DeWitt LLP Law Firm




## Daniel A. Blasiole, Ph.D.

Registered Patent Agent

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### Service Areas:

- Intellectual Property

### Education:

- Ph.D., Biochemistry, University of Wisconsin – Madison
- M.A., Philosophy of Science, University of California at San Diego
- B.A., Philosophy with Pre-Medical Curriculum, Franklin & Marshall College

### Admissions:

- U.S. Patent & Trademark Office (USPTO)

Your patent counsel needs to understand your technology. As a registered patent agent, Dan brings to his practice a detailed understanding of experimental science, focused expertise in a number of biotechnological disciplines and extensive, hands-on research experience. Dan works with university technology transfer organizations, individual inventors, and companies ranging from startups to multi-national corporations in securing their patent rights both domestically and internationally and in managing their patent portfolios.

He conducts nearly all aspects of practice before the United States Patent and Trademark Office, including patent prosecution, requests for reexamination, and appeals before the Patent Trial and Appeal Board. In addition, Dan advises on such matters as invalidity opinions, freedom to operate opinions, patentability opinions, licensing agreements, and litigation.

Dan has experience with a number of technologies, including enzymes, antibodies, medical devices, pharmaceutical compounds, cellular reprogramming methods, assays, assay platforms, nutraceutical compositions, disease treatments, nanopositioning systems, chemical manufacturing processes, and mechanical devices, among others.

His practice is informed with his expertise in a number of areas of bioscience, such as biochemistry, cell biology, molecular biology, microbiology, genetics, and genomics. He has researched molecular and cellular mechanisms underlying metabolic disease, particularly the role of certain protein receptors and enzymes in regulating lipid metabolism. He has also contributed to a genetic mapping of mRNA expression and metabolic profiles in an F2 intercross between diabetes-resistant and diabetes-susceptible mouse strains. In addition, he has conducted molecular genetic research on microbial pathogens and developed multiplex real-time PCR viral diagnostic arrays for the U.S. Department of Defense.

### Representative Patents

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| U.S. Patent 11,985,974 | Antimicrobial ferulic acid derivatives and uses thereof |
| U.S. Patent 11,981,904 | BAHD acyltransferases |

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| U.S. Patent 11,981,946 | Microorganisms and methods for producing 2-pyrone-4,6-dicarboxylic acid and other compounds |
| U.S. Patent 11,913,028 | Artificial transcription factors and uses thereof |
| U.S. Patent 11,866,744 | Gene construct encoding mutant thioesterase, mutant thioesterase encoded thereby, transformed host cell containing the gene construct, and method of using them to produce medium-chain fatty acids |
| U.S. Patent 11,845,958 | Genetically modified genes and cells, and methods of using same for silencing virus gene expression |
| U.S. Patent 11,827,922 | High throughput nucleic acid profiling of single cells |
| U.S. Patent 11,813,239 | Compositions and methods for improving cardiac structure and/or function |
| U.S. Patent 11,807,875 | Feruloyl-CoA:monolignol transferases |
| U.S. Patent 11,807,876 | P-coumaroyl-CoA:monolignol transferases |
| U.S. Patent 11,779,040 | Production of protein-polysaccharide conjugates |
| U.S. Patent 11,759,533 | Methods and compositions for modulating gene expression |
| U.S. Patent 11,732,285 | Selective enrichment media and uses thereof |
| U.S. Patent 11,721,021 | Image analysis of epithelial component of histologically normal prostate biopsies predicts the presence of cancer |
| U.S. Patent 11,634,462 | Methods of processing ß-lactoglobulin-containing compositions with thermolysin and transglutaminase |
| U.S. Patent 11,608,524 | Methods of analyzing cells |
| U.S. Patent 11,548,885 | NLRX1 ligands |
| U.S. Patent 11,547,745 | Compositions and methods for treating pancreatic enzyme deficiencies in mammals |
| U.S. Patent 11,542,548 | Blood DNA methylation biomarker diagnostic test for anxiety and depressive disorders |
| U.S. Patent 11,492,342 | Crystalline forms of piperazine-1,4-diylbis((6-(1H-benzo[d]imidazo-2-yl)pyridin-2yl)methanone) |
| U.S. Patent 11,491,185 | Intra-mammary teat sealant formulation and method of using same to reduce or eliminate visual defects in aged cheeses |
| U.S. Patent 11,459,310 | LANCL ligands |
| U.S. Patent 11,449,987 | Image analysis of epithelial component of histologically normal prostate biopsies predicts the presence of cancer |
| U.S. Patent 11,447,754 | In vitro methods of chemical conversion using non-stereospecific glutathione lyases |
| U.S. Patent 11,435,342 | Sample clarification and reduction of background fluorescence for fluorescent detection of analytes |
| U.S. Patent 11,414,372 | Methods for detecting and determining levels of monolignol ester conjugates incorporated into lignin and compounds relating thereto |
| U.S. Patent 11,408,014 | Mutant thioesterases |
| U.S. Patent 11,377,694 | Unbiased DNA methylation markers define an extensive field defect in histologically normal prostate tissues associated with prostate cancer: new biomarkers for men with prostate cancer |
| U.S. Patent 11,377,437 | Lanthionine C-like protein 2 ligands, cells prepared therewith, and therapies using same |
| U.S. Patent 11,371,023 | Artificial transcription factors and uses thereof |
| U.S. Patent 11,357,802 | Oral delivery compositions for improved gut barrier protection and immunity in mammals |
| U.S. Patent 11,339,360 | Culture systems and methods of using same |
| U.S. Patent 11,306,128 | Methods of purifying mucin |
| U.S. Patent 11,242,544 | Microbiomes and methods for producing medium-chain fatty acids from organic substrates |
| U.S. Patent 11,203,759 | Oxygen-responsive bacterial gene switch |
| U.S. Patent 11,197,891 | Therapies with lanthionine C-like protein 2 ligands and cells prepared therewith |
| U.S. Patent 11,197,836 | Topical vasoconstrictor preparations and methods for protecting cells during cancer chemotherapy and radiotherapy |
| U.S. Patent 11,180,473 | PLXDC2 ligands |

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| U.S. Patent 11,168,340 | Compositions and methods for producing lipids and other biomaterials from grain ethanol stillage and stillage derivatives |
| U.S. Patent 11,142,492 | Methods of isolating phenols from phenol-containing media |
| U.S. Patent 11,117,881 | Lanthionine c-like protein 2 ligands, cells prepared therewith, and therapies using same |
| U.S. Patent 11,066,364 | NLRX1 ligands |
| U.S. Patent 11,065,657 | Compositions and methods for oxidizing and sequestering carbon and stabilizing metals |
| U.S. Patent 11,053,480 | Gene construct encoding mutant thioesterase, mutant thioesterase encoded thereby, transformed host cell containing the gene construct, and method of using them to produce medium-chain fatty acids |
| U.S. Patent 11,028,418 | Microorganisms and methods for producing 2-pyrone-4,6-dicarboxylic acid and other compounds |
| U.S. Patent 11,028,235 | Polycarboxylated compounds and compositions containing same |
| U.S. Patent 11,026,888 | Functional beverage compositions and methods of using and making same |
| U.S. Patent 11,008,577 | Oleaginous microorganisms and uses of same |
| U.S. Patent 10,993,450 | Processes for removal of lactose from dried milk products |
| U.S. Patent 10,982,240 | Production of polyhydroxy alkanoates with a defined composition from an unrelated carbon source |
| U.S. Patent 10,982,234 | Microorganisms that co-consume glucose with non-glucose carbohydrates and methods of use |
| U.S. Patent 10,945,448 | Process for removing phospholipids and off-flavors from proteins and resulting protein product |
| U.S. Patent 10,905,748 | Ovotransferrin treatment for the reproductive tract |
| U.S. Patent 10,898,552 | Microorganisms and methods for producing biologics and introducing biologics to sites |
| U.S. Patent 10,883,090 | P-coumaroyl-CoA:monolignol transferases |
| U.S. Patent 10,883,089 | Feruloyl-CoA:monolignol transferases |
| U.S. Patent 10,881,635 | Tannin-containing gastrointestinal formulations and methods of use |
| U.S. Patent 10,878,935 | Systems and methods for determining genotypes for performing physiological functions |
| U.S. Patent 10,849,895 | Lanthionine synthetase C-like 2-based therapeutics |
| U.S. Patent 10,844,410 | Mutant thioesterases |
| U.S. Patent 10,834,945 | Methods of high pressure processing and products produced therewith |
| U.S. Patent 10,829,745 | In vitro methods for processing lignin and other aromatic compounds |
| U.S. Patent 10,765,135 | Production of protein-polysaccharide conjugates |
| U.S. Patent 10,744,085 | Intra-mammary teat sealant formulation and method of using same to reduce or eliminate visual defects in aged cheeses |
| U.S. Patent 10,736,915 | Nylon-3 co-polymers and synthetic lung surfactant compositions containing same |
| U.S. Patent 10,689,631 | Gene construct encoding mutant thioesterase, mutant thioesterase encoded thereby, transformed host cell containing the gene construct, and method of using them to produce medium-chain fatty acids |
| U.S. Patent 10,682,349 | Lanthionine synthetase C-like 2-based therapeutics |
| U.S. Patent 10,676,436 | NLRX1 ligands |
| U.S. Patent 10,662,448 | Compositions and methods for producing lipids and other biomaterials from grain ethanol stillage and stillage derivatives |
| U.S. Patent 10,619,130 | Selective enrichment media and uses thereof |
| U.S. Patent 10,604,742 | Adsorptive membranes for trapping viruses |
| U.S. Patent 10,573,404 | Systems and methods for determining flux distribution |
| U.S. Patent 10,493,072 | Lanthionine synthetase C-like 2-based therapeutics |
| U.S. Patent 10,487,057 | NLRX1 ligands |
| U.S. Patent 10,463,719 | Microorganisms and methods for producing biologics and introducing biologics to sites |
| U.S. Patent 10,443,084 | Naphthalene derived chromogenic enzyme substrates |

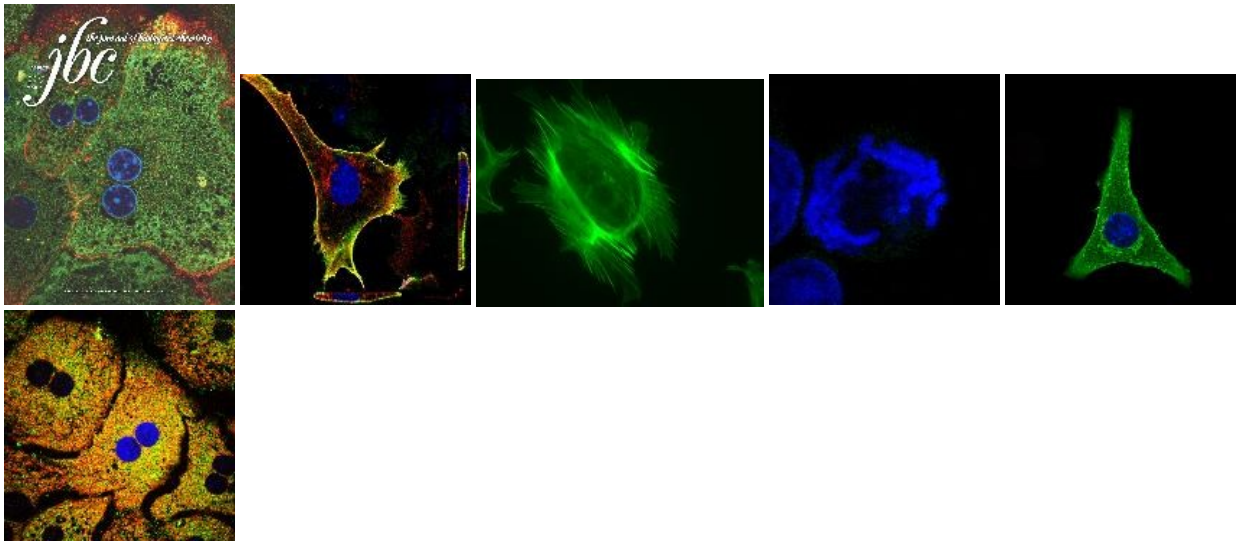
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| U.S. Patent 10,421,951 | Gene construct encoding mutant thioesterase, mutant thioesterase encoded thereby, transformed host cell containing the gene construct, and method of using them to produce medium-chain fatty acids |
| U.S. Patent 10,406,232 | Oral delivery compositions for treating dermatitis disorders in mammals |
| U.S. Patent 10,385,334 | Molecular identity tags and uses thereof in identifying intermolecular ligation products |
| U.S. Patent 10,376,563 | Methods for systemically delivering polypeptides and microorganisms therefor |
| U.S. Patent 10,370,690 | Microorganisms for producing glycogen and methods of using same |
| U.S. Patent 10,336,868 | Polycarboxylated compounds and compositions containing same |
| U.S. Patent 10,323,121 | Poly-beta-peptides from functionalized beta-lactam monomers and antibacterial compositions containing same |
| U.S. Patent 10,322,998 | Heterogeneous foldamers containing alpha, beta, and/or gamma-amino acids |
| U.S. Patent 10,321,569 | Electronic module and method of making same |
| U.S. Patent 10,316,296 | Adsorptive membranes for trapping viruses |
| U.S. Patent 10,301,653 | Microorganisms that co-consume glucose with non-glucose carbohydrates and methods of use |
| U.S. Patent 10,273,511 | Enzymes for producing non-straight-chain fatty acids |
| U.S. Patent 10,246,725 | Microorganisms and methods for producing pyruvate, ethanol, and other compounds |
| U.S. Patent 10,233,206 | D-fagomine for the control of inflammatory processes related to an overactivation of the humoral immune response |
| U.S. Patent 10,227,287 | Method for detecting and determining levels of monolignol ester conjugates incorporated into lignin and compounds relating thereto |
| U.S. Patent 10,201,538 | Lanthionine synthetase C-like 2-based therapeutics |
| U.S. Patent 10,184,141 | Microorganisms for producing glycogen and methods of using same |
| U.S. Patent 10,144,938 | Methods of processing aromatic compounds |
| U.S. Patent 10,105,345 | Tannin-containing gastrointestinal formulations and methods of use |
| U.S. Patent 10,104,888 | Tannin-chitosan composites |
| U.S. Patent 10,093,918 | Sample collection and analysis devices |
| U.S. Patent 10,051,873 | Processes for removal of lactose from dried milk products |
| U.S. Patent 10,028,950 | Lanthionine synthetase C-like 2-based therapeutics |
| U.S. Patent 9,956,167 | Intra-mammary teat sealant formulation and method of using same to reduce or eliminate visual defects in aged cheeses |
| U.S. Patent 9,938,562 | Naphthalene derived chromogenic enzyme substrates |
| U.S. Patent 9,925,213 | Nylon-3 co-polymers and synthetic lung surfactant compositions containing same |
| U.S. Patent 9,920,102 | Fusion tags for protein expression |
| U.S. Patent 9,916,416 | System and method for genotyping using informed error profiles |
| U.S. Patent 9,903,028 | Nitroxyl-mediated oxidation of lignin and polycarboxylated products |
| U.S. Patent 9,879,303 | Chromogenic glucuronidase substrates and uses |
| U.S. Patent 9,856,459 | Adsorptive membranes for trapping viruses |
| U.S. Patent 9,850,505 | Microorganisms and methods for producing pyruvate, ethanol, and other compounds |
| U.S. Patent 9,839,638 | Compositions and methods for protecting cells during cancer chemotherapy and radiotherapy |
| U.S. Patent 9,839,635 | Lanthionine synthetase C-like 2-based therapeutics |
| U.S. Patent 9,796,660 | Gamma amino acid building blocks |
| U.S. Patent 9,765,343 | Linear vectors, host cells and cloning methods |
| U.S. Patent 9,708,630 | Cells and methods for producing fatty alcohols |
| U.S. Patent 9,694,000 | ITE for cancer intervention and eradication |
| U.S. Patent 9,683,081 | Poly-beta-peptides from functionalized beta-lactam monomers and antibacterial compositions containing same |
| U.S. Patent 9,651,487 | Surface plasmon resonance compatible carbon thin films |
| U.S. Patent 9,556,146 | Lanthionine synthetase C-like 2-based therapeutics |

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| U.S. Patent 9,545,423 | Tannin-chitosan composites |
| U.S. Patent 9,522,131 | Tannin-containing gastrointestinal formulations and methods of use |
| U.S. Patent 9,518,283 | Selective enrichment media and uses thereof |
| U.S. Patent 9,480,729 | Enzymes for inhibiting growth of biofilms and degrading same |
| U.S. Patent 9,458,100 | Synthesis and growth regulatory activity of a prototype member of a new family of aminothiol radioprotectors |
| U.S. Patent 9,428,732 | Compositions and methods for differentiating pluripotent stem cells into primitive blood cells and uses thereof |
| U.S. Patent 9,416,341 | Sustained release additives for fermentation products |
| U.S. Patent 9,388,285 | Method for modifying lignin structure using monolignol ferulate conjugates |
| U.S. Patent 9,382,291 | Gamma amino acid building blocks |
| U.S. Patent 9,375,499 | Adsorptive membranes for trapping viruses |
| U.S. Patent 9,370,534 | Biocidal polymers |
| U.S. Patent 9,359,322 | C-linked glucuronide of N-(4-hydroxybenzyl) retinone, analogs thereof, and method of using the same to inhibit neoplastic cell growth |
| U.S. Patent 9,354,175 | Lucigen yellow (LucY), a yellow fluorescent protein |
| U.S. Patent 9,238,645 | ITE for cancer intervention and eradication |
| U.S. Patent 9,044,392 | Nylon-3 co-polymers and synthetic lung surfactant compositions containing same |
| U.S. Patent 9,044,034 | Blue cheese product and process for preparing same |
| U.S. Patent 9,034,641 | Translation-coupling systems |
| U.S. Patent 9,029,134 | Linear vectors, host cells and cloning methods |
| U.S. Patent 9,029,118 | Selective enrichment media and uses thereof |
| U.S. Patent 8,999,657 | Reagents, methods, and kits for the classification of cancer |
| U.S. Patent 8,969,534 | Selective aerobic alcohol oxidation method for conversion of lignin into simple aromatic compounds |
| U.S. Patent 8,946,302 | Selective sigma-1 receptor ligands |
| U.S. Patent 8,865,770 | Carbamide peroxide treatments for the reproductive tract |
| U.S. Patent 8,846,354 | Microorganisms for producing organic acids |
| U.S. Patent 8,846,329 | Microorganisms for producing organic acids |
| U.S. Patent 8,828,422 | Stabilized liquid egg material for extended shelf life |
| U.S. Patent 8,822,543 | Method of using punicic acid to enhance immune response and prevent metabolic disorders |
| U.S. Patent 8,815,263 | Tandem facial amphiphiles |
| U.S. Patent 8,795,714 | Intra-mammary teat sealant formulation and method of using same to reduce or eliminate visual defects in aged cheeses |
| U.S. Patent 8,771,772 | Method to separate lipids from cheese whey |
| U.S. Patent 8,715,973 | Organic acid-tolerant microorganisms and uses thereof for producing organic acids |
| U.S. Patent 8,685,672 | Incorporation of flavan-3-ols and gallic acid derivatives into lignin to improve biomass utilization |
| U.S. Patent 8,642,536 | Method of making biologically active alpha-beta peptides |
| U.S. Patent 8,623,652 | Host-vector system for cloning and expressing genes |
| U.S. Patent 8,617,856 | Fatty acid-producing hosts |
| U.S. Patent 8,574,898 | Translation-coupling systems |
| U.S. Patent 8,569,465 | Method for modifying lignin structure using monolignol ferulate conjugates |
| U.S. Patent 8,568,448 | Clotting cascade initiating apparatus and methods of use and methods of closing wounds |
| U.S. Patent 8,501,220 | Stabilized liquid egg material for extended shelf life |
| U.S. Patent 8,461,136 | Compositions and methods for protecting cells during cancer chemotherapy and radiotherapy |
| U.S. Patent 8,431,174 | Method to separate lipids from cheese whey |
| U.S. Patent 8,404,890 | Production of 2,4-hexadienoic acid and 1,3-pentadiene from 6-methyl-5,6-dihydro-2-pyrone |

Daniel A. Blasiole, Ph.D.
Registered Patent Agent

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| U.S. Patent 8,211,906 | Method of inhibiting growth of neoplastic cells and inhibiting infection by administering an immune enhancer drug |
| U.S. Patent 8,093,030 | Thermostable viral polymerases and methods of use |
| U.S. Patent 8,088,612 | Thermostable cellulase and methods of use |
| U.S. Patent 8,084,500 | Methods of using catalpic acid to treat dyslipidemia |
| U.S. Patent 7,960,164 | Selective growth medium for Listeria spp. |
| U.S. Patent 7,834,058 | Method of using catalpic acid to treat hyperinsulinemia |
| U.S. Patent 7,807,636 | Bovine P-selectin glycoprotein ligand-1 |

## Scientific Work




### Scientific Publications


- Blasiole DA, Oler AT, Attie, AD. Regulation of apoB secretion by the LDL receptor requires exit from the cytoplasmic reticulum and interaction with apoE or apoB. J Biol Chem. 2008; 25;283(17):11374-81. (Link)
- Ferrara CT, Wang P, Neto EC, Stevens, RD, Bain JR, Wenner BR, Ilkayeva OR, Keller MP, Blasiole DA, Kendziorski C, Yandell BS, Newgard CB, Attie AD. Genetic networks of liver metabolism revealed by integration of metabolic and transcriptional profiling. PLoS Genet. 2008; 14;4(3):e1000034. (Link)
- Blasiole DA, Davis RA, Attie AD. The physiological and molecular regulation of lipoprotein assembly and secretion. Mol Biosyst. 2007; 3(9):608-19. (Link)
- Nassoury N, Blasiole DA, Tebon Oler A, Benjannet S, Hamelin J, Poupon V, McPherson PS, Attie AD, Prat A, Seidah NG. The cellular trafficking of the secretory proprotein convertase PCSK9 and its dependence on the LDLR. Traffic. 2007; 8(6):718-32. ( Link)
- Freed NE, Blasiole D, Daum L, Metzgar D, Wu J, Russell KL. Detection of influenza A, influenza B, and adenoviruses using single tube fluorogenic PCR with melting curve analysis. In Strengthening Influenza Pandemic Preparedness through Civil-Military Cooperation, edited by Neville J and Kisilev OI, pp. 123-128; 2005. Amsterdam: IOS Press.
- Blasiole DA, Metzgar D, Daum LT, Ryan MA, Wu J, Wills C, Le CT, Freed NE, Hansen CJ, Gray GC, Russell KL. Molecular analysis of adenovirus isolates from vaccinated and unvaccinated young adults. J Clin Microbiol. 2004; 42(4): 1686-93. (Link)