

Curriculum Vitae  
**MARC A. ILIES, Ph. D.**

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**Office Address:**

Temple University School of Pharmacy  
Department of Pharmaceutical Sciences  
3307 North Broad Street, Suite 517  
Philadelphia, PA-19140  
Phone: 215-707-1749 ; Fax: 215-707-5620  
Email: mailies@temple.edu

**Home address:**

2616 Parrish Street  
Philadelphia, PA-19130

**PRESENT POSITION:** Professor

Director of the NMR facilities of TU School of Pharmacy  
Member of the Moulder Center for Drug Discovery Research, TUSP  
Collaborating member of Temple Fox Chase Cancer Center Molecular  
Therapeutics Program and Imaging Consortium

**EDUCATION**

*NRSA/NIH Postdoctoral fellow*, University of Pennsylvania Health System,  
Department of Pharmacology (2006-2007); Mentors: Professors Vladimir  
Muzykantov and Ian Blair

*Postdoctoral fellow*, University of Pennsylvania, Department of Chemistry (2004-  
2006); Mentor: Professor Virgil Percec

*Welch postdoctoral fellow*, Texas A&M University, Galveston, TX, and *Visiting  
scientist*, University of Texas Medical Branch at Galveston, TX; (2001-2004);  
Mentors: Professors Alexandru T. Balaban, William A. Seitz, and E. Brad  
Thompson

*Ph. D., Chemistry*, University “Politehnica” Bucharest, Romania, 2001  
Thesis title: “Novel pyrylium and pyridinium salts with biological activity”  
Adviser: Professor Alexandru T. Balaban *F. Rom. Acad. Sci.* (presently Professor  
at Texas A&M University at Galveston, Galveston, TX)

*M. S., Chemistry*, University of Bucharest, Bucharest, Romania, 1996  
Advisers: Professor Pierre Grandclaoudon (ENSCL Lille, France) & Professor  
Ovidiu Maior (University of Bucharest)

*B. S., Chemistry*, University of Bucharest, Bucharest, Romania, 1995

*Baccalaureate*, Natural Sciences High School, Brasov, Romania, 1989

**PROFESSIONAL AND ACADEMIC APPOINTMENTS**

<i>2019 – present</i>	<i>Professor</i> , Department of Pharmaceutical Sciences, Temple University School of Pharmacy (TUSP);
<i>2014 – 2019</i>	<i>Associate Professor</i> , Department of Pharmaceutical Sciences, Temple University School of Pharmacy (TUSP);
<i>2008 - present</i>	<i>Director of NMR facilities</i> , Temple University School of Pharmacy;
<i>2007 – 2014</i>	<i>Assistant Professor</i> , Department of Pharmaceutical Sciences, Temple University School of Pharmacy (TUSP);
<i>2004 – 2007</i>	<i>Postdoctoral fellow</i> , University of Pennsylvania, Philadelphia, PA;

## Curriculum Vitae

- 2003 – 2004 *Visiting Scientist*, University of Texas Medical Branch at Galveston, TX, Department of Biochemistry and Molecular Biology;
- 2001 – 2004 *Postdoctoral fellow*, Texas A&M University, Galveston, TX;
- 1998 – 2001 *Junior Assistant Professor* (2000 – 2001), *Research scientist and Instructor* (1998 – 2000), University of Agricultural Sciences and Veterinary Medicine Bucharest, Romania, Faculty of Biotechnology, Department of Chemistry;
- 1996 – 2000 *Research scientist*, National Institute for Research and Development in Electrochemistry and Condensed Matter, Bucharest, Romania;

## HONORS AND AWARDS

- 2016 Temple University School of Pharmacy Golden Apple Award for Teaching Excellence and Innovation
- member of the American-Romanian Academy of Arts and Sciences – since 2014
- member of Temple Materials Institute – 2010-2015
- elected in Rho Chi Pharmacy Honor Society - 2008
- NRSA/NIH Fellowship 2006-2007 (Cancer Pharmacology), Department of Pharmacology, University of Pennsylvania
- Training Scholarship in Molecular Modeling and Combinatorial Chemistry from International Centre for Science and High Technology Trieste, Italy (I.C.S.-U.N.I.D.O.) 1999;
- M. Sc. Scholarship from Government of France – 1996, following II<sup>nd</sup> place in the M. Sc. Francophone Teaching Module – University of Bucharest, 1995
- Special Prize of the Jury, Student Research Competition, Organic Chemistry Division, University of Bucharest, 1995
- 1<sup>st</sup> prize, Student Research Competition, Organic Chemistry Division, University of Bucharest, 1994
- 1<sup>st</sup> prize, Student Research Competition, Organic Chemistry Division, University of Bucharest, 1993
- finalist of Romanian National Chemistry Olympiads 1986, 1987, 1988, 1989; 3<sup>rd</sup> Prize 1986; member of the Romanian National Chemistry Team 1986-1987

## SUPERVISORY AND TEACHING EXPERIENCE

### Courses taught:

At Temple:

#### **Pharm. D. Program**

- Medicinal Chemistry 151 (Biochemistry): 154 students; Fall 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016; 2017; 2018; 2019; *Course Coordinator* ('11, '12, '13, '14, '15, '16, '17, '18, '19)
- Medicinal Chemistry 251: 150 students; Fall 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017
- Medicinal Chemistry 152: 150 students; Spring 2009, 2010

## Curriculum Vitae

### Ph. D. Program (Pharmaceutical Sciences)

- Introduction to Drug Design/Advanced Medicinal Chemistry (PS8009): graduate level  
Spring 2007, 2012, 2015, 2017, 2019
- Advanced Drug Delivery Systems (PS8584): graduate level (New Course, *Course Coordinator*); Fall 2011, 2013, 2015, 2017, 2019
- Biochemistry (PS8131): graduate level (*Course Coordinator*); Fall 2013, 2014, 2015, 2016, 2017, 2018, 2019

#### Before Temple:

- 2003 organic chemistry laboratory course (lecturer) – Texas A&M University;
- 1998- 2001 organic chemistry laboratory course - University of Agricultural Sciences and Veterinary Medicine, Bucharest;
- 1998- 2001 inorganic chemistry laboratory course - University of Agricultural Sciences and Veterinary Medicine, Bucharest;
- 1997-1998 organic chemistry laboratory course – Polytechnic University of Bucharest, Faculty of Industrial Chemistry, Department of Organic Chemistry

#### Mentoring

##### Visiting scientists:

*Ozlem Ozen Karakus PhD*, Associate Professor, Pamukkale University, Faculty of Science & Arts (August 2015 – October 2016)

##### Post-doctoral fellows:

*Bogdan Draghici PhD* (January 2013 – March 2015)

#### Graduate Advising

##### Ph. D. Students:

*Sushma Savarala* (TU College of Science and Technology, co-advised with Dr. Stephanie Wunder, January 2008 – December 2011; thesis defended 11/15/11)

*Suleyman Akocak* (with Full Scholarship from Government of Turkey); TUSP (September 2009 – September 2014; thesis defended 07/24/14)

*Vishnu Dutt Sharma* TUSP, (September 2010 – May 2014; thesis defended 04/28/14); received:

- 2<sup>nd</sup> Prize in 2014 TUSP Research Day in the graduate student section,
- the 2014 Gautieri Award of TUSP
- TU Dissertation Completion Grant

*Utpal Kumar Mondal*; TUSP, (September 2013 – February 2019); thesis defended 02/07/19), received:

- TU Dissertation Completion Grant

## Curriculum Vitae

*Rajesh Kishore Kumar*; TUSP, (September 2013 – May 2018; co-advised with Dr. Ellen Walker; thesis defended 04/11/18)

*Uttam Satyal*; TUSP, (September 2013 – November 2018; thesis defended 10/26/18), received:  
- the 2018 Kallelis Outstanding Graduate Student Award of TUSP

*Ahmed Shabana*; TUSP, (September 2013 – May 2018; thesis defended 04/18/18), received:  
- 3<sup>rd</sup> Prize in 2014 TUSP Research Day in the graduate student section;  
- 1<sup>st</sup> Prize in 2018 TUSP Research Day in the graduate student section,  
- the 2017 Gautieri Award of TUSP  
- TU Dissertation Completion Grant

*Md. Abu Sufian*, TUSP, (September 2019 – present)

### Rotations:

*Obioma Chikwendu*; TUSP, (March 2008 – October 2010)

*Arjun Karla*; TUSP (September 2009 – January 2010)

*Md. Hridoy Leonard* (September 2018 – January 2019)

*Shibbir Ahmed Khan* (September 2019 – present)

### Pharm. D. Students:

*Tiffany Sommers* (PY2, TUSP), June 2009 – June 2010

*Ramzan Ali* (PY1, TUSP), March 2010- June 2010

*Horng Mian (Zoe) Huang* (PY1, TUSP), October 2011-November 2011

*Lisa L. Dragic* (PY1, TUSP), September 2012 – August 2013

*Received the TUSP Renzulli Scholarship*

*Julia Lees* (PY1, TUSP), September 2012 – August 2013

*Received the TUSP Renzulli Scholarship*

*Kun Lee* (PY1, TUSP), January 2013- August 2013

*Sabina Zamanova* (PY2, TUSP), January 2018- present

*Received a Johnson & Johnson Global Regulatory Affairs – Established Products Internship (June – August 2018, at Janssen Research & Development – Raritan, NJ)*

*Received the TUSP Renzulli Scholarship*

*Rachel Nguyen* (PY1, TUSP)

### M. Sc. Students:

*Khyati Dave* (Jan – Dec 2008), presently at Merck and Co.

*Mrudang Shah* (March- July 2008), presently at Advent Technologies

*Harshith Neeli* (Sep 2014 – Jan 2015), presently in PhD program, Long Island University, NY

*Md. Raqibul Alam*; TUSP, (September 2013 – August 2016), presently Pharm. D. student Jefferson University

*Qiangnan Zhang* (January 2016 - 2017)

*Yang Pan* (January 2016 - 2017)

### Research Technicians:

*Benjamin Duy Tran* (Nov 2010 – Feb 2011)

*Chidubem Eneanya* (Feb 2019 – August 2019)

## Curriculum Vitae

### Undergraduate Advising

2019-2020	<i>David Rula</i> (TU CST – Chemistry) <i>Shreya Shah</i> (TU CST- Biochemistry) <i>Leslie Lam</i> (TU CST- Biology)
2018-2019	<i>Kate Doroba</i> (TU CST – Neuroscience) <i>David Rula</i> (TU CST – Chemistry) <i>Shreya Shah</i> (TU CST- Biochemistry) <i>Leslie Lam</i> (TU CST- Biology) <i>Rachel Nguyen</i> (TU CST-Biology)
2017-2018	<i>Kate Doroba</i> (TU CST – Neuroscience) <i>Nicole Lemon</i> (TU CST – Biochemistry) <i>2<sup>nd</sup> Prize, poster session of the Mid-Atlantic Pharmacology Society (MAPS) 2017</i>
2016-2017	<i>Aaron Chacko</i> (TU CST – Chemistry) <i>Ronit Shvarzman</i> (TU CST – Biochemistry) <i>(Finalist, TU Undergraduate Research Day 2017)</i> <i>Elizabeth Mcduffie</i> (TU CST – Biochemistry) <i>(2<sup>nd</sup> Prize TU Undergraduate Research Day 2017)</i> <i>Taylor Spoon</i> (TU CST – Biology) <i>Nicole Lemon</i> (TU CST – Biochemistry) <i>Jennifer Alexandra Shif</i> (TU CST - Pharmaceutical Sciences)
2015-2016	<i>Joseph Musco</i> (TU CST – Chemistry) <i>Codee Alicia Ross</i> (TU CST – Chemistry) <i>Taylor Spoon</i> (TU CST – Biology) <i>(3<sup>rd</sup> Prize TU Undergraduate Research Day 2016)</i> <i>Eric B. Gurevich</i> (TU CST – Biochemistry)
2014-2015	<i>Joseph Musco</i> (TU CST – Chemistry) <i>Rachel Adelberg</i> (TU CST – Chemistry) <i>Shani Vildbaum</i> (TU CST – Biochemistry) <i>(Finalist, TU Undergraduate Research Day 2015)</i> <i>Harry S. Thompson</i> (TU CST – Biochemistry) <i>Hanan Naser</i> (TU CST – Biology)
2013-2014	<i>Mallorie Fouch</i> (TU CST – Biochemistry) <i>Kayla D. Kownurko</i> (TU Cellular and Molecular Neuroscience) <i>Harry S. Thompson</i> (TU CST – Biochemistry)
2012-2013	<i>Han Nguyen</i> (TU CST – Chemistry) <i>James Grivas</i> (TU CST – Biology)
2011-2012	<i>Julia Lees</i> (TU CST - Chemistry) <i>Lisa Dragic</i> (TU CST – Biology) <i>Adrian Kizewski</i> (TU CST – Biochemistry) was admitted in the PhD program of the Department of Pharmacology, Johns Hopkins University, MBA Georgetown University <i>Andrew Gaspari</i> (TU CST – Biochemistry) <i>Kara Thompson</i> (TU CST –Biology)
2010-2011	<i>Adrian Kizewski</i> (TU CST – Biochemistry) <i>(2<sup>nd</sup> Prize, TUSP Research Day)</i>

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	<i>Andrew Gaspari</i> (TU CST – Biochemistry)
2009-2010	<i>Adrian Kizewski</i> (TU CST – Biochemistry) <i>Bhumiben Shah</i> (TU CST – Biochemistry) <i>Kyle Norris</i> (TU CST- Chemistry) <i>Eronmwon Aifuwa</i> (TU CST- Chemistry) <i>Huishu Xu</i> (TU CST-Chemistry) <i>Ahn Nguyen</i> (TU CST-Chemistry) <i>Li Ching He</i> (TU CST-Biology) (1st Prize, TUSP Research Day)
2008-2009	<i>Huishu Xu</i> (TU CST-Chemistry, with Dr. Stephanie Wunder) <i>Ahn Nguyen</i> (TU CST-Chemistry, with Dr. Stephanie Wunder) <i>Mydung Le</i> (TU CST-Chemistry, with Dr. Stephanie Wunder) <i>Dushyant Javia</i> (TU CST-Chemistry, with Dr. Stephanie Wunder) (2nd prize TUSP Research Day) <i>Samson Russom</i> (TU-PCC Bridge program) <i>Lauren Spearman</i> (PSTP Program)
2000- 2001	<i>Nicolae Foldesi</i> (BSc Thesis, USAMV Bucharest) <i>Adrian Popa</i> (BSc Thesis, USAMV Bucharest) <i>Cristina Bacanu</i> (BSc Thesis, USAMV Bucharest)
1997	teacher for the Romanian Olympic Team preparing for The International Chemistry Olympiad – Montreal, Canada;

## RESEARCH INTERESTS

Bio-organic & medicinal chemistry/chemical biology at membrane interfaces:

- heterocyclic chemistry and drug design: selective carbonic anhydrase inhibitors and activators, molecular markers for hypoxia and/or cancer, development of theranostic agents for combined therapy and diagnostic purposes. Our goal is to understand and exploit the role of carbonic anhydrase isozymes in the hypoxic tumor microenvironment and in the brain for development of anticancer and nootropic agents;
- pyridinium derivatives: synthesis, physicochemical and biological properties, with a focus on their use in drug and gene delivery systems and towards the generation of novel biomarkers and theranostic systems;
- supra-molecular chemistry and materials sciences, nanotechnology: synthesis, self-assembling, physicochemical and biological properties of assemblies of amphiphilic molecules of different molecular weights and packing parameters: surfactants, gemini surfactants, lipophilic oligomeric surfactants, lipids, dendrons, polymers; interfacial engineering for controlling the above-mentioned properties, drug and gene loading and delivery, enzymatic degradation, toxicity and loading of metallic nanoparticles (composite systems) for improved tracking/imaging capabilities, synergetic delivery and stabilization;
- basic tissue engineering: spheroid cultures, understanding the tumor microenvironment in relation with oxygen/hypoxia and the role of carbonic anhydrases in tumor metabolism and development, establishment of 2D/3D correlations for streamlining in vitro/in vivo translation of drug and gene delivery systems.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

- American Chemical Society (since 2001)
- American Society of Gene Therapy (since 2004)
- Controlled Release Society (2007-2008)
- American Association of Colleges of Pharmacy (2007)
- Rho Chi Honor Society (since 2008)
- American Association of Pharmaceutical Scientists (since 2008)
- American Romanian Academy of Arts and Sciences (elected member, since 2014)

INVITED LECTURES

- 2019 258<sup>th</sup> ACS National Meeting, San Diego, CA, (Division of Colloid and Surface Chemistry): “Impact of thermal annealing on physicochemical properties, serum stability and transfection efficiency of pyridinium based lipoplexes”, August 25-29, 2019;
- 2019 258<sup>th</sup> ACS National Meeting, San Diego, CA, (Division of Colloid and Surface Chemistry): “Formulation of carbonic anhydrase IX - targeted drug delivery systems against hypoxic tumors”, August 25-29, 2019;
- 2019 257<sup>th</sup> ACS National Meeting, Orlando, FL, (Division of Colloid and Surface Chemistry): “Functionalization of gold nanoparticles for generation of drug and nucleic acid delivery nanoplatfoms”, March 31- April 4, 2019;
- 2018 256<sup>th</sup> ACS National Meeting, Boston, MA, (Division of Colloid and Surface Chemistry): “Functionalization of gold nanoparticles for generation of drug and nucleic acid delivery nanoplatfoms” (delivered by my PhD student Utpal Mondal), August 19-23, 2018;
- 2018 256<sup>th</sup> ACS National Meeting, Boston, MA, (Division of Colloid and Surface Chemistry): “Self-assembled block copolymer micelles with tuned hydrolytic stability as efficient docetaxel delivery systems for breast cancer therapy” (delivered by my PhD student Uttam Satyal), August 19-23, 2018;
- 2018 North American Thermal Analysis Society (NATAS) National Meeting, Philadelphia, PA: “Thermal analysis of PEGylated conjugates and their supramolecular assemblies as drug delivery systems” (delivered by my PhD student Utpal Mondal), August 6, 2018;
- 2018 Tokyo Institute of Technology, Tokyo, Japan: “Efficient nucleic acid delivery based on synergetic action of synthetic pyridinium lipids and gemini surfactants”, August 2, 2018;
- 2018 University of Kitakyushu, Faculty of Environmental Engineering, Kitakyushu, Japan: “Synthetic nucleic acid delivery systems based on pyridinium amphiphiles”, July 30, 2018;
- 2018 18<sup>th</sup> Symposium for Gene Design and Delivery, Minatomachi Mojiku Kitakyushu, Fukuoka, Japan: “Efficient and synergistic nucleic acid delivery with synthetic systems based on pyridinium amphiphiles”, July 28, 2018;
- 2018 11<sup>th</sup> International Conference on Carbonic Anhydrase, Bucharest, Romania: “CA IX inhibitors in the design of theranostic nanosystems for hypoxic tumor detection and treatment”, June 27-30, 2018;

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- 2018 255<sup>th</sup> ACS National Meeting, New Orleans, LA, (Division of Colloid and Surface Chemistry): “Interfacially-stabilized polymeric nanosystems for drug delivery” March 18 – 22, 2018;
- 2018 255<sup>th</sup> ACS National Meeting, New Orleans, LA, (Division of Colloid and Surface Chemistry): “Efficient and synergistic nucleic acid delivery with synthetic systems based on pyridinium amphiphiles” March 18 – 22, 2018;
- 2018 255<sup>th</sup> ACS National Meeting, New Orleans, LA, (Division of Medicinal Chemistry): “Amphiphilic heterocyclic sulfonamides as carbonic anhydrase inhibitors with selectivity for tumor-overexpressed isozymes – towards theranostic systems for cancer detection and treatment” March 18 – 22, 2018;
- 2017 254<sup>th</sup> ACS National Meeting, Washington, DC, (Division of Colloid and Surface Chemistry): “Carbonic anhydrase IX -targeted nanosystems for hypoxic tumor detection and treatment” August 20 – 24, 2017;
- 2017 254<sup>th</sup> ACS National Meeting, Washington, DC, (Division of Colloid and Surface Chemistry): “Surface chemistry dictates the internalization and cytotoxicity of carbonic anhydrase inhibitor functionalized gold nanoparticles targeting hypoxic tumors” August 20 – 24, 2017; presented by graduate student Ahmed Shabana
- 2017 Carbonic Anhydrase Satellite Meeting, Montecatini, IT: “Theranostic CA IX inhibitors engineered from a delivery perspective” May 24-28, 2017;
- 2016 252<sup>nd</sup> ACS National Meeting, Philadelphia, PA, (Division of Colloid and Surface Chemistry): “Interface-engineered PEG-PCL delivery system for docetaxel controlled delivery” August 21 – 25, 2016;
- 2016 252<sup>nd</sup> ACS National Meeting, Philadelphia, PA, (Division of Colloid and Surface Chemistry): “Controlling the physicochemical and self-assembling properties of pyridinium amphiphiles at molecular level for efficient nucleic acid delivery” August 21 – 25, 2016, presented by graduate student Uttam Satyal
- 2016 Department of Chemical and Biological Engineering, Stone Group, Princeton University, “Amphiphile design for enhanced drug and gene delivery”, May 4, 2016;
- 2016 TAFDV Spring Symposium 2016 - Thermal Analysis Research in the Delaware Valley: a bio/nano/materials interface, Temple University: “Liposomal Drug Delivery Systems for Carbonic Anhydrase Inhibitors”, April 13, 2016;
- 2016 251<sup>th</sup> ACS National Meeting, San Diego, CA, (Division of Colloid and Surface Chemistry): “The impact of amphiphile packing parameter on the drug loading and delivery properties of an anticancer liposomal delivery system” March 13 – March 17, 2016;
- 2015 The International Chemical Congress of Pacific Basin Societies (Pacifichem), Honolulu, Hawaii: “Synergistic DNA delivery with gold-synthetic amphiphile hybrid nanosystems”, December 15-20, 2015;
- 2015 The International Chemical Congress of Pacific Basin Societies (Pacifichem), Honolulu, Hawaii: “Impact of packing parameter of synthetic amphiphiles in the design of drug and gene delivery systems”, December 15-20, 2015;
- 2015 10<sup>th</sup> International Carbonic Anhydrase Conference, Maastricht, The Netherlands: “Alzheimer disease and other applications of the carbonic anhydrase activators” April 20-22, 2015;
- 2015 249<sup>th</sup> ACS National Meeting, Denver, CO, (Division of Colloid and Surface Chemistry): “Synergetic DNA delivery with pyridinium amphiphiles with



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- different packing parameters – toward composite DNA delivery systems” March 22 – March 26, 2015;
- 2014 248<sup>th</sup> ACS National Meeting, San Francisco, CA, (Division of Colloid and Surface Chemistry): “Modulation of self-assembling of pyridinium cationic amphiphiles for enhanced gene delivery” August 10 - August 14, 2014;
- 2014 "Interfacial engineering of pyridinium amphiphiles in self-assembled gene delivery systems", Drexel University, Department of Chemistry, April 24<sup>th</sup> 2014;
- 2014 Thermal Analysis Forum of the Delaware Valley 2014, at ASTM International: "Thermal analysis of self-assembled systems of gemini surfactants, lipids and polymers: Implications in drug and gene delivery", March 13<sup>th</sup>, 2014;
- 2013 University of Pennsylvania, Center for Targeted Therapeutics and Translational Nanomedicine Symposium: “Interfacial engineering of pyridinium amphiphiles in self-assembled gene delivery systems”, November 12<sup>th</sup> 2013;
- 2013 Institut de Chimie de Substances Naturelles, Gif-sur-Yvette, FR “Pyridinium drug and gene delivery systems”, October 28<sup>th</sup> 2013;
- 2013 2<sup>nd</sup> Satellite Meeting on Carbonic Anhydrases, Naples, IT, “Recent advances in CA inhibitor and activator design”, 23-25 October 2013;
- 2013 University of Pennsylvania, Center for Targeted Therapeutics and Translational Nanomedicine: “Enhancing the transfection efficiency of pyridinium gemini surfactants through interfacial engineering”, April 17<sup>th</sup> 2013;
- 2013 245<sup>th</sup> ACS National Meeting, New Orleans, LA, (Division of Colloid and Surface Chemistry): “Enhancement of cationic lipid - DNA complex properties by gemini surfactants and its impact in gene delivery”; I also received an invitation to allow the organizers to record the presentation and post it on ACS website;
- 2013 “Thermotropic self-assembling of novel pyridinium gemini surfactants” Thermal Analysis Forum of Delaware Valley Symposium, ASTM International, March 14<sup>th</sup> 2013;
- 2012 244<sup>th</sup> ACS National Meeting, Philadelphia, PA (Division of Colloid and Surface Chemistry): “Compaction of DNA on silica-supported cationic lipid bilayers”;
- 2012 244<sup>th</sup> ACS National Meeting, Philadelphia, PA (Division of Colloid and Surface Chemistry): “Dramatic enhancement of transfection efficiency of pyridinium gemini surfactants through interfacial engineering”;
- recorded and posted online at ACS website: <http://presentations.acs.org/common/presentation-detail.aspx/Fall2012/COLL/COLL12A/20355>
- 2012 “Pyridinium group – a versatile moiety for targeting carbonic anhydrase isozymes”, 9<sup>th</sup> International Conference on Carbonic Anhydrases, Antalya, TR, April 11-16, 2012.
- 2012 “Pyridinium amphiphiles: Synthesis, self-assembling, physicochemical and biological properties”, Selcuk University, TR, April 9<sup>th</sup> 2012;
- 2012 “Self-assembling in bulk and in solution of novel pyridinium amphiphiles” Thermal Analysis Forum of Delaware Valley Symposium, ASTM International, March 20<sup>th</sup> 2012;
- 2011 “Drug and Gene Delivery with Pyridinium Compounds” Department of Chemistry, CUNY- Lehman College, November 30<sup>th</sup> 2011;
- 2011 242<sup>nd</sup> ACS National Meeting, Denver, CO (Division of Colloid and Surface Chemistry): “Interaction of pyridinium surfactants with cellular membranes: Relevance to nucleic acid delivery”;

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- 2011 241<sup>st</sup> ACS National Meeting, Anaheim, CA (Division of Colloid and Surface Chemistry): “Modulation of lipoplex physicochemical properties and surface chemistry to enhance and target genetic material delivery to malignancies”;
- 2010 239<sup>th</sup> ACS National Meeting, San Francisco, CA (Division of Colloid and Surface Chemistry): “Structure-activity relationships throughout several classes of pyridinium-based amphiphilic compounds for gene delivery”;
- 2009 237<sup>th</sup> ACS National Meeting, Salt Lake City, UT (Division of Colloid and Surface Chemistry): “Impact of linker design and hydrophobic domain on physicochemical characteristics and transfection ability of pyridinium cationic lipids, gemini surfactants, and lipophilic polycations for gene delivery”;
- 2008 “Bridging the Broad Street’ Seminar Series, Temple University, Department of Chemistry: ”Synthetic self-assembling amphiphiles for drug and gene delivery”
- 2007 234<sup>th</sup> ACS National Meeting, Boston, MA (Division of Polymer and Material Science and Engineering): “Cell adhesion molecules-targeted polymeric worm micelles as selective in vivo drug delivery systems against endothelial cells”
- 2004 227<sup>th</sup> ACS National Meeting, Anaheim, CA (Division of Colloid and Surface Chemistry): “Lipophilic pyrylium salts in the synthesis of pyridinium-based cationic lipids and gemini surfactants for gene transfer”
- 2002 University of Florence, Florence, IT, Department of Chemistry: “Pyridinium Group – A Versatile Moiety in Drug Targeting”;
- 2001 University of Florence, Florence, IT, Department of Chemistry: “Selective Carbonic Anhydrase Inhibitors and Activators”;
- 2000 Calimanesti-Caciulata, Romania: 24<sup>th</sup> Romanian National Chemical Conference (with international participation) “Pyridinium Carbonic Anhydrase Inhibitors with Selectivity Against Membrane-Bound Isozyme CA IV”

## TRAINING COURSES, STAGES, SUMMER SCHOOLS

- **Philadelphia, PA (2006)** X-Ray Scattering Course
- **Galveston, TX (2003)** – Supervisor Development Program, at Texas A&M University Galveston
- **Trieste, Italy (1999)** - training course “Combinatorial Chemistry and Combinatorial Technologies”, International Centre for Science and High Technology (I.C.S.-U.N.I.D.O.).
- **Lille, France (1996)** - Master Stage with Prof. Pierre Grandclaude, Laboratory of Organic and Physical Chemistry, Ecole Nationale Supérieure de Chimie de Lille, France;
- **Bucharest, Romania (1995)** - training course “2D-NMR” - Prof. Andre Thevand (Universite de Marseille) during the Francophone Teaching Module;
- **Bucharest, Romania (1995)** - training course “Use of Sulfur Derivatives in Organic Synthesis by Means of Stabilized Anions” - Prof. Pierre Grandclaude (ENSCL, Lille, France) during the Francophone Teaching Module;
- **Sibiu, Romania (1994)** - summer school “Peak Techniques In Molecular Biology”, organized by Ecole Normale Supérieure de Paris and University of Bucharest;

## PATENTS

US7456197B2 (November 2008) “Pyridinium cationic lipids as gene transfer agents”  
A. T. Balaban, W.A. Seitz, **M.A. Ilies**, E.B. Thompson, R.E. Garfield, B. H. Johnson, A. Miller, M. Wentz, inventors, TAMU System Assignee, research license awarded to Temple

**PUBLICATIONS (cited > 2750 times by peers, H-Index = 28)**

**A. Books**

K. Sakurai, **M. A. Ilies**, Editors: “Targeted Nanosystems for Therapeutic Applications: New Concepts, Dynamic Properties, Efficiency, and Toxicity”, ACS Books & Oxford University Press, American Chemical Society: Washington, DC, **2019**, 348 pp, published online 03/20/19 (<https://pubs.acs.org/isbn/9780841233836>).

**M. A. Ilies**, Editor: “Control of Amphiphile Self-Assembling at the Molecular Level: Supra-Molecular Assemblies with Tuned Physicochemical Properties for Delivery Applications”, ACS Books & Oxford University Press, ACS Symposium Series 1271, American Chemical Society: Washington, DC, **2017**, 331 pp, ISBN 9780841232747, web: <https://pubs.acs.org/isbn/9780841232747>.

**B. Book chapters** (invited, peer-reviewed)

9. M. A. Ilies, J.-Y. Winum, “Carbonic anhydrase inhibitors for the treatment of tumors: therapeutic, immunologic, and diagnostic tools targeting isoforms IX and XII.” in “Carbonic Anhydrases”, C. T. Supuran, A. Nocentini Eds, Elsevier, **2019**, pp. 331-365.

8. R. K. K. Sanku, O. O. Karakus, M. Ilies, M. A. Ilies, “Inclusion complexes in drug delivery and drug targeting: formation, characterization and biological applications” in “Targeted Nanosystems for Therapeutic Applications: New Concepts, Dynamic Properties, Efficiency, and Toxicity”, ACS Books, Washington, DC, **2019**, pp. 187-221.

7. A. M. Shabana, M. A. Ilies “Drug delivery to hypoxic tumors targeting carbonic anhydrase IX”, in “Targeted Nanosystems for Therapeutic Applications: New Concepts, Dynamic Properties, Efficiency, and Toxicity”, ACS Books, Washington, DC, **2019**, pp. 223-252.

6. U. Satyal, V. D. Sharma, J. A. Shif, **M. A. Ilies** “Interface-Engineered Amphiphilic Block Copolymers with Tuned Enzymatic Resistance for Controlled Delivery of Chemotherapeutic Drugs”, in “Control of Amphiphile Self-Assembling at the Molecular Level: Supra-Molecular Assemblies with Tuned Physicochemical Properties for Delivery Applications”, M. A. Ilies Ed., **ACS Books**, Washington, DC, **2017**, 211-229.

5. **M. A. Ilies**, U. Satyal, V. D. Sharma “Synthetic Delivery Systems for DNA, siRNA, and mRNA Based on Pyridinium Amphiphiles”, in “Control of Amphiphile Self-Assembling at the Molecular Level: Supra-Molecular Assemblies with Tuned Physicochemical Properties for Delivery Applications”, M. A. Ilies Ed., **ACS Books**, Washington, DC, **2017**, 1-34.

4. S. Akocak, **M. A. Ilies** “Next-generation primary sulfonamide CA inhibitors” in “Targeting Carbonic Anhydrases”, C. T. Supuran, C. Capasso Eds., **Future Science**, London, **2014**, 35-51.

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71. N. Lemon, R. K. K. Sanku, A. M. Chong, M. A. Ilies, E. A. Walker, "Profiling a Novel Series of Carbonic Anhydrase Activators in Mouse Memory Assays", Mid-Atlantic Pharmacology Society (MAPS), Philadelphia, PA, October 26, 2017; (**2<sup>nd</sup> Prize**)
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62. A. M. Shabana, Md. R. Alam, C. A. Ross , A. Kizewski, M. A. Ilies, “Gold nanoparticle functionalization for the generation of drug and gene delivery systems”, 252nd ACS National Meeting, Philadelphia, PA, August 21 – 25, 2016;
61. R. K. K. Sanku, B. Draghici, U. K. Mondal , E. A. Walker , C. T. Supuran, M. A. Ilies, “Development of efficient carbonic anhydrase activators for memory impairments”, 252nd ACS National Meeting, Philadelphia, PA, August 21 – 25, 2016;
60. O. O. Karakus, R. K. K. Sanku, U. K. Mondal, M. A. Ilies, “Host-Guest Formulations of Novel Isozyme-Selective Carbonic Anhydrase Inhibitors for Colon Cancer Detection and Treatment”, 252nd ACS National Meeting, Philadelphia, PA, August 21 – 25, 2016;
59. S. Akocak, Md. R. Alam, A. M. Shabana, R. K. K. Sanku, H. Thompson, C. T. Supuran, M. A. Ilies, “PEG-conjugated aromatic and heterocyclic sulfonamides as potent carbonic anhydrase inhibitors with antitumor activity”, 252nd ACS National Meeting, Philadelphia, PA, August 21 – 25, 2016;
58. U. K. Mondal, B. Draghici, J. P. Musco, C. T. Supuran, M. A. Ilies, “Synthetic strategies for the generation of aliphatic and aromatic bis-imidazoles as carbonic anhydrase activators”, 252nd ACS National Meeting, Philadelphia, PA, August 21 – 25, 2016;

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57. Ozlem O. Karakus, Rajesh K. K. Sanku, Utpal K. Mondal, Marc A. Ilies, “Toxicity of host-guest formulations of isozyme-selective carbonic anhydrase inhibitors” 44<sup>th</sup> Middle Atlantic Regional Meeting of the American Chemical Society, Riverdale, NY, United States, June 9-12, 2016, MARM-553.
56. R. K. K. Sanku, B. Draghici, U. Satyal, E. A. Walker, M. A. Ilies, “Activation of carbonic anhydrase and its role in enhancing memory and learning” 251st ACS National Meeting, San Diego, CA, March 13 – 17, 2016;
55. J. Musco, B. Draghici, U. K. Mondal, M. A. Ilies, “Design and Synthesis of Novel BisImidazole Carbonic Anhydrase Activators as Potential Nootropics”, 251st ACS National Meeting, San Diego, CA, March 13 – 17, 2016;
54. A. M. Shabana, R. L. Adelberg, S. Bandegi, S. L. Wunder, M. A. Ilies “Impact of Lipid Fluidity and Packing Parameter on the Liposomal Delivery of Carbonic Anhydrase Inhibitors”, TAFDV Annual Meeting, December 7th, 2015. (*Awarded 2<sup>nd</sup> Prize - Graduate Student Section*).
53. Z. Lu, S. Jamzad, U. Satyal, M. A. Ilies, R. Fassihi, “Deficiency in discriminatory effect of USP-34 dissolution monograph on immediate release fenofibrate tablets having different particle sizes”, AAPS National Meeting, Orlando, FL, October 25-29, 2015.
52. U. Satyal, B. Draghici, M. A. Ilies, “Efficient synthetic DNA delivery systems based on novel biodegradable pyridinium cationic lipids”, AAPS National Meeting, Orlando, FL, October 25-29, 2015.
51. U. K. Mondal, B. Draghici, C. T. Supuran, M. A. Ilies, “Carbonic Anhydrase Activation and Selectivity within two Series of Bis-imidazoles”, AAPS National Meeting, Orlando, FL, October 25-29, 2015.
50. S. Akocak, Md. R. Alam, H. Thompson, C. T. Supuran, M. A. Ilies, “PEG-conjugated Aromatic and Heterocyclic Sulfonamides as Potent Carbonic Anhydrase Inhibitors with Potential Anti-tumor Activity”, AAPS National Meeting, Orlando, FL, October 25-29, 2015.
49. R. K. K. Sanku, U. Satyal, M. A. Ilies, “Structure–Toxicity Correlations in a Series of Carbonic Anhydrase Activators”, AAPS National Meeting, Orlando, FL, October 25-29, 2015.
48. A. M. Shabana, R. L. Adelberg, S. Bandegi, S. L. Wunder, M. A. Ilies “Impact of Lipid Fluidity and Packing Parameter on the Liposomal Delivery of Carbonic Anhydrase Inhibitors”, AAPS National Meeting, Orlando, FL, October 25-29, 2015.
47. S. Akocak, B. Draghici, D. Vullo, M. Raqibul Alam, U. K. Mondal, H. Thompson, C. T. Supuran, M. A. Ilies “Modulation of carbonic anhydrase isozyme activity through activator and inhibitor scaffolds containing bis-heterocyclic moieties” 10<sup>th</sup> International Carbonic Anhydrase Conference, Maastricht, The Netherlands, April 20-22, 2015.

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46. A. M. Shabana, S. Akocak, M. A. Ilies “Topical delivery of lipophilic carbonic anhydrase inhibitors with liposomal formulations” Abstracts of Papers, 249<sup>th</sup> ACS National Meeting, Denver, CO, March 22 – March 26, 2015 (COLL-194).
45. A. M. Shabana, S. Akocak, M. A. Ilies “Liposomal formulations for topical delivery of lipophilic carbonic anhydrase inhibitors” AAPS National Meeting, November 2-6, 2014, San Diego, CA.
44. Rajesh K. K. Sanku, S. Akocak, M. A. Ilies “Anti-tumor activity of carbonic anhydrase inhibitors” AAPS National Meeting, November 2-6, 2014, San Diego, CA.
43. S. Akocak, Md. R. Alam, H. Thompson, C. T. Supuran, M. A. Ilies “Aromatic and heterocyclic (bis-)sulfonamides as potent carbonic anhydrase inhibitors with potential anti-tumor activity” AAPS National Meeting, November 2-6, 2014, San Diego, CA.
42. B. Draghici, U. K. Mondal, M. A. Ilies “Carbonic Anhydrase Activation and Isozyme Selectivity Studies with a Series of Aromatic Bis-imidazoles” AAPS National Meeting, November 2-6, 2014, San Diego, CA.
41. V. D. Sharma, U. Satyal, H. Nguyen, M. A. Ilies “Formulation development of pyridinium cationic lipid-DNA complexes and its impact on lipoplexes physicochemical properties” AAPS National Meeting, November 2-6, 2014, San Diego, CA
40. R. Fassihi, M. A. Ilies “Analysis of Fractured Coating Structures and Interfaces in Modified Release Oral Dosage Forms: Confocal Laser Scanning Microscopy (CLSM)” AAPS National Meeting, November 2-6, 2014, San Diego, CA
39. A. Kizewski, V. D. Sharma, M. A. Ilies “Synergetic DNA delivery with pyridinium amphiphiles with different packing parameters – towards composite DNA delivery systems” Gordon Research Conference on Drug Carriers in Medicine & Biology, August 17 – 22, 2014, Waterville Valley Resort, NH.
38. V. D. Sharma, M. A. Ilies “Incorporation of gemini surfactants into pyridinium lipoplexes enhances transfection through endosomal membrane destabilization” Abstracts of Papers, 248<sup>th</sup> ACS National Meeting, San Francisco, CA, August 10 - August 14, 2014 (COLL-253).
37. V. D. Sharma, X. Zhu, B. B. Wayland, M. A. Ilies “Thermal behavior of PEG45-PBO0,6,9-PCL60 and dynamic stability of corresponding supra-molecular micelles” Thermal Analysis Forum of Delaware Valley - Annual Business Meeting and Poster Session, Philadelphia, PA, December 4th, 2013.
36. V. D. Sharma, J. Lees, M. A. Ilies “Modulation of pyridinium cationic lipid-DNA complex properties by pyridinium gemini surfactants and its impact on lipoplex transfection properties” AAPS National Meeting, San Antonio, TX, October 10<sup>th</sup>-October 14<sup>th</sup> 2013.

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35. M. A. Ilies, V. D. Sharma, A. Reza Fassihi “In Situ Artifact Layer Appearance at the Core-coat Interface during Coating of Tablets or Pellets” AAPS National Meeting, San Antonio, TX, October 10<sup>th</sup>- October 14<sup>th</sup> 2013.
34. B. Draghici, M. A. Ilies “Influence of Liphophilicity on Carbonic Anhydrase Activation Properties in a Series of Amphiphilic Imidazoles” AAPS National Meeting, San Antonio, TX, October 10<sup>th</sup>- October 14<sup>th</sup> 2013.
33. S. Akocak, C. T. Supuran, M. A. Ilies “Selective Carbonic Anhydrase Inhibitors as Theranostic Probes for Hypoxic Tumors” ” AAPS National Meeting, San Antonio, TX, October 10<sup>th</sup>- October 14<sup>th</sup> 2013.
32. V. D. Sharma, X. Zhu, B. B. Wayland, M. A. Ilies “Dynamic stability of PEG45-PBO0,6,9-PCL60 micelles as new drug delivery systems” AAPS National Meeting, San Antonio, TX, October 10<sup>th</sup>- October 14<sup>th</sup> 2013.
31. Vishnu Dutt Sharma, Julia Lees, Nicholas E. Hoffman, Muniswamy Madesh, Stephanie L. Wunder, Marc A. Ilies “Modulation of pyridinium cationic lipid-DNA complex properties by pyridinium gemini surfactants and its impact on lipoplex transfection properties” Gordon Research Conference of Cancer Nanotechnology, Mount Snow, VT, July 14-19.
30. S. Akocak, C. T. Supuran, M. A. Ilies “Efficient carbonic anhydrase inhibitors with tuned membrane permeability” Abstracts of Papers AAPS National Meeting Chicago, October 14- October 18, 2012 (T3106)
29. V. D. Sharma, X. Zhu, B. B. Wayland, M. A. Ilies “Enzymatic degradation of PEG-PCL diblock copolymer micelles via esterases: the impact of hydrophilic/hydrophobic interface” Abstracts of Papers AAPS National Meeting Chicago, October 14- October 18, 2012 (W5227)
28. M. A. Ilies, V. D. Sharma, R. Fassihi “Physicochemical and stability characterization of enteric-coated Omeprazole pellets with and without a protective sub-coat” Abstracts of Papers AAPS National Meeting Chicago, October 14- October 18, 2012 (W5025)
27. V. D. Sharma, M. A. Ilies “Novel gene delivery systems based on gemini surfactants” Abstracts of Papers AAPS National Meeting Chicago, October 14- October 18, 2012 (R6131)
26. L. L. Dragic, M. A. Ilies “Novel pyridinium lipoplexes for nucleic acid delivery – a formulation and stability study” Abstracts of Papers, 244<sup>th</sup> ACS National Meeting, Philadelphia, PA, August 19 - August 23, 2012 (COLL-320).
25. M. A. Ilies, K. Dave, S. Akocak, C. Temperini, D. Vullo, A. Scozzafava, C. T. Supuran “Modulating the activity of carbonic anhydrases: The key role of active site residue 131 towards interaction of different isoforms with inhibitors and activators”, Abstracts of Papers, 244<sup>th</sup> ACS National Meeting, Philadelphia, PA, August 19 - August 23, 2012 (BIOL-220).

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24. S. Akocak, C. T. Supuran, M. A. Ilies, "Pyridinium-benzolamide derivatives as isozyme-selective CA inhibitors", Abstracts of Papers, 244<sup>th</sup> ACS National Meeting, Philadelphia, PA, August 19 - August 23, 2012 (BIOL-100).
23. V. D. Sharma, E. A. Aifuwa, M. A. Ilies, "Structure-activity relationships in a series of pyridinium gemini surfactants for gene delivery bearing hydrophilic linkers", 15<sup>th</sup> American Society of Gene & Cell Therapy Annual Meeting, Philadelphia, PA, May 16-19, 2012.
22. A. Kizewski, M. A. Ilies, "Gold nanoparticles mediated gene delivery via surface charge reversal with pyridinium amphiphiles", 15<sup>th</sup> American Society of Gene & Cell Therapy Annual Meeting, Philadelphia, PA, May 16-19, 2012.
21. S. Akocak, O. Guzel, C. T. Supuran, M. A. Ilies, "Pyridinium derivatives of 3-aminobenzenesulfonamide – Structure-activity relationships as carbonic anhydrase inhibitors", 9<sup>th</sup> International Conference on Carbonic Anhydrases, Antalya, TR, April 11-16, 2012.
20. S. Akocak, C. T. Supuran, M. A. Ilies, "Pyridinium-benzolamide derivatives for cancer detection and treatment", 9<sup>th</sup> International Conference on Carbonic Anhydrases, Antalya, TR, April 11-16, 2012.
19. V. D. Sharma, M. A. Ilies, "Self-assembling in bulk and in solution for a series of pyridinium gemini surfactants bearing a hydrophilic linker" Thermal Analysis Forum of Delaware Valley - Annual Business Meeting and Poster Session, Philadelphia, PA, December 8, 2011 – 2<sup>nd</sup> Place in Student Poster Competition
18. S. Akocak, C. T. Supuran, M. A. Ilies, "Pyridinium-sulfonamides as efficient inhibitors of carbonic anhydrases" AAPS National Meeting, Washington, DC, October 23-27, 2011.
17. V. D. Sharma, E. O. Aifuwa, M. A. Ilies, "Pyridinium gemini surfactants: Synthesis, self-assembling, and physicochemical properties" Abstracts of Papers, 242<sup>st</sup> ACS National Meeting, Denver, CO, August 28-September 1, 2011 (COLL-239).
16. S. Savarala, F. Monson, M. A. Ilies, S. L. Wunder, "Supported lipid bilayer nanosystems stabilization by undulatory-protrusion forces, and destabilization by lipid bridging" Abstracts of Papers, 242<sup>st</sup> ACS National Meeting, Denver, CO, August 28-September 1, 2011 (COLL-165).
15. S. Akocak, C. T. Supuran, M. A. Ilies, "Pyridinium-sulfonamides as efficient inhibitors of carbonic anhydrases" Abstracts of Papers, 241<sup>st</sup> ACS National Meeting, Anaheim, CA, March 27-31, 2011 (MEDI-300).
14. S. Savarala, S. L. Wunder, M. A. Ilies, "Stabilization of soft lipid colloids via nanoparticle decoration and its interplay with supported lipid bilayer formation"

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Abstracts of Papers, 241st ACS National Meeting, Anaheim, CA, March 27-31, 2011 (COLL-275).

13. M. A. Ilies, “Modulation of lipoplex physicochemical properties and surface chemistry to enhance and target genetic material delivery to malignancies” Abstracts of Papers, 241st ACS National Meeting, Anaheim, CA, March 27-31, 2011 (COLL-79).
12. T. V. Sommers, L. C. He, M. A. Ilies, “Self-assembling and gene transfer properties of novel pyridinium surfactants” AAPS National Meeting, New Orleans, LA, November 14-18, 2010.
11. O. C. Chikwendu, T. V. Sommers, M. A. Ilies, “Structure-activity relationships in a series of biodegradable cholesteryl-pyridinium cationic lipids for gene delivery”. AAPS National Meeting, New Orleans, LA, November 14-18, 2010.
10. S. Savarala, S. L. Wunder, M. A. Ilies “Impact of counterion and hydrophobic anchor on physicochemical characteristics and transfection efficiency for a series of pyridinium cationic lipid-based lipoplexes” 13<sup>th</sup> American Society of Gene and Cell Therapy National Meeting, Washington, DC, May 19-22, 2010
9. M. A. Ilies “Pyridinium derivatives as modulators of carbonic anhydrase activity” 239<sup>th</sup> ACS National Meeting, San Francisco, CA, March 21-25, 2010
8. S. Ahmed, S. Savarala, J. Villano, M. A. Ilies, S. L. Wunder “Fusion and stability of DMTAP/DMPC supported lipid bilayers (SLBs) on SiO<sub>2</sub> nanoparticles” 239<sup>th</sup> ACS National Meeting, San Francisco, CA, March 21-25, 2010
7. S. Savarala; Q. Wang, A. Khaku, M. A. Ilies, S. L. Wunder “Colloidal stability of supported lipid nanoparticles” 239<sup>th</sup> ACS National Meeting, San Francisco, CA, March 21-25, 2010
6. S. Savarala, S. L. Wunder, M. A. Ilies “Counterion influence on the physicochemical characteristics and transfection efficiency in a series of pyridinium cationic lipid-based lipoplexes”, 238<sup>th</sup> ACS National Meeting, Washington, DC, August 16-20, 2009
5. O. Chikwendu, M. A. Ilies “Modulation of polar head hydration and its influence on the transfection efficiency in a series of pyridinium amphiphiles for gene delivery”, 238<sup>th</sup> ACS National Meeting, Washington, DC, August 16-20, 2009
4. M. A. Ilies, A. T. Balaban “Impact of linker design and hydrophobic domain on physico-chemical characteristics and transfection ability of pyridinium cationic lipids, gemini surfactants, and lipophilic polycations for gene delivery”, 237<sup>th</sup> ACS National Meeting, Salt Lake City, UT, March 22-26, 2009
3. S. Savarala, S. L. Wunder, M. A. Ilies “Structure-activity relationships for a series of dopamine-related cationic lipids for gene delivery”, 237<sup>th</sup> ACS National Meeting, Salt Lake City, UT, March 22-26, 2009



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2. M. A. Ilies, O. Chikwendu, E. B Thompson, A. T. Balaban “Structure-activity relationships in a series of cholesteryl-pyridinium cationic lipids for gene delivery”, AAPS National Meeting, Atlanta, GA, November 15-20, 2008

1. K. Dave, C. Temperini, A. Scozzafava, C. T. Supuran, M. A. Ilies “Pyridinium derivatives of histamine as novel carbonic anhydrase activators” 236<sup>th</sup> ACS National Meeting, Philadelphia, August 16-20, 2008

### **Intramural:**

76. S. Zamanova, and M. A. Ilies, “Carbonic Anhydrases as Disease Markers” TUSP Research Day, April 12, 2019.

75. S. Zamanova, and M. A. Ilies, “Carbonic anhydrase inhibitors can efficiently alter the growth dynamics of hypoxic tumors expressing carbonic anhydrase IX isozyme”, TUSP Research Day, March 12, 2018.

74. A. M. Shabana, U. K. Mondal, Md. R. Alam, T. Spoon, M. A. Ilies, “Carbonic anhydrase inhibitor-functionalized gold nanoparticles enhance the delivery of doxorubicin to hypoxic cancer cells”, TUSP Research Day, March 12, 2018.

73. U. K. Mondal, E. McDuffie and M. A. Ilies, “Synthesis and evaluation of novel aromatic/heterocyclic sulfonamides as carbonic anhydrase inhibitors with selectivity for tumor-overexpressed isozymes”, TUSP Research Day, March 12, 2018.

72. U. Satyal, J. A. Shif, V. D. Sharma, M. A. Ilies, “Comparative Dynamic Stability of Polymeric Micelles Self-Assembled from Diblock PEG-PCL Copolymers and PEG-PBO-PCL Interface-Engineered Triblock Copolymers Against Enzymatic Systems from Blood and from Tissues”, TUSP Research Day, March 12, 2018.

71. R. Shvarzman, U. K. Mondal, M. A. Ilies, “Synthesis and structure-properties relationships of fluorescent probes with p-terphenyl core”, TU Undergraduate Research Symposium, October 6, 2017. (**Honorable mention**)

70. J. A. Shif, U. Satyal, V. D. Sharma, M. A. Ilies, “Dynamic enzymatic stability of PEG-PBO<sub>0,6,9</sub>PCL micelles as new drug delivery systems”, TU Undergraduate Research Symposium, October 6, 2017.

69. E. McDuffie, U. K. Mondal, M. A. Ilies, “Synthesis and characterization of novel ureido-aromatic/heterocyclic sulfonamides as carbonic anhydrase inhibitors”, TU Undergraduate Research Symposium, October 6, 2017. (**2<sup>nd</sup> Prize**)

68. N. Lemon, R. K. K. Sanku, A. M Chong, M. A. Ilies, E. A. Walker, “Profiling a Novel Series of Carbonic Anhydrase Activators in Mouse Memory Assays”, TU Undergraduate Research Symposium, October 6, 2017.

67. A. M. Shabana, Md. R. Alam, T. Spoon, M. A. Ilies, “Targeting carbonic anhydrase IX enhances the cellular uptake and cytotoxicity of PEGylated liposomal doxorubicin in ovarian cancer cells”, TUSP Research Day, February 17<sup>th</sup>, 2017;

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66. J. Douek, B. Lu, M. A. Ilies, R. K. K. Sanku, E. A. Walker, "Effects of Novel Carbonic Anhydrase Activator on Memory in Mice Using Novel Object Recognition Testing", TUSP Research Day, February 17<sup>th</sup>, 2017;
65. Q. Zhang, U. Satyal, B. Draghici, M. A. Ilies, "Pyridinium pseudo-gemini surfactants as efficient siRNA and mRNA delivery systems", TUSP Research Day, February 17<sup>th</sup>, 2017;
64. R. K. K. Sanku, B. Draghici, Y. Pan, M. A. Ilies, E. A. Walker, "Novel Lipophilic Carbonic Anhydrase Activators Protect Mice from Recognition Memory Deficits Produced by Scopolamine", TUSP Research Day, February 17<sup>th</sup>, 2017;
63. U. K. Mondal, S. Akocak, C. T. Supuran, M. A. Ilies, "Structure-activity and structure-fluorescence property relationships in a series of carbonic anhydrase inhibitors as potential colon cancer theranostic agents", TUSP Research Day, February 17<sup>th</sup>, 2017;
62. Z. Lu, Y. Yang, R.-A. Covington, V. Bi, T. Dürig, M. A. Ilies, R. Fassihi, "Supersaturated controlled release (CR) matrix for delivery of BCS Class-II drug: Amorphous Glipizide", TUSP Research Day, February 17<sup>th</sup>, 2017;
61. U. Satyal, V. D. Sharma, S. Vildbaum, X. Zhu, B. B. Wayland, Marc A. Ilies, "Dynamic enzymatic stability of PEG45-PBO0,6,9-PCL62,58,53 micelles as new drug delivery systems", TUSP Research Day, February 17<sup>th</sup>, 2017;
60. U. Satyal, V. D. Sharma, S. Vildbaum, X. Zhu, B. B. Wayland, M. A. Ilies, "Self-assembled interfacial-engineered triblock copolymers with tuned hydrolytic stability as delivery systems for cancer therapeutics", TUSP-FELS-FCCC Drug Discovery and Development Retreat, Philadelphia, January 27, 2017;
59. R. K. K. Sanku, S. Akocak, Md. R. Alam, A. M. Shabana, D. Vullo, C. T. Supuran, M. A. Ilies, "Anti-tumor activity of polymeric carbonic anhydrase inhibitors", TUSP-FELS-FCCC Drug Discovery and Development Retreat, Philadelphia, January 27, 2017;
58. A. M. Shabana, Md. R. Alam, T. Spoon, M. A. Ilies, "Targeting carbonic anhydrase IX enhances the cellular uptake and cytotoxicity of PEGylated liposomal doxorubicin in ovarian cancer cells", TUSP-FELS-FCCC Drug Discovery and Development Retreat, Philadelphia, January 27, 2017;
57. T. Spoon, A. M. Shabana, Md. R. Alam, C. A. Ross, M. A. Ilies, "Carbonic anhydrase inhibitor - functionalized gold nanoparticles control the viability of hypoxic tumors", TUSP-FELS-FCCC Drug Discovery and Development Retreat, Philadelphia, January 27, 2017;
56. U. K. Mondal, B. Draghici, J. P. Musco, D. Vullo, C. T. Supuran, M. A. Ilies, "Design and synthesis of novel bis-imidazoles with aliphatic and aromatic backbones as potent and fluorescent carbonic anhydrase activators", TUSP-FELS-FCCC Drug Discovery and Development Retreat, Philadelphia, January 27, 2017;

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55. T. Spoon, A. M. Shabana, Md. R. Alam, C. A. Ross, M. A. Ilies, “Carbonic anhydrase inhibitor - functionalized gold nanoparticles control the viability of hypoxic tumors”, TU Undergraduate Research Symposium, September 17<sup>th</sup> 2016 (**Finalist in poster session out of 67 participants, awarded III<sup>rd</sup> prize**).
54. U. Satyal, B. Draghici, L. L. Dragic, Q. Zhang, K. W. Noris, Marc A. Ilies, “Controlling the physicochemical and self-assembling properties of novel pyridinium pseudo-gemini surfactants at molecular level for efficient delivery of DNA, siRNA and mRNA”, TUSP Research Day, February 19<sup>th</sup>, 2016.
53. U. K. Mondal, B. Draghici, J. Musco, C. T. Supuran, M. A. Ilies, “Exploring different synthetic strategies for the synthesis of aliphatic and aromatic bis-imidazoles for carbonic anhydrase activation”, TUSP Research Day, February 19<sup>th</sup>, 2016.
52. B. Klar, M. Panthrose, R. K. K. Sanku, Y. Jiao, E. A. Walker, M. A. Ilies, “Establishing the novel object recognition test for mice to test novel carbonic anhydrase activators”, TUSP Research Day, February 19<sup>th</sup>, 2016.
51. M. Salkovitz, B. Draghici, R. K. K. Sanku, E. A. Walker, M. A. Ilies, “Acetazolamide’s detrimental effects on memory are partially reversed with novel carbonic anhydrase activator BD117 in mice”, TUSP Research Day, February 19<sup>th</sup>, 2016.
50. Z. Lu, S. Jamzad, U. Satyal, M. A. Ilies, R. Fassihi, “Deficiency in discriminatory effect of USP-34 dissolution monograph on immediate release fenofibrate tablets having different particle sizes”, TUSP Research Day, February 19<sup>th</sup>, 2016.
49. U. Satyal, B. Draghici, M. A. Ilies, “Efficient synthetic DNA delivery systems based on novel biodegradable pyridinium cationic lipids”, TUSP Research Day, February 19<sup>th</sup>, 2016.
48. S. Akocak, Md. R. Alam, H. Thompson, C. T. Supuran, M. A. Ilies, “PEG-conjugated Aromatic and Heterocyclic Sulfonamides as Potent Carbonic Anhydrase Inhibitors with Potential Anti-tumor Activity”, TUSP Research Day, February 19<sup>th</sup>, 2016.
47. R. K. K. Sanku, B. Draghici, U. Satyal, E. A. Walker and M. A. Ilies, “Effects of efficient carbonic anhydrase activation on learning and memory in mice”, TUSP Research Day, February 19<sup>th</sup>, 2016.
46. O. O. Karakus, R. K. K. Sanku, M. A. Ilies “Comparative toxicity of several nanocarriers for drug delivery”, TUSP Research Day, February 19<sup>th</sup>, 2016.
45. A. M. Shabana, Md. R. Alam, M. A. Ilies “Formulation development of novel carbonic anhydrase - targeted stealth liposomal doxorubicin for ovarian cancer treatment”, TUSP Research Day, February 19<sup>th</sup>, 2016.
44. S. Vildbaum, U. Satyal, M. A. Ilies “Hydrolytic degradation of polymeric nanomicelles: Exploring the impact of enzyme catalysts and their structure”, TU

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Undergraduate Research Symposium, September 17<sup>th</sup> 2015 (**Finalist in poster session, ranked 5<sup>th</sup> out of 67 participants**).

43. R. Adelberg, A. Shabana, M. A. Ilies “Evaluation of CAIX overexpression as a marker of hypoxic tumors”, TU Undergraduate Research Symposium, September 17<sup>th</sup> 2015.
42. J. Musco, B. Draghici, U. Mondal, M. A. Ilies “Design and Synthesis of Novel Bis-Imidazole Carbonic Anhydrase Activators as Potential Nootropics”, TU Undergraduate Research Symposium, September 17<sup>th</sup> 2015.
41. A. M. Shabana, S. Akocak, M. A. Ilies “Liposomal formulations for topical delivery of lipophilic carbonic anhydrase inhibitors”, TUSP Research Day, February 20<sup>th</sup> 2015.
40. Rajesh K. K. Sanku, S. Akocak, M. A. Ilies “Anti-tumor activity of carbonic anhydrase inhibitors” TUSP Research Day, February 20<sup>th</sup> 2015.
39. S. Akocak, MR. Alam, H. Thompson, C. T. Supuran, M. A. Ilies “Aromatic and heterocyclic (bis-)sulfonamides as potent carbonic anhydrase inhibitors with potential anti-tumor activity” TUSP Research Day, February 20<sup>th</sup> 2015.
38. B. Draghici, U. K. Mondal, M. A. Ilies “Carbonic Anhydrase Activation and Isozyme Selectivity Studies with a Series of Aromatic Bis-imidazoles” TUSP Research Day, February 20<sup>th</sup> 2015.
37. V. D. Sharma, U. Satyal, H. Nguyen, M. A. Ilies “Formulation development of pyridinium cationic lipid-DNA complexes and its impact on lipoplexes physicochemical properties” TUSP Research Day, February 20<sup>th</sup> 2015.
36. M. D. Salkovitz, B. Draghici, M. A. Ilies, E. A. Walker “Carbonic Anhydrase Activators: Testing for learning or memory enhancement”, TUSP Research Day, February 20<sup>th</sup> 2015.
35. M. Fouch, S. Akocak, M. A. Ilies “Lipophilic carbonic anhydrase inhibitors”, Temple Undergraduate Research Symposium, September 18<sup>th</sup> 2014.
34. V. D. Sharma, J. Lees, N. E. Hoffman, M. Madesh, S. L. Wunder, M. A. Ilies, “Modulation of pyridinium lipoplex properties by pyridinium gemini surfactants”, TUSP Research Day, February 24<sup>th</sup> 2014. (**2<sup>nd</sup> Prize, graduate students section**)
33. A. Shabana, M. A. Ilies, “Liposomal formulations of lipophilic carbonic anhydrase inhibitors”, TUSP Research Day, February 24<sup>th</sup> 2014. (**3<sup>rd</sup> Prize, graduate students section**)
32. B. Draghici, U. K. Mondal, M. A. Ilies, “Structure-activity relationships in a series of amphiphilic imidazoles with carbonic anhydrase activation properties”, TUSP Research Day, February 24<sup>th</sup> 2014.

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31. H. Nguyen, U. Satyal, V. D. Sharma, M. A. Ilies, "Influence of pyridinium cationic lipoplex generation on lipoplex properties", TUSP Research Day, February 24<sup>th</sup> 2014.
30. S. Akocak, D. Vullo, S. Isik, C. T. Supuran, M. A. Ilies, "Selective Carbonic Anhydrase Inhibitors as Theranostic Probes for Hypoxic Tumors", TUSP Research Day, February 24<sup>th</sup> 2014.
29. J. Lees, V. D. Sharma, M. A. Ilies, "Stability of cationic lipid-DNA complexes under static and dynamic conditions: Lipoplex compaction enhancement by gemini surfactants: Lipoplex compaction enhancement by gemini surfactants", TUSP Research Day, February 25<sup>th</sup> 2013.
28. S. Akocak, C. T. Supuran, M. A. Ilies "Efficient carbonic anhydrase inhibitors with tuned membrane permeability", TUSP Research Day, February 25<sup>th</sup> 2013.
27. V. D. Sharma, X. Zhu, B. B. Wayland, M. A. Ilies "Enzymatic degradation of PEG-PCL diblock copolymer micelles via esterases: the impact of hydrophilic/hydrophobic interface", TUSP Research Day, February 25<sup>th</sup> 2013.
26. J. Lees, M. A. Ilies, "Stability of cationic lipid-DNA complexes under static and dynamic conditions: Lipoplex compaction enhancement by gemini surfactants", Temple Undergraduate Research Program – Research Symposium, September 21, 2012
25. V. D. Sharma, E. A. Aifuwa, M. A. Ilies, "Interfacial engineering of pyridinium gemini surfactants in novel synthetic transfection systems with enhanced efficiency" 4<sup>th</sup> Annual Temple University Graduate Fellows Research Symposium, September 15, 2012
24. A. Kizewski, M. A. Ilies, "Gold nanoparticles-mediated gene delivery via surface charge reversal with pyridinium amphiphiles" TU School of Pharmacy Research Day, February 24, 2012
23. J. Burmeister, M. A. Ilies, E. A. Walker, "Carbonic anhydrase activation in the brain: Enhancement in memory and recognition?" TU School of Pharmacy Research Day, February 24, 2012
22. K. Thompson, V. D. Sharma, M. A. Ilies, "Self-assembling properties of novel pyridinium amphiphiles for gene delivery" TU School of Pharmacy Research Day, February 24, 2012
21. L. L. Dragic, M. A. Ilies, "Novel pyridinium lipoplexes for nucleic acid delivery – a formulation and stability study" TU School of Pharmacy Research Day, February 24, 2012
20. S. Akocak, M. A. Ilies, "Pyridinium benzolamide derivatives for cancer detection and treatment" TU School of Pharmacy Research Day, February 24, 2012

## Curriculum Vitae

19. V. D. Sharma, E. A. Aifuwa, M. A. Ilies, "Structure-activity relationships in a series of pyridinium gemini surfactants for gene delivery" TU School of Pharmacy Research Day, February 24, 2012
18. L. L. Dragic, M. A. Ilies, "Formulation and testing of a novel pyridinium cationic lipid for nucleic acid delivery" Temple Undergraduate Research Program – Research Symposium, September 29<sup>th</sup>, 2011
17. V. D. Sharma, E. O. Aifuwa, M. A. Ilies, "Pyridinium gemini surfactants: Synthesis, self-assembling, and physicochemical properties" Temple Annual Graduate Fellows Research Symposium, September 10, 2011
16. S. Akocak, C. T. Supuran, M. A. Ilies, "Pyridinium-sulfonamides as efficient inhibitors of carbonic anhydrases" Temple Annual Graduate Fellows Research Symposium, September 10, 2011
15. A. P. Gaspari, M. A. Ilies, "Cholesteryl-pyridinium cationic lipoplexes: formation, stability, and physicochemical characteristics" TU School of Pharmacy Research Day, February 25, 2011
14. A. Kizewski, M. A. Ilies, "Functionalized gold nanoparticles for endocytosis studies" TU School of Pharmacy Research Day, February 25, 2011 (*2<sup>nd</sup> Prize in Undergraduate Research Section*)
13. S. Akocak, M. A. Ilies, "Pyridinium-sulfonamides as efficient inhibitors of carbonic anhydrases" TU School of Pharmacy Research Day, February 25, 2011
12. V. D. Sharma, M. A. Ilies, "Impact of chain length and counterion on self-assembling of pyridinium gemini surfactants" TU School of Pharmacy Research Day, February 25, 2011
11. A. Nguyen, D. Javia, S. L. Wunder, M. A. Ilies, "An Optimized Synthesis and Purification of mPEG-PLA Amphiphilic Diblock Copolymers" TU School of Pharmacy Research Day, February 19, 2010
10. E. O. Aifuwa, M. A. Ilies, "Lipophilic Pyrylium Salts in the Synthesis of Pyridinium-Based Gemini Surfactants for Gene Delivery" TU School of Pharmacy Research Day, February 19, 2010
9. H. Xu, S. L. Wunder, M. A. Ilies, "Towards PEGylated Carbonic Anhydrase Inhibitors - a Synthetic Study" TU School of Pharmacy Research Day, February 19, 2010
8. K. W. Norris, M. A. Ilies, "New Pyridinium Cationic Lipids with Programmed Biodegradability for Gene Delivery" TU School of Pharmacy Research Day, February 19, 2010

## Curriculum Vitae

7. Li Ching He, M. A. Ilies, "Pyridinium Cationic Surfactants: Self-Assembling and Biological Properties" TU School of Pharmacy Research Day, February 19, 2010 (*1<sup>st</sup> Prize in Undergraduate Research Section*)
6. S. Savarala, S. L. Wunder, M. A. Ilies "Counterion influence on the physicochemical characteristics and transfection efficiency in a series of pyridinium cationic lipid-based lipoplexes", TU School of Pharmacy Research Day, February 19, 2010
5. O. Chikwendu, M. A. Ilies "Modulation of polar head hydration and its influence on the transfection efficiency in a series of pyridinium amphiphiles for gene delivery", TU School of Pharmacy Research Day, February 19, 2010
4. Khyati Dave, C. Temperini, A. Scozzafava, C. T. Supuran, M. A. Ilies "Pyridinium derivatives of histamine as novel carbonic anhydrase activators", TU School of Pharmacy Research Day, November 7, 2008
3. Obioma Chikwendu, M. A. Ilies "Novel cholesteryl-pyridinium cationic lipids for gene delivery: physico-chemical characteristics, liposome formulation and properties", TU School of Pharmacy Research Day, November 7, 2008
2. Dushyant Javia, Obioma Chikwendu, Stephanie L. Wunder, M. A. Ilies "Synthesis, characterization and self-assembling properties of PEG-PLA amphiphilic diblock copolymers of different molecular weights", TU School of Pharmacy Research Day, November 7, 2008
1. Sushma Savarala, Stephanie L. Wunder, M. A. Ilies "Progress towards a gene delivery system based on templated self-assembly of synthetic amphiphiles by inorganic nanoparticles", TU School of Pharmacy Research Day, November 7, 2008

## F. International Conferences and Congresses

- **Oxford, UK (1995):** V<sup>th</sup> International Congress On Carbonic Anhydrases;
- **Brasov, Romania (1995):** The International Congress on Nuclear Magnetic Resonance;
- **Lille, France (1996):** "Journées Francophones des Jeunes Physico - Chimistes";
- **Brasov, Romania (1997):** International Conference on Imaging NMR Spectrometry;
- **Neptun, Romania (1998):** "Modern Spectrometric Techniques in Biophysics";
- **Halkidiki, Greece (1999):** First International Conference of Balkans' National Chemical Societies;
- **Calimanesti-Caciulata, Romania (1999):** XXVth National Chemical Conference (with international participation);
- **Calimanesti-Caciulata, Romania (2000):** XXVIth National Chemical Conference with international participation
- **Boston, MA (2001):** Drug Discovery Technology 2001;
- **Houston, TX (2001):** The Welch Conference 2001;
- **Galveston, TX (2002):** Symposium of Structural Biology 2002;
- **Houston, TX (2002):** The Keck/GCC 2002 Bioinformatics Symposium;
- **Santa Clara, CA (2002):** Biophex/Interphex 2002;
- **Houston, TX (2002):** The Welch Conference 2002;

## Curriculum Vitae

- **New Orleans, LA (2003):** 225<sup>th</sup> ACS National Meeting;
- **Galveston, TX (2003):** Symposium of Structural Biology 2003;
- **Houston, TX (2003):** The Welch Conference 2003;
- **Anaheim, CA (2004):** 227<sup>th</sup> ACS National Meeting;
- **Galveston, TX (2004):** Symposium of Structural Biology 2004;
- **Minneapolis, MN (2004):** American Society of Gene Therapy's 7<sup>th</sup> Annual Meeting;
- **Philadelphia, PA (2004):** 228<sup>th</sup> ACS National Meeting;
- **St. Louis, MO (2005):** American Society of Gene Therapy's 8<sup>th</sup> Annual Meeting;
- **Baltimore, MA (2006):** American Society of Gene Therapy's 9<sup>th</sup> Annual Meeting;
- **Long Beach, CA (2007):** Controlled Release Society National Meeting;
- **Boston, MA (2007):** 234<sup>th</sup> ACS National Meeting;
- **Boston, MA (2008):** American Society of Gene Therapy's 11<sup>th</sup> Annual Meeting;
- **Philadelphia, PA (2008):** 236<sup>th</sup> ACS National Meeting;
- **Atlanta, GA (2008):** AAPS National Meeting;
- **Salt Lake City, UT (2009):** 237<sup>th</sup> ACS National Meeting;
- **Washington, DC (2009):** 238<sup>th</sup> ACS National Meeting;
- **San Francisco, CA (2010):** 239<sup>th</sup> ACS National Meeting.
- **Washington, DC (2010):** American Society of Gene and Cell Therapy's 13<sup>th</sup> Annual Meeting;
- **New Orleans, LA (2010):** AAPS National Meeting.
- **Anaheim, CA (2011):** 241<sup>st</sup> ACS National Meeting.
- **Denver, CO (2011):** 242<sup>nd</sup> ACS National Meeting
- **Washington, DC (2011):** AAPS National Meeting;
- **Antalya, TR (2012):** 9<sup>th</sup> International Conference on Carbonic Anhydrases
- **Philadelphia, PA (2012):** 15<sup>th</sup> American Society of Gene & Cell Therapy Annual Meeting
- **Philadelphia, PA (2012):** 244<sup>th</sup> ACS National Meeting
- **Chicago, IL (2012):** AAPS National Meeting
- **New Orleans, LA (2013):** 245<sup>th</sup> ACS National Meeting
- **Mount Snow, VT (2013):** Gordon Research Conference on Cancer Nanotechnology
- **Naples, IT (2013):** 2<sup>nd</sup> Satellite Carbonic Anhydrase Conference
- **San Francisco, CA (2014):** 248<sup>th</sup> ACS National Meeting
- **Waterville Valley, NH (2014):** Gordon Research Conference on Drug Carriers in Medicine & Biology
- **Denver, CO (2015):** 249<sup>th</sup> ACS National Meeting
- **Maastricht, The Netherlands (2015):** 10<sup>th</sup> International Carbonic Anhydrase Conference
- **Honolulu, HI (2015):** The International Chemical Congress of Pacific Basin Societies (Pacifichem).
- **San Diego, CA (2016):** 251<sup>st</sup> ACS National Meeting
- **Montreal, CA (2016):** 40<sup>th</sup> American-Romanian Academy of Arts and Sciences Congress
- **Waterville Valley (2016):** Gordon Research Conference on Drug Carriers in Medicine & Biology
- **Philadelphia, PA (2016):** 252<sup>nd</sup> ACS National Meeting
- **Denver, CO (2016):** AAPS National Meeting
- **San Francisco, CA (2017):** 253<sup>nd</sup> ACS National Meeting
- **Montecatini, IT (2017):** CA Satellite Conference



## Curriculum Vitae

- **Mount Snow, VT (2017):** Gordon Research Conference on Cancer Nanotechnology
- **Washington, DC (2017):** 254<sup>th</sup> ACS National Meeting
- **New Orleans, LA (2018):** 255<sup>th</sup> ACS National Meeting
- **Bucharest, Romania (2018):** 11<sup>th</sup> International Conference on Carbonic Anhydrases
- **Kitakyushu, Japan (2018):** 18<sup>th</sup> Symposium for Gene Design and Delivery
- **Philadelphia, PA (2018):** North American Thermal Analysis Society (NATAS) National Meeting
- **West Dover, VT (2018):** Gordon Research Conference on Drug Carriers in Medicine & Biology
- **Boston, MA (2018):** 256<sup>th</sup> ACS National Meeting
- **Orlando, FL (2019):** 257<sup>th</sup> ACS National Meeting
- **West Dover, VT (2019):** Gordon Research Conference on Cancer Nanotechnology
- **San Diego, CA (2019):** 258<sup>th</sup> ACS National Meeting

## SERVICE ACTIVITIES

### Intramural:

#### TU School of Pharmacy

- *Director of the TUSP NMR facilities* (created by a joint initiative TUSP & Provost's Office)
  - daily maintenance of our Bruker AVANCE III 400 MHz NMR (June 2009 – present)
- Curriculum Committee (2011)
- Disciplinary Committee (Nov 2010)
- Hiring/Search Committees for Medicinal Chemistry Associate Professor and Research Assistant Professor positions in TUSP (2010)
- Merit Committee (2009, 2011)
- Safety Committee (2009-present)
- 2010 Research Day Organizing Committee (Feb 2010)
- Teaching & Evaluation Committee (2008-present; 2011: I have evaluated my colleague Patrick McDonnell teaching for his promotion folder)
- Wyeth Lecture Series Committee (2007)
- Hiring/Search Committees for Medicinal Chemistry Associate Professor and Research Assistant Professor positions in TUSP
- Accreditation Committee for standards 24-26 (Faculty and Staff Quantitative and Qualitative Factors, Continuing Professional Development and Performance Review)
- PY4 Focus Group facilitator (2012) - generated feed-back from the PharmD students on what they think about PharmD curriculum once they have completed the program
- Task Force for Graduate Curriculum improvement (2011, 2012)
- PharmD class of 2016 faculty advisor (TUSP Class of 2016 ranked 1<sup>st</sup> on Eastern Seaboard in NAPLEX average score)
- Faculty interviewer for incoming Pharm. D. candidates

#### Temple University

- Internal PhD thesis evaluator:
  - Rajesh Raman Madathingal, (Adviser Stephanie Wunder PhD, Temple CST-Chemistry)
  - Selver Ahmed (Adviser Stephanie L. Wunder PhD, Temple CST-Chemistry)

## Curriculum Vitae

- Sivakumar Annadurai (Adviser Daniel J. Canney PhD, Temple Pharmaceutical Sciences, TUSP)
  - Sushma Savarala (Adviser Stephanie L. Wunder PhD, Temple CST-Chemistry)
  - Swapnil Singh (Adviser Scott Sieburth PhD, Temple CST-Chemistry)
  - Manali Phadke (Adviser Evgenyi Krinetzky PhD, Pharmaceutical Sciences, TUSP)
  - Richie Bhandare (Adviser Daniel J. Canney PhD, Pharmaceutical Sciences, TUSP)
  - Bharat S. Wagh (Adviser Rodrigo Andrade PhD, Temple CST-Chemistry)
  - Jelena Drazenovic, (Adviser Stephanie Wunder PhD, Temple CST-Chemistry)
  - Suzan Owaisat (Adviser David Lebo PhD, Pharmaceutical Sciences, TUSP)
  - Kaining Zhi (Adviser David Lebo PhD, Pharmaceutical Sciences, TUSP)
  - Zheng Lu (Adviser Reza Fassihi PhD, Pharmaceutical Sciences, TUSP)
  - Qiangnan Zhang (Adviser Reza Fassihi PhD, Pharmaceutical Sciences, TUSP)
  - Sanaz Bandegi (Adviser Stephanie L. Wunder, Temple CST – Chemistry)
- Preliminary PhD Exam/PhD Committee member:
- Manali Phadke (Adviser Evgeny Krynetzkiy PhD, Pharmaceutical Sciences, TUSP)
  - Sivakumar Annadurai (Adviser Daniel J. Canney PhD, Pharmaceutical Sciences, TUSP)
  - Richie Bhandare (Adviser Daniel J. Canney PhD, Pharmaceutical Sciences, TUSP)
  - Seth Forster (Adviser Ho-Lun Wong PhD, Pharmaceutical Sciences, TUSP)
  - Amit Bansal (Adviser David Lebo PhD PharmD, Pharmaceutical Sciences, TUSP)
  - Suzan Owaisat (Adviser David Lebo PhD PharmD, Pharmaceutical Sciences, TUSP)
  - Peter Freed (Adviser David Lebo PhD, Pharmaceutical Sciences, TUSP)
  - Zheng Lu (Adviser Reza Fassihi PhD, Pharmaceutical Sciences, TUSP)
  - Kaining Zhi (Adviser David Lebo PhD, Pharmaceutical Sciences, TUSP)
  - Connor Quinn (Adviser Salim Merali PhD, Pharmaceutical Sciences, TUSP)
  - Md. Hridoy (Adviser TBD, Pharmaceutical Sciences, TUSP)
- Pharmacy/Chemistry Intercollegial “Bridging the Broad Street” Research Seminar Program (2007-present, with Dr. Jonathan Shackman, CST-Chemistry)
- 2012 Temple Annual Graduate Fellows Symposium Faculty Discussant
- 2013, 2014, 2015, 2016, 2017, 2018 Temple Undergraduate Research Program Symposium Judge

### Extramural:

- reviewer for *Proceedings of the National Academy of Sciences of USA* (National Academy of Sciences), *Journal of The American Chemical Society*, *Journal of Medicinal Chemistry*, *ACS Macro Letters*, *ACS Medicinal Chemistry Letters*, *ACS Nano*, *Biomacromolecules*, *Journal of Chemical Information and Modeling*, *ACS Biomaterials Science & Engineering*, *ACS Combinatorial Science*, *ACS Medicinal Chemistry Letters*, *Langmuir*, *Molecular Pharmaceutics* (ACS), *Biomaterials*, *Bioorganic & Medicinal*

## Curriculum Vitae

*Chemistry, Bioorganic & Medicinal Chemistry Letters, Chemistry – A European Journal, Colloids and Surfaces B: Biointerfaces, Journal of Inorganic Biochemistry, Tetrahedron Letters* (Elsevier), *Advanced Functional Materials, Medicinal Research Reviews, Chemical Biology and Drug Design, Journal of Pharmaceutical Sciences, Macromolecular Bioscience* (Wiley Interscience), *RCS Advances, Organic and Biomolecular Chemistry, MedChemComm, ChemComm, Molecular BioSystems, Soft Matter, Journal of Materials Chemistry B, Polymer Chemistry Biomaterials Science* (Royal Society of Chemistry), *Journal of Carbohydrate Chemistry, Journal of Enzyme Inhibition and Medicinal Chemistry, Expert Opinion on Therapeutic Patents* (Taylor & Francis), *Current Medicinal Chemistry, Current Topics in Medicinal Chemistry, Current Enzyme Inhibition, Anti-Infective Agents in Medicinal Chemistry* (Bentham Sciences), *Synlett* (Thieme), *Research on Chemical Intermediates, Structural Chemistry, Colloid & Polymer Science* (Springer Verlag), *Arkivoc* (Arkat USA), *Marine Drugs* (MDPI) and *Future Medicine* (Future Science) journals;

- Voluntary consultant for Royal Society of Chemistry Roadmap;
- Faculty of 1000 reviewer (Pharmacology and Drug Discovery) one evaluation done with graduate student Suleyman Akocak ranked number 8 in the “Pharmacology & Drug Discovery Hidden Jewels Top 10”
- Grant reviewer:
  - Research Corporation for Science Advancement, Tucson, AZ - Cottrell College Science Award Applications,
  - Oak Ridge Institute for Science and Education,
  - Natural Sciences and Engineering Research Council of Canada (NSERC).
  - Polish National Science Foundation
  - National Institutes of Health (NIH)
  - Israel Science Foundation (ISF)
  - Istituto Pasteur Italia - Fondazione Cenci Bolognetti
- External book reviewer for American Society of Health-System Pharmacists-Acquisitions and Special Publishing Department (book “Concepts in Medicinal Chemistry”).
- External (international) PhD thesis evaluator:
  - Leo Syrjänen - Adviser Seppo Parkkila, University of Tampere, Finland, 2015
  - Kanae Teruya - Adviser Sally-Ann Poulsen, Griffith University, Australia, 2016

## Editorial Activity

- Associate Editor for the U.S. for *Current Enzyme Inhibition* (Bentham Science), Impact Factor 2016:
- Member of the editorial board for:
  - *Journal of Enzyme Inhibition and Medicinal Chemistry* (Taylor & Francis), – Impact Factor 2016: 4.293 <http://informahealthcare.com/enz>,
  - *Expert Opinion on Therapeutic Patents*, (Taylor & Francis) Impact Factor 2016: 2.87 <http://www.tandfonline.com/toc/ietp20/current>
  - *International Journal of Molecular Sciences* (MDPI), Impact Factor 2017: 3.69 (Editor in Biochemistry, Molecular and Cellular Biology Section) <http://www.mdpi.com/journal/ijms/sectioneditors/biochemistry>

## Curriculum Vitae

- *Anti-Cancer Agents in Medicinal Chemistry*, (Bentham Science), Impact Factor 2017: 2.56 (5 Year IF = 2.63)
- *Medicinal Chemistry Open Access*, (Omics Publishing Group), Impact Factor 2016: 1.18 (5 Year IF = 1.91)
- *Journal of Clinical and Experimental Pharmacology* (Omics Publishing Group), Impact Factor 2016: 1.75

- Editor, ACS Symposium Books for book “Control of Amphiphile Self-Assembling at the Molecular Level: Supramolecular Assemblies with Tuned Physicochemical Properties for Delivery Applications”, American Chemical Society: Washington, DC, 2017

- Editor, (with K. Sakurai), ACS Symposium Book for book “Targeted Nanosystems for Therapeutic Applications: New Concepts, Dynamic Properties, Efficiency, and Toxicity”, ACS Books & Oxford University Press, American Chemical Society: Washington, DC, 2019.

### Symposium/meeting organizer

- 2019            258th ACS National Meeting & Exposition, August 25-29, 2019, San Diego, CA, Division of Colloid and Surface Chemistry: “Formulation strategies to control the physicochemical parameters of drug and nucleic acid delivery systems” Symposium (co-organized with Professor Kazuo Sakurai, University of Kitakyushu, Japan, 4 days, 40 speakers)
- 2018            256th ACS National Meeting & Exposition, August 19-23, 2018, Boston, MA, Division of Colloid and Surface Chemistry: “Synthetic self-assembled systems for drug and nucleic acid delivery: new materials, formulation strategies, targeting, toxicity and regulatory issues” Symposium (co-organized with Professor Kazuo Sakurai, University of Kitakyushu, Japan, 5 days, 42 speakers)
- 2018            North American Thermal Analysis Society (NATAS) National Meeting, Philadelphia, PA, August 6-9, 2018: Pharmaceutics track (co-organized with Dr. Rachel Forcino, GSK)
- 2018            11<sup>th</sup> International Conference on Carbonic Anhydrase, Bucharest, Romania, June 27-30, 2018 (co-organized the whole international meeting, comprising about 90 participants from all over the world, with Drs. Supuran, Barboiu, Parvulescu)
- 2017            254<sup>th</sup> ACS National Meeting, Washington, DC, August 20-24, Division of Colloid and Surface Chemistry: “Targeted Nanosystems for Therapeutic Applications: New Concepts, Dynamic Properties, Efficiency and Toxicity” (co-organized with Professor Kazuo Sakurai, University of Kitakyushu, Fukuoka, Japan, 3-day session, 36 speakers)
- 2016            252<sup>nd</sup> ACS National Meeting, Philadelphia, PA, August 21-25, Division of Colloid and Surface Chemistry: “Control of Amphiphile Self-Assembling at the Molecular Level: Supramolecular Assemblies with Tuned

## Curriculum Vitae

Physicochemical Properties for Delivery Applications” (1 day session, with 2 sub-sessions, 13 speakers)

2016 TAFDV Spring Symposium 2016 - Thermal Analysis Research in the Delaware Valley: a bio/nano/materials interface, Temple University, April 13, 2016 (co-organized with Dr. Stephanie L. Wunder, TU-CST Chemistry).