

Russell Craig Marians, Ph.D.

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PROFESSIONAL HIGHLIGHTS

- Cell/molecular biologist, scientific leader, and cross-functional project leader focused on protein drug selection and advancement.
- Ph.D. with 8 years of post-doctoral experience in Biological Sciences, including over 3-1/2 years in biotech industry.
- Hands-on leader and contributor to late-stage discovery and early-stage development of protein therapeutics.
- Successfully advanced recombinant secreted protein into clinical-track: lead candidate currently in final toxicology.
- Expertise in use and design of established and novel in vitro and in vivo models for advancing protein therapeutics.
- Expertise vetting multiple therapeutic areas including metabolic diseases (thyroid, bone, adipocyte, and touched on diabetes), ophthalmology, inflammation, autoimmune diseases, renal diseases, and hemolytic diseases.
- Expertise reducing disease indications into testable cell-based assays for target validation and lead-protein identification.
- Adept at in silico computer work to convert a nonhuman recombinant protein into a useable protein therapeutic.
- Expertise in bioinformatic searches for homology determination and prediction of protein characteristics.
- Supervision and mentorship of lab technicians, scientists, and (during academic career) PhD candidates.

EMPLOYMENT HISTORY

Scientist II

Taligen Therapeutics, Aurora, Colorado

1/2006 – 8/2009

(Taligen's therapeutic candidates are recombinant fusion proteins and monoclonal antibodies.)

Scientific Lead for therapeutic protein selection

- Humanized candidate proteins
- Performed in vitro comparisons in support of lead molecule selection
- Member of CMC team that identified lead expression clone and established master cell bank

Developed key bioassays in support of IND and pre-clinical pharmacology

Developed Age-related Macular Degeneration (AMD) program into a marketable asset

- Coordinated scientific and business development consultants
- Organized meeting with Key Opinion Leaders
- Updated the CSO and CEO on scientific and competitive intelligence
- Provided scientific oversight and planning of proof of concept studies with academic collaborators and CROs

Supported \$65million Series B financing

- Scientific Lead for characterization of pipeline molecules
- Prepared investor packets
- Prepared slides/presentations for upper management
- Presented data to Board of Directors and Venture Capital firms

Lead Scientist, Targeted Complement Inhibitor Protein Project

- Directed development, lab-scale production, purification, and in vitro testing of therapeutic recombinant proteins
- Coordinated selecting potential disease indications
- Screened contract research/manufacturing organizations
- Supervised ELISA development efforts
- Developed new cell-based functional assays
- Served as liaison with academic collaborators for testing Taligen proteins in preclinical models
- Scientific Lead on teams that managed CMO selection as well as pilot-scale and GLP protein production
- Served as liaison with attorneys to protect/develop intellectual property
- Represented Taligen at scientific conferences
- Wrote progress reports and project summaries

Post-Doctoral Fellow 4/2003 – 12/2005
Department of Obstetrics and Gynecology
The University of Colorado Health Sciences Center
Aurora, Colorado
Research Summary: investigated cellular and molecular processes underlying fat reallocation during lactation, paying particular attention to adipose cell physiology

Post-Doctoral Fellow 12/2001 – 3/2003
Division of Endocrinology, Diabetes, and Bone Disease
The Mount Sinai School of Medicine
New York, New York

Laboratory Technician 1/1992 – 8/1992
Plant Genetic Engineering Laboratory
Las Cruces, New Mexico

Laboratory Technician 8/1991 – 5/1992
Department of Chemical Engineering
New Mexico State University
Las Cruces, New Mexico

SKILLS

Scientific:

- DNA isolation, manipulation, detection, and cloning;
- RNA isolation and analysis (RT-PCR, RACE, northern blot, and real-time PCR, in situ hybridization);
- rodent handling (drug administration, sample draw and surgery);
- immunohistochemistry;
- immunofluorescence;
- confocal microscopy;
- PCR; TLC;
- protein purification (column chromatography, FPLC);
- western blot; ELISA; RIA; assay development (cell-free and cell-based);
- FACS
- tissue culture of both primary and immortalized cell lines;
- murine embryonic stem cell manipulation and transfection;
- design and generation knock-out mouse models of human disease;
- familiar with GLP procedures and the drug development process

Managerial:

- Supervisor to PhD students, technicians, collaborators, contract research organizations and contract manufacturing organizations;
- report writing;
- interfacing with consultants;
- meeting planning;
- laboratory relocation and set-up;
- data preparation and presentation

EDUCATION

Ph.D., Biological Sciences 11/2001
The Mount Sinai Graduate School of Biological Sciences, New York, New York.
Thesis title: “The Thyrotropin Receptor Knock-out Mouse: The TSHR... It’s Not Just for Thyroids Anymore”.
Mentor: Dr. Terry F. Davies, M.D., F.R.C.P.

Post-Graduate Studies 8/1992 – 5/1995
New Mexico State University, Las Cruces, New Mexico

B.S., Biochemistry 1/1992
New Mexico State University, Las Cruces, New Mexico

ABSTRACTS / PUBLICATIONS / PRESENTATIONS

ABSTRACTS

Holers, V.M., Mazsaroff, I., Akana, H., Smith, C.G., Emlen, J.W., **Marians, R.C.**, and Horvath, C.J. (2009) TT30, a Novel Human Protein Therapeutic, Selectively Modulates the Complement Alternative Pathway on Cell Membranes By Targeted Supplementation of Local Factor H Activity. The American Society of Hematology. New Orleans, LA.

Marians, R.C. and Neville, M.C. (2005) Adipose Depot-Specific Responses to Lactation in the Mouse. The Endocrine Society. San Diego, CA.

PUBLICATIONS

Thurman, J.M., **Marians, R.**, Emlen, W., Wood, S., Smith, C., Akana, H., Holers, V.M., Lesser, M., Kline, M., Hoffman, C., Christen, E., and Trachtman, H. (2009) Alternative Pathway of Complement in Children with Diarrhea-Associated Hemolytic Uremic Syndrome. *Clinical Journal of American Society of Nephrology*. Accepted and published on line October 2009.

Rudolph, M.C., **Marians, R.C.**, Burns, V., Russell, T., and Neville, M.C. (2009) Developmental Regulation of Fatty Acid Synthesis in the Mammary Epithelium: Role of Sterol Regulatory Element Binding Protein (SREBP). *J Biol Chem*. Submitted, under review.

Pichurin PN, Pichurina O, **Marians R.C.**, Chen C.R., Davies T.F., Rapoport B., and McLachlan S.M. (2004). Thyrotropin receptor knockout mice: studies on immunological tolerance to a major thyroid autoantigen. *Endocrinology* *145*, 1294-1301.

Abe,E., **Marians,R.C.**, Yu,W., Wu,X.B., Ando,T., Li,Y., Iqbal,J., Eldeiry,L., Rajendren,R., Blair,H.C., Davies,T.F., and Zaidi,M. (2003). TSH is a Negative Regulator of Skeletal Remodeling. *Cell* *115*, 151-162.

Marians,R.C., Ng,L., Blair,H.C., Unger,P., Graves,P.N., and Davies,T.F. (2002). Defining thyrotropin-dependent and -independent steps of thyroid hormone synthesis by using thyrotropin receptor-null mice. *Proc. Natl. Acad. Sci. U. S. A.* *99*, 15776-15781.

Postiglione,M.P., Parlato,R., Rodriguez-Mallon,A., Rosica,A., Mithbaakar,P., Maresca,M., **Marians,R.C.**, Davies,T.F., Zannini,M.S., de Felice,M., and Di Lauro,R. (2002). Role of the thyroid-stimulating hormone receptor signaling in development and differentiation of the thyroid gland. *Proc. Natl. Acad. Sci. U. S. A.* *99*, 15462-15467.

Davies,T., **Marians,R.C.**, and Latif,R. (2002). The TSH receptor reveals itself. *J. Clin. Invest.* *110*, 161-164.

Karpichev,I.V., Luo,Y., **Marians,R.C.**, and Small,G.M. (1997). A complex containing two transcription factors regulates peroxisome proliferation and the coordinate induction of beta-oxidation enzymes in *Saccharomyces cerevisiae*. *Mol. Cell Biol.* *17*, 69-80.

Kita,M., Ahmad,L., **Marians,R.C.**, Vlase,H., Unger,P., Graves,P.N., and Davies,T.F. (1999). Regulation and transfer of a murine model of thyrotropin receptor antibody mediated Graves' disease. *Endocrinology* *140*, 1392-1398.

Rajasekharan,R., **Marians,R.C.**, Shockey,J.M., and Kemp,J.D. (1993). Photoaffinity labeling of acyl-CoA oxidase with 12-azidooleoyl-CoA and 12-[(4-azidosalicyl)amino]dodecanoyl-CoA. *Biochemistry* *32*, 12386-12391.

PRESENTATIONS

Foundation for Fighting Blindness Research Update 2/2009
Taligen Therapeutics

Provided a comprehensive review of all pipeline recombinant proteins and antibodies being evaluated for the treatment of AMD to the Denver Chapter of the Foundation for Fighting Blindness.

Key Opinion Leader Summit on Macular Degeneration 8/2008
Taligen Therapeutics

Outlined Taligen's concept of preclinical and clinical programs to a group of experts on the topic of macular degeneration (AMD) as a way to solicit input on the best way to pursue AMD as a clinical indication.

Venture Capital Due Diligence Retreat 11/2007
Taligen Therapeutics

Presented data and intended direction of the preclinical program for a recombinant protein to current Board of Directors as well as to Venture Capital Firm looking to invest in Taligen Therapeutics.

References available upon request