

Maria del Carmen Pina

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October 30, 2018

EDUCATION

PhD in Chemistry, 1984

State University of Moscow, (Lomonosov), Moscow, Russia.
Doctoral studies developed in Havana and Moscow, (1979-1984).
Synthesis and Characterization of Heterocyclic Compounds.

Bachelor of Science in Chemistry, 1968.

Faculty of Chemistry, Havana University, La Havana, Cuba.

Professional Experience in USA, Miami, FL

St. Thomas University – School of Science, Technology & Engineering Management Adjunct Part-Time Faculty – 2010-2013

St. Thomas University –School of Science, Technology & Engineering Management Assistant Professor of Chemistry -2013 to the present (2018)

Professor of General and Organic Chemistry courses included in the career curricula of
Biology, Chemistry and Engineering studies.

Subjects:

CHM 1025 Introduction to Chemistry
CHM 1033 L Chemistry for Health Sciences Lab
CHM 1045 L General Chemistry I Lab
CHM 1046 General Chemistry II
CHM 1046 L **General Chemistry II** Lab
CHM 2210 Organic Chemistry I
CHM 2210 L Organic Chemistry I Lab
CHM 2211 Organic Chemistry II
CHM 2211L Organic Chemistry II Lab
CHE 214 Introduction to Research Methods
CHM 4231 Spectroscopic Identification of Organic Compounds
SCI 490 Natural Products
BSC-4900-03 Directed Readings in Biology
CHM 314 Intermediate Research in Chemistry

Chemistry Tutor for students in the Si Puedo Program – **St. Thomas University**/Miami
Dade College. 2009-2011.

Miami Dade College. InterAmerican Campus (IAC) and Medical Campus
Adjunct Part-Time Faculty, 2004-2005 to 2013.

Subjects: **IAC** CHM1025 Introductory Chemistry
CHM1045 Lab General Chemistry I
CHM1046 General ChemistryII

CHM1046 Lab General Chemistry II
PSC1515 Energy in the Natural Environment.
CHM1033 Chemistry for Health Sciences (General, Organic, and Biological Chemistry).
CHM1033 Lab Chemistry for Health Sciences.
CHM2210 Organic Chemistry I
CHM2210 Lab Organic Chemistry I
CHM2211 Organic Chemistry II
CHM2211 Lab Organic Chemistry II

Subject: **Medical Campus**

CHM 1033 Chemistry for Health. (General, Organic, and Biological Chemistry).

Chemistry Tutor in the Science Lab at Miami Dade College, InterAmerican Campus ,
20 h/week 2009-2013 (5 years).

**NOVA Southeastern University/ Fischler School of Education and Human Services
Adjunct Part-Time Faculty – 2009-2013.**

Professor of the following subjects in the Master in Science of Education Program.
Miramar and Tampa Campus.

Subjects: **SCI 601** Inquiry Based Space Science for Teachers
SCI 605 Interdisciplinary Earth Science for Teachers.
SCI 604 Teaching Chemistry: An Activity Based Study of Matter & Energy.
SCI 600 Foundations of Physical Science for Teachers.
SCI 602 Teaching Comprehensive Ocean Studies.
523 Methods of Teaching Sciences

Miami Dade County Public Schools 2002-2005
Adult Part Time Teacher, Coral Gables Adult Education Center. Miami Florida

Subjects: Earth Space Science, Chemistry, Physical Science, Environmental Science.

Certified Teacher in Chemistry 6th-12th Florida Department of Education,
Tallahassee, FL since 2003 to 2013.

**Havana University, Department of Organic Chemistry, Faculty of Chemistry, La
Habana, Cuba.**

PROFESSIONAL EXPERIENCE in Cuba.
Full Time Professor in Chemistry (1968-2001)

	Institution
(1968-1971) Graduate Instructor	School of Chemistry/Havana University
(1971-1977) Assistant Professor	School of Chemistry/Havana University
(1977-2001) Chemistry Professor (Auxiliar Professor).	School of Chemistry/Havana University

- (1972-1976) Chair of Organic Chemistry Dept. Dept. of Organic Chemistry (Havana. University).
- (1973-1987) Member of National Chemistry Commission. Ministry of Middle Education. Havana. Cuba.
- (1981-1986) Chair of Organic Synthesis Research Group. Faculty of Chemistry, UH.
- (1987-1992) Chair of Lab Purification, Institute of Materials and Reagents IMRE,UH
- (1993-2001) Secretary of Scientific Council, Institute of Materials and Reagents (IMRE), UH.
- (1987-2001) Member of the National Commission of Scientific Degrees, Ministry of Higher Education, Havana, Cuba.
- (1995-2001) Principal Professor of Organic Analysis Faculty of Chemistry, UH

Visiting Professor

- Universidad Autonoma de Yucatan, Merida, Mexico. (1992, 1995)
Analytical. Organic Chemistry Methods, Postgraduate course..
- Universidad Autonoma de Nuevo Leon, Monterrey, Mexico, 1997.
General and Organic Chemistry for Teachers in Middle School, Postgraduate course.
- Centro Tecnologico de Informatica/Microelectronic Institute, 1998. Campinas, Brasil
Course: Liquid Crystals Synthesis.
- University of Zaragoza, Zaragoza, Spain, 1999, 2000, 2001.
Research in collaboration between University of Havana-University of Zaragoza.Faculty of Chemistry, Dept. of Organic Chemistry.
- Researcher, Post-Doctoral Trainings. (1987, 1989, 1990).
State University of Moscow (Lomonosov) and Institute of Chemical Reagents with High Purity, IREA, Moscow, Russia.
Training in analytical techniques of solvent purification used in Microelectronics.
Moscow, Russia.

TECHNICAL SKILLS:

- Laboratory Techniques in General Chemistry.
- Synthesis and characterization of organic compounds.
Determination of physical properties as: melting point, boiling point, density, refraction index, optical rotation.
- Isolation and purification of natural products.
- Chromatography for plant extracts. Phytochemical tests to detect biological molecules.
- Chromatography and spectroscopic methods for identification of organic compounds. (UV, IR, ¹H NMR and ¹³C NMR, Mass spectrometry)
- Organization and planning tasks in a chemistry laboratory. Experience in lab equipment.
- Microsoft Word, Excel, PowerPoint, Access and Outlook. Bilingual: English/Spanish.

PUBLICATIONS

Lab Manual of Organic Chemistry I, Edit. Pueblo and Education, UH (1991)

Ma. del C. Pina, M. Suarez

Lab Manual of Organic Analysis, Edit. Pueblo and Education, UH (1984)

Ma. del C. Pina, Z Trimino, T. Isern.

Introduction to Heterocyclic Chemistry Manual. Edit. Pueblo and Education, UH,

Ma. del C. Pina, M. Suarez, E. Otazo.(1986).

Chemistry for 12th Grade. National System of Middle and High School in Cuba. Edit.

Pueblo and Education, **Ma. del C. Pina**, N. Collado, O.Sanchez.(1991).

J. Barbera, R. Gimenez, N. Gimeno, M. Marcos, **Ma.del C. Pina** and J.L. Serrano. "Bis(salicylaldehyde) copper (II) and palladium (II) complexes: towards columnar mesophases". Liquid Crystals, Vol. 30, No. 6, 651-661, **2003**.

Ma. del C. Pina, O. Ramirez. Synthesis and Characterization of Heterocyclic Schiff Bases like Mesogens. Revista CENIC, 2001.

Ma. del C. Pina, C. Peniche. Surgimiento y desarrollo de los estudios de doctorado en especialidades quimicas en Cuba, Revista Cubana de Quimica, Vol. XI, No. 1, p. 38, 1999.

Ma.del C. Pina, E. Otazo. Foundations of the Science and Technology of New Materials, IMRE-UH. Revista Ediciones OCPI, p.171-178, La Habana 1997

Ma. del C. Pina, O. Ramirez. Synthesis and Preliminary Study of Furan Liquid Crystals. Anales of III Iberoamerican Seminar in Liquid Crystal Displays Technology Madrid, Spain, 1998.

Ma. del C. Pina, I. Gonzalez, O. Carr. Synthesis of 5-Br-furfuriliden-p-carboxianilina like liquid crystals.Revista del III Reunion Cientifica del Sureste de Mexico, p. 65, Yucatan, Mexico, 1995.

Ma. del C. Pina, V. Budilin, Y.G. Bundel. Synthesis and Prototropic isomerization of 1-nitrophenyl-2-acyl-pyrroles. Xim. Get. Soed. No. 3, p. 324-327, 1989.

Ma. del C. Pina, V. Budilin, Y.G. Bundel. Spatial Structure of 1-nitrophenylpyrrole carbonyl derivatives. Xim. Get. Soed. No. 2, p. 185-190, 1989.

Ma. del C. Pina, V. Budilin, Y.G. Bundel. Synthesis and properties of azomethynes bases on 1-nitrophenyl-2-formylpyrroles Xim.Get. Soed. No. ` , p. 53-56, 1989.

Ma. del C. Pina, V. Budilin, Y.G. Bundel.

Rearrangement of Carbonyl Group in Pyrrols. Xim. Get. Soed. No.4, p 562, 1984

Ma. del C. Pina, E. Otazo

Organic Analysis of Diverse Products for the Microelectronic Industry. Special Bulletin of the University of Havana, p.10, 1986.

Ma. del C. Pina, J.M. Docampo.

Light Stabilizers for Plastics I. Journal of Science and Technology, Ano V, No. 11, p.43, 1987

Ma. del C. Pina, J.M. Docampo

Synthesis of Furan and Pyrrol Amides of Benzotriazol Derivatives. Journal of Science and Technology, Ano V, No. 10, p.35, 1987.

Ma. del Ca. Pina, V. Budilin, Y.G. Bundel

Synthesis and Spectral Data of 1-Aryl-2-formylpyrroles Xim.Get. Soed. No. 2, 0.180-184, 1989.

Ma. del C. Pina, J.M. Docampo, R. Krael.

Light Stabilizers for Plastics III. UV Shielding. Journal of Science and Technology, Ano VIII, No. 19, 1990.

Participation in Scientific Research Projects.

TITLE

- Isolation of Natural Products from Endemic Cuban Plants. UH, 1969-1972.
- Synthesis of Furan Derivatives from Furfuraldehyde, UH, (1972-1979).
- Synthesis of Pyrrol Derivatives from Furfuraldehyde, UH-Moscow State University, (1979-1984).
- Purification of Drugs for Clinical Tests, IMRE-UH, (1988-1991).
- Synthesis of Stabilizers for Plastics, IMRE-UH, (1988-1993).
- Validation of Chemical Products used in the Cuban Electronic Industry. UH, (1991).
- Synthesis of Furan Derivatives as Precursors of Liquid Crystals, UH-University of Zaragoza, Spain (1995-2002).
- Study of Ethanol and Aqueous Extracts of Ardisia Crenata and Dioscorea Bulbifera L using TLC with Different Solvent Mixtures. St. Thomas University. Agricultural Education grant and the U.S. Dept of Education –STEM TRAC grant (P03C110190)-MDC-School of Science, Technology and Engineering Management.**2014**
- Thin Layer Chromatography and Spectrophotometric Analysis of Chlorophyll in Plants Growing in Different Light Conditions. U.S. Dept of Education –STEM TRAC grant (P03C110190)-MDC-School of Science, Technology and Engineering Management. **2015.**

- Spectrophotometric Iron Determination in Organic Fertilizer Treated Soil Analyzed using 1,10-Phenanthroline Method. **(2016)**
- Nitrogen Determination Using Kjeldhal Method in Soil and Fertilizer to Grow Okinawa Spinach Plants. (2016)
- Characterizing Potential Anticancer Properties of the “Medicinal” Oyster Plant *Tradescantia Spathacea*. (2016)
- Preliminary antioxidant activity analysis of Brazilian pepper tree (*Schinus terebinthifolius*) extracts via TLC, FRAP, and DPPH methods. (2017) .S. Dept of Education –STEM TRAC grant (P03C110190)-MDC-School of Science, Technology and Engineering Management. **2017.**
- Preliminary study by thin layer chromatography and the antioxidant activity of *Vitis rotundifolia* (muscadine grape) extracts using different methods. (2017)
- Antioxidant properties of oyster plant (*Tradescantia spathacea*) extracts. (2017)
- Evaluating medicinal plants for anticancer properties: testing plant extracts for cytotoxicity (2017)
- Fractionation via chromatography of different aqueous/ethanolic fractions of plant extracts from Brazilian Peppertree. Biological activity. **(2018)**
- Antioxidant properties of Porterweed/Verbena (*Stachytharpheta Jamaicense*) Extracts using different methods. **(2018)**
- Preliminary study of antioxidant properties in Comfrey plant (*Symphytum officinale*) extracts using different methods. **(2018)**
- Screening medicinal plant extracts for inhibitors of breast cancer cell migration. **(2018).**

Work/Stay in Foreign Centers.

Center: State University of Moscow (Lomonosov)
 City : Moscú Country: Russia Date: 1979 Time: 5 months
 Theme: Reaction of furfuraldehyde with aromatic primary amines.
 Mentor: Dr. V. Budilin, A. N. Kost.

(Center: State University of Moscow Lomonosov)
 Date: 1981 Time: 3 months
 Theme: Synthesis of Nitrophenyl pyrrols .
 Mentor: Dr. V. Budilin, A.N. Kost.

Center: State University of Moscow (Lomonosov)
 Date: 1982 Time : 3 months
 Theme: Electrophilic Substitution Reactions in 1-Nitrophenyl Pyrrols.
 Mentor: Dr. V. Budilin, A.N. Kost

Center: State University of Moscow (Lomonosov)
 Date: 1983-1984 Time: 7 months
 Theme: Characterization of 1-Nitrophenyl Pyrrols Derivatives.
 Defense of the Doctorate Thesis (PhD).

Center: State University of Moscow (Lomonosov)
Date: 1987 Time: 2 months
Theme: Postdoctoral Courses in Heterocyclic Chemistry.
 Synthesis of Liquid Crystal Compounds..

Center: Institute of Chemical Reagents with High Purity. (IREA)
City: Moscow Country : Russia Year: 1989
Time: 3 weeks
Theme: Training in Analytical Techniques of Organic Solvent Purification.

Center: State University of Moscow (Lomonosov)
City: Moscow Country : Russia (antigua) Year: 1990
Time: 2 months
Theme: Synthesis of Liquid Crystals Compounds.
 Dr. B. I Bumaguin, I.P. Bilietskaya.

Center : Universidad Autónoma de Yucatán, Mérida México
City : Mérida Country : México Year: 1992
Time : 3 months
Postgraduate Teaching: Course of Methods of Organic Analysis to Professionals in
Chemistry.

Center : Universidad Autónoma de Yucatán
Time: 2 weeks. Country : México Year: 1995
Faculty Representative from Havana University to the III Scientific Meeting of the South
East of Mexico.

Center : Universidad Autónoma de Nuevo León
Time : 1 month Country : México Year: 1997
Postgraduate Teaching: Methodology and Didactic in the Chemistry Teaching.
Postgraduate Courses to Professionals of the High and Middle School, Nuevo Leon,
Mexico.

Center: Centro Tecnológico de Informática/Instituto de Microelectrónica. Campinas
Time: 1 month Country: Brasil Year: 1998
Analysis of Organic Compounds (Liquid Crystals) used in the LCD Displays.

Center: Universidad de Zaragoza, -Instituto de Ciencias de Materiales de Aragon.
Time: 2 months Country: Spain Year: 1999
Theme: Synthesis and Characterization of Furanic Schiff Bases.

Center. Universidad de Zaragoza, Institute of Science of Materials
Time: 2 months Country: Spain Year: 2000
TEMA: Synthesis and Characterization of Metalomesogens' Liquid Crystals (I)

Center. Universidad de Zaragoza, Institute of Science of Materials

Time: 2 months Country: Spain Year: 2001
Theme: Synthesis and Characterization of Metalomesogens' Liquid Crystals (II)

SCIENTIFIC CONFERENCES

Oral Presentations.

International Meeting of Research Project Development in the Electronic Industry for CAME members.

Place: Hungary, Budapest. Year : 1987

Cuban Chemistry Society Convention.

Place: Santiago de Cuba, Cuba Year : 1990

Mediator in Round Table about New Materials in Electronic Industry.

Meeting Cuba-Brasil de Nuevos Materiales

Place: La Habana, Cuba Year : 1992

I Seminario Iberoamericano de Mostradores de Cristal Líquido

Place: Lisboa, Portugal Year : 1996

II Seminario Iberoamericano de Mostradores de Cristal Líquido

Place: Pucón, Chile Year : 1997

Visiting Lecturer in the I Iberoamerican Course of Liquid Crystal Displays.

IV Workshop IBERCHIP

Place: Mar del Plata, Argentina Year: 1998

Conference: III Seminario Iberoamericano de Mostradores de Cristal Líquido

Place: Madrid, Spain Year: 1998

Conference: III Congreso de la Sociedad Cubana de Química.

Place: La Habana, Cuba Year: 1998

Conference: IV Seminario Iberoamericano en Tecnología de Mostradores de Cristal Líquido

Place: La Habana, Cuba Year: 1999

Conference: XVI Congreso de Química de la Universidad de Oriente

Place: Santiago de Cuba, Cuba Year: 1999

Conference: VI Workshop IBERCHIP

Liquid Crystals and Their Applications.

Place: Sao Paulo, Brazil Year: 2000

Congress: Congreso Brasileiro de Aplicaciones de Vacío en la Industria y en la Ciencia.

XXI CBRAVIC.

New Advances in Liquid Crystal Displays.
Place: San José dos Campos, Brazil Year: 2000.

IV Congreso Internacional de Química
Country: La Habana, Cuba Year: 2001

Oral presentations:

- Synthesis and Characterization of Liquid Crystals with Heterocyclic Rings.
- Synthesis and Characterization of Schiff Bases as new Mesogenic Compounds.
- Synthesis of Arylfuroic Acids as Precursors for new Mesogenic Compounds.
- Synthesis and Characterization of Amide Derivatives from 5-(p-Nitrophenyl Furoic Acid) as Liquid Crystals.

19th International LIQUID CRYSTAL CONFERENCE 2002.

Place: Edinburgh, UK 30 June- 5July 2002 Ano: 2002

Coauthor: Design of Salicylaldiminate Metal Complexes for Columnar Mesophases

IV Seminario Iberoamericano de Mostradores de Informacao – V Infodisplay – e da IV Escola Iberoamericana de Mostradores de Informacao – IV DisplayEscola.

Place: Campinas, Brazil. Year: 2000

Lecture: Analytical Methods in Organic Chemistry.

Curso de Educación Continua a Profesionales, Universidad Autónoma de Yucatán, Mérida, México, 1992.

Title: Projects of Organic Synthesis in the Faculty of Chemistry, Havana University.

Representante de la Facultad de Química a la III Reunión científica del Sudeste de México, Universidad Autónoma de Yucatán, Mérida, 1995.

Lecture: Discovery of the Liquid Crystals: History and Clasification..

I Curso Iberoamericano de Mostradores de Cristal Líquido. IV Workshop Iberchip, Mar del Plata, Argentina, 1998.

Lecture: Liquid Crystals: Applications.

Centro Tecnológico de Informática/Instituto de Microelectrónica, Campinas Brasil, 1998.

Organic Materials used in the Liquid Crystal Displays

IV Seminario Iberoamericano en Tecnología de Mostradores de Cristal Líquido y II Curso Iberoamericano en LCDs. Universidad de La Habana, Cuba. 1999

The 78th Annual Meeting of the FLORIDA ACADEMY OF SCIENCES. Indian River State College, Fr. Pierce, Florida, March 7 – 8, 2014.

Presentation for UNI SCI about the opportunities of research work in Organic Chemistry, October 2014.

Summer Research Symposium, School of Science, September 2014. Poster presentation: “Study of Ethanol and Aqueous Extracts of Ardisia Crenata and Dioscorea Bulbifera L. Using Thin Layer Chromatography “.M. Pina, and eight more students.

9th Annual Southeast Cell Science, Undergraduate Research Symposium, May 5th , 2014. (Judge of the oral presentations).

Summer Research Symposium, MDC – School of Science , September **2015**. Poster presentation.

Summer Research Symposium, MDC – School of Science , September **2015**. Poster presentation.

Summer Research Symposium, School of Science- MDC September **2015**. Poster presentation:. Thin Layer Chromatography and Spectrophotometry:

STEM Undergraduate Research Symposium, Broward College North Campus, April 2nd , **2016**. Poster presentation..

11th Annual Southeast Cell Science, Undergraduate Research Symposium, April 23rd , St. Thomas University, **2016**. Judge of the oral presentations.

The 8th Annual Undergraduate Summer Research Symposium, St. Thomas University, Sept 16th , **2016**. Posters

The 16th Annual Student and Faculty Undergraduate Research Symposium, April 19-20th, St. Thomas University, Convocation Hall, **2017**. Poster presentations

5th Annual Life Sciences South Florida, STEM Undergraduate Research Symposium. Palm Beach State College, Eissey Campus, April 1st , **2017** Judge./posters

Summer Research Institute Annual Symposium. **St. Thomas University**, School of Science, Nov. 3, **2017**. Oral presentation/1st place. Award and posters.

STEM Research Symposim, Miami Dade College, North Campus, Sept. 23, **2017** Posters

Annual Biomedical Research Conference for Minority Students (ABRCMS) November 1-4 at the Phoenix Convention Center in Phoenix, **Arizona. 2017. MDC** poster presentation.

American Chemical Society Undergraduate Research Meeting, **North Carolina, 2017** Poster.

St. Thomas University, Science Building. Science Meeting with Larkin Representatives. Science Building, April, **2017**.

MDC Undergraduate Research Symposium, North Campus, Miami, FL. Sept. **2018** 2 posters MDC students/St. Thomas Univ.

Summer Research Symposium, MDC – School of Science , September **2018**. Poster presentation.

Summer Research Symposium, MDC – School of Science , September **2018**. Poster presentation.

Summer Research Symposium, School of Science- MDC September **2018**. Poster presentation. Thin Layer Chromatography, antioxidant properties of natural products.

St. Thomas University (**2018**) Summer Research Institute, 10th Annual Symposium, Oct 12, **2018**.

- Bio-assay guided fractionation of plant extracts using chromatography. Student oral presentation. (**2018**)

- Preliminary study of the antioxidant activity of Comfrey (*Symphytum Officinale*) extracts using different methods . (**2018**). Poster

- Preparation an analysis of extracts from Brazilian Peper tree (*Schinus Terebinthifolius*) using antioxidant assays. (**2018**). Poster

- Antioxidant properties of Porter weed/Verbena (*Starchytharpheta jamaicensis*). (**2018**). Poster.

- Screening medicinal plant extracts for inhibitors of breast cancer cell migration. (**2018**). Poster.

FELLOWSHIPS

Member of the Cuban Society of Chemistry. 1985-2002.

Member of the National Committee of Scientific Degrees, Ministry of Higher Education, Cuba, 1987-2001.

Member of the National Committee of Chemistry, Ministry of Education, 1973-1987, Cuba.

Member of the Red Iberoamericana de Mostradores de Cristal Liquido, 1996-2002.

Principal Professor of Organic Analysis, Havana University, Chemistry Faculty, 1995-2001

Chairperson of Organic Chemistry Department (1972-1978), .Organic Synthesis Group (1981-1986), and Lab Purification in the Institute of Materials and Reagents, (1987-1992).

President and Adviser of the Scientific Council in the Chemistry Faculty/Scientific Council in the Institute of Materials and Reagents, Havana University, La Habana, Cuba.

(1993-2001).

Member of the COMPENSATION AND WELFARE COMMITTEE. St. Thomas University, **2015-2018**

Member of the Accreditation Committee. St. Thomas University, **2017-2018**

AWARDS AND HONORS

Scientific-Technical Award in Researches, Havana University.
Faculty of Chemistry, University of Havana, Cuba (1985), (1988).

Cuban Education Distinction for the excellent results during 20 years.
Faculty of Chemistry, University of Havana, Cuba (1995)

PERSONAL DATA:

October 30th, 2018-10-30