Z, Xiao J, Barnaeva E, Ho BA, Agoulnik IU, Ferrer M, Marugan JJ, Southall N, Agoulnik AI. Structural insights into the activation of human relaxin family peptide receptor 1 by small molecule agonists. Biochemistry. February, 2016. PMID: 26866459

22. Guo ST, Chi MN, Yang RH, Guo XY, Zan LK, Wang CY, Xi YF, Jin L, Croft A, Tseng HY, Yan XG, Farrelly M, Wang FH, Lai F, Wang JF, Li YP, Ackland S, Scott R, Agoulnik IU, Hondermarck H, Thorne RF, Liu T, Zhang XD, Jiang CC. INPP4B is an oncogenic regulator in human colon cancer. Oncogene. September 28, 2015. PMID: 26411369

23. Agoulnik IU, Agoulnik AI. Long-lasting consequences of testosterone exposure. Endocrinology. 156(10):3488-9. October, 2015. PMID: 26380936

24. Huang Z, Myhr C, Bathgate RAD, Ho B, Bueno A, Hu X, Xiao J, Southall N, Barnaeva E, Agoulnik IU, Marugan J, Ferrer M, I Agoulnik AI. Activation of Relaxin Family Receptor 1 from different mammalian species by relaxin peptide and small molecule agonist ML290. Frontiers in Endocrinology. 6:129. August, 2015. PMID: 26347712

25. Hodgson MC, Deryugina EI, Suarez E, Lopez SM, Lin D, Xue H, Gorlov IP, Wang Y, Agoulnik IU. INPP4B suppresses prostate cancer cell invasion. Cell Commun Signal. 2014 Sep. 25;12(1):61. PMID: 25248616

26. Lai Y, Beaver JM, Lorente K, Melo J, Ramjagsingh S, Agoulnik IU, Zhang Z, Liu Y. Base Excision Repair of Chemotherapeutically-Induced Alkylated DNA Damage Predominantly Causes Contractions of Expanded GAA Repeats Associated with Friedreich's Ataxia. PLoS One. 9(4):e93464. April, 2014. PMID: 24691413

27. Lopez SM, Hodgson MC, Packianathan C, Bingol-Ozakpinar O, Uras F, Rosen BP, Agoulnik IU. Determinants of the tumor suppressor INPP4B protein and lipid phosphatase activities. *BBRC*, 440(2):277-82. October, 2013. PMID: 24070612

28. Xiao J, Huang Z, Chen CZ, Agoulnik IU, Southall N, Hu X, Jones RE, Ferrer M, Zheng W, Agoulnik AI, Marugan JJ. Identification and optimization of small-molecule agonists of the human relaxin hormone receptor RXFP1. *Nat Commun*. 14(4):1953. June, 2013. PMID: 23764525

29. Xiao J, Chen CZ, Huang Z, Agoulnik IU, Ferrer M, Southall N, Hu X, Zheng W, Agoulnik AI, Marugan JJ. Discovery, optimization, and biological activity of the first potent and selective small-molecule agonist series of human relaxin receptor 1 (RXFP1). *Probe Reports from the NIH Molecular Libraries Program*. Bethesda (MD): National Center for Biotechnology Information (US); 2010-2012. May, 2013. PMID: 23905199

30. Hodgson MC, Vanostran G, Alghamdi S, Poppiti RJ, Agoulnik AI, Agoulnik IU. Reduced Androgen Receptor Expression Accelerates the Onset of ERBB2 Induced Breast Tumors in Female Mice. PLoS One. 8;8(4):e60455. Apr 2013. PMID: 23593223

31. Nakka M, Agoulnik IU, Weigel NL. Targeted disruption of the p160 coactivator interface of androgen receptor (AR) selectively inhibits AR activity in both androgen-dependent and castration-resistant AR-expressing prostate cancer cells. Int J Biochem Cell Biol. 45(4):763-72. Apr 2013. PMID: 23593223

32. Chen C, Southall N, Xiao J, Ferrer M, Jones R, Hu X, Feng S, Agoulnik IU, Wei Z, Agoulnik AA. Identification of small-molecule agonists of human relaxin family receptor 1 (RXFP1) by utilizing a homogenous cell-based cAMP assay. J of Biomol Screen, 2012. PMID: 23212924

33. Agoulnik IU, Hodgson MC, Bowden WA, Ittmann MM. INPP4B: the New Kid on the PI3K Block. Oncotarget, 2(4):321-8. Apr 2011. PMID: 21487159

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CHAPTERS IN BOOKS

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PATENT DISCLOSURES, APPLICATIONS, AND AWARDS:

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PROFESSIONAL HONORS, PRIZES, FELLOWSHIPS

Chair of the New Developments in the Role and Regulation of the Androgen Receptor Symposium. ENDO Society 98th Annual Meeting, Boston, MA, April 1-4, 2016.

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INVITED PRESENTATIONS:

1. INSL3 and its receptor RXFP2. Agoulnik IU, Esteban-Lopez M, Wilson KJ, Myhr C, Kaftanovskaya EM, Henderson MJ, Southall NT, Xu X, Wang A, Barnaeva E, Ye W, Ferrer M, Morello R, Marugan JJ, Agoulnik AI. International Regulatory Peptide Society. June 23 – 27, Washington, DC, 2025

2. Agoulnik IU. Sexually dimorphic regulation of basal metabolism. Distinguished guest lecture. Department of Biochemistry & Molecular Biology, Boonshoft School of Medicine, Wright State University, Dayton, OH, October 5, 2023

3. Agoulnik IU. Regulation of Casodex Response by Androgen Receptor Corepressor NCOR1. Florida Prostate Cancer Research Symposium. Clearwater, Florida, May 19, 2016

4. Agoulnik IU. Role of INPP4B in Endocrine Cancers. Distinguished guest lecture. Center for Molecular Biology & Biotechnology. FAU- Neuroscience, Charles E. Schmidt College of Science. Florida Atlantic University, Jupiter, FL. October 28, 2015

5. Agoulnik IU. Modulation of Androgen Receptor Action by Tumor Suppressor Inositol polyphosphate 4-Phosphatase Type II (INPP4B). Invited talk. The Endocrine Society 97th Annual Meeting, San Diego, CA, March 5-8, 2015.

6. Mechanism of action of INPP4B tumor suppressor in endocrine cancers. Fourth International Meeting on Pharmacy & Pharmaceutical Sciences (IMPPS-4). Plenary Speaker. Marmara University, Istanbul, Turkey, September 18-21, 2014.

7. Androgen Regulation of Base Excision Repair in Prostate Cancer. Florida Prostate Cancer Research Symposium, Lake Buena Vista, FL, March 21-22, 2014.

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