

# Jessica Sharon Carmen, Ph.D.

## Summary

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Enterprising biotechnology professional with an expansive network in the cell and gene therapy industry developed over 5 years of business dealings in the space. I combine a passion for innovative science and medicine with a desire to build business(s) encompassing next generation medicines for unmet medical needs. I have unique insights drawing from scientific training coupled with experience in licensing enabling technologies as well as contract development and manufacturing of regenerative medicines.

## Experience

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**Pullan Consulting;** Ellicott City, MD

November 2018 – Present

*Consultant*

- Partnering and Licensing Strategy
  - Market evaluation; Asset valuation and/or positioning
  - 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
- Manufacturing Strategy – drawing on scientific training and work experience at leading international CDMO

**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 annual 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)*

- Recognized subject matter expert for global cell therapy business
- 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
  - Built relationships/harvesting leads for new business partnership opportunities
- 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

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**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

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

## Professional Affiliations

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- 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
  - Secretary: 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

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- 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)

## Deals – Select Examples

<sup>1</sup>N-E – Non-Exclusive

<sup>2</sup>MSA – Manufacturing Service Agreement

<sup>3</sup>PD – Process Development

Transaction	Role	Outcome	Commentary
<b>MaxCyte</b>			
N-E Clinical and Commercial Rights License to <a href="#">CRISPR Therapeutics</a>	Negotiation Lead	Deal Closed	Milestone and sales-based payments; products to treat immunooncology indications
N-E Clinical and Commercial Rights License to <a href="#">Precision Biosciences</a>	Negotiation Lead	Deal Closed	Milestone-based payments; products to treat immunooncology indications
N-E Clinical and Commercial Rights License to <a href="#">CRISPR Therapeutics</a>	Deal Team Member	Deal Closed	Upfront, milestone, and sales-based payments; products to treat hemoglobinopathies and rare immunodeficiencies
<b>Lonza</b>			
MSA <sup>2</sup> for Process Development <sup>3</sup> 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

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- **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- $\alpha$  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.](#)