John Michael Wasylyk

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Yardville, NJ 08620

PERSONAL OBJECTIVE: Advance chemical process understanding through applied spectroscopy.

EDUCATION:

09/85-05/89 Ph.D. in Biology courses in radioisotope practice and handling, physiology, chemistry, HPLC, and research in pharmacognosy, physical and chemical processes associated with cryopreservation. UNIVERSITY OF HOUSTON, Houston, TX and STATE UNIVERSITY OF NEW YORK at BINGHAMTON, Binghamton, NY.

05/83-12/85 Master of Science in Medicinal Chemistry and Pharmacognosy, graduation with honors, courses in chemistry, medicinal chemistry, pharmacognosy, and pharmacology, and research in pharmacognosy, UNIVERSITY OF HOUSTON, Houston, TX.

10/80-12/82 Undergraduate and graduate chemistry courses and research

 in pharmacognosy, UNIVERSITY OF CONNECTICUT, Storrs, CT.

09/76-05/80 Bachelor of Science in Marine Science, SOUTHAMPTON COLLEGE OF LONG ISLAND UNIVERSITY, Southampton, NY.

SKILLS AND ABILITIES: Research and applied experiences in biochemistry

 and organic chemistry including 1H and 13C NMR, (one- and two-dimensional techniques), UV spectroscopy, NearIR spectroscopy, Raman spectroscopy, IR spectroscopy, polarimetry, DSC, and interpretation of spectral information for structure assignment to newly isolated compounds. Chromatography including chiral chromatography method development. SAP administrative experience. Chemometric software including Grams, MatLab, TQ Analyst, and SynTQ for GMP-PAT control.

EXPERIENCE:

01/04-present: PAT Development and Implementation. Develop and apply in-line spectroscopic methods for QbD, Process Development and Manufacturing Control. Expertise in vibration spectroscopy applied to productivity enhancement and foreign material analyses. Prepare and review documents required for GMP management of PAT equipment. Develop off-line spectroscopic methods for process information studies. Experience in technology transfer of validated spectroscopy-based analytical methods. Installation, data acquisition and data handling of in-line MS. IQ/OQ execution and instrument control documentation.

03/89-12/03: Laboratory Manager. Manage in-process analytical laboratory in fermentation-based plant. Established in-process chemical laboratory. Coordinated daily operations, ordering, development and implementation of analytical methods. Coordinated division’s first automation team. Site data administrator for SAP.

09/83-02/89. Research Assistant, DEPARTMENTS OF BIOLOGY, UNIVERSITY OF HOUSTON, Houston, TX; STATE UNIVERSITY OF NEW YORK AT BINGHAMTON, Binghamton, NY.

 Characterization of cryoprotectant solutions at sub-freezing temperatures using NMR and DSC. Thermal analyses of the intracellular and extracellular vitrification of cryopreserved human erythrocytes. Screening for insecticide/antifeedant, and isolation and identification of natural products from the goldenrod, Solidago canadensis. Isolation and identification of cardiovascular active components from the tunicate Styela plicata. Design and lecture in graduate level HPLC course.

 Research Assistant, DEPARTMENT OF MEDICINAL CHEMISTRY AND PHARMACOGNOSY; AND DEPARTMENT OF BIOLOGY, UNIVERSITY OF HOUSTON, Houston, TX.

 Isolation, structural elucidation and evaluation for biological activity of natural products from Solidago canadensis, Styela plicata, and the gorgonian Pseudoplexaura wagenaari.

09/80-12/82 Research Technician, SCHOOL OF PHARMACY, UNIVERSITY OF CONNECTICUT, Storrs, CT.

 Isolation and structural elucidation of several new biologically active cyclic peptides from the marine tunicate, Lissoclinum patella.

01/79-09/80 Independent Research, SOUTHAMPTON COLL., Southampton,NY.

 Isolation, identification, and toxicological screening of a toxin from the trunkfish, Lactophrys trequeter.

09/79-12/79 Research Chemist Intern, SCRIPPS INSTITUTION OF OCEANOGRAPHY,

 La Jolla, CA.

 Isolation and identification of a new furan-sesquiterpene from the soft coral, Pseudopterogorgia americana.

SOCIETIES:

American Chemical Society, 1986-2023.

Society of Applied Spectroscopy, At-Large International Delegate to the SAS Governing Board,

 2010-2012.

Parliamentarian for SAS, 2012-2014.

Board of Governors for SAS, 2010-2014.

Long Range Planning Committee for SAS, 2015.

Chair, Publication Committee, SAS and J. Applied Spectroscopy, 2016-2017.

Marketing Chair for Federation of Analytical Chemistry and Spectroscopy Society (FACSS)

 2014-2016; 2017-2019.

Pharmaceutical Section Chair for SciX (The Great Scientific Exchange) 2013-2016.

Pharmaceutical Section Co-Chair for SciX (The Great Scientific Exchange) 2017-2024.

SAS NY/NJ Section Chair, 2020-2024.

ACS Green Chemistry Initiative Pharmaceutical Roundtable, Analytical Focus Team Co-Leader. 2020-2024.

ACS GCE Conference Analytical Chemistry Section co-chair, 2021-2024.

SELECTED WEBINARS:

# “A Perfect Match: Vibrational Spectroscopy and Sustainable Chemistry.” ACS Webinar Series. June 11, 2020.

“Applying low frequency raman to QbD in pharmaceutical development.”

## John Wasylyk and James Carriere, BioPharma Asia. 26th April 2019.

SELECTED PUBLICATIONS:

 “Generic NIR Method for Quantitation of Moisture in Lyophilized Proteins.”[John](http://www.pharmtech.com/john-wasylyk)

 [Wasylyk](http://www.pharmtech.com/john-wasylyk), Mary Krause, [Ming Huang](http://www.pharmtech.com/ming-huang), [Bob Wethman](http://www.pharmtech.com/bob-wethman). *Pharmaceutical Technology*.

 Under review.

 “Scalability and Predictability of Polymorph Transformations Under High Shear.”

 Ronald Carrasquillo-Flores**,** Steven R. Wisniewski, Vivek Daftary, Federico Lora-

 Gonzalez, Tamar Rosenbaum, Robert Wethman, Ming-Hsing Huang, John

 M. Wasylyk, Joshua Selekman, Candi Choi, Brendan Mack, Thomas M. Razler

 and Joshua Engstrom. *Organic Process Research & Development* 25, 4, 1028-

1035 (2021).

“Spectroscopy Facilitates Lean Analysis.” [John Wasylyk](http://www.pharmtech.com/john-wasylyk), [Ming Huang](http://www.pharmtech.com/ming-huang), [Bob Wethman](http://www.pharmtech.com/bob-wethman), [Kieran O’Connor](http://www.pharmtech.com/kieran-o-connor). *Pharmaceutical Technology*. **43**(2) 35–39 (2019).

# “Buffer exchange path influences the stability and viscosity upon storage of a high concentration protein.” [Krause ME](https://www.ncbi.nlm.nih.gov/pubmed/?term=Krause%20ME%5BAuthor%5D&cauthor=true&cauthor_uid=30031090), [Narang AS](https://www.ncbi.nlm.nih.gov/pubmed/?term=Narang%20AS%5BAuthor%5D&cauthor=true&cauthor_uid=30031090), [Barker G](https://www.ncbi.nlm.nih.gov/pubmed/?term=Barker%20G%5BAuthor%5D&cauthor=true&cauthor_uid=30031090), [Herzer S](https://www.ncbi.nlm.nih.gov/pubmed/?term=Herzer%20S%5BAuthor%5D&cauthor=true&cauthor_uid=30031090), [Deshmukh S](https://www.ncbi.nlm.nih.gov/pubmed/?term=Deshmukh%20S%5BAuthor%5D&cauthor=true&cauthor_uid=30031090), [Lan W](https://www.ncbi.nlm.nih.gov/pubmed/?term=Lan%20W%5BAuthor%5D&cauthor=true&cauthor_uid=30031090), [Fichana D](https://www.ncbi.nlm.nih.gov/pubmed/?term=Fichana%20D%5BAuthor%5D&cauthor=true&cauthor_uid=30031090), [Wasylyk JM](https://www.ncbi.nlm.nih.gov/pubmed/?term=Wasylyk%20JM%5BAuthor%5D&cauthor=true&cauthor_uid=30031090), [Demirdirek B](https://www.ncbi.nlm.nih.gov/pubmed/?term=Demirdirek%20B%5BAuthor%5D&cauthor=true&cauthor_uid=30031090), [Zhang L](https://www.ncbi.nlm.nih.gov/pubmed/?term=Zhang%20L%5BAuthor%5D&cauthor=true&cauthor_uid=30031090), [Fiske J](https://www.ncbi.nlm.nih.gov/pubmed/?term=Fiske%20J%5BAuthor%5D&cauthor=true&cauthor_uid=30031090), [McGann M](https://www.ncbi.nlm.nih.gov/pubmed/?term=McGann%20M%5BAuthor%5D&cauthor=true&cauthor_uid=30031090), [Adams ML](https://www.ncbi.nlm.nih.gov/pubmed/?term=Adams%20ML%5BAuthor%5D&cauthor=true&cauthor_uid=30031090), [Gandhi RB](https://www.ncbi.nlm.nih.gov/pubmed/?term=Gandhi%20RB%5BAuthor%5D&cauthor=true&cauthor_uid=30031090). [*Eur J Pharm Biopharm.*](https://www.ncbi.nlm.nih.gov/pubmed/30031090)  **13** 60-69 (2018).

“Ensuring Product Quality with Process Raman and FT-IR Spectroscopy.” John Wasylyk. *Spectroscopy*, **31**(5) 33-35 (2016).

“Application of Low- and Mid-Frequency Raman Spectroscopy to Characterize the Amorphous-Crystalline Transformation of Indomethacin.” Peter J. Larkin, John Wasylyk, Michaella Raglione. *J. of Applied Spectroscopy*. **69**(11) 1217-1228 (2015).

“Study of Pharmaceutical Drug-Excipient Interaction by FT-IR and Raman Spectroscopy.” Ming Huang, Robert Wethman, John Wasylyk. *Biopharma Asia*, **4**(3) 36-41 (2015).

 “Control Strategy for the Manufacture of Brivanib Alaninate, a Novel Pyrrolotriazine

 VEGFR/FGFR Inhibitor.” Paul C. Lobben\*, Evan Barlow, James S. Bergum, Alan

 Braem, Shih-Ying Chang, Frank Gibson, Nathaniel Kopp, Chiajen Lai, Thomas L.

 LaPorte, David K. Leahy, Jale Müslehiddinoğlu, Fernando Quiroz, Dimitri Skliar, Lori

 Spangler, Sushil Srivastava, Daniel Wasser, John Wasylyk Robert Wethman,

 Zhongmin Xu. *Org. Proc Res. Dev*., May 15 (2014).

“The Process Development of Ravuconazole: An Effective Multikilogram Scale Preparation of an Antifungal Agent.” Jaan Pesti, Chien-Kuang Chen, Lori Spangler, Albert J. Delmonte, Serge Benoit, Derek Berglund, Jeffrey Bien, Paul Brodfuehrer, Yeung Chen, Elisabeth Corbett, Carrie Costello, Paul DeMena, Robert P. Discordia, Wendel Doubleday, Zinong Gao, Stephane Gingras, John Grosso, Oscar Haas, David Kasur, Chaijen Lai, Simon Leung, Melanie Miller, Jale Muslehiddinoglu, Nina Nguyen, Jun Qiu, Martina Olzog, Emily Reiff, Dominoque Thoraval, Michale Totleben, Dale Vanyo, Purushotham Vemishetti, John Wasylyk, and Chenkou Wei. *Organic Process research and Development*, **13**, 716-728 (2009).

“Effectively Using PAT in a Process Development Environment to Expedite Processing in a Pilot Plant Facility” Charles Ray, Ph.D., Robert Wethman, M.S., and John Wasylyk, Ph.D. Journal of Process Analytical Technology, 14, 112-116 (2005).

“Biochemical Approaches to the Synthesis of Ethyl 5-(S)-hydroxyhexanoate and 5-(S)-hydroxyhexanenitrile” Venkata B. Nanduri, Ronald L. Hanson, Animesh Goswami, John M. Wasylyk, Thomas Laporte, Kishta Katipally, Hyei –Jha Chung, Ramesh N. Patel. *Enzyme and Microbial Technology*, **28**(7-8), 632 (2001).

“Synthesis of allysine ethylene acetal using phenylalanine dehydrogenase from Thermoactinomyces intermedius” Ronald L. Hanson, Jeffrey M. Howell, Thomas L. LaPorte, MaryJo Donovan, Dana L. Cazzulino, Valerie Zannella, Michael A. Montana, Venkata B. Nanduri, Steven R. Schwarz, Ronald F. Eiring, Susan C. Durand, John M. Wasylyk, William L. Parker, Laszlo J. Szarka, Ramesh N. Patel. *Enzyme Microbial Technol* **26**, 348-358 (2000).

“Biotransformation of Taxus Extracts with Site-Specific Enzymes for Hydrolysis of Taxanes at C-10 and C-13” Ronald L. Hanson, John M. Wasylyk, Venkata B. Nanduri, Ramesh Patel, Laszlo J. Szarka *ACS Abstracts* **207** 1P208 (1994).

“Site-Specific Enzymatic Hydrolysis of Taxanes at C-10 and C-13” Ronald L. Hanson, John M. Wasylyk, Venkata B. Nanduri, Dana L. Cazzulino, Ramesh Patel *J. of Biological Chemistry* 269(35) 22145 (1994).

“Vitreous Domains in an Aqueous Ribose Solution” John M. Wasylyk, John G. Baust. *In* Advances Experimental Medicine and Biology, Vol. 302. Water Relationships in Foods: Advances in the 1980s and Trends for the 1990s. ed. Harry Levine, Louise Slade. American Chemical Society. Plenum Press. 225 (1991).

“Investigation of Vitrification by NMR and Differential Scanning Calorimetry in Honey: A Model Carbohydrate System” Carmel A. Rubin, John M. Wasylyk, John G. Baust. *J. Agric. Food Chem*. **38**(9) 1824 (1990).

"Isolation and Identification of a New Pregnene Glycoside from the Gorgonian Pseudoplexaura wagenaari" John M. Wasylyk, Gary E. Martin, Alan J. Weinheimer, Maktoob Alam. *J. Nat. Prod*. 52(2) 391 (1989).

"Isolation and Identification of a New Cembranoid Diterpene From The Tunicate Styela Plicata " John M. Wasylyk, Maktoob Alam. *J. Nat. Prod*. **52**(6) 1360 (1989).

"Partial Glass Formation: A Novel Mechanism of Insect Cryoprotection" John M. Wasylyk, Allen R. Tice and John G. Baust. *Cryobiology* **25**(5) 451 (1988).

 "On the vitrification of erythrocytes." John M. Wasylyk,. and John G. Baust Cryobiology

 **25**(6), 511-512 (1988).

“Evidence of Vitrification in Polymer-Solutions Containing Erythrocytes” John M. Wasylyk, John G. Baust *Cryobiology* **25**(6) 526 (1988).

“PNMR and DSC Analyses of Cryoprotectant Mixtures” John M. Wasylyk, Raymond L. Szymanski Jan Wolanczyk, John G. Baust *Cryobiology* **24**(6) 548 (1987).

"Structure of 3beta-(D-galactopyranosyl)pregna-5,20-diene-Dimethyl Sulfoxide Solvate" M. Bilayet Hossain and Dick van der Helm; John M. Wasylyk and Maktoob Alam. *Acta Crystallographica*, C**43**, 2424 (1987).

 "Cyclic Peptide Structures from the Tunicate Lissoclinum Patella by FAB Mass

 Spectrometry" John M. Wasylyk, Joseph E. Biskupiak, Cathreine E. Costello and Chris

 M. Ireland. *Journal of Organic Chemistry*, **48**, 4445 (1983).

"Germacrene Derivatives from Diverse Marine Soft-Corals (Octacorallia)" Richard R. Izac, Maury M. Bandurraga, John M. Wasylyk, Fred W. Dunn and William Fenical. *Tetrahedron*, **38**, 301 (1982).

"Isolation and Structural Elucidation of an Icthyocrinotoxin from the Trunkfish (Lactophrys Trequeter Linnaeus)" Arthur S. Goldberg, John M. Wasylyk, Steven Renna and Howard Reisman. *Toxicon*, **20**(6), 1069 (1982).