Jessica Sharon Carmen, Ph.D.

Summary

Enterprising biotechnology professional with an expansive network in the cell and gene therapy industry developed over a decade in the industry. I combine a passion for innovative science and medicine with a drive to build business(s) encompassing next generation medicines for unmet medical needs. I have unique insights drawing from scientific training coupled with experience in closing licensing deals and helping both tools and therapeutic companies set their corporate strategies.

Experience

Pullan Consulting; Ellicott City, MD November 2018 – Present

Consultant

- Partnering and Licensing Strategy
  - Scouting; identification of novel assets/opportunities for in-license
  - Outreach to potential partners; engaging and/or developing potential partner or investor relationships
  - Negotiation – leading and/or supporting deal negotiations
  - Market evaluation; Asset valuation and/or positioning
- Manufacturing Strategy
  - Identifying phase appropriate risk mitigation with an eye toward commercial readiness
- Market Analysis
  - Emerging technologies
  - Emerging markets

MaxCyte; Gaithersburg, MD June 2016 – November 2018

Director of Business Development for Cellular Therapies and Strategic Marketing

- Expanded commercial growth of the GT technology platform (exceeded 2016, 2017, 2018 revenue targets)
- Worked with the executive team to develop and initiate internal realignment around licensing strategy
- Develop business strategies for key market segments
- Developed a strategic plan for expansion of business into new geographic territories

Lonza; Walkersville, MD August 2010 – June 2016

Associate Director of Sales and Business Development (March 2015 – June 2016)

- Closed deals, combined, in excess of $30M USD for 2015
- Key account manager for strategic customer with project spanning multiple sites within the Lonza network

Business Development Manager (January 2013 – February 2015)

- Expanded commercial growth of the cell therapy contract services business
- Led global team in a profitability assessment initiative and attained approval by the CEO (December 2015)

Product Manager – Cell and Viral Therapy Manufacturing Services (May 2012 – December 2012)

- Developed marketing plans for both the cell therapy and viral therapy businesses
- Served on strategic planning steering committees for cell and viral manufacturing service offerings

Scientist, Therapeutic Cell Solutions R&D (August 2010 – May 2012)

- Created and staffed an R&D group focused on cell characterization
- Yellow Belt for Operational Excellence (Lean Six Sigma)

Johns Hopkins University; Baltimore, MD October 2006 – June 2010

Postdoctoral Research Fellow, Neurology (Advisor: Jeffrey Rothstein M.D./Ph.D.)

Funding: Maryland Stem Cell Research Fund (MSCRF) Fellowship Award, May 19, 2008 - RFA-MD-07-3 - *NG2 Precursor Dysfunction and Neurodegeneration*

National Institute of Aging; Baltimore, MD October 2005 - October 2006

Intramural Research Training Associate (IRTA), Laboratory of Neuroscience (Advisors: Mahendra Rao M.D./Ph.D. and Mark Mattson Ph.D.)

Education

Johns Hopkins University; Baltimore, MD August 2005*

Doctor of Philosophy, Molecular Microbiology and Immunology, (Advisor: Douglas Kerr M.D./Ph.D.)

Dissertation: *Innate Immune Determinants of Viral Induced Paralysis: The Role of Glial Cells in the Pathogenesis of Neuroadapted Sindbis Virus*

Funding: National Institute of Neurological Disorders and Stroke (NINDS) Individual NRSA Grant, March 31, 2003 - 5 F31 NS462616 - *Glial Cells in the Immune Response to Alphavirus*

*Degree conferred May 2006

University of Florida; Gainesville, FL May 1999

Bachelor of Science, Major in Microbiology, Minor in Chemistry; Cum Laude

Board Appointments

- Standards Coordinating Body (SCB) for Regenerative Medicine (since 2017)
  - Vice President: June 2019 - present
  - Secretary: January – June 2017

Professional Affiliations

- Alliance for Regenerative Medicine (ARM, Science & Technology Committee); 2011-present
  - Task force chair to establish the Standards Coordinating Body for Regenerative Medicine (2015 - 2016)
- Co-Founder: Standards Coordinating Body (SCB) for Regenerative Medicine
  - Vice President of the Board: June 2019 - Present
  - Secretary of the Board: January – June 2017
- International Society for Cell Therapy (ISCT, Commercialization Committee); 2012-2016
- International Society for Stem Cell Research (ISSCR); 2009-2010
- Society for Neuroscience (SFN); 2003-2010

Related Skills and Training

- Negotiation Skills - Licensing Executive Society (LES) 2018
- Business Development Fundamentals Course - Biotechnology Innovation Organization (BIO) 2018
- Good working knowledge of the 21CFR600 and 21CFR610 (federal code of regulations for biologics and general biological product standards respectively, also known as “cGMPs”) and ISO9001.
- Leadership Training, including strength deployment inventory (SDI) assessment – June 2012
- Project Management Training (PMI) – May 2011
- Good working knowledge of Sales Force Dot Com (SFDC) and Inova

Deals – Select Examples

[1]N-E – Non-Exclusive
[2]MSA – Manufacturing Service Agreement
[3]PD – Process Development

Transaction	Role	Outcome	Commentary
MaxCyte			
N-E[1] Clinical and Commercial Rights License to Kite, a Gilead Company	Negotiation Lead	Option Agreed (triggered after departure)	Products to treat immunooncology indications
N-E Clinical and Commercial Rights License to CRISPR Therapeutics	Negotiation Lead	Deal Closed	Milestone and sales-based payments; products to treat immunooncology indications
N-E Clinical and Commercial Rights License to Precision Biosciences	Negotiation Lead	Deal Closed	Products to treat immunooncology indications
N-E Clinical and Commercial Rights License to a Small Biotech	Negotiation Lead	Partner Delayed	Product to treat ultra-rare indication
Exclusive Commercial Rights License to a Mid-Size Biotech	Deal Team Member	Deal Not Closed	Autologous products to treat assorted oncology indications
N-E Clinical and Commercial Rights License to CRISPR Therapeutics	Deal Team Member	Deal Closed	Upfront, milestone, and sales-based payments; products to treat hemoglobinopathies and rare immunodeficiencies
Lonza			
MSA[2] for Process Development[3] and Clinical Manufacturing with a Small Biotech	Negotiation Lead	Deal Closed	Allogeneic product to treat pancreatic cancer
MSA for Commercial Manufacturing with a Small Biotech	Negotiation Lead	Deal Not Closed	Product failed to meet clinical endpoint; allogeneic product to treat pancreatic cancer
MSA for PD and Clinical Manufacturing for a Small Biotech	Negotiation Lead – started with VC to prepare proposal as seed budget for company	Deal Closed	Allogeneic cell therapy product
MSA for PD and Clinical Manufacturing with a Small Biotech	Negotiation Lead – drove process development strategy to reduce CoGs	Deal Closed	Autologous cell therapy product to treat myeloma
MSA for PD and Clinical Manufacturing with a Small Biotech	Negotiation Lead –drove process development strategy to change treatment paradigm	Deal Closed	Autologous cell therapy product to treat carcinoma
MSA for PD and Clinical Manufacturing with a Small Biotech	Negotiation Lead	Deal Closed	Allogeneic cell therapy product

Publications – Select Examples

- **Carmen, J.** Feb 2018. Guest article on BioInsights, Merits of non-viral cellular engineering versus viral cellular engineering
- **Carmen, J.** Feb 6, 2013. Guest blog on The Cell Culture Dish, Best Practices in Cell Therapy Manufacturing
- Bravery, C., **Carmen, J.**, Fong, T., Oprea, W., Hoogendoorn, K., Woda, J., Burger, S., Rowley, J., Bonyahadi, M., Van't Hof, W. *Potency Assay Development for Cellular Therapy Products; A Review of the Requirements and Experiences in the Industry* Cytotherapy (2013), 15: 9-19.
- **Carmen, J.**, Burger, S., McCamen, M., and Rowley, J. 2012. *Cell Characterization: Developing Assays to Address the Biological Parameters of Identity, Potency, Purity, and Safety* Regenerative Medicine (2012)7(1), 85-100
- **Carmen, J.**, Rothstein, J.D., and Kerr, D.A. 2009. *Tumor Necrosis Factor-α Modulates Glutamate Transport in the CNS and is a Critical Determinant of Outcome from Viral Encephalomyelitis* Brain Research 1263(2009):143-154.
- Lepore, A.C., Dejea, C., **Carmen, J.**, Rauck, B., Kerr, D.A., Sofroniew, M.V., and Maragakis, N.J. 2008 *Selective Ablation of Proliferating Astrocytes Does Not Affect Disease Outcome in Either Acute or Chronic Models of Motor Neuron Degeneration* Experimental Neurology 211(2):423-432.
- Magnus, T., **Carmen, J.**, DeLeon, J., Xue, H., Pardo, A., Lepore, A., Mattson, M.P., Rao, M.S., and Maragakis, N.J. 2008. *Adult Glial Precursor Proliferation in Mutant SOD1G93A Mice* Glia 56(2): 200-208.
- **Carmen, J.**, Magnus, T., Cassiani-Ingoni, R., Sherman, L., Rao, M.S., Mattson, M.P. 2007 *Revisiting the Astrocyte-Oligodendrocyte Relationship in the Adult CNS* Progress in Neurobiology 82:151-162.
- Deshpande, D.M., Kim, Y.S., Martinez, T., **Carmen, J.**, Dike, S., Shats, I., Rubin, L.L., Drummond, J., Krishnan, C., Hoke, A., Maragakis, N., Shefner, J., Rothstein, J.D., Kerr, D.A. 2006. *Recovery from Paralysis in Adult Rats Using Embryonic Stem Cells* Annals of Neurology 60(1):32-44
- **Carmen, J.**, Gowing, G., Julien, J.P., and Kerr, D. 2006. *Altered Immune Response to CNS Viral Infection in Mice with a Conditional Knock-Down of Macrophage-Lineage Cells* Glia 54(2):71-80
- Kerr, D., Krishnan, C., Pucak, M., and **Carmen, J.** 2005. *The Immune System and Neuropsychiatric Diseases* International Review of Psychiatry 17(6):443-9.
- Kaplin, A., Deshpande, D., Scott, E., Krishnan, C., **Darman, J.**, Shats, I., Martinez, T., Drummond, J., Dike, S., Pletnikov, M., Keswani, S., Moran, T., Pardo, C., Calabresi, P., and Kerr, D. 2005. *Interleukin-6 Induces Regionally Selective Spinal Cord Injury in Patients with the Neuroinflammatory Disorder Transverse Myelitis* Journal of Clinical Investigation 115(10):2731-41.
- Krishnan, C., Kaplin, A., Graber, J., **Darman, J.**, and Kerr, D. 2005. *Recurrent Transverse Myelitis following Neurobrucellosis: Immunologic Features and Beneficial Response to Immune Suppression* Journal of Neurovirology 11 (2): 225-231
- **Darman, J.**, Backovic, S., Dike, S., Krishnan, C., Maragakis, N., Rothstein, J., Irani, D., and Kerr, D. 2004. *Viral Induced Spinal Motor Neuron Death is Non-Cell Autonomous and Involves Glutamate Excitotoxicity* Journal of Neuroscience 24(34):7566-7575.
- Harper, J., Krishnan, C., **Darman, J.**, Deshpande, D., Peck, S., Shats, I., Backovic, Rothstein, J., and Kerr, D. 2004. *In Vitro and In Vivo Biology of Embryonic Stem Cell-Derived Motoneurons* Proceedings of the National Academy of Sciences 101(18):7123-8.