**NOELEEN MELODY**

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**EDUCATION**

Ph.D., Synthetic Organic Chemistry, National University of Ireland Galway, 1991

B.Sc., Chemistry, National University of Ireland Galway, 1987

**POSITIONS**

July 2017-present Associate Research Professor, School of Molecular Sciences (formerly Department of Chemistry & Biochemistry) Arizona State University, Tempe, Arizona

2003- June 2017 Assistant Research Professor, School of Molecular Sciences (and formerly Department of Chemistry & Biochemistry) Arizona State University, Tempe, Arizona

1993 - 2003 Faculty Research Associate, Cancer Research Institute, Department of Chemistry & Biochemistry, Arizona State University, Tempe, Arizona

1991 – 1993 Post-Doctoral Research Associate, Cancer Research Institute, Department of Chemistry Biochemistry, Arizona State University, Tempe, Arizona

**EXPERTISE**

Synthetic Organic Chemistry:

Synthesis; SAR Studies; Natural Product Isolation and Structure Elucidation; Drug Delivery; Carbohydrate Chemistry; Heterocyclic Chemistry.

**MEMBERSHIP**

March 2017 -present ASU chapter of the National Academy of inventors (NAI).

**PUBLICATIONS**

1. Antineoplastic Agents. 606. The Betulastatins. George R. Pettit, Noeleen Melody, and Jean-Charles Chapuis, 2017, submitted.
2. Antineoplastic Agents. 605. Isoquinstatins, J. Nat. Prod., George R. Pettit, Noeleen Melody, Jean-Charles Chapuis, 2017, 80, 2447-2452. DOI:10.1021/acs.jnatprod.7b00352. Online ahead of print. Chosen for the Special Issue in Honor of Susan Horwitz.
3. Antineoplastic Agents 604. The Path of Quinstatin Derivatives to Antibody Drug Conjugates. George R. Pettit, Noeleen Melody, Jean-Charles Chapuis , J. Nat. Prod., 2017, 80, 2447-2452.
4. Antineoplastic agents 603. Quinstatins. Exceptional Cancer Cell Growth Inhibitors George R. Pettit, Noeleen Melody and Jean-Charles Chapuis, J. Nat. Prod., 2017, 80, 692-698. Chosen for special issue to honor Professor Phil Crews and awarded “ACS Editors Choice”.
5. Isolation and Structure of Cancer Cell Growth Inhibitory Tetracyclic Triterpenes from the Zimbabwean Monadenium lugardae . Pettit, G.R., Ye, Q., Knight, J.C., Hogan, F., Melody, N., Mukku, V.J.R.V., Doubek, D.L., and Chapuis, J.C.,J. Nat. Prod., 2016, 79, 1598–1603.
6. Antineoplastic Agents. 585. Isolation of Bridelia ferruginea Anticancer Podophyllotoxins and Synthesis of 4-Aza-Podophyllotoxin Structural Modifications. Pettit, G. R., Searcy, J. D.,Tan, R., Cragg, G.M., Melody, N., Knight, J.C., Chapuis, J.C., Journal of Natural Products, 2016, 79, 507-518.
7. The Cephalostatins. 24. Isolation, Structure, and Cancer Cell Growth Inhibition of Cephalostatin 20. Pettit, George R.; Xu, Jun-Ping; Chapuis, Jean-Charles; Melody, Noeleen, Journal of Natural Products 2015, 78(6), 1446-1450.
8. Neristatin 1 Provides Critical Insight into Bryostatin 1 Structure–Function Relationships. Kedei, Noemi; Kraft, Matthew B.; Keck, Gary E.; Herald, Cherry L.; Melody, Noeleen; Pettit, George R.; Blumberg, Peter M. Journal of Natural Products, 2015, 78(4), 896-900.
9. Antineoplastic Agents. 595. Structural Modifications of Betulin and the X-ray Crystal Structure of an Unusual Betulin Amine Dimer Pettit, George R.; Melody, Noeleen; Hempenstall, Frank; Chapuis, Jean-Charles; Groy, Thomas L.; Williams, Lee.; Journal of Natural Products (2014), 77(4), 863-872.
10. Antineoplastic Agents. 587. Isolation and Structure of 3-Epipancratistatin from Narcissus cv. Ice Follies. Pettit, George R.; Tan, Rui; Bao, Guan-Hu; Melody, Noeleen; Doubek, Dennis L.; Gao, Song; Chapuis, Jean-Charles; Williams, Lee. Journal of Natural Products (2012), 75(4), 771-773.
11. Preclinical efficacy of sodium narcistatin to reduce inflammation and joint destruction in rats with adjuvant-induced arthritis. Lubahn, Cheri; Schaller, Jill A.; Shewmacker, Eric; Wood, Carlo; Bellinger, Denise L.; Byron, Donna; Melody,Noeleen; Pettit, George R.; Lorton, Dianne. Rheumatology International (2012), 32(12), 3751- 3760.
12. Antineoplastic Agents. 454. Synthesis of the Strong Cancer Cell Growth Inhibitors trans- Dihydronarciclasine and 7-Deoxy-trans-dihydronarciclasine. Pettit, George R.; Ducki, Sylvie; Eastham, Stephen A.; Melody, Noeleen. Journal of Natural Products (2009), 72(7), 1279-1282.
13. Antineoplastic Agents. 578. Synthesis of Stilstatins 1 and 2 and Their Water-Soluble Prodrugs. Pettit, George R.; Thornhill, Andrew; Melody, Noeleen; Knight, John C. Journal of Natural Products (2009), 72(3), 380-388.
14. Antineoplastic Agents. 579. Synthesis and Cancer Cell Growth Evaluation of E-Stilstatin 3: A Resveratrol Structural Modification. Pettit, George R.; Melody, Noeleen; Thornhill, Andrew; Knight, John C.; Groy, Thomas L.; Herald, Cherry L. Journal of Natural Products (2009), 72(9), 1637-1642.
15. Antineoplastic Agents. 550. Synthesis of 10b(S)-Epipancratistatin from (+)-Narciclasine Pettit, George R.; Melody, Noeleen; Herald, Delbert L.; Knight, John C.; Chapuis, Jean-Charles Journal of Natural Products (2007), 70(3), 417-422.
16. Isolation and Structural Modification of 7-Deoxynarciclasine and 7-Deoxy-trans-Dihydronarciclasine By Pettit, George R.; Eastham, Stephen A.; Melody, Noeleen; Orr, Brian; Herald, Delbert L.; McGregor, Jane; Knight, John C.; Doubek, Dennis L.; Pettit, George R., III; Garner, Lynnette C.; Journal of Natural Products (2006), 69(1), 7-13.
17. Antineoplastic Agents. 527. Synthesis of 7-Deoxynarcistatin, 7-Deoxy-trans-dihydronarcistatin, and trans-Dihydronarcistatin Pettit, George R.; Melody, Noeleen, Journal of Natural Products (2005), 68(2), 207-211.
18. Antineoplastic Agents. 511. Direct Phosphorylation of Phenpanstatin and Pancratistatin Pettit, George R.; Melody, Noeleen; Herald, Delbert L., Journal of Natural Products (2004), 67(3), 322- 327.
19. Antineoplastic Agents 500. Narcistatin Pettit, George R.; Melody, Noeleen; Simpson, Michael; Thompson, Michael; Herald, Delbert L.; Knight, John C. Journal of Natural Products (2003), 66(1), 92-96.
20. Antineoplastic agents. 467. Synthesis of 10b(R)-hydroxypancratistatin, 10b(S)-hydroxy-1- epipancratistatin, 10b(S)-hydroxy-1,2-diepipancratistatin and related isocarbostyrils. Pettit, George R.; Melody, Noeleen; Herald, Delbert L.; Schmidt, Jean M.; Pettit, Robin K.; Chapuis, Jean- Charles, Heterocycles (2002), 56(1-2), 139-155.
21. Antineoplastic Agents. 450. Synthesis of (+)-Pancratistatin from (+)-Narciclasine as Relay. Pettit, George R.; Melody, Noeleen; Herald, Delbert L. Journal of Organic Chemistry (2001), 66(8), 2583- 2587.
22. Antineoplastic agents. Part 409: Isolation and structure of montanastatin from a terrestrial actinomycete Pettit, George R.; Tan, Rui; Melody, Noeleen; Kielty, Joshua M.; Pettit, Robin K.; Herald, Delbert L.; Tucker, Bruce E.; Mallavia, Louis P.; Doubek, Dennis L.; Schmidt, Jean M. Bioorganic & Medicinal Chemistry (1999), 7(5), 895-899.
23. Antineoplastic agents. 385. The isolation and structure of a scalarane-type sesterterpene from the Indian Ocean porifera Hyrtios erecta. Pettit, George R.; Cichaz, Zbigniew A.; Tan, Rui; Herald, Delbert L.; Melody, Noeleen; Hoard, Michael S.; Doubek, Dennis L.; Hooper, John N. A. Collection of Czechoslovak Chemical Communications (1998), 63(10), 1671-1677.
24. Antineoplastic agents. 386. Isolation of sesterstatins 1-3 from the marine sponge Hyrtios erecta Pettit, George R.; Cichacz, Zbigniew A.; Tan, Rui; Hoard, Michael S.; Melody, Noeleen; Pettit, Robin K. Journal of Natural Products (1998), 61(1), 13-16.
25. Antineoplastic agents. 397. Isolation and structure of sesterstatins 4 and 5 from Hyrtios erecta (the Republic of Maldives). Pettit, George R.; Tan, Rui; Melody, Noeleen; Cichacz, Zbigniew A.; Herald, Delbert L.; Hoard, Michael S.; Pettit, Robin K.; Chapuis, Jean-Charles, Bioorganic & Medicinal Chemistry Letters (1998), 8(16), 2093- 2098.
26. Antineoplastic agents. 321. Synthesis of 10b-R-hydroxy-pancratistatin via narciclasine. Pettit, George R.; Melody, Noeleen; O'Sullivan, Michael; Thomson, Michael A.; Herald, Delbert L.; Coates, Brian, Journal of the Chemical Society, Chemical Communications (1994), (23), 2725-6.
27. An NMR analysis of 1,2-O-isopropylidene-3-O-methyl--D-allofuranose and 1,2:5,6-di-O- isopropylidene-3-O-methyl--D-allofuranose, and the X-ray structure of the former Lee, Elizabeth; Melody, Noeleen; McArdle, Patrick; Cunningham, Desmond, Carbohydrate Research (1992), 226(1), 175-8.
28. NMR studies of some deoxyhexopyranosides and the x-ray structures of methyl 3,4,6-tri-O-acetyl-2- deoxy--Darabino-hexopyranoside and methyl 4,6-O-benzylidene-3-deoxy--D-arabino-hexopyranoside By Lee, Elizabeth; Melody, Noeleen; McArdle, Patrick; Cunningham, Desmond, Carbohydrate Research (1991), 219, 229-36.
29. X-ray crystallographic and proton and carbon-13 NMR studies of methyl 4,6-O-(R)-benzylidene-3-O- methyl-2-O-ptolylsulfonyl--D-glucopyranoside and methyl 4,6-O-(R)-benzylidene-2-O-methyl-3-O-p- tolylsulfonyl--D-glucopyranoside. Lee, Elizabeth; McArdle, Patrick; Melody, Noeleen; Cunningham, Desmond; Gallagher, John, Carbohydrate Research (1990), 208, 231-40.

**PATENTS**

1. US7709643: Synthesis of sodium narcistatin and related compounds:

2. US6949647: Synthesis of Pancratistatin

3. US7994320 : Narcistatin prodrugs

4. US7541346 and US7351830: Pancratistatin cyclic phosphate prodrugs and Phenpanstatin Cyclic phosphate prodrugs

5. Patent Application: Quinstatin compounds WO 2017019489 A1

**RESEARCH SUPPORT**

ADHS14-082978 G.R. Pettit (PI) 10/23/2014 – 10/22/2017

Discovery of Powerful Anticancer Drugs for Monoclonal Anticancer Drugs (ADC) Development Capable of Improving Cancer Treatments

The goal of this research is the discovery of anti-cancer ADC drug conjugates for linkage to a broad variety of monoclonal antibodies representing a spectrum of human cancer types.

Role: Co-investigator