



## Michael J. Allikian, Ph.D.

Associate

Tel 312.474.6642  
mallikian@marshallip.com

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For clients developing valuable products in molecular biology, Michael J. Allikian, Ph.D. brings extensive technological expertise to secure their patents. His significant graduate study, including extensive doctoral research on aging and postdoctoral research on musculoskeletal disease, gives him extraordinary grasp of the issues as well as application of the science. Clients find him careful and precise in working with them, as well as a strong communicator on behalf of their rights from his experience as a teacher and writer.

### Practices

- Patent Prosecution

### Industries

- Biotechnology & Life Sciences
- Non-Profit Technology Transfer
- Pharmaceutical

### Representative Experience

- Prepared and prosecuted patent applications relating to therapeutic compositions, methods of their use, formulations, and diagnostic platforms.
- Prosecuted domestic and foreign patent applications directed to attenuated viral therapeutics for treatment of cancer.

Dr. Allikian has successfully gained patent protections for clients in a wide variety of molecular biology technologies, including:

- Nanobiotechnology – nanoparticle-based diagnostic and therapeutic applications, gene chip analysis of expression, high throughput screening.
- Genomics – antisense regulation of gene expression, nucleic acid amplification and sequencing methods, viral vectors for in vivo heterologous gene expression.
- Therapeutics – methods using traditional pharmaceuticals or biologicals.

## Background and Credentials

Dr. Allikian's studies have included the role of the dystrophin associated protein complex on mammalian and invertebrate systems muscle development and function. In connection with his research on transmembrane linkages for muscle, Dr. Allikian has authored several peer-reviewed articles and reviews dealing with the sarcoglycan complex in skeletal and cardiac muscle.

His noteworthy scientific study includes:

- Pre-doctoral fellow. Training in Endocrinology and Neurobiology of Aging (Dr. Caleb Finch) NIA.
- Postdoctoral fellow. Individual National Research Service Award (NRSA), NIH Grant.
- MDA Grant regarding *Drosophila* models to dissect sarcoglycan trafficking and function.

Dr. Allikian was a lecturer at the University of Chicago in undergraduate biology in addition to supervising research conducted by junior postdoctoral fellows and undergraduates. Prior to attending the University of Chicago, he taught upper level undergraduate molecular biology at the University of Southern California.

## Education

- University of Southern California (Ph.D.)
  - Molecular Biology
- Illinois State University (M.S.)
  - Biology
- Illinois State University (B.S.)
  - Biology

## Publications and Presentations

Dr. Allikian has extensively published the results of his scientific research, including these articles:

- Allikian MJ, Bhabha G, Dospoy P, Heydemann A, Ryder P, Earley JU, Wolf MJ, Rockman HA, McNally EM. (2007). Reduced life span with heart and muscle dysfunction in *Drosophila* sarcoglycan mutants. *Hum Mol Genet.* 16(23): 2933-43.
- Allikian, M.J., and McNally, E.M. (2007). Processing and Assembly of the Dystrophin Glycoprotein Complex. *Traffic* 8(3): 177-83.
- Allikian, M.J., Hack, A.A., Mewborn, S., Mayer, U., and McNally, E.M. (2004). Genetic compensation for sarcoglycan loss by integrin  $\alpha 7 \beta 1$  in muscle. *J Cell Sci* 117, 3821-3830.
- Bhole, D., Allikian, M.J., and Tower, J. (2004). Doxycycline-regulated over-expression of hsp22 has negative effects on stress resistance and life span in adult *Drosophila melanogaster*. *Mech Ageing Dev* 125, 651-663.
- Wheeler, M.T., Allikian, M.J., Heydemann, A., Hadhazy, M., Zarnegar, S., and McNally, E.M. (2004). Smooth muscle cell-extrinsic vascular spasm arises from cardiomyocyte degeneration in sarcoglycan-deficient cardiomyopathy. *J Clin Invest* 113, 668-675.
- McNally, E., Allikian, M., Wheeler, M.T., Mislow, J.M., and Heydemann, A. (2003). Cytoskeletal defects in cardiomyopathy. *J Mol Cell Cardiol* 35, 231-241.
- Allikian, M.J., Deckert-Cruz, D., Rose, M.R., Landis, G.N., and Tower, J. (2002). Doxycycline-induced expression of sense and inverted-repeat constructs modulates phosphogluconate mutase (Pgm) gene expression in adult *Drosophila melanogaster*. *Genome Biol* 3, research0021.

- Wheeler, M.T., Allikian, M.J., Heydemann, A., and McNally, E.M. (2002). The sarcoglycan complex in striated and vascular smooth muscle. *Cold Spring Harb Symp Quant Biol* 67, 389-397.
- Allikian, M., and Tower, J. (2000) [Review]. *Drosophila Studies. Encyclopedia of Stress*, Ed. G. Fink, Academic Press Vol. 1: 753-55.