Thomas M. Monticello, DVM, Ph.D., DACVP

SENIOR CONSULTANT, PHARMACEUTICALS

CONTACT INFORMATION

ToxStrategies LLC, A BlueRidge Life Sciences Company
Santa Barbara, CA
Phone (805) 410-0992 (Mobile)
tmonticello@toxstrategies.com

PROFESSIONAL PROFILE

Dr. Thomas Monticello is a Senior Consultant in ToxStrategies' Pharmaceuticals practice. He has been a nonclinical safety sciences management and scientific toxicology/pathology translational safety leader for over 30 years. His experience includes work at major global pharmaceutical companies in diverse therapeutic areas for small and large molecules and novel modalities. His regulatory toxicology expertise encompasses interactions with health authorities at all stages of development, and particularly with investigational new drug (IND), new drug (NDA), and biologics license (BLA) applications.

Dr. Monticello has driven change in business practice by completing the Executive Black Belt and by implementing corporate initiatives to deliver savings and provide innovative approaches to expedite drug development and outsourcing opportunities. As a board-certified veterinary pathologist with expertise in nonclinical drug development, Dr. Monticello has contributed to the translational sciences field by serving as Past President of the Society of Toxicologic Pathology (STP), as a Board of Directors member for the International Consortium for Innovation and Quality in Pharmaceutical Research (IQ), and as past Chair of the IQ DruSafe Leadership Group, composed of senior nonclinical safety science leaders from over 30 biopharmaceutical companies. In addition, Dr. Monticello's successful leadership of cross-functional teams has earned him a strong track record of recruiting, mentoring, and retaining key scientific talent.

SELECTED PROFESSIONAL EXPERIENCE

Nonclinical Safety, Research/Development

Managed and provided scientific leadership to nonclinical safety scientists (toxicologists, pathologists, safety pharmacologists) in support of pipeline progression at major pharmaceutical companies. Responsible for the scientific integrity of new drug candidate nominations and regulatory submissions with a key focus on ensuring patient safety, GLP compliance, and applying the 3Rs of animal welfare. Served as the nonclinical safety representative on committees to nominate new drug candidates into development and first in human entry.

Contributed to the successful registration of many drug products, including Prolia®, Repatha®, Evenity®, Aimovig® and Lumakras®.

Scientific and global laboratory functional leadership includes nonclinical projects, molecular pathology and biomarker laboratories, general toxicology, safety pharmacology and development, and reproductive toxicology operations.

Business Development

Managed and provided scientific leadership of nonclinical safety due diligence reviews across modalities and therapeutic indications in partnership with business development colleagues. Served on both the joint operations and executive committees with contract research organization (CRO) partners.

Other Major Project/Skills

Achieved Six Sigma Executive Belt to ensure operational and scientific excellence, and for attracting, motivating and developing exceptional talent. Co-chaired IQ DruSafe working groups on the Nonclinical to Clinical Translational Database initiatives for First-In-Human translation and longer-term study translation in support of Phase II/III and registration.

EDUCATION AND DEGREES EARNED

1986-1991	Post-doc, Chemical Industry Institute of Toxicology, Research Triangle Park, NC
1990	Ph.D., Comparative Pathology, Duke University, Durham, NC
1982	D.V.M., Michigan State University, East Lansing, MI
1981	B.S., Microbiology, Michigan State University, East Lansing, MI

LICENSES AND CERTIFICATIONS

1990	Diplomat of the American College of Veterinary Pathologists (ACVP)

PROFESSIONAL ASSOCIATIONS

1989–Present	Society of Toxicology (SOT)
1989–Present	American College of Toxicology (ACT)
1988-Present	Society of Toxicologic Pathology (STP)

SCIENTIFIC COMMITTEES AND PROFESSIONAL ACTIVITIES

2013-2024	Amgen representative, Board of Directors, International Consortium (IQ) for Innovation and Quality in Pharmaceutical Development
2013-2024	Chair, Nonclinical to Clinical Translational Database Working Group, DruSafe Leadership Group, IQ Consortium
2010-2024	Amgen Nonclinical Safety Representative, Preclinical Safety Leadership Group, International Consortium (IQ) for Innovation and Quality in Pharmaceutical Development
2020	Past Chair, DruSafe Leadership Group, IQ Consortium
2019	Chair, DruSafe Leadership Group, IQ Consortium
2018	Vice Chair, DruSafe Leadership Group, IQ Consortium
2016	Vice Chair Elect, DruSafe Leadership Group, IQ Consortium
2012	Past President, Society of Toxicologic Pathology (STP)
2011	President, STP
2009-2011	Chair, Membership Committee, Society of Toxicology (SOT)
2004-2010	Associate Editor, *Toxicologic Pathology*
2003-2008	Elected Councilor/Executive Committee Member (4-year term), STP
2003	Elected Councilor (3-year term), Toxicologic and Exploratory Specialty Section (TEPSS), SOT
1995	Member, Publications Committee, STP

AD HOC REVIEWER

Critical Reviews in Toxicology

Journal of Toxicology and Environmental Health

Mutation Research

Toxicological Sciences

Toxicology and Applied Pharmacology

Toxicologic Pathology

Veterinary Pathology

BOOK CHAPTERS

Monticello TM, MacLachlan TK, Funk KA, Rock BM, Bussiere JL, Grieves JL, Schuh JCL, Henry S. 2025. Nonclinical safety assessment: An overview of drug and medical device development. Chapter 1 in: Bouchard PR, Sahota PS, Wallace S, Wojcinski ZW, Schumacher VL (eds), Toxicologic Pathology: Nonclinical Safety Assessment, 3rd edition. Boca Raton: CRC Press-Taylor and Francis Group, pp. 3-51.

Monticello TM, Bussiere JL. 2018. Nonclinical safety evaluation of drugs. Chapter 2 in: Sahota PS, Popp JA, Hardisty JF, Gopinath C. (eds), Toxicologic Pathology: Nonclinical Safety Assessment, 2nd edition. Boca Raton: CRC Press-Taylor and Francis Group, pp. 27-64.

Monticello TM, Bussiere JL. 2012. Nonclinical safety evaluation of drugs. Chapter 2 in: Sahota PS, Popp JA, Hardisty JF, Gopinath C. (eds), Toxicologic Pathology: Nonclinical Safety Assessment. Boca Raton: CRC Press-Taylor and Francis Group, pp. 25-54.

Durham SK, Goller NL, Barton DS, **Monticello TM**, Rose PM, Laskin DL. 1995. Utilization of nonisotopic probes to localize endothelin receptors A and B mRNA in sinusoidal cells of the rat liver. In: Wisse E, Knook DL, Wake K. (eds), Cells of the Hepatic Sinusoid, Vol. 5. Leiden, Netherlands: Kupffer Cell Foundation, pp. 212-214.

Morgan KT, **Monticello TM**. 1990. Formaldehyde toxicity: Respiratory epithelial injury and repair. In: Thomassen DG, Nettesheim P. (eds), Biology, Toxicology, and Carcinogenesis of Respiratory Epithelium. New York: Hemisphere Publishing Inc., pp. 155-171.

Harkema JR, **Monticello TM**, Hotchkiss JA. 1989. Inhaled toxicant-induced proliferative responses in nasal epithelium of laboratory animals. In: Feron VJ, Bosland MC (eds), Nasal Carcinogenesis in Rodents: Relevance to Human Risk. Wageningen, Netherlands: Pudec Publications, pp. 42-47.

Morgan KT, **Monticello TM**. 1989. Airflow, mucociliary clearance, and lesion distribution in the nasal passages of experimental animals. In: Feron VJ, Bosland MC (eds), Nasal Carcinogenesis in Rodents: Relevance to Human Risk. Wageningen, Netherlands: Pudec Publications, pp. 36-41.

Morgan KT, **Monticello TM**, Fleischman A, Patra AL. 1989. Preparation of rat nasal airway casts and their application to studies of nasal airflow. Chapter 5 in: Hayes AW, Crapo, JD (eds), Extrapolation of Dosimetric Relationships for Inhaled Particles and Gases. San Diego: Academic Press, Inc., pp. 45-58.

PUBLICATIONS

Bienvenu JG, Chouinard L, Felix M, Boyce, RW, **Monticello TM**. 2024. Inhibition of both sclerostin and DKK1 results in novel skull findings in the rat and non-human primate that is not observed with inhibition of sclerostin alone. Bone 179(Feb):116985; doi: 10.1016/j.bone.2023.116985.

Monticello TM, Potter DM, Huang Q, Hart TK, Shuey D, Troth S, Vergis JM, Tassew N, et al. 2024. Do longer duration nonclinical toxicology studies provide predictive clinical safety value? The IQ Consortium longer duration nonclinical to clinical translational database. Toxicol Applied Pharmacol 492(Sept 5):117087; doi: 10.1016/j.taap.2024.117087.

Coppi A, Davies R, Wegesser T, Ishida K, Karmel J, Han J, Aiello F, Xie Y..., **Monticello TM**, et al. 2022. Characterization of false positive, contaminant- driven mutagenicity in impurities associated with the sotorasib drug substance. Regul Toxicol Pharmacol 131(June):105162; doi: 10.1016/j.yrtph.2022.105162.

Ishida K, Werner J, Lafleur N, Wisler J, Wannberg S, Kalanzi J, Bussiere J, **Monticello TM**. 2021. Phosphatidylinositol 3-kinase δ-specific inhibitor-induced changes in the ovary and testis in the Sprague Dawley rat and cynomolgus monkey. Int J Toxicol 40(4):344-354; doi: 10.1177/109158211008175.

Werner JA, Davies R, Wahlstrom J, Dahal UP, Jiang M, Stauber J, David B, Siska W..., **Monticello TM**. 2021. Mercapturate pathway metabolites of sotorasib, a covalent inhibitor of KRASG12C, are associated with renal toxicity in the Sprague Dawley rat. Toxicol Appl Pharmacol 423(July 15):11578; doi: 10.1016/taap.2021.115578.

Bogdanfy MS, Lesnick J, Mangipudy R, Sistare FD, Colman K, Garcia-Tapla D, **Monticello T**, Blanset D. 2020. Tg.rasH2 mouse model for assessing carcinogenic potential of pharmaceuticals: Industry survey of current practices. Int J Toxicol 39(3):198-206; doi: 10.1177/1091581820919896.

Bussiere JL, Davies R, Dean C, Xu C, Kim KH, Vargas HM, Chellman GJ, Balasubramanian G, **Monticello TM**. 2019. Nonclinical safety evaluation of erenumab, a CGRP receptor inhibitor for the prevention of migraine. Regul Toxicol Pharmacol 106(Aug):224-238; doi: 10.1016/j.yrtph.2019.05.013.

Prior H, **Monticello T**, Boulifard V, Brennan FR, Kimber I. 2019. Integration of consortia recommendations for justification of animal use within current and future drug development paradigms. Int J Toxicol 38(4):319-325; doi: 10.1177/1091581819852922.

Monticello TM, Jones TW, Dambach DM, Potter DM, Bolt MW, Liu M, Keller DA, Hart TK, et al. 2017. Current nonclinical testing paradigm enables safe entry to First-in-Human clinical trials: The IQ consortium nonclinical translational database. Toxicol Appl Pharmacol 334(Nov 1):100-109; doi: 10.1016/j.taap.2017.09.006.

Monticello TM. 2015. Drug development and nonclinical to clinical translational databases: Past and current efforts. Toxicol Pathol 43(1):57-61; doi: 10.1177/0192623314557189.

Wang X, Hsu M-Y, Steinbacher TE, **Monticello TM**, Schumacher WA. 2007. Quantification of platelet composition in experimental venous thrombosis by real-time polymerase chain reaction. Thromb Res 119(5):595-600; doi: 10.1016/j.thromres.2006.04.011.

Rose WC, Marathe PH, Jang G, **Monticello TM**, Balasubramanian BN, Long B, Fairchild C, Wall ME, Wani MC. 2006. Novel fluoro-substituted campthothecins: *In vivo* antitumor activity, reduced gastrointestinal toxicity and pharmacokinetic characterization. Cancer Chemother Pharmacol 58(1):73-85; doi: 10.1007/s00280-005-0128-y.

Trippodo NC, Fox M, **Monticello TM**, Panchal BC, Asaad MM. 1999. Vasopeptidase inhibition with omapatrilat improves cardiac geometry and survival in cardiomyopathic hamsters more than does ACE inhibition with captopril. J Cardiovasc Pharmacol 34(6):782-790; doi: 10.1097/00005344-199912000-00003.

Aversa CA, Oparil S, Caro J, Li H, Sun S, Chen YF, Swerde MR, **Monticello TM**, et al. 1997. Hypoxia stimulates human preproendothelin-1 (PPET-1) promoter activity in transgenic mice. Am J Physiol 273(4):L848-L855; doi: 10.1152/ajplung.1997.273.4.L848.

Bolton L, Zaki G, Monte K, Durham SK, **Monticello TM**, Hudak J, Shannon R, Wilfinger W, et al. 1997. Tissue repair in space. Wounds 9(4):127-142.

Grover GJ, Dzwonczyk S, **Monticello TM**. 1996. Comparative cardioprotective effects of cromakalin and diltiazem in ischemic hypertrophied and non-hypertrophied rat hearts. Am J Physiol 270(1 Pt 2):H174-H182; doi: 10.1152/ajpheart.1996.270.1.H174.

Monticello TM, Sargent CA, McGill JR, Barton DS, Grover GJ. 1996. Amelioration of ischemia/reperfusion injury in isolated rat hearts by a novel ATP sensitive potassium channel opener. Cardiovasc Res 31(1):93-101.

Monticello TM, Swenberg JA, Gross EA, Leininger JR, Kimbell JS, Seilkop S, Starr TS, Gibson JE, et al. 1996. Correlation of regional and nonlinear formaldehyde-induced nasal cancer with proliferating populations of cells. Cancer Res 56(5):1012-1022.

Monticello TM, Barton D, Ma X, Babish JG, Durham SK. 1995. Comparison of acute hepatocellular proliferating cell nuclear antigen (PCNA) labeling indices and growth fractions, $p34^{cdc2}$ kinases, and serum enzymes in carbon tetrachloride-treated rats. Toxicol Pathol 23(4):439-446; doi: 10.1177/019262339502300401.

Monticello TM, Morgan KT. 1994. Cell proliferation and formaldehyde-induced respiratory carcinogenesis. Risk Anal 14(3):313-319; doi: 10.1111/j.1539-6924.1994.tb00246.x.

Monticello TM, Morgan KT. 1994. Nasal lesion distribution and toxicity in the squamous epithelial region. Inhal Toxicol 6(Sup1):177-186; doi: 10.1080/10917691.1994.12288925.

Conolly RB, **Monticello TM**, Morgan KT, Clewell HJ, Anderson ME. 1992. A biologically-based risk assessment for inhaled formaldehyde. Comments Toxicol 4:269-293.

Bonnefoi M, **Monticello TM**, Morgan KT. 1991. Toxic and neoplastic responses in the nasal passages: Future research needs. Exp Lung Res 17(5):853-868; doi: 10.3109/01902149109064322.

Brown R, **Monticello TM**, Maronpot RR, Randall HW, Hotchkiss JR, Morgan KT. 1991. Proliferative and neoplastic lesions in the rodent nasal cavity. Toxicol Pathol 19(4 Pt 1):358-372; doi: 10.1177/0192623391019004-105.

Goldsworthy TL, **Monticello TM**, Morgan KT, Bermudez E, Wilson D, Butterworth BE. 1991. Examination of potential mechanisms of carcinogenicity of 1,4-dioxane in rat nasal epithelial cells and hepatocytes. Arch Toxicol 65(1):1-9; doi: 10.1007/BF01973495.

Monticello TM, Miller FJ, Morgan KT. 1991. Regional increases in nasal epithelial cell proliferation following acute and subacute inhalation of formaldehyde. Toxicol Appl Pharmacol 111(3):409-421; doi: 10.1016/0041-008x(91)90246-B.

Monticello TM, Renne R, Morgan KT. 1991. Chemically induced cell proliferation in upper respiratory tract carcinogenesis. Prog Clin Biol Res 369:323-225.

Morgan KT, Kimball JS, **Monticello TM**, Patra AL, Fleishman A. 1991. Studies of inspiratory airflow patterns in the nasal passages of the F344 rat and rhesus monkey using nasal molds: Relevance to formaldehyde toxicity. Toxicol Appl Pharmacol 110(2):223-240; doi: 10.1016/s0041-008x(05)80005-5.

Monticello TM, Morgan KT, Hunt ME. 1990. Unit length as the denominator for quantitation of cell proliferation rates in nasal epithelia. Toxicol Pathol 18(1 Pt 1):24-31; doi: 10.1177/019262339001800104.

Morgan KT, **Monticello TM**. 1990. Airflow, gas deposition and lesion distribution in the nasal passages. Environ Health Perspect 85(Apr):209-218; doi: 10.1289/ehp.85-1568327.

Monticello TM, Morgan KT, Everitt JE, Popp JA. 1989. Effects of formaldehyde gas on the respiratory tract of rhesus monkeys: Pathology and cell proliferation. Am J Pathol 134(3):515-527.

Hurtt ME, Thomas DA, Working PK, **Monticello TM**, Morgan KT. 1988. Degeneration and regeneration of the olifactgory epithelium following inhalation exposure to methyl bromide: Pathology, cell kinetics and olfactory function. Toxicol Appl Pharmacol 94(2):311-328; doi: 10.1016/0041-008x(88)90273-6.

Randall HW, **Monticello TM**, Morgan KT. 1988. Large area sectioning for morphologic studies of nonhuman primate nasal cavities. Stain Technol 63(6):355-362; doi: 10.3109/10520298809107611.