

# TRIAD CHEMICAL TIMES



Central North Carolina Section American Chemical Society

## May CNC-ACS Meeting

**Eric M. Lewis, PhD**  
**Thursday, May 2, 2013**



## Balancing Life and Death; The Role of Apoptosis Inducing Factor in Cellular Homeostasis and Cancer

### May Meeting Details:

#### When:

Thursday May 2, 2013

#### Where:

High Point University  
Norton Hall Room 101

#### Time:

Social: 6:30 pm

Meeting: 7:00 pm

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<i>2013 Executive Committee and Committee</i>	5

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## Balancing Life and Death; The Role of Apoptosis Inducing Factor in Cellular Homeostasis and Cancer

Apoptosis Inducing Factor (AIF) is a mitochondrial flavoprotein implicated in caspase-independent cell death. However, AIF is also essential for healthy cell function and has been shown to have protective properties in cancer cells. Here I will discuss the control of cellular homeostasis by AIF and how the biochemical modification and enzymatic activity of AIF plays a role in these processes.

### Eric Michael Lewis, Ph.D.

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#### OVERVIEW

As a Visiting Assistant Professor, I strive to maintain high standards and expectations while also being completely accessible to any student that needs guidance both in and outside of the classroom. I believe the most effective teacher has the ability to relate knowledge to students through those students' interests and with an honest and infectious enthusiasm for the material. I believe in the Socratic method and that educators have an obligation to always look for the most effective ways to encourage students to learn while providing them with the tools and skills necessary to do so.

#### CURRENT POSITION

Visiting Assistant Professor of Biochemistry  
Department of Chemistry and Physics  
High Point University  
High Point, NC

#### EDUCATION

Ph.D., Molecular Medicine, Wake Forest University, Winston-Salem, NC (July, 2007)  
BS, Biochemistry, BA, Chemistry, Cum Laude, North Carolina State University, Raleigh, NC, (May, 2001)

#### PUBLICATIONS

E.M. Lewis, A.S. Wilkinson, J.S. Jackson, S. Varambally, A.M. Chinnayan, and J.C. Wilkinson. The Enzymatic Activity of Apoptosis Inducing Factor Supports Energy Metabolism Benefiting the Growth and Invasiveness of Advanced Prostate Cancer Cells. *J. Biol Chem.* 2012 Dec 21; 287(52): 43862-75.

E.M. Lewis, A.S. Wilkinson, N.Y. Davis, D.A. Horita, and J.C. Wilkinson. Non-degradative Ubiquitination of Apoptosis Inducing Factor (AIF) by X-linked Inhibitor of Apoptosis at a Residue Critical for AIF-mediated Chromatin Degradation. *Biochemistry.* 2011 Dec 27; 50(51): 11084-96

E.M. Lewis, S. Sergeant, B. Ledford, N. Stull, M. Dinauer, and L.C. McPhail. Phosphorylation of p22<sup>phox</sup> on Threonine 147 enhances NADPH Oxidase activity by promoting p47<sup>phox</sup> binding. *J. Biol Chem.* 2010 Jan 29; 285(5): 2959-2967.

E.M. Lewis, M. Singla, S. Sergeant, P.P. Koty, L.C. McPhail. X-linked Chronic Granulomatous Disease secondary to skewed X chromosome inactivation in a female with a novel CYBB mutation and late presentation. *Clin Immunol.* 2008 Nov; 129(2): 372-380.

## **Directions to HPU For May 2<sup>nd</sup> Central NC Section ACS:**

Norton Hall Room 101 (this is building #9 on the campus map)

Directions to HPU From WS: Take US-311 South towards High Point. Exit #21, Greensboro road, and turn right (southwest). Go less than a mile and turn left on Montlieu Ave. Follow Parking Directions Below:

From Central GB or the Eastern Piedmont: Take I-85 south and merge into I-85 Business south (Exit #118 ) toward HP. Take the E Kivett Dr exit, turn right. Continue on Kivett Dr about 3 miles to N College Dr. Take a right at N College Dr for less than a mile and turn left at Montlieu Ave. Follow Parking Directions Below:

From Western GB/Airport Area: Take NC-68 south. From I-40 you travel about 6 miles (about 3 miles from Wendover Ave.) Turn left at N Centennial St and go less than a mile. Turn left at N College Dr and go about a mile. Turn right on Montlieu Ave. Follow Parking Directions Below:

Parking directions once you reach Montlieu Ave: Continue past the main entrance and the next entrance with a most likely closed gate. Proceed to the third entrance with a welcome hut and turn right; this can be found on the far left of the campus map. Take a slight right after the welcome center and follow the parking lots on the right until you hit the second section of lots after the stop sign. Norton Hall is the first building on your left in this second parking section, its building #9 on the campus map. Enter through the back entrance on the ground level just past the statue of the soldier.

# Campus Map of HPU For May 2<sup>nd</sup> Central NC Section ACS:

## HIGH POINT UNIVERSITY

Belk Residence Hall.....	30	Millis Athletic and Convocation Center.....	33	Roberts Hall.....	27
Blessing Residence Hall.....	31	Millis Residence Hall.....	22	School of Education.....	12
Club/Intramural Fields.....	40	Nido R. Qubein School of Communication.....	11	School of Science (proposed).....	34
Congdon Hall.....	3	Norcross Graduate School.....	32	Slane Student Center.....	25
Coy O. Williard Baseball Stadium.....	36	North College Administration.....	44	Smith Library.....	28
David R. Hayworth Hall.....	8	North College C-Store 3.....	45	Steele Sports Center.....	37
David R. Hayworth Park.....	24	North College Court and Bistro.....	43	Townhome Community 1.....	14
Erath Baseball Field.....	35	North College Terrace.....	47	Townhome Community 2 (proposed).....	15
Fifth Street Lofts (proposed).....	16	North College Townhomes.....	46	University Center.....	23
Finch Residence Hall.....	5	<b>Norton Hall.....</b>	<b>9</b>	U-Ville Apartments.....	42
Greek Village.....	13	Old Student Center/Security.....	26	Vert Track and Soccer Stadium.....	39
Hayworth Chapel.....	7	Phillips Hall.....	6	Village.....	41
Hayworth Fine Arts Center.....	2	Plato S. Wilson School of Commerce.....	10	Wilson Residence Hall.....	21
Ike Belk Track.....	38	Point Place Apartments, 806.....	20	Wrenn Admissions Building.....	1
Kester International Promenade.....	4	Point Place Apartments, 812.....	19	York Residence Hall.....	17
McEwen, North, Wesley, Yadkin Residence Halls.....	29	Point Place Apartments, 818.....	18		

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