

## Curriculum Vitae

Dr. Thomas L. Selby, Ph.D.

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### EDUCATION

#### **The Scripps Research Institute, La Jolla, CA**

X-ray Crystallography, Post-Doctoral Research  
Advisor: Dr. Raymond C. Stevens, Ph.D.

September 1999 - August 2002

Focus: *Structural Biology, Bioinformatics, High Throughput Crystallization, Neurobiology*

#### **The Ohio State University, Columbus, OH**

Ph.D. in Biological Chemistry  
Advisor: Dr. Mind-Daw Tsai, Ph.D.

July 1994 – September 1999

Ph.D. Thesis: *Structure-Function Studies of Tumor Suppressor Proteins.*

#### **University of Akron, Akron, OH**

B.S. in Chemistry (ACS Certified), *magna cum laude*  
Advisor: Dr. Chrys Wesdemiotis, Ph.D.

September 1990 – June 1994

Focus: *Gas Phase Kinetics, Mass Spectrometry of Cyclic Polymers and Biological Molecules.*

### EMPLOYMENT

#### **Assistant Professor of Chemistry**

Department of Chemistry  
University of Central Florida, Orlando, FL

August 2002 - Present

#### **Post-Doctoral Researcher**

Department of Chemistry and Molecular Biology  
The Scripps Research Institute, La Jolla CA

September 1999 - August 2002

#### **Project Team Leader**

The Joint Center for Structural Genomics (JCSG)  
The Scripps Research Institute, La Jolla, CA

July 2000 - August 2002

#### **Adjunct Faculty Member**

Department of Chemistry  
The University of San Diego, San Diego, CA.

September 2000 - May 2002

**United States Marine, Corporal (E-4)**

United States Marine Corps  
Camp Foster, Okinawa, Japan

September 1986 – July 1990

FELLOWSHIPS and AWARDS

**Academic:**

- NIH Post Doctoral Fellowship (NS11037) 2000-2002
- NIH Graduate Fellowship 1998-Present \$21k/yr;
- GAAN Fellowship, September 1995-97. \$16k/yr
- Chemistry Department Fellowship 1994, \$15k/yr
- Undergraduate Research Award, The University of Akron 1993
- Akron Rubber Group Scholarship, September 91-94. \$3,000/yr
- American Institute of Chemists Foundation Student Award, 1993
- Merck Award, 1993
- Phi Sigma Alpha Honorary Society, April 1993

**Military:**

- Navy Unit Commendation
- Certificate of Commendation (4)
- Meritorious Mast (3)
- Good Conduct Medal;
- Sea Service Deployment Ribbon (2dAwd)
- Expert Rifle Badge (3rdAwd)
- Letter of Appreciation (3)

AWARDED GRANTS AND CONTRACTS

**Mechanism of Calcium-Dependent Phospholipases C (Co-PI)**

Dr. Karol Bruzik, Ph.D. (PI), U. of Ill. at Chicago  
Sponsor: National Institutes of Health (5R01GM057568-07)  
\$1,144,000.00 (25% Effort, \$288,000.00 Direct)

12/01/04-11/30/08

**Symposium on the “Origin’s of Life” (PI)**

Sponsor: UCF Student Government and Private Donations.  
\$6,682.00 (100% Effort)

10/1/05- 12/31/2006

**A Delineation of FDKP Self-assembly Processes: Understanding the Molecular Events Involved in FDK Interaction (Co-PI)**

Dr. Otto Phanstiel, Ph.D. (PI), U. of Central Florida

6/15/2005 - 7/1/2006

Sponsor: Mannkind Biopharmaceuticals  
 \$184,551.00 (18% Effort, \$33,507.00 Direct)

**Development of Cancer Therapies through Substrate Specificity (PI)**

Sponsor: Florida Hospital  
 \$15,000.00 (100% Effort)

4/1/2005 - 3/31/2006

**Screening and Selection tools for Protein Production (PI)**

Sponsor: University of Central Florida  
 \$7,500.00 (100% Effort)

5/1/2003 – 4/30/2004

**Development of a High Throughput Protein Purification Facility (PI)**

Sponsor: UCF Presidential Matching Fund  
 Total Dollar Amount: \$176,254.00 (100% Effort)

1/1/2003 – 12/31/2003

**Crystallization and Biophysical Characterization of Genetically Altered Cancer Proteins (PI)**

Sponsor: Florida Hospital  
 \$15,000.00 (100% Effort)

1/1/2003 - 12/31/2004

TEACHING

<i>Term</i> Course Description	Course Listing	Enrollment
<i>Spring 2007</i> Biochemical Methods Lab	BCH 4103L.0011	Enrollment: 24
Biochemistry I	BCH 4053.0001	Enrollment: 149
<i>Fall 2006</i> Biochemistry I Honors	BCH 4053H.0200	Enrollment: 5
<i>Spring 2006</i> Biochemical Methods Lab	BCH 4103L.0011	Enrollment: 24
<i>Fall 2005</i> Biochemistry I	BCH 4053.0002	Enrollment: 120
Honors Biochemistry I	BCH 4053H.0201	Enrollment: 09
*Structure-Function of Biomol.	BSC 6432.0001	Enrollment: 27
Undergraduate Research	CHM 4912.0002	Enrollment: 01
Thesis Research	CHM 7919.0011	Enrollment: 01
<i>* Team taught</i>		

*Spring 2005*

Biochemistry II	BCH 4054.0001	Enrollment: 73
*Structure-Function of Biomol. II	BSC 6433.0002	Enrollment: 24
Undergraduate Research	CHM 4912.0003	Enrollment: 03
Undergraduate Research	CHM 4912.0011	Enrollment: 01
Undergraduate Research	CHM 4912.0102	Enrollment: 01
Thesis Research	CHM 6971.0101	Enrollment: 01

*\* Team taught*

*Fall 2004*

Biochemistry I	BCH 4053.0002	Enrollment: 100
Undergraduate Research	CHM 4912.0003	Enrollment: 01
Undergraduate Research	CHM 4912.0004	Enrollment: 02
Thesis Research	CHM 6971.0015	Enrollment: 01
*Structure-Function of Biomol	IDS 7691.0001	Enrollment: 17
*Special Topics: X-ray Cryst.	MCB 6938.0001	Enrollment: 10

*\* Team taught*

*Spring 2004*

Biochemistry I	BCH 4053.0001	Enrollment: 99
Biochemical Methods Lab	BCH 4103L.0011	Enrollment: 21
Undergraduate Research	CHM 4912.0001	Enrollment: 01
Thesis Research	CHM 6971.0023	Enrollment: 01
*Special Topics: X-ray Cryst.	IDS 7939L.0002	Enrollment: 05

*\* Team taught*

*Fall 2003*

Biochemistry I	BCH 4053.0002	Enrollment: 100
Applied Biological Chemistry	CHM 5305.0001	Enrollment: 05
Doctoral Research	IDS 7919.0004	Enrollment: 01
*Special Topics: X-ray Cryst.	IDS 7939.0001	Enrollment: 21

*\* Team taught*

*Spring 2003*

Biochemistry I	BCH 4053.0002	Enrollment: 90
Biochemical Methods Lab	BCH 4103L.0011	Enrollment: 24
Thesis Research	CHM 6971.0101	Enrollment: 01

*Fall 2002*

Biochemistry I	BCH 4053 0002	Enrollment: 75
Independent Study: <i>Bioinformatics</i>	CHM 6908 0013	Enrollment: 01

## PUBLICATIONS

### Peer Reviewed Publications

- 18) "Analysis of Helix Packing Energies to Probe the Stability and Mechanism of Structural Transitions in Apoptotic Proteins." Nuska Tschammer, Annette R. Khaled, and Thomas L. Selby, *Biochemistry Submitted* (2007)
- 17) "Computational Active Site Analysis to Improve Functional Classification of Proteins." Sinem Ozyurt and Thomas L. Selby, *Biochemical and Biophysical Research Communications, Submitted*, (2007)
- 16) "Structural Transitions that mediate the membrane binding activity of BAX are dependent on its C-terminal alpha-9 helix" Nuska Tschammer, Deepika Minhas, Abhay Pande, Shan Qin, Ge Zhang, Suren A. Tatulian, Thomas L. Selby, and Annette R. Khaled, *Journal of Biological Chemistry, In Press* (2007)
- 15) "X-ray structure of the R69D phosphatidylinositol-specific phospholipase C enzyme: Insight into the role of calcium and surrounding amino acids in active site geometry and catalysis." D Apiyo, L Zhao, MD Tsai, TL Selby, *Biochemistry* 44 (30): 9980-9989 August, 2 (2005)
- 14) "Crystal structure of an iron-containing 1,3-propanediol dehydrogenase (TM0920) from *Thermotoga maritima* at 1.3 angstrom resolution." Schwarzenbacher R, von Delft F, Canaves JM, Brinen LS, Dai XP, Deacon AM, Elsliger MA, Eshaghi S, Floyd R, Godzik A, Grittini C, Grzechnik SK, Guda C, Jaroszewski L, Karlak C, Klock HE, Koesema E, Kovarik JS, Kreusch A, Kuhn P, Lesley SA, McMullan D, McPhillips TM, Miller MA, Miller MD, Morse A, Moy K, Ouyang J, Page R, Robb A, Rodrigues K, Selby TL, Spraggon G, Stevens RC, van den Bedem H, Velasquez J, Vincent J, Wang XH, West B, Wolf G, Hodgson KO, Wooley J, Wilson IA *Proteins-Structure Function and Genetics* 54 (1): 174-177 JAN 1 (2004)
- 13) "Crystal structure of O-acetylserine sulfhydrylase (TM0665) from *Thermotoga maritima* at 1.8 Å resolution." Heine A, Canaves JM, von Delft F, Brinen LS, Dai XP, Deacon AM, Elsliger MA, Eshaghi S, Floyd R, Godzik A, Grittini C, Grzechnik SK, Guda C, Jaroszewski L, Karlak C, Klock HE, Koesema E, Kovarik JS, Kreusch A, Kuhn P, Lesley SA, McMullan D, McPhillips TM, Miller MA, Morse A, Moy K, Ouyang J, Page R, Robb A, Rodrigues K, Schwarzenbacher R, Selby TL, Spraggon G, Stevens RC, van den Bedem H, Velasquez J, Vincent J, Wang XH, West B, Wolf G, Hodgson KO, Wooley J, Wilson IA. *Proteins-Structure Function and Bioinformatics* 56 (2): 387-391 AUG 1 (2004)
- 12) "Crystal structure of uronate isomerase (TM0064) from *Thermotoga maritima* at 2.85 angstrom resolution." Schwarzenbacher R, Canaves JM, Brinen LS, Dai XP, Deacon AM, Elsliger MA, Eshaghi S, Floyd R, Godzik A, Grittini C, Grzechnik SK, Guda C, Jaroszewski L, Karlak C, Klock HE, Koesema E, Kovarik JS, Kreusch A, Kuhn P, Lesley SA, McMullan D, McPhillips TM, Miller MA, Miller MD, Morse A, Moy K, Ouyang J, Robb A, Rodrigues K, Selby TL, Spraggon G, Stevens RC, van den Bedem H, Velasquez J, Vincent J, Wang XH, West

B, Wolf G, Hodgson KO, Wooley J, Wilson IA. *Proteins-Structure Function and Genetics* 53 (1): 142-145 OCT 1 (2003)

11) "Crystal structure of a zinc-containing glycerol dehydrogenase (TM0423) from *Thermotoga maritima* at 1.5 angstrom resolution", Brinen LS, Canaves JM, Dai XP, Deacon AM, Elsliger MA, Eshaghi S, Floyd R, Godzik A, Grittini C, Grzechnik SK, Guda C, Jaroszewski L, Karlak C, Klock HE, Koesema E, Kovarik JS, Kreuzsch A, Kuhn P, Lesley SA, McMullan D, McPhillips TM, Miller MA, Miller MD, Morse A, Moy K, Jie OY, Robb A, Rodrigues K, Selby TL, Spraggon G, Stevens RC, van den Bedem H, Velasquez J, Vincent J, Wang XH, West B, Wolf G, Taylor SS, Hodgson KO, Wooley J, Wilson IA, *Proteins-Structure Function and Genetics* 50 (2): 371-374 FEB 1 (2003)

10) "Structural genomics of the *Thermotoga maritima* proteome implemented in a high-throughput structure determination pipeline" S.A. Lesley, P. Kuhn, A. Godzik, A.M. Deacon, I. Mathews, A. Kreuzsch, G. Spraggon, H.E. Klock, D. McMullan, T. Shin, J. Vincent, A. Robb, L.S. Brinen, M.D. Miller, T.M. McPhillips, M.A. Miller, D. Scheibe, J.M. Canaves, C. Guda, L. Jaroszewski, T.L. Selby, M.A. Elsliger, J. Wooley, S.S. Taylor, K.O. Hodgson, I.A. Wilson, P.G. Schultz, R.C. Stevens *Proc. Natl. Acad. Sci. USA*, 99, 11664-11669 (2002).

9) "Crystal structure of thy1, a thymidylate synthase complementing protein from *Thermotoga maritima* at 2.25 Å resolution" P. Kuhn, S.A. Lesley, I.I. Mathews, J.M. Canaves, L.S. Brinen, X. Dai, A.M. Deacon, M.A. Elsliger, S. Eshaghi, R. Floyd, A. Godzik, C. Grittini, S.K. Grzechnik, C. Guda, K.O. Hodgson, L. Jaroszewski, C. Karlak, H.E. Klock, E. Koesema, J.M. Kovarik, A.T. Kreuzsch, D. McMullan, T.M. McPhillips, M.A. Miller, M. Miller, A. Morse, K. Moy, J. Ouyang, A. Robb, K. Rodrigues, T.L. Selby, G. Spraggon, R.C. Stevens, S.S. Taylor, H. van den Bedem, J. Velasquez, J. Vincent, X. Wang, B. West, G. Wolf, J. Wooley, I.A. Wilson *Proteins: Structure, Function and Genetics*, 49, 142-145 (2002).

8) "Tumor Suppressor INK4: Solution Structure of p15INK4B, Refined Solution Structure of p16INK4A, and Structural Comparison of INK4 Proteins." Thomas L. Selby, Chunhua Yuan, Junan Li, In-Ja Byeon, and Ming-Daw Tsai. *Protein Science*. Jun;9(6):1120-8 (2000)

7) "Tumor Suppressor INK4: Quantitative Structure-Function Analyses of p18INK4C as an Inhibitor of Cyclin-Dependent Kinase 4." Junan Li, Ming Jye Poi, Dongyan Qin, Thomas L. Selby, In-Ja Byeon, and Ming-Daw Tsai, *Biochemistry*. Feb 1;39(4):649-57 (2000)

6) "Tumor Suppressor INK4: Comparisons of Conformational Properties between p15INK4B, p16INK4A, and p18INK4C." Chunhua Yuan, Junan Li, Thomas L. Selby, In-Ja Byeon, and Ming-Daw Tsai, *J Mol Bio.*, 294, 201-211 (1999)

5) "Tumor Suppressor INK4: 3. Determination of the Solution Structure of p18INK4C and Demonstration of the Functional Significance of Loops in p18INK4C and p16INK4A." Junan Li, In-Ja L. Byeon, Karen Ericson, Ming Jye Poi, Paul O'Maille, Thomas Selby, and Ming-Daw Tsai, *Biochemistry* 38, 2930-2940 (1999).

4) "Tumor Suppressor p16INK4A: 2. Determination of Solution Structure and Analyses of Its Interaction with Cyclin-Dependent Kinase 4". In-Ja L. Byeon, Junan Li, Karen Ericson, Thomas L. Selby, Anton Tevelev, Hee-Jung Kim, Paul O'Maille, and Ming-Daw Tsai, *Molecular Cell* 1, 421-431 (1998).

3) "Tumor Suppressor INK4: 3. Determination of the Solution Structure of p18INK4C and Demonstration of the Functional Significance of Loops in p18INK4C and p16INK4A." Junan Li, In-Ja L. Byeon, Karen Ericson, Ming Jye Poi, Paul O'Maille, Thomas Selby, and Ming-Daw Tsai, *Biochemistry* 38, 2930-2940 (1999).

2) "Tumor suppressor p16-INK4A: Structural characterization of wild-type and mutant proteins by NMR and circular dichroism." Tevelev A, Byeon IJ, Selby T, Ericson K, Kim HJ, Kraynov V, Tsai MD. *Biochemistry*, Jul 23;35(29):9475-9487 (1996)

1) "Dissociation Characteristics of  $[M + X]^+$  Ions ( $X = H, Li, Na, K$ ) from Linear and Cyclic Polyglycols." Selby, T.L., Wesdemiotis, C., Lattimer, R.P. *J Am Soc Mass Spectrom*, Volume 5, 1081-1092 (1994)

### **Book Chapters**

3) "Robotics for Automated Crystal Formation and Analysis" M. Weselak, M.G. Patch, T.L. Selby, G. Knebel, R.C. Stevens, *Macromolecular Crystallography, Part C. Methods in Enzymology* 368: 45-76 (2003).

2) "Bioinformatics and high-throughput protein production for structural genomics" T.L. Selby, R.C. Stevens *Gene Cloning and Expression Technologies*, Eaton Publishing (2002).

1) "Structure-Function Relationship of the INK4 Family of Tumor Suppressors". Junan Li, In-Jia L. Byeon, Ming Jye Poi, Karen Ericson, Thomas Selby, Paul O'Maille, Dongyan Qin, and Ming-Daw Tsai, in *DNA Alterations in Cancer: Genetic and Epigenetic Changes*, Melanie Ehrlich, Ed., *BioTechniques Books*, Eaton Publishing (1999)

### **Published Meeting Abstracts**

1) "Inside-Out" methods to determine enzyme active site structures for drug design  
Selby TL, *FASEB JOURNAL* 19 (4): A303-A304 Part 1 Suppl. S, MAR 4 (2005)

### **Undergraduate Research Journals**

1) Barbara C. Mascareno-Shaw and Thomas L. Selby, "Computational Analysis of Broad Complex Zinc-Finger Transcription Factors" *UCF Undergraduate Research Journal*, *Submitted*

## Patents

1) “Randomized DNA Cassette Compositions, and System and Methods Using the Compositions for Applications including Lead Drug Compound Discovery.” Inventors: Thomas L. Selby, Serial No. 60/827,963; filed October 3, (2006)

## STUDENTS SUPERVISED

### Post-Doctoral Researchers

*Dr. Michael Jackson, Ph.D.*

University of Tennessee, Chemistry Department, 2006

Project: Crystallization and Structure Determination of saPLC

July 2006 – Present

*Dr. David Apiyo, Ph.D.*

Tulane University, Chemistry Department, 2001

Project: Purification and Crystallization of saPLC

February 2003 – December 2004

### Visiting Scholars

*Dr. Shams Mohamed Kholoussi Ismail, M.S., M.D.*

Visiting researcher from the National Research Center,

November 2006 – April 2007

Human Genetics and Genome Research Department, Cairo, Egypt.

Faculty of Medicine, Cairo University, Clinical and Chemical Pathology Department

Project: Structure-function studies of FRET proteins.

### Graduate Students

Nuska Tschammer Ph.D. Program—Biomolecular Sciences (w/ A. Khaled, BMS)

*Planned Graduation Spring 2007*

Anindarupa Chunder Ph.D. Program—Chemistry Department

*Departed my lab Spring 2006*

Prafull Bhaurao Kore Ph.D. Program—Chemistry Department

*Departed the Program Spring 2006*

Sinem Ozyurt, M.S. Chemistry 2005

*Graduated Summer 2005, now with SGX Pharmaceuticals, Inc., San Diego, CA*

Karlo Kitanovski Ph.D. Program—Physics Department (with T. Winningham, Physics)

*Departed the Program Fall 2005*

Eric McCurdy Ph.D. Program—Biomolecular Sciences

*Departed the Program Fall 2004*

Hedvika Davis Ph.D. Program—Biomolecular Sciences

*Departed my lab Fall 2003*

## Thesis Committee

6) Nuska Tschammer  
Committee Chair: Annette Khalid  
Dissertation Title: TBD  
Degree program: Ph.D. in Biomolecular Sciences

*Thesis work still in progress*

5) Kathleen Nemec  
Committee Chair: Suren Tatulian  
Dissertation Title: Phospholipase A2 mechanism of interfacial activation: An interdisciplinary approach. Ph.D. in Biomolecular Sciences.

*Graduated with her degree in Summer 2006.*

4) Marina Santos  
Committee Chair: Andres Campiglia  
Dissertation title: Analytical potential of polymerized liposomes bound to lanthanide ions for qualitative and quantitative analysis of proteins. Ph.D. in Chemistry.

*Successfully defended her thesis on defended on October 26, 2006.*

3) Dan Yiqiang Wang  
Committee Chair: Otto Phanstiel  
Thesis Title: Synthesis, transport and bioevaluation of polyamine analogues in mammalian cells

*Departed the Program Spring 2006*

2) Evan Small  
Committee Chair: William Self  
Honors Thesis Title: A Study of REDOX enzymes in *Sulfolobus solfataricus* and their potential for use in biosensors”

*Completed and Defended Thesis Spring 2005*

1) Sinem Ozyurt  
Committee Chair: Thomas Selby  
Thesis Title: “High-Throughput Project of Cancer Related Proteins and Crystallization of Phospholipases.”

*Successfully Defended and Graduated Summer 2005*

## Undergraduates

Julie Taylor (B.S. Forensic Science, Biochemistry track)	Spring 2007 – Present
Diane Burberry (B.S. Molecular and Microbiology)	Summer 2006 – Fall 2007
Jeffrey Cummings, (B.S.Molecular and Microbiology) <i>Honor's Student, American Cancer Society Fellow (Summer 2006)</i>	Summer 2006 – Fall 2007
Neil Beauregard (B.S. Forensic Science, Biochemistry track)	Fall 2005 – Fall 2007

Barbara C. Mascareno-Shaw (B.S. Chemistry) <i>Severed as Undergraduate Research Advisor</i>	Fall 2004- Spring 2006
Evan Small (B.S. Molecular and Microbiology) <i>Academic Advisor—Honors College w/ Thesis</i>	Spring 2004 – Fall 2005
Marcus Friedrich (B.S. Molecular and Microbiology)	Spring 2004 – Fall 2005
Maximilian Siu (B.S. Molecular and Microbiology)	Spring 2004 – Fall 2005
Adam Powell (B.S. Chemistry) <i>Severed as Undergraduate Research Advisor</i>	Fall 2003 – Spring 2004
Ashley Vrecenak (B.S. Molecular and Microbiology)	Fall 2003 – Spring 2004
Ami Smith (B.S. Molecular and Microbiology)	Fall 2003 – Spring 2004
Ansley Gascoigne (B.S. Molecular and Microbiology) <i>American Cancer Society Fellow (Summer 2004)</i>	Fall 2003 – Fall 2004
Ben Mahon (B.S. Molecular and Microbiology)	Fall 2002 –Spring 2003
Julia Walton (B.S. Molecular and Microbiology)	Fall 2002 –Spring 2003

## RESEARCH PRESENTATIONS

### International Meetings

- 4) “The Role of Helix Packing Energies in Structural Transitions”  
Nuska Tschammer, Annette. R. Khaled, Thomas L. Selby  
20th Annual Symposium, San Diego, CA  
The Protein Society  
August 5-9th, 2006
- 3) “Structural Transitions that Regulate the Apoptotic Activity of BAX are Dependant on Interactions Mediated Through its C-terminal Alpha-9 Helix”  
Nuska Tschammer, Ge Zhang, Thomas Selby, Suren Tatulian and Annette R. Khaled  
6th International Cytokine Conference, Vienna Austria  
August 27-31, 2006
- 2) “‘Inside-out’ Methods for Determining Enzyme Active Site Structures for Drug Design”  
Ayse S. Ozyurt, Adam B. Powell, and Thomas L. Selby  
ASBMB Annual Meeting, San Diego, CA  
American Society for Biochemistry and Molecular Biology  
March 31st - April 5th, 2005

1) "Protein Structure Determination and Computational Inhibitor Design for the Treatment of Metabolic Disorders and Disease"

Thomas L. Selby

229th ACS National Meeting

San Diego, CA - March 13 – 17th, 2005

### **Regional Meetings**

3) "Investigation of Substrate-Enzyme Interactions for Bacterial Phospholipase C"

David Apiyo and Thomas L. Selby

56th Southeast Regional Meeting

American Chemical Society

November 10-13, 2004

2) "X-ray Structure of the R69D Phosphatidylinositol-Specific Phospholipase-C Enzyme: Insight into the Role of Calcium and Surrounding Amino Acids on Active Site Geometry and Catalysis"

Thomas L. Selby

56th Southeast Regional Meeting

American Chemical Society

November 10-13, 2004

1) "A Novel Bioinformatics Method for Determining Active Site Architecture and Specificity"

Adam Powell and Thomas L. Selby

56th Southeast Regional Meeting

American Chemical Society

November 10-13, 2004

### **Local Meetings**

7) "Understanding the Effect of Mutations on Transcription Factors using Molecular Mechanics Calculations"

Barbara C. Mascareno-Shaw and Thomas L. Selby

Florida Annual Meeting and Exposition

American Chemical Society, Florida Section

May 11-13, 2006

6) "Structural Studies of an Engineered Calcium-binding Bacterial Phospholipase-C"

David Apiyo and Thomas L. Selby

Florida Academy of Sciences Meeting, Orlando, FL

Spring Meeting, 2003

5) "Structure Determination of Cancer and Metabolic Disease Related Proteins"

Ayse S. Ozyurt and Thomas L. Selby

Florida Academy of Sciences Meeting, Orlando, FL

Spring Meeting, 2003

4) “Reverse Structure Activity Relationships (rSAR) in Template-Based Drug Design”

Thomas L. Selby

Organic Faculty of Florida Annual Meeting

Orlando, FL

March 1-2nd 2003

3) “High Throughput Structure Determination (HTSD) to Elucidate Cancer Progression Mechanisms in Functionally Unclassified Proteins”

Ayse S. Ozyurt and Thomas L. Selby

Florida Academy of Sciences Meeting, Orlando, FL

Spring Meeting, 2002

2) “Designing Cross Reactive Enzyme Inhibitors to Control Junction Pathway Metabolism in the Treatment of Genetic Disorders.

Hedvika A. Davis and Thomas L. Selby

Florida Academy of Sciences Meeting, Orlando, FL

Spring Meeting, 2002

1) “Using Genetic Diversity to Improve Drug Design through Reverse Structure Activity Relationships (rSAR)”

Thomas L. Selby

Florida Academy of Sciences Meeting, Orlando, FL

Spring Meeting, 2002

### **University Presentations and Invited Lectures**

5) “Computational Simulation of Natural Mutants of Zinc-Finger Proteins”

Barbara C. Mascareno-Shaw and Thomas L. Selby

Dept. of Chemistry University of Central Florida

Undergraduate Research Showcase, Orlando FL

February 28, 2006

4) “Using Structural Biology and Computational Drug Design for the Treatment of Metabolic Diseases”

Thomas L. Selby

Biophysics Lecture, Orlando, FL

April 20th, 2004

3) “Using Structural Biology and Computational Drug Design for the Treatment of Metabolic Diseases”

University of Akron Chemistry Department, Akron OH

February 21st, 2004

2) “Computational Inhibitor Design for the Treatment of Metabolic Diseases”

Thomas L. Selby  
Troy State Chemistry Department, Troy, AL  
October 30th, 2003

1) “Structural Genomics Approaches to Understanding Metabolic Pathways”  
Thomas L. Selby,  
Physics Department Seminar,  
November 9th 2002

## SERVICE

### **Service to the Scientific Community**

American Crystallographic Association National Meeting  
Local Chair  
May 28-June 2, 2005, Orlando, FL  
Chair: Ed Collins, Co-Chair: Khaled Abboud

Proposal Reviewer: *National Science Foundation, 2005*  
Manuscript Reviewer: *Biochemistry, 2003*

### **Service to the University/Public**

Annual Symposium on the “Origins of Life”  
October 7 & 8, (2005)  
October 15 & 16 (2004)  
Sponsoring nationally recognized speakers in the chemical sciences to come to UCF and give presentations on how biological life began.  
Sponsored a student competition for the chemical basis of the Origin of Life  
Web site for this event: [www.originseducation.org](http://www.originseducation.org)

Seminole County and Orange County Science Fair Judge (2002- 2005)

### **Service to the Department**

#### **2006**

Biomolecular Sciences Admissions Committee  
Biochemistry Faculty Search Committee  
Chemistry Department Outreach Committee (Co-Chair)  
Biochemistry subject committee (Chair)  
Graduate affairs committee

#### **2005**

Biochemistry Faculty Search Committee (Chair)  
Biomolecular Sciences Admissions Committee

Chemistry Department Outreach Committee (Co-Chair)  
Biochemistry subject committee (Chair)  
Graduate affairs committee

**2004**

Biochemistry Faculty Search Committee (Chair)  
Biochemistry subject committee

**2003**

Seminar Committee  
Web page Development  
Biochemistry subject committee

**2002**

Seminar Committee  
Web page Development  
Biochemistry subject committee

**WORKSHOPS ATTENDED AND PROFESSIONAL DEVELOPMENT**

Honors College Teaching Circles  
Burnett Honors College  
Fall Semester (3 meetings), 2006  
University of Central Florida, Orlando, FL

Faculty Development Summer Conference, Diversity Track.  
“The New America(n)”  
University of Central Florida Diversity Initiatives  
May 1-4th, 2006, Orlando, FL

Virtual Focus Group for Effectively Teaching Biochemistry  
Sponsored by Project Specialists, Content Connections, LLC  
October 19, 2006, Orlando, FL