

# **Hany F. Sobhi Ph.D.**

Wilson H. Elkins Professor of Chemistry  
Associate Professor Organic and Clinical Chemistry  
Founding Director Coppin Center for Organic Synthesis  
Coppin State University

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## **INTRODUCTION**

- Fifteen years of experience in Organic/ Bio-organic Synthesis and Clinical Bioanalytical Research.
- Fifteen years of experience in teaching undergraduate and graduate organic chemistry courses, lectures and laboratories.
- Experience teaching multi nuclear  $^1\text{H}$ ,  $^{13}\text{C}$ ,  $^{31}\text{P}$ - NMR, UV – VIS, IR, LC, HPLC, GC/MS, LC/MS/MS spectra instrumentation.
- Mastering work with Thermal and Material analysis instruments such as TGA and DSC, GPC, MFFT and other ASTM analysis methods.

## **EDUCATION**

**CASE WESTERN RESERVE UNIVERSITY, SCHOOL OF MEDICINE, CLEVELAND, OH,** 2010  
NIH Postdoctoral Fellowship, Department of Pharmacology Center for Mitochondrial Diseases

**CLEVELAND STATE UNIVERSITY, CLEVELAND, OHIO** 2008  
Ph.D. in Clinical Bioanalytical Chemistry (Synthetic Bioorganic Chemistry)

**CLEVELAND STATE UNIVERSITY, CLEVELAND, OHIO** 2005  
Master of Science in Chemistry (Synthetic Organic Chemistry)

**UNIVERSITY OF ALEXANDRIA, - ALEXANDRIA, EGYPT** 1993  
Bachelor of Science – Chemistry, May 1993

## **RESEARCH FACULTY FELLOWSHIP AWARDS**

### ***NATIONAL INSTITUTE OF HEALTH (NIH) - ARKANSAS CHILDREN'S RESEARCH INSTITUTE (ACRI)***

*CHEMICAL SYNTHESIS AND COMPOUND IDENTIFICATION FOR ACNC METABOLOMICS* **AUG. 2016-2018**

### ***BOARD OF REGENTS FACULTY AWARD, USM – BOR*** **APRIL -2016**

*BOARD OF REGENTS FACULTY AWARD FOR RESEARCH, AND INNOVATION, FROM THE FROM THE UNIVERSITY SYSTEM OF MARYLAND BOARD OF REGENTS, USM / BOR*

### ***WILSON L. ELKINS FACULTY AWARD*** **JULY -2015**

*WILSON L. ELKINS FACULTY AWARD, FROM THE UNIVERSITY SYSTEM OF MARYLAND / USM , JULY 2015*

### ***NASA NAI- MIRS ASTROBIOLOGY FACULTY FELLOWSHIP PROGRAM*** **MAY - DECEMBER 2012**

*NASA ASTROBIOLOGY INSTITUTE (NAI)/ ASTROCHEMISTRY & NUCLEATION LABORATORY (CODE 691) NASA GODDARD SPACE FLIGHT CENTER GREEN BELT, MARYLAND 20771*

### ***NASA NAI- ASTROBIOLOGY FACULTY INCENTIVE RESEARCH AWARD*** **JANUARY, 2013**

## **Academic TEACHING**

- Organic chemistry I CHM-307
- Organic chemistry II CHM-308
- Organic chemistry CHM-313
- Introduction to Research in Chemistry Chem- 407
- Polymer Chemistry I Chem- 490
- Forensic Chemistry Chem- 410
- General Chemistry II Chem 102

## **PROFESSIONAL ASSOCIATIONS**

- *American Chemical Society ( Organic Division ) –ACS*
- *The American Society for Biochemistry and Molecular Biology –ASBMB*
- *American association For Cancer Research - AACR*
- *American Society for Applied Spectroscopy –ASAS*
- *North Coast Thermal Analysis Society – NCTAS*

## **AWARDS, ACHIEVEMENTS, AND CONTRIBUTIONS**

- 2016 Board Of Regents Faculty Award, USM – BOR , for research , and innovation
- 2015 *WILSON L. ELKINS FACULTY AWARD, FROM THE UNIVERSITY SYSTEM OF MARYLAND - USM*
- 2013 NASA - NAI- MIRS Astrobiology Faculty Incentive Research Award.
- 2012 NASA - NAI- Astrobiology Faculty Fellowship program / Faculty Scholar Research Award. June 4 , 2012.
- 2011 American Association for Cancer Research, AACR Faculty Scholar in Cancer Research Award.
- 2011 Distinguished Faculty research and development Award, from Coppin State University Research Council.
- 2009 Postdoctoral Research Award, Research Showcase -2009 Case western Reserve University. April 16-2009.
- 2007 F.C. Mark Graduate Teaching Assistantship Award For Excellence in Teaching Organic Chemistry.
- 2007 North East Ohio Science and Engineering Fair -2007 (NEOSEF) Judging for the American Chemical Society special awards in chemistry projects. March 13, 2007.
- 2007 Doctoral Dissertation Research Expense Award, Cleveland State University, University Research Council.
- 2006 F.C. Mark Graduate Teaching Assistantship Award for excellence in teaching NMR and Organic Chemistry Laboratories.
- 2005 Best Poster Presentation, Department of Chemistry and Cleveland Clinic Foundation, Eighth Student Symposium of the Joint Ph.D. Program, in Clinical Bioanalytical Chemistry.
- 1991-1993 Dean’s List College of Science, University of Alexandria.
- 1990 Freshman Chemistry Achievement Award, College of Science, University of Alexandria.

## **AWARDS, GRANTS AND FINDINGS**

- National Institute of Health ( NIH – Sub award ) For the development of Strategies to Qualitative AND, and quantitative OF XENOMETABOLITES – July 2016- June 2018
- Wilson H. Elkins Faculty Award, from the University system of MARYLAND - USM July 2015-

- NASA-MIRS Astrobiology Faculty Incentive Award , January 2013.
- NASA - NAI- Astrobiology Faculty Fellowship program / Faculty Scholar Research Award. June 4 , 2012.
- U.S. ARMY Research & Materiel Command USAMRAA-CSC Proposal Log :10273013, The Assessment and Evaluation of Traumatic Brain Injuries (TBI)" awarded on June 15 ,2011.
- American Association for Cancer Research, AACR Faculty Scholar in Cancer Research travel Award January 2011.
- Distinguished Faculty Research Award, from the Office of Academic affair and The Faculty Research and Development Committee , at Coppin State University May 19, 2011.

### **SELECTED PUBLICATIONS AND SEMINARS**

- 1- Synthesis and characterization of N, N'-bis(salicylidene) ethylenediamine Copper complex for dye sensitized solar cells, Hany Sobhi<sup>1,\*</sup>, William Ghann<sup>2</sup>, and Jamal Uddin<sup>2</sup> Manuscript ID 2908099. Presentation at the 255th ACS National Meeting, New Orleans, LA, **March 18-22, 2018.**
- 2- Recent Advances in Direct and Indirect Methods of Fine Particle Characterization Yvonne L. Fornishi<sup>1</sup>, Raafat Fahmy<sup>2</sup> and Hany F. Sobhi<sup>1,\*</sup>, submitted for Journal of Pharmaceutical Analytics and Insights, Manuscript ID: JPAI-18-048 **March 06, 2018.**
- 3- Synthesis, <sup>1</sup>H-NMR, GC-MS Characterization, and in Vitro Bactericidal Studies of an Aqueous Soluble Vanadium (IV) Complex with Dipicolinic Acid and Methylsalysilate ligands. Tulio Chavez Gil<sup>\*1,2</sup>, Amanda A Robinson<sup>1</sup> Hany F Sobhi<sup>1</sup>, Alex Ramirez Gonzalez<sup>2</sup>, Valerie Madera Garcia<sup>2</sup> and Jonathan Vega Estevez<sup>2</sup>, submitted for Archive Organic and Inorganic Chemistry , Manuscript ID: AOICS-RA-18-127 , accepted February 20 2018, published / Volume1 (5) 2018, page 1-5. AOICS.MS.ID.000124. **February 23 2018.**
- 4- Improvements on Semi Critical Assisted-Solvent Extraction of Biocrude Oil from Spirogyra. sp Macro Algae, Tulio. Chavez-Gil<sup>1,3,\*</sup>, Hany F. Sobhi<sup>2</sup>, Alexis. Pacheco-Laracuenta<sup>3</sup>, Manuscript ID: 789-AJBB, Submitted to the American Journal of Biochemistry and Biotechnology, **February 05, 2018.**
- 5- Advances in Fatty Acid Analysis for Clinical Investigation and Diagnosis using GC/MS Methodology , Meghan R. Johnston<sup>#,1</sup> and Hany F. Sobhi<sup>\*,#.2</sup>, Manuscript # JBAS-2-111 submitted to the Journal of Biochemistry and Analytical Studies, on 09 Nov 2017; Accepted on December 12 2017, and Published / Volume 3(1): doi <http://dx.doi.org/10.16966/jbas.111> on **December 21 2017**

- 6- Water quality in the Baltimore's watersheds: a physicochemical analysis, M. Vester, D. Solomon, A. McCullough, T. Warrington. J. George, T. Colbert , T. Roth, M. Jiru, and H.F. Sobhi. 23rd Annual Maryland Water Monitoring Council Conference ( MWMC)" Managing Water Quality in a Changing World" Maritime Institute in Linthicum **December 8, 2017**
- 7- Synthesis and characterization of free and copper (II) complex of N, N Bis (salicylidene) ethylene- diamine and their application in dye sensitized solar cell, William Ghann<sup>1</sup>, Hany Sobhi<sup>2</sup>, Hyeonggon Kang<sup>1</sup>, Tulio Chavez-Gil<sup>1</sup>, Fred Nesbitt<sup>1</sup> & Jamal Uddin<sup>1</sup> , Manuscript submitted for publication in the Journal of Materials Science and Chemical Engineering, 2017, 5, 46-66 , Accepted on May 17 2017, Published **June 29 2017**
- 8- Synthesis and characterization of lipophilic Acyl – Coenzyme A Thioesters for Clinical Diagnosis of Mitochondrial fatty acid oxidation disorder Hany F. Sobhi<sup>1</sup>, Sean Adams<sup>2</sup>, ID: 2726169. 45 th ACS- MARM – American Chemical Society Middle Atlantic Regional Meeting, **June 4-6, 2017** | Hershey, PA.
- 9- Photophysical, electrochemical and photovoltaic properties of Porphyrin-based Dye Sensitized Solar Cell" William Ghann<sup>1</sup>, Tulio Chavez-Gil<sup>2</sup> Hany Sobhi<sup>1</sup>, Hyeonggon Kang<sup>1</sup>, , Fred Nesbitt<sup>1</sup> & Jamal Uddin<sup>1</sup> Manuscript ID: 1510550 Submitted March 23 2017, accepted on April 08 2017, Published: Advances in Materials Physics and Chemistry (AMPC), 2017, 7, 148-172, **May 17 2017**
- 10- Synthesis & spectroscopic characterization of xenometabolite, biomarkers for the diagnosis of fatty acid  $\beta$ - oxidation disorder. Hany F. Sobhi<sup>1</sup>, Sean Adams<sup>2</sup>, Miriam Ekwuru<sup>3</sup>, and Precious Teasley<sup>3</sup> , ID: 2669611. BIOL 204. 253rd American Chemical Society **APRIL 2-6, 2017** | San Francisco, CA.
- 11- More studies on cyclic six- and seven-membered 2,3-diaryl-1,3-thiaza-4-ones. L.J. Silverberg, H. Yennawar, C.N. Pacheco, A.F. Lagalante, H.F. Sobhi, ID: 2649070. – ORGN 399. 253rd American Chemical Society **APRIL 2-6, 2017** | San Francisco, CA.
- 12- Microbial thermal melanism uses melanin as a heat capacitor, Radames JB Cordero<sup>1\*</sup>, Vincent Robert<sup>2</sup>, Gianluigi Cardinali<sup>3</sup>, Hany Sobhi<sup>4</sup>, Arturo Casadevall<sup>1</sup>, Manuscript reviewed for publication in PLOS ONE , March 17, 2017
- 13- Recent Development in Bio aerosol Mass Spectrometric Analysis. Rabih E. Jabbour\* Hany F. Sobhi and A. Peter Snyder, U.S. Army Edgewood Chemical Biological Center, Aberdeen Proving Ground, MD , Manuscript review submitted for publication, Tetrahedron letters December, 2017.
- 14- Functions of fungal melanin beyond virulence. Radames JB Cordero<sup>1\*</sup>, Vincent Robert<sup>2</sup>, Gianluigi Cardinali<sup>3</sup>, Hany Sobhi<sup>4</sup>, Arturo Casadevall<sup>1</sup>. Oral presentation at the 6 th meeting of the International Society for Human and Animal Mycology, ISHAM on Black Yeasts, **September 15-17 , 2016** Viterbo, Italy

- 15- Synthesis and Spectroscopic characterization of acyl carnitine derivatives, for the diagnosis of fatty acid  $\beta$ -oxidation disorder , Hany F Sobhi 1-2,\* , Kazim Ackie1 , and Anster J Charles1 . ID: 2501483. 44 th ACS- MARM – American Chemical Society Middle Atlantic Regional Meeting, **June 9-12, 2016** | Riverdale, NY.
- 16- Synthesis and Spectroscopic Characterization of Hydroxytyrosol derivatives: An antioxidant agent with potential cell protection against free radicals that cause cell damage, Tamla R Lionel1, Charlyne Smith2, and Hany F Sobhi 1-2\*23rd Annual Undergraduate and Graduate Science Research Symposium Morgan State University, **April 14, 2016**.
- 17- New route for the Synthesis of Aldehydes and Ketones using Microwave based methodology Chelsee Sauni1-2, Kache Woods1-2, and \*Hany Sobhi1-2\*. 23rd Annual Undergraduate and Graduate Science Research Symposium Morgan State University, **April 14, 2016**.
- 18- Synthesis & characterization of acyl carnitine derivatives, for the diagnosis of fatty acid  $\beta$ -oxidation disorder ,Hany F Sobhi a-b,\* , Anster J Charles a and Aisha Ward a. 2 nd UAE Conference on Pure and Applied Chemistry | ECPAC16, Sharjah –UAE **March 1-4 2016**
- 19- Loss of Intralipid®- but Not Sevoflurane-Mediated Cardioprotection in Early Type-2 Diabetic Hearts of Fructose-Fed Rats: Importance of ROS Signaling Phing-How Lou, Eliana Lucchinetti, H  l  ne Lemieux, Hany F. Sobhi, \*Alexander S. Clanachan, \*Michael Zaugg, et al. , Manuscript Published: August 15, 2014 DOI: 10.1371/journal.pone.0104971 , PLOS ONE , August 2014 | Volume 9 | Issue 8 | e104971 **August 15 2014**.
- 20- The mechanism of Intralipid®-mediated cardioprotection: Complex IV inhibition by the active metabolite, palmitoylcarnitine, generates reactive oxygen species and activates reperfusion injury salvage kinases. Phing-How Lou, Eliana Lucchinetti, H  l  ne Lemieux, Hany F. Sobhi, \*Alexander S. Clanachan, \*Michael Zaugg, et al. , Manuscript published , Plos-one Number . January 2014 | Volume 9 | Issue 1 | e87205 **Jan 31 2014**.
- 21- Thermal Analysis of Water and Magnesium Hydroxide Content in Commercial Pharmaceutical Suspensions of Milk of Magnesia Lakshmi Kaza<sup>1</sup>, Hany F. Sobhi<sup>1,4</sup> , Jeffrey Allen Fruscella<sup>1</sup>, Chris Kaul<sup>1</sup>, Shravan Thakur<sup>1</sup>, Kenneth Alexander 2 And Alan Riga<sup>1,2</sup>. Published in the Journal of Thermal Analysis and Calorimetry JTAC /. DOI: 10.1007/s10973-012-2429-9 JTACF7 ISSN: 1388-6150, 2012, 109, (3), 1365-1371, **May, 14 2012**.
- 22- An Insight Into Mn (II) Chemistry: A Study of Reaction Kinetics Under Alkaline Conditions Moses Wekesa<sup>1\*</sup>, MD. Jamal Uddin<sup>1</sup>, and Hany F. Sobhi<sup>1</sup>. Int J Chem Res, Vol 2, Issue 4, 2011, 34-37, ISSN- 0976-5689. **November, 14 2011**.
- 23- The Evolution Of Abdominal Wall Reconstruction And The Role Of Nanobiotechnology In The Development Of Intelligent Abdominal Wall Prostheses Cherif Boutros MD, MSc<sup>1</sup>, Hany F. Sobhi PhD<sup>1</sup>, Nader Hanna MD, FACS, FICS<sup>1</sup> Chapter number 13 of a new book titled "Biomedical Materials and Diagnostic Devices" edited by Ashutosh Tiwari, Hisatoshi Kobayashi and Anthony P. F. Turner / Pub Date: August 30, 2012/ISBN: 9781118030141, National Institute for Materials Science, Japan. Publisher: Scrivener Publishing LLC, USA, www.scrivenerpublishing.com **August, 04 2012**.
- 24- Solid State Studies of Drugs and Chemicals by Dielectric and Calorimetric Analysis Dhruthiman R Mantheni [1], M P K Maheswaram [1], Hany F. Sobhi [1], [2]Alan T. Riga [1],

[3],[4], M Ellen Matthews [3], K. Alexander [4] Published Journal of Thermal Analysis and Calorimetry, JTAC DOI: 10.1007/s10973-011-1423-y, Volume 108, Number 1 Pages227-233, **April, 01 2012.**

- 25- Evolution of Targeted Hepatic Therapy and Development of Intelligent Carrier Using Nano Technology. Hany F. Sobhi<sup>1</sup>, Cherif Boutros<sup>2</sup>, Jamal Uddin<sup>1</sup>, Nader Hanna<sup>2</sup>; Abstracts of Papers, AACR, American Association for Cancer Research, Special Conference on Nano in Cancer: Linking Chemistry, Biology, and Clinical Applications In Vivo, Miami, FL **January 12 - 15, 2011.**
- 26- Synthesis and characterization of cis-4-decenoyl-CoA, 3-phenylpropionyl-CoA, and 2,6-dimethylheptanoyl-CoA. Hany F. Sobhi , Paul E. Minkler and, Charles L. Hoppel. Analytical Biochemistry, 401 (2010) 114–124, ISSN: 1096-0309, DOI: 10.1016/j.ab.2010.02.026 **April, 07 2010.**
- 27-  $\beta$ -Keto-octanoyl-Coenzyme A: Chemical synthesis and characterization. Sobhi, Hany F.; Minkler, Paul E.; Hoppel, Charles L. Abstracts of Papers, 239th ACS National Meeting, San Francisco, CA, United States, March 21-25, 2010 (2010), ORGN-322. CODEN: 69MML8 AN 2010:345596 **March, 25 2010.**
- 28- Evaluation of Acylphosphine Oxide Polymerization Initiators Using Differential Scanning Calorimetry. Hany F. Sobhi, John M. Masnovi, and Alan T. Riga. Published , The Journal of Thermal Analysis and Calorimetry -JTAC-D-09-00623- DOI : 10.1007/s10973-010- 0731-y. ISSN: 1388-6150, 1572-8943 Volume 101, Number 3, 1065-1069, **March 26, 2010.**
- 29- Synthesis and Characterization of Lipophilic CoenzymeA, Thioester Derivatives from Non-Standard Medium Chain Fatty Acids. Hany F. Sobhi , Paul E. Minkler and, Charles L. Hoppel. Awarded poster presentation Research Showcase, Case Western Reserve University- Department of Pharmacology and Medicine, Center for Mitochondrial Diseases, Cleveland, Ohio **April 16, 2009.**
- 30- Synthesis and Characterization of Acylphosphine oxide Photoinitiators. Hany F. Sobhi Doctoral Dissertation, OCLC # 300276635, Call Number/Serial Holdings, QD716.P5S622008eb / QD716.P5S622008 , Cleveland State University, Department of Chemistry, **May 30, 2008.**
- 31- Selecting Polymers for Medical Devices based on Thermal Analytical Methods. H.Sobhi, M. Ellen Matthews, B. Grandy, J. Masnovi and, A.T. Riga Vol. 93 (2008) 2, 535-539 The Journal of Thermal Analysis and Calorimetry. ISSN: 1388-6150, **May 30, 2008.**
- 32- Synthesis of Acylphosphine Oxide Photo initiators for Polymerization of Biomaterials in Clinical Dentistry. Hany F. Sobhi, John Masnovi, Manuscript submitted for publication in the Journal of Organic Chemistry, September 27, 2017.
- 33- Polymerization of monomers used in clinical dentistry catalyzed by synthetic acylphosphine oxides and measured by Differential Scanning Calorimetry. Hany Sobhi, John Masnovi, and Alan Riga, Poster presentation for the 40 th Central Regional Meeting of the American Chemical Society - Columbus , Ohio (CERMACS- 2008) Reference number 57579 **June 14, 2008.**

- 34- Polymerization of Monomers Used in Dentistry Catalyzed by Synthetic Acylphosphine oxides and Measured by Differential Scanning Calorimetry. H.Sobhi, I. Awadeh, L. Primiano, A. Pallam, J. Masnovi, and A. Riga, Poster presentation for the 36 th Annual Conference on Thermal Analysis and applications – Atlanta , Georgia (NATAS- 2008) Reference number 192 **August 20, 2008.**
- 35- Identifying patentable and statistically significant forensic properties of polymeric fibers and films using thermal analysis. Hany Sobhi, K.Grandhi, A. Riga, A. O'Connor Poster presentation for the ICSAM - 2007 Conference in Patras, Greece **September 1, 2007.**
- 36- Characterization of phosphorus polymerization photo-initiators. Hany F. Sobhi Master Thesis, MSTR THES CHEM 0098, OCLC # 67290153, Ohio Depository Northeast: Cleveland State University, and Department of chemistry, Cleveland, Ohio, **November 30, 2005.**
- 37- Photo initiators for biomedical applications and drug delivery. Hany F. Sobhi, John M.Masnovi, Poster presentation College of Science, Research Day. Cleveland state University **October 28, 2005.**