

CURRICULUM VITAE

SHIZUE MITO, Ph.D.

Assistant Professor

Department of Chemistry at University of Texas Rio Grande Valley

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PROFESSIONAL PREPARATION

| <u>College/University</u> | <u>Location</u> | <u>Major</u> | <u>Degree & Year</u> |
|---------------------------|-----------------|-------------------------|--------------------------------|
| Osaka University | Osaka, JAPAN | Pharmaceutical Sciences | B.S., 1993 |
| Osaka University | Osaka, JAPAN | Pharmaceutical Sciences | M.S, 1995 |
| Hokkaido University | Sapporo, JAPAN | Pharmaceutical Sciences | Ph.D, 2004 |
| Kyoto University | Kyoto, JAPAN | Chemistry | Postdoctoral fellow, 2004-2005 |
| Harvard University | Cambridge, MA | Chemistry | Postdoctoral fellow, 2005-2008 |

ACADEMIC/PROFESSIONAL APPOINTMENTS

| | | |
|---------------------------------------|---------------------|---------------|
| University of Texas Rio Grande Valley | Assistant Professor | 2015- present |
| University of Texas at El Paso | Assistant Professor | 2008- 2015 |
| Toray Research Center | Research Scientist | 1995-2001 |
| Toyonaka Watanabe Hospital | Pharmacist | 1993-1995 |

CERTIFICATIONS

Pharmacist (Valid in Japan, May 1993 – present)

PROFESSIONAL AFFILIATION

The Chemical Society of Japan (2001 – present)
American Chemical Society (2005 – present)
Society of Synthetic Organic Chemistry Japan (2008 – present)
Sigma Xi, Full Member (2009 – present)
Pharmaceutical Society of Japan (1993 – 1996)
Japan Society for Analytical Chemistry (1995 – 2001)

AWARDS AND SCHOLARSHIPS

- The Best Mentor Award, the UTEP COURI Symposium Spring 2014.
- Full member Sigma Xi, 2009 University of Texas System, Faculty Science and Technology Acquisition and Retention (STARs) Award Faculty, 2008
- Naito Foundation Scholarship for overseas study, 2005
- Award for the Best Discussion, the 15th Sapporo Symposium, Sapporo, Japan 2003

Thesis Advisor and Postgraduate Scholar Sponsors

Total Number of Graduate Students advised: 5

Total Number of Postdoctoral Scholars Sponsored: 0

PUBLICATIONS

Independent works

- 1) "Niclosamide induces protein ubiquitination and inhibits multiple pro-survival signaling pathways in the human glioblastoma U-87 MG cell line." Cheng, B., Morales, L. D., Zhang, Y., Mito, S., Tsin, A. *PLoS ONE*, **2017**, 12(9), e0184324.
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0184324>
10.1371/journal.pone.0184324
- 2) "Ultrasound assisted one-pot synthesis of benzo-fused indole-4,9-diones from 1,4-naphthoquinone and α -aminoacetals." Quang H. Luu, Jorge D. Guerra, Cecilio M. Castañeda, Manuel A. Martinez, Jong Saunders, Benjamin A. Garcia, Brenda V. Gonzales, Anushritha Aidunuthula, and Shizue Mito; *Tetrahedron Lett.* **2016**, 57, 2253.
- 3) "Preparation of indolequinones and their applications in organic synthesis" Quang H. Luu, Shizue Mito; *Tetrahedron*, **2015**, 71, 895-916.
- 4) "The Cytotoxic Effect of 2-Acylated-1,4-Naphthohydroquinones on Leukemia/Lymphoma Cells." Diego A. Pedroza, Fernando De Leon, Armando Varela-Ramirez, Carolina Lema, Renato J. Aguilera and Shizue Mito; *Bioorg. Med. Chem.* **2014**, 22, 842.
- 5) "Synthesis of 6-Acyl-5,8-quinolinediols by Photo-Friedel-Crafts Acylation Using Sunlight." Fernando De Leon, Sudhakar Kalagara, Ashley A. Navarro and Shizue Mito; *Tetrahedron Lett.* **2013**, 54, 3147.

Postdoc/Graduate/Undergraduate works

- 6) "Scope and Mechanism of Enantioselective Michael Additions of 1,3-Dicarbonyl Compounds to Nitroalkenes Catalyzed by Nickel(II) Chiral Diamine Complexes." David A. Evans, Shizue Mito and Daniel Seidel; *J. Am. Chem. Soc.* **2007**, 129, 11583.
- 7) "Reactions of Zirconocene-Alkyne Complexes with $\text{Mo}(\text{CO})_6$." Shizue Mito, Lishan Zhou, Chanjuan Xi and Tamotsu Takahashi; *Chem. Lett.* **2006**, 35, 122.
- 8) "Double Carbonylation of Zirconocene-Alkyne Complexes." Shizue Mito and Tamotsu Takahashi; *Chem. Commun.* **2005**, 2495.
- 9) "CO Insertion Reaction of Zirconacyclopentadienes." Zhenfeng Xi, Hong-Tao Fan, Shizue Mito and Tamotsu Takahashi; *J. Organomet. Chem.* **2003**, 682, 108.
- 10) "One-pot Synthetic Routes to Multiply Substituted Indene Derivatives by Hydrolysis of Zirconocene-Mediated Intermolecular Coupling Reactions of Aromatic Ketones and Alkynes." Zhenfeng Xi, Ruiyun Guo, Shizue Mito, Hongliang Yan, Ken-ichiro Kanno, Kiyohiko Nakajima and Tamotsu Takahashi, *J. Org. Chem.* **2003**, 68, 1252.
- 11) "Radical Cycloaddition by Ni(II) Complex-Catalyzed Electroreduction. A Method for Preparation of Pyrrolopyridine and Pyrrolopyrrole Derivatives." Shigeo Ozaki, Shizue Mito and Hidenobu Ohmori; *Chem. Pharm. Bull.* **1996**, 44, 2020.
- 12) "Indirect Electroreductive Sequential Radical Reaction Catalyzed by a Ni(II) Complex. One-Step Preparation of Functionalized (Methylene)-cyclopentanes." Shigeo Ozaki, Shizue Mito, Hidenobu Ohmori; *Chem. Pharm. Bull.* **1995**, 43, 1435.
- 13) "Hypervalent Iodine-Introduced Nucleophilic Substitution of *para*-Substituted Phenol Ethers. Generation of Cation Radicals as Reactive Intermediates." Yasuyuki Kita, Hirofumi Tohma, Kenji Hatanaka, Takeshi Takada, Shigekazu Fujita, Shizue Mito, Hiromu Sakurai and Shigenori Oka; *J. Am. Chem. Soc.* **1994**, 116, 3684.
- 14) "A Novel and Direct Alkyl Azidation of *p*-Alkylanisoles Using Phenyl Iodine(III) Bis (Trifluoroacetate) (PIFA) and Trimethylsilyl Azide." Yasuyuki Kita, Hirofumi Tohma, Takeshi Takada, Shizue Mito, Shigekazu Fujita and Michiyo Gyoten; *Synlett* **1994**, 427.

RELATED ESSAY

- 1) Shizue Mito "Difficulties Brought Me Good Fortune" *Chemistry & Chemical Industry (Kagaku-to-Kogyo)*, **2010**, 63, 351.
- 2) Shizue Mito "Evans Group: Paradise for Young Chemists!" *Organometallic News, Japan*, **2006**, 134-135.

PRESENTATIONS

Independent works

- 1) "Formal synthesis of Syringolide1." Shizue Mito, Sudhakar Kalagara, Gabriel Orozco, *The 256th ACS National Meeting*; Boston MA. USA, August **2018**.
- 2) "Synthesis and structure –activity relationship study of niclosamide derivatives in protein ubiquitination and prosurvival signaling pathways in the human glioblastoma cells" Shizue Mito, Benjamin A. Garcia, Liza D Morales, Yonghong Zhang, Benxu Cheng: *The UTRGV SoM Inaugural Research Symposium*, August **2017**.
- 3) "One-pot synthesis of benzo-fused *p*-indolequinones from naphthoquinone" Shizue Mito, *The 252th ACS National Meeting*; Philadelphia, PA, USA, August **2016**.
- 4) "One-pot synthesis of α -amino acid using CO₂ via zirconaadiridine" Shizue Mito, Susumu Oda, Yoon Ju Kim, Zachary Martinez; *The 248th ACS National Meeting*; San Francisco, CA, USA, August **2014**.
- 5) "Synthesis of hetrocycles by sunlight." Shizue Mito; ACS Southwest Regional Meeting. Waco, TX. November **2013**
- 6) "Transition metal mediated one-pot synthesis of amino acids from carbon dioxide" Yoon-Ju Kim, Susumu Oda, Diego Pedroza, Zachary Martinez and Shizue Mito; *43rd IUPAC World Chemistry Congress*, San Juan, Puerto Rico, August **2011**.
- 7) "Reactions of Early Transition metal Complexes with Carbon Dioxide." Shizue Mito, Zachary Martinez and Daniel Castillo; *65th Southwest Regional Meeting of the American Chemical Society*, El Paso, TX, USA, November **2009**.

Undergraduate, Graduate, industrial and Postdoctoral Work

- 1) "Scope and Mechanism of Enantioselective Michael Additions of 1,3-Dicarbonyl Compounds to Nitroalkenes Catalyzed by Nickel(II) Chiral Diamine Complexes." Shizue Mito, Daniel Seidel and David A. Evans; *The Tenth international Kyoto Conference on New Aspects of Organic Chemistry (IKCOC-10)*, Kyoto, Japan, November **2006**.
- 2) "Catalytic Enantioselective Michael Additions of 1,3-Dicarbonyl Compounds to Nitroalkenes." Shizue Mito, Daniel Seidel and David A. Evans; *Gordon Research Conference on Stereochemistry*, Newport, RI, USA, June **2006**.
- 3) "Palladium catalyzed allylation of nucleic acid bases with allyl alcohol in water." Shizue Mito, Hiroshi Shinokubo and Atsuhiko Osuka; *85th CSJ(The Chemical Society of Japan) National Spring Meeting*, Tokyo, Japan, March **2005**.
- 4) "Reaction of Dialkylzirconocene with Carbon Monoxide and Isonitrile." Shizue Mito, Kiyohiko Nakajima and Tamotsu Takahashi; *84th CSJ National Spring Meeting*, Nishinomiya, Japan, March **2004**.
- 5) "Reaction of Zirconocene Complexes with CO." Shizue Mito, Yanzhong Li, Kiyohiko Nakajima and Tamotsu Takahashi; *Hokkaido University Catalyst Research Center Relocate Celebration Symposium*, Sapporo, Japan, January **2004**.
- 6) "Reaction of Zirconocene Complexes with CO." Shizue Mito, Yanzhong Li, Zhenfeng Xi, Hong-Tao Fan and Tamotsu Takahashi; *53rd Annual Meeting of Japan Society of Coordination Chemistry, Yamagata*, Japan, September **2003**.
- 7) "Double Carbonylation of Zirconocene–Alkyne Complexes" Shizue Mito, Yanzhong Li and Tamotsu Takahashi; *2003 Hokkaido Division of CSJ Annual Summer Meeting*. Kitami, Japan, July **2003**.
- 8) "CO Insertion Reaction of Zirconacyclopentadienes." Shizue Mito, Hong-Tao Fan, Zhenfeng Xi and Tamotsu Takahashi; *83th CSJ National Spring Meeting*, Tokyo, Japan, March **2003**.
- 9) "CO Insertion Reaction of Zirconacyclopentadienes." Shizue Mito, Hong-Tao Fan, Zhenfeng Xi and Tamotsu Takahashi; *83rd CSJ National Spring Meeting*, Tokyo, Japan, March **2003**.
- 10) "One-pot Synthetic Routes to Maltiply Substituted Indene Derivatives by Hydrolysis of Zirconocene-Mediated Intermorecular Coupling Reactions of Alkynes." Shizue Mito, Ruiyun Guo, Zhenfeng Xi, Tamotsu Takahashi; *82nd CSJ National Spring Meeting*, Tokyo, Japan, March

2002.

- 11) "Reaction of Zirconaheterocycles with Propargyl Halide." Shizue Mito, Yanzhong Li and Tamotsu Takahashi; *2001 Hokkaido Division of CSJ Annual Summer Meeting*, Muroran, Japan, July **2001**.
- 12) "The Influences on liquid crystal display (LCD) by irradiation with the Nd-YAG Laser." Ritsu Kamoto, Shizue Mito, Naoto Nagai, Yoshikatsu Nagasawa; *2000 Japanese Liquid Crystal Society Annual Meeting and International Conference*, Matsue, Japan, October **2000**.
- 13) "Development of a new technical sampling method and measurement to estimate bonding degree for resins of liquid crystal display (LCD) with FT-IR and mass spectroscopy: New MS/MS analysis." Shizue Mito, Ritsu Kamoto, Naoto Nagai and Hideyuki Ishida; *47th JSAC (The Japan Society for Analytical Chemistry) Annual Meeting*, Gifu, Japan, October **1998**.
- 14) "Microanalysis of Pharmaceutical Product by FT-IR Micro spectroscopy." Shizue Mito, Ritsu Kamoto, Naoto Nagai and Hideyuki Ishida; *The 12th International Conference on Fourier Transform Spectroscopy (ICFTS-12)*, Tokyo, Japan, August **1999**.
- 15) "New technical measurement to estimate decomposition degree of ultraviolet cured resins for liquid crystal display (LCD) with FT-IR and mass spectroscopy and micro-sampling mass spectroscopy." Shizue Mito, Ritsu Kamoto, Naoto Nagai and Hideyuki Ishida; *59th JSAC (The Japan Society for Analytical Chemistry) Conference*, Otaru, Japan, May **1998**.
- 16) "Application of micro-sampling mass spectroscopy: New technical measurement for estimation of ultraviolet cured resins." Shizue Mito, Ritsu Kamoto, Naoto Nagai and Hideyuki Ishida; *46th JSAC (The Japan Society for Analytical Chemistry) Annual Meeting*, Tokyo, Japan, October **1997**.
- 17) "Discovery of a new technical measurement to estimate degree of bonding for sealing epoxy resins of liquid crystal display panel (LCD panel) using FT-IR micro spectroscopy and mass spectroscopy with micro-sampling." Shizue Mito, Ritsu Kamoto, Gen K atagiri and Hideyuki Ishida; *45th JSAC (The Japan Society for Analytical Chemistry) Annual Meeting*, Sendai, Japan, August **1996**.
- 18) "Radical Cycloaddition by Ni(II) Complex-Catalyzed Electroreduction. Synthesis of Pyrrolopyridine and Pyrrolopyrrole Derivatives." Shigeko Ozaki, Shizue Mito and Hidenobu Ohmori; *116th The Pharmaceutical Society of Japan National Annual Meeting*, Kanazawa, Japan, March **1996**.
- 19) "Indirect Electroreductive Sequential Radical Reaction Catalyzed by a Ni(II) Complex. One-Step Preparation of Functionalized (Methylene)-cyclopentanes." Shigeko Ozaki, Shizue Mito, Hidenobu Ohmori; *114th The Pharmaceutical Society of Japan National Annual Meeting*, Tokyo, Japan, March **1994**.

Student presentations (independent works)

National Meetings

- 1) "Total Synthesis of Mansouramycins A and B" Abigail Zepeda, Beatriz Gamez, Benjamin Garcia, Shizue Mito. *257th ACS National Meeting*; Orlando, FL, USA, March **2019**.
- 2) "Synthesis and Biological Evaluations of Hydroquinone and p-Indolequinone Derivatives as Anticancer Agents" Gonzalez, A., Strong, C., Zhan, F., Mito, S.: *SACNAS The National Diversity in Stem Annual research conference*, San Antonio, TX, October **2018**
- 3) "One-pot synthesis of indole-4,9-diones from naphthoquinone" Jorge Guerra, Manuel. A. Martinez, Cecilio M. Castaneda, Quang Luu, Shizue Mito,; *249th ACS National Meeting*; Denver, CO, USA, March **2015**.
- 4) "Total Synthesis of Syringolides" Sudhakar Kalagara, Gabriel Orozco and Shizue Mito; *The 245rd ACS National Meeting*; New Orleans, LA, USA, March **2013**.
- 5) "Zirconium-mediated synthesis of γ -amino acids from carbon dioxide" Ashley Cooke and Shizue Mito; *The 243rd ACS National Meeting*; San Diego, CA, USA, March **2012**.
- 6) "Total Synthesis of Syringolides" Sudhakar Kalagara, Salvand Rivera and Shizue Mito; *The 243rd ACS National Meeting*; San Diego, CA, USA, March **2012**.

- 7) "Zirconium mediated one-pot synthesis of α -amino acid using CO₂" Yoon Ju Kim, Susumu Oda and Shizue Mito and Shizue Mito; *The 243rd ACS National Meeting*; San Diego, CA, USA, March **2012**.
- 8) "The Synthesis of Non-Proteinogenic Amino Acids by Utilizing Carbon Dioxide." Zachary Martinez and Shizue Mito; *the 2010 Annual Biomedical Research Conference for Minority Students (ABRCMS)*, Charlotte, NC, USA, November **2010**.
- 9) "Group 4 Metal Mediated Reactions with Carbon Dioxide." Susumu Oda, Yoon-Ju Kim and Shizue Mito; *The 240th ACS National Meeting*, Boston, MA, August **2010**.

On campus presentations

- 1) "Structure modifications of p-indolequinones for study of biological activities on NAD(P)H-dependent enzymes" Cabrera, L., Mito, S: LSAMP Summer research Academy El Paso, TX, August **2019**.
- 2) "General Synthesis of Mansouramycins A and B" Abigail Zepeda, Beatriz Gamez, Benjamin Garcia, Shizue Mito. *UTRGV COS Annual research conference*, Edinburg, TX, March **2019**
- 3) "Synthesis and Biological Evaluations of Hydroquinone and p-Indolequinone Derivatives as Anticancer Agents" Gonzalez, A., Strong, C., Zhan, F., Mito, S., *UTRGV COS Annual research conference*, Edinburg, TX, March **2019**
- 4) "Synthesis of (TRa) Specific Thyromimetic Derivative" Longoria, A., Ramos, R., Dean, F., Mito, S.: *UTRGV COS Annual research conference*, Edinburg, TX, March **2019**
- 5) "Synthesis of agonist AR437735 and inverse agonist AR437948 for the treatment of type two diabetes" Palacios, A., Tran, T. M., Rodriguez, D. J., Mito, S.: *UTRGV COS Annual research conference*, Edinburg, TX, March **2019**
- 6) "Synthesis of Niclosamide derivatives to study Protein Ubiquitination and Pro-Survival Signaling Pathways in the Human Glioblastoma Cells" Ruiz, T., Garcia, B. A., Garay, G., Cheng, B., Mito, S.: *UTRGV COS Annual research conference*, Edinburg, TX, March **2019**
- 7) "Synthesis and Biological Evaluations of Hydroquinone and p-Indolequinone Derivatives as Anticancer Agents" Gonzalez, A., Strong, C., Zhan, F., Mito, S., *UTRGV School of Medicine Annual research conference*, Edinburg, TX, September **2018**.
- 8) "Synthesis of 8-hydroxyquinoline derivatives as anti-glioblastoma agent" Kiana Garcia, Matthew Estrellado, Shizue Mito. *The UTRGV SoM Inaugural Research Symposium*, August **2017**.
"The Novel Total Synthesis of Marine Alkaloids Mansouramycins A-D" Benjamin Garcia, Shizue Mito. LSAMP Summer research Academy El Paso, TX, August **2017**.
- 9) "One-pot Synthesis of Pyrazine-fused-p-indolequinones" Benjamin Garcia, Cesar Bautista, Shizue Mito. " *UTRGV Engaged Scholar Symposium*, Edinburg TX, USA, April **2017**
- 10) "One-pot synthesis of heterocycle-fused p-Indolequinones with α -aminoacetals" Benjamin Garcia, Gloria Lugo, Cesar Bautista, and Shizue Mito.; UTRGV COS (college of Science) Annual research conference. *UTRGV COS Annual research conference*, McAllen, TX, March **2017**
- 11) "Synthesis and Characterization of Acylated Quinolinediol Aluminum (III) Complexes" Kiana Garcia, Brenda V. Gonzales, Hugo Sanchez, Shizue Mito.; *UTRGV COS Annual research conference*, McAllen, TX, March **2017**
- 12) "Synthesis and Characterization of Acyl-8-hydroxyquinoline Metal Complexes" Brenda V. Gonzales, Hugo Sanchez, Kiana Garcia, Shizue Mito.; UTRGV Engaged Scholar Symposium, Edinburg TX, USA, April **2016**.

At the University of Texas at El Paso

- 1) "One-pot synthesis of indolequinones from quinones" Jorge Guerra, Quang Luu, Shizue Mito.; UTEP The *COURI Symposium Abstracts, Summer 2014*, ID= 436, El Paso TX, USA, August **2014**.
- 2) "Total synthesis of syringolides" Daniel Leonard, Sudhakar Kalagara, Shizue Mito; UTEP The *COURI Symposium Abstracts, Summer 2014*, ID= 504, El Paso TX, USA, August **2014**.

- 3) "Synthesis of 3-oxyindole using sunlight" Xinxiao Li, Quang Luu, Shizue Mito; UTEP The *COURI Symposium Abstracts, Summer 2014*, ID= 554, El Paso TX, USA, August **2014**.
- 4) "Titanium mediated synthesis of α -methyl- γ -lactones from CO₂" Daniela Muñiz Rojas, Quang Luu, Shizue Mito; UTEP The *COURI Symposium Abstracts, Summer 2014*, ID=522, El Paso TX, USA, August **2014**.
- 5) "Photodimerization of Quinones" Cecilio Castaneda, Quang Luu, Jorge Guerra, Shizue Mito; UTEP The *COURI Symposium Abstracts, Summer 2014*, ID=506, El Paso TX, USA, August **2014**.
- 6) "Synthesis of acylated quinonxalinediol by photo-Friedel-Crafts acylation using sunlight" Foyu Zhang, Anwar Jacintomoreno, Sudhakar Kalagara, Shizue Mito; UTEP The *COURI Symposium Abstracts, Summer 2014*, ID= 555, El Paso TX, USA, April **2013**.
- 7) "Synthesis and characterization of acylated quinolinediol Aluminum (III) complexes" Anwar Jacintomoreno, Kei Takigawa, Shizue Mito,; UTEP The *COURI Symposium Abstracts, Summer 2014*, ID= 436, El Paso TX, USA, August **2014**.
- 8) "Total Synthesis of Syringolides" Gabriel Orozco, Sudhakar Kalagara and Shizue Mito; UTEP The *COURI Symposium Abstracts, Spring 2013*, ID= 91, El Paso TX, USA, April **2013**.
- 9) "Synthesis and characterization of novel acylated quinonlinediol aluminum (III) complexes" Anwar Jacintomoreno, Salvador A Fernandez, Brian Jacinto, Shizue Mito; UTEP The *COURI Symposium Abstracts, Spring 2014*, ID= 303, El Paso TX, USA, April **2014**.
- 10) "One-pot synthesis of indole-4,7-diones from quinones" Jorge D Guerra, Quang H Luu, Shizue Mito; UTEP The *COURI Symposium Abstracts, Spring 2014*, ID= 312, El Paso TX, USA, April **2014**.
- 11) "Synthesis and photochemical reactions of 1,4,5,8-anthracenetetrone" Ai S Pastrana, Shizue Mito; UTEP The *COURI Symposium Abstracts, Spring 2013*, ID= 394, El Paso TX, USA, April **2013**.
- 12) "Synthesis and characterization of electrically responsive molecules based on aluminum(III) complexes
Jose R Villaseñor, Brian Jacinto, Shizue Mito; UTEP The *COURI Symposium Abstracts, Spring 2013*, ID= 144, El Paso TX, USA, August **2013**.
- 13) "Synthesis of indolinone derivatives with solar reactions of quinone derivatives" Jorge D Guerra, Jong Saunders, Quang H Luu, Shizue Mito; UTEP The *COURI Symposium Abstracts, Summer 2013*, ID= 157, El Paso TX, USA, August **2013**.
- 14) "Synthesis of two new nitrogen heterocyclic compounds: pyridazine and quinazoline derivatives" Mengwei Yuan, Jingzhe Li, Quang H Luu, Shizue Mito; UTEP The *COURI Symposium Abstracts, Summer 2013*, ID= 214, El Paso TX, USA, August **2013**.
- 15) "Synthesis and solar reaction of 1,4,5,8-anthracenetetrone with aldehyde" Ai S Pastrana, Shizue Mito; UTEP The *COURI Symposium Abstracts, Summer 2013*, ID= 215, El Paso TX, USA, August **2013**.
- 16) "Cytotoxic effects of acylated hydroquinones on selective lymphoid cell lines" Diego A Pedroza, Fernando De Leon , Armando Varela-Ramirez, Carolina Lema, Renato J Aguilera , Shizue Mito; UTEP The *COURI Symposium Abstracts, Summer 2013*, ID= 221, El Paso TX, USA, August **2013**.
- 17) "Synthesis of 5,8-dihydroxy-1,4-naphthoquinone and its homologation under sunlight" Jingzhe Li, Mengwei Yuan, Quang H Luu, Shizue Mito; UTEP The *COURI Symposium Abstracts, Summer 2013*, ID= 227, El Paso TX, USA, August **2013**.
- 18) "Synthesis of isoquinoline derivatives by solar reaction of imine derivatives and quinones" Jong G Saunders, Jorge D Guerra, Quang H Luu, Shizue Mito; UTEP The *COURI Symposium Abstracts, Summer 2013*, ID= 237, El Paso TX, USA, August **2013**.
- 19) "Solar Synthesis of Acyl hydroquinones and their Bioactivity" Fernando De Leon and Shizue Mito; UTEP 2012 COURI Summer Research Symposium, El Paso TX, USA, July **2012**.

- 20) Synthesis of Methylene γ -lactones Using Carbon Dioxide, Bryan P. Ferrell, Giber Martinez, Intesar El-Feitouri and Shizue Mito; UTEP 2012 COURI Summer Research Symposium, El Paso TX, USA, July **2012**.
- 21) ‘One-pot γ -Amino Acids Synthesis from CO₂ via Zirconacycle’ Teresita J. Maldonado, Diego A. Pedroza, and Shizue Mito; UTEP 2012 COURI Summer Research Symposium, El Paso TX, USA, July **2012**.
- 22) ‘‘Zirconium Mediated One-pot Synthesis of γ -Amino Acids from Carbon Dioxide’’ Diego A. Pedroza and Shizue Mito; UTEP The 2nd Annual COURI Symposium, El Paso TX, USA, April **2012**.
- 23) ‘‘Photo-Friedel-Crafts Acylation with Sunlight’’ Fernando De Leon and Shizue Mito; UTEP The 2nd Annual COURI Symposium, El Paso TX, USA, April **2012**.
- 24) ‘‘Studies Towards the Total Synthesis of Syringolide’’ Allyssa M. Amaya, Sudhakar Kalagara and Shizue Mito; the 2011 LSAMP Student Research Conference, Arlington, TX, USA, August 2011.
- 25) ‘‘Zirconium Mediated One-pot Synthesis of γ -Amino Acids from Carbon Dioxide’’ Diego A. Pedroza and Shizue Mito; UTEP 2011 End-of-the Summer Research Symposium, El Paso TX, USA, July **2011**.

INVITED LECTURES

- June 2019, Department of Pharmaceutical Sciences, Osaka University, Japan: Departmental seminar
- October 2018, College of Sciences, University of Texas San Antonio, TX: College of Sciences research seminar
- January 2018, Department of Chemistry, Tokushima University, Japan: Departmental seminar
- May 2013, Department of Health Sciences, University of Texas at El Paso: Departmental seminar
- April 2013, Department of Chemistry, Texas Christian University, TX: Departmental seminar
- April 2013, Department of Chemistry, University of Texas at Arlington, TX: Departmental seminar
- January 2012, Department of Chemistry, Tohoku University, Japan: Global COE seminar
- January 2011, Department of Engineering, Nagoya University, Japan: Global COE seminar
- January 2011, Department of Engineering, Tokyo University of Science, Japan: Departmental Seminar
- January 2011, Department of Chemistry, Kyoto University, Japan: Global COE seminar
- January 2011, Department of Engineering, Kyoto University, Japan: Global COE (center of excellence) seminar
- April 2009, Department of Chemistry, New Mexico State University, NM: Departmental seminar

Ongoing Research Support

NIH R15 (NIH-PA-16-200)

\$ 432,729 07/01/2018 –6/30/2021

Role: Co-PI

‘‘Nanodiamond based anti-HIV drug delivery targeted towards the brain’’

My role is to synthesize chemically modified nano diamond, diamond-shaped carbon nanoparticle (~5nm), with the large accessible surface for drug binding.

The College of Sciences (COS) Research Enhancement Seed Grants Program (UTRGV)

\$ 16,000 05/15/2019 –11/15/2020

Role: PI

‘‘Synthesis of bioactive quinolinequinones and p-indolequinones’’

The goal of this proposal is to make contributions to the synthesis of various quinones, which fused with heterocycles, possessing clinically significant biological activity. The compounds synthesized in our laboratory will be evaluated for their anticancer activities in collaboration with Dr. Sue Anne Chew (UTRGV Health and Biomedical Sciences) to explore the potential of these compounds for medicinal use.