



Selected references

Clinical grade manufacturing of dendritic cells and macrophages with Miltenyi Biotec products

Macrophage manufacturing with CliniMACS® Systems

Fraser, A.R. *et al.* (2017) Development, functional characterization and validation of methodology for GMP-compliant manufacture of phagocytic macrophages: A novel cellular therapeutic for liver cirrhosis. *Cytotherapy* 17: 30592–30593.

Blood derived DC manufacturing with CliniMACS Systems

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Monocyte-derived DC manufacturing with CliniMACS® Systems

Dendritic cell vaccination for solid tumors

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Dendritic cell vaccination for leukemia

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Mo-DC manufacturing with CliniMACS® Systems for *in vitro* T cell activation

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Tolerogenic DC manufacturing with CliniMACS Systems

Bell, G.M. *et al.* (2017) Autologous tolerogenic dendritic cells for rheumatoid and inflammatory arthritis. *Ann Rheum Dis* 2017; 76: 227–234.

Progenitor-derived DCs manufacturing with CliniMACS Systems

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MACS® GMP Media, MACS GMP PepTivators®, MACS® GMP Cytokines

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Tumor lysate preparation for DC vaccines with gentleMACS™ Dissociators

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Nava, S. *et al.* (2012) An optimized method for manufacturing a clinical scale dendritic cell-based vaccine for the treatment of glioblastoma. *PLoS One*. 12: e52301.

Alfaro, C. *et al.* (2011) Pilot clinical trial of type 1 dendritic cells loaded with autologous tumor lysates combined with GM-CSF, pegylated IFN, and cyclophosphamide for metastatic cancer patients. *J. Immunol.* 187(11): 6130–42.

MACS® GMP Cell Differentiation Bags

Fraser, A.R. *et al.* (2017) Development, functional characterization and validation of methodology for GMP-compliant manufacture of phagocytic macrophages: A novel cellular therapeutic for liver cirrhosis. *Cytotherapy*. 17: 30592–30593.

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Clinical trials using CliniMACS® Systems for manufacturing of dendritic cells or macrophages

Reference	Cellular product	CliniMACS System	Indication	Type of antigen
Fraser, A.R. <i>et al.</i> (2017)	Regulatory macrophages	CliniMACS Prodigy® LP-14 System	Liver cirrhosis	–
Curbishley, S. (2017)	Infl. Mo-DC	CliniMACS Prodigy LP-14 System	Liver cancer	Tumor lysate
Anguille, S. <i>et al.</i> (2017)	Infl. Mo-DC	CliniMACS CD14 System	Acute myeloid leukemia (AML)	WT-1 mRNA electroporation
Inogés, S. Tejada, S. (2017)	Infl. Mo-DC	CliniMACS CD14 System	Glioblastoma	Tumor lysate
De Haar, C. <i>et al.</i> (2017)	CBDC	CliniMACS CD34 System	AML	WT-1 mRNA electroporation and WT1 peptides
Bell, G.M. <i>et al.</i> (2017)	Tol Mo-DC	CliniMACS CD14 System	Rheumatoid and inflammatory arthritis	Autologous synovial fluid
Tel, J., De Haas, N. <i>et al.</i> (2016)	CD1c ⁺ DC and CD304 ⁺ DC	CliniMACS LP-BDC System	Melanoma	gp100 peptides
Schreibelt, G. <i>et al.</i> (2015)	CD1c ⁺ DC	CliniMACS LP-BDC System	Melanoma	gp100 peptides
Prue, R. L. <i>et al.</i> (2015)	CD1c ⁺ DC	CliniMACS CD1c System	Prostate cancer	Prostate cancer associated peptides (PSA, PAP)
Zabaleta, A. <i>et al.</i> (2015)	Infl. Mo-DC	CliniMACS CD14 System	Chronic hepatitis C virus (HCV) infection	Recombinant adenovirus encoding HCV NS3 protein (AdNS3) fuse to CD40L ectodomain
Van Craenenbroeck, A. H. <i>et al.</i> (2015)	Infl. Mo-DC	CliniMACS CD14 System	Cytomegalovirus (CMV) infection	pp65 mRNA electroporation
Tel, J. <i>et al.</i> (2013)	CD304 ⁺ DC	CliniMACS CD304 System	Melanoma	gp100 peptides and tyrosinase peptides
Coosemans, A. <i>et al.</i> (2013)	Infl. Mo-DC	CliniMACS CD14 System	Uterine tumor	WT-1 mRNA electroporation
Nava, S. <i>et al.</i> (2012)	Infl. Mo-DC	CliniMACS CD14 System	Glioblastoma	Tumor lysate
Iwami, K. <i>et al.</i> (2012)	Infl. Mo-DC	CliniMACS CD14 System	Malignant glioma	IL-13Ra2-derived peptides
Diez Valle, R. <i>et al.</i> (2012)	Infl. Mo-DC	CliniMACS CD14 System	Glioblastoma	Tumor lysate
Palma, M. <i>et al.</i> (2011)	Infl. Mo-DC	CliniMACS CD14 System	Chronic lymphocytic leukemia (CLL)	Apoptotic B cells
Alfaro, C. <i>et al.</i> (2011)	Infl. Mo-DC	CliniMACS CD14 System	Various metastatic solid tumors	Tumor lysate
Bornhäuser, M. <i>et al.</i> (2011)	Infl. Mo-DC for T cells	CliniMACS CD14 System	Chronic myeloid leukemia (CML)	Human leukocyte Ag-restricted peptides (from PR1, WT1, and/or B cell receptor-ABL)
Muthuswamy, R. <i>et al.</i> (2010)	Infl. Mo-DC	CliniMACS CD14 System	Melanoma	–
Van Tendeloo, V. <i>et al.</i> (2010)	Infl. Mo-DC	CliniMACS CD14 System	AML	WT-1 mRNA electroporation
Van Driessche, A. <i>et al.</i> (2009)	Infl. Mo-DC	CliniMACS CD14 System	AML	WT-1 mRNA electroporation
Di Nicola, M. <i>et al.</i> (2009)	Infl. Mo-DC	CliniMACS CD14 System	B cell lymphoma	Tumor specific IgH sequences
Adamson, L. <i>et al.</i> (2009)	Infl. Mo-DC	CliniMACS CD14 System	CLL	Apoptotic B cells
Schwaab, T. <i>et al.</i> (2009)	Infl. Mo-DC	CliniMACS CD14 System	Metastatic renal cell carcinoma (RCC)	Tumor lysate
Palma, M. <i>et al.</i> (2008)	Infl. Mo-DC	CliniMACS CD14 System	CLL	Apoptotic B cells
Curti, A. <i>et al.</i> (2007)	Infl. Mo-DC	CliniMACS CD14 System	Multiple myeloma	Tumor specific IgH sequences
Fuessel, S. <i>et al.</i> (2006)	Infl. Mo-DC	CliniMACS CD14 System	Prostate cancer	Prostate cancer associated peptides (prostein, survivin, PSMA, PSA, trp-p8)
Babatz, J. <i>et al.</i> (2006)	Infl. Mo-DC	CliniMACS CD14 System	Colorectal cancer, lung cancer	Carcinoembryonic antigen derived altered peptide
Mazzolini, G. <i>et al.</i> (2005)	Infl. Mo-DC	CliniMACS CD14 System	Metastatic gastrointestinal carcinoma	–
Hörtl, L. <i>et al.</i> (2005)	Infl. Mo-DC	CliniMACS CD14 System	RCC	Tumor lysate

Infl. Mo-DC = inflammatory dendritic cells derived from peripheral blood monocytes;
Tol Mo-DC = tolerogenic dendritic cells derived from peripheral blood monocytes;
CBDC = dendritic cells derived from cord blood CD34⁺ hematopoietic progenitors.



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