

BIOGRAPHICAL SKETCH

Name: **Paul Viktor Lehmann, M.D., Ph.D.**

Position title: **CEO of CTL, Adj. Prof. Pathol. & Neurol. at CWRU**

A. Education and Training:



INSTITUTION AND LOCATION	DEGREE	DATE	FIELD OF STUDY
Gymnasium Kastl, Kastl, Oberpfalz, Germany	B.A.	1976	Arts and Sciences
Medical School, Univ. of Tübingen, Germany	M.D.	1983	Medicine
Doctoral thesis, "Immune regulation by lipoproteins" Internal Medicine, Univ. of Tübingen, Germany	Ph.D.	1988	Immunology

B. Personal Statement:

My entire research career revolved around immune monitoring. Initially I pursued this field entirely in the academic setting. In 1998 I founded a company around immune monitoring, CTL. At CTL we have been continuously refining methods, reagents and instrumentation for improving the ability to reliably detect rare antigen-specific T- and B cells in freshly isolated cell material, such as human blood. Not only have we been offering new developments to the scientific community, but we also have been the first ones to apply them in research, continuing to further the field. I personally have been trying to combine my new role as the head of a company that employs over 200 in the meantime, with directing research in our R&D department, and continued academic productivity in this field.

C. Positions:

1986-1989 **Postdoctoral Scholar in Immunology** at Preclinical Research, Sandoz Ltd.,
 1989-1993 **Senior Postdoctoral Scholar in Immunology** at (UCLA) with Dr. Eli E. Sercarz.
 1993-1998 **Assistant Professor**, (CWRU), Dept. of Pathology & Neurology, Cleveland, OH.
 1998-2002 **Associate Professor, Tenure** (CWRU), Dept. of Pathology & Neurology, Cleveland, OH.
 2002-2008 **Full Professor with Tenure**, CWRU
 2008-Present **CEO of CTL, Adjunct Professor** at CWRU

• Peer-reviewed Publications ([Google Scholar](#): h-index 57, 317 publications, 16,373 citations):

- Adorini L, Muller S, Cardinaux F, Lehmann PV, Falcioni F, Nagy ZA. *In vivo competition between self peptides and foreign antigens in T cell activation.* **Nature**, 1988, 334, 623-625. ([Link](#))
- Adorini L, Sette A, Buus S, Grey HM, Darsley M, Lehmann PV, Doria G, Nagy ZA, Appella E. *Interaction of an immunodominant epitope with Ia molecules in T cell activation.* **Proc. Natl. Acad. Sci. U.S.A.**, 1988, 85, 5181-5. ([Link](#))
- Lehmann PV, Cardinaux F, Appella E, Muller S, Falcioni F, Adorini L, Nagy ZA. *Inhibition of T cell response with peptides is influenced by both peptide-binding specificity of major histocompatibility complex molecules and susceptibility of T cells to blocking.* **Eur. J. Immunol.**, 1989, 19, 1071-1077. ([Link](#))
- Nagy ZA, Lehmann PV, Falcioni F, Muller S, Adorini L. *Why peptides? Their possible role in the evolution of MHC-restricted T cell recognition.* **Immunol. Today**, 1989, 10, 132-138. ([Link](#))
- Falcioni F, Dembic Z, Muller S, Lehmann PV, Nagy ZA. *Flexibility of the T cell repertoire. Self tolerance causes a shift of T cell receptor gene usage in response to insulin.* **J. Exp. Med.**, 1990, 171, 1665-1681. ([Link](#))
- Lehmann PV, Schumm G, Moon D, Hurtenbach U, Falcioni F, Muller S, Nagy ZA. *Acute lethal graft-versus-host reaction induced by major histocompatibility complex class II-reactive T helper cell clones.* **J. Exp. Med.**, 1990, 171, 1485-1496. ([Link](#))
- Tary-Lehmann M, Rolink AG, Lehmann PV, Nagy ZA, Hurtenbach U. *Induction of graft versus host-associated immunodeficiency by CD4+ T cell clones.* **J. Immunol.**, 1990, 145, 2092-2098. ([Link](#))
- Lehmann PV, Drexler K, Tary-Lehmann M, Falcioni F, Hurtenbach U, Nagy ZA. *Graft-versus-host resistance induced by class II major histocompatibility complex-specific T cell clones.* **J. Exp. Med.**, 1991, 173, 333-341. ([Link](#))
- Lehmann PV, Forsthuber T, Miller A, Sercarz EE. *Spreading of T cell autoimmunity to cryptic determinants of an autoantigen.* **Nature**, 1992, 358, 155-157. ([Link](#))
- Kaufman DL, Clare-Salzler M, Tian J, Forsthuber T, Ting GS, Robinson P, Atkinson MA, Sercarz EE, Tobin AJ, Lehmann PV. *Spontaneous Loss of T Cell Tolerance to Glutamic Acid Decarboxylase in Murine Insulin-dependent Diabetes.* **Nature**, 1993, 366, 69-72. ([Link](#))
- Lehmann PV, Sercarz EE, Forsthuber T, Dayan CM, Gammon G. *Determinant spreading and the dynamics of the autoimmune T cell repertoire.* **Immunol. Today**, 1993, 14, 203-208. ([Link](#))

- Sercarz EE, Lehmann PV, Ametani A, Benichou G, Miller A, Moudgil K. *Dominance and crypticity of T cell antigenic determinants.* **Annu. Rev. Immunol.**, 1993, 11, 729-766. ([Link](#))
- Benichou G, Fedoseyeva E, Lehmann PV, Olson CA, Geysen HM, McMillan M, Sercarz EE. *Limited T cell response to donor MHC peptides during allograft rejection. Implications for selective immune therapy in transplantation.* **J. Immunol.**, 1994, 153, 938-945. ([Link](#))
- Bhardwaj V, Kumar V, Grewal IS, Dao T, Lehmann PV, Geysen HM, Sercarz EE. *T cell determinant structure of myelin basic protein in B10.PL, SJL/J, and their F1S.* **J. Immunol.**, 1994, 152, 3711-3719. ([Link](#))
- Tary-Lehmann M, Lehmann PV, Schols D, Roncarolo MG, Saxon A. *Anti-SCID mouse reactivity shapes the human CD4+ T cell repertoire in hu-PBL-SCID chimeras.* **J. Exp. Med.**, 1994, 180, 1817-1827. ([Link](#))
- Ransohoff R, Tuohy VK, Lehmann PV. *The immunology of multiple sclerosis: new intricacies and new insights.* **Curr. Opin. Neurol.**, 1994, 7, 242-249. ([Link](#))
- Tian J, Lehmann PV, Kaufman DL. *T cell cross-reactivity between coxsackievirus and glutamate decarboxylase is associated with a murine diabetes susceptibility allele.* **J. Exp. Med.**, 1994, 180, 1979-1984. ([Link](#))
- Tary-Lehmann M, Saxon A, Lehmann PV. *The human immune System in hu-PBL-SCID Mice.* **Immunol. Today**, 1995, 16, 529-533. ([Link](#))
- Forsthuber T, Yip HC, Lehmann PV. *Induction of TH1 and TH2 immunity in neonatal mice.* **Science**, 1996, 271, 1728-1730. ([Link](#))
- Le Grice SF, Whalen CC, Hom DL, Lehmann PV, Walker CJ. *Perspective: research highlights at the Case Western Reserve University Center for AIDS Research. Learning from the past and looking toward the future.* **AIDS Res. Hum. Retroviruses**, 1996, 12, 1659-1666. ([Link](#))
- Lehmann PV. *Immunomodulation by proteolytic enzymes.* **Nephrol. Dial. Transplant.**, 1996, 11, 952-955. ([Link](#))
- Tian J, Atkinson MA, Clare-Salzler M, Herschenfeld A, Forsthuber T, Lehmann PV, Kaufman DL. *Nasal administration of glutamate decarboxylase (GAD65) peptides induces Th2 responses and prevents murine insulin-dependent diabetes.* **J. Exp. Med.**, 1996, 183, 1561-1567. ([Link](#))
- Tian J, Clare-Salzler M, Herschenfeld A, Middleton B, Newman D, Mueller R, Arita S, Evans C, Atkinson MA, Mullen Y, Sarvetnick N, Tobin AJ, Lehmann PV, Kaufman DL. *Modulating autoimmune responses to GAD inhibits disease progression and prolongs islet graft survival in diabetes-prone mice.* **Nat. Med.**, 1996, 2, 1348-1353. ([Link](#))
- Lehmann PV. *Immunological tolerance.* **Science**, 1996, 272, 1404-1406. ([Link](#))
- Chu RS, Targoni OS, Krieg AM, Lehmann PV, Harding CV. *CpG oligodeoxynucleotides act as adjuvants that switch on T helper 1 (Th1) immunity.* **J. Exp. Med.**, 1997, 186, 1623-1631. ([Link](#))
- Lehmann PV, Matesic D, Benichou G, Heeger PS. *Induction of T helper 2 immunity to an immunodominant allopeptide.* **Transplantation**, 1997, 64, 292-296. ([Link](#))
- Tian J, Lehmann PV, Kaufman DL. *Determinant spreading of T helper cell 2 (Th2) responses to pancreatic islet autoantigens.* **J. Exp. Med.**, 1997, 186, 2039-2043. ([Link](#))
- Birnbaum G, Kotilinek L, Miller SD, Raine CS, Gao YL, Lehmann PV, Gupta RS. *Heat shock proteins and experimental autoimmune encephalomyelitis. II: environmental infection and extra-neuraxial inflammation alter the course of chronic relapsing encephalomyelitis.* **J. Neuroimmunol.**, 1998, 90, 149-161. ([Link](#))
- Lehmann PV. *The fate of T cells in the brain: veni, vidi, vici and veni, mori.* **Am. J. Pathol.**, 1998, 153, 677-680. ([Link](#))
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- Targoni OS, Tary-Lehmann M, Lehmann PV. *Prevention of murine EAE by oral hydrolytic enzyme treatment.* **J. Autoimmun.**, 1999, 12, 191-198. ([Link](#))
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- Ott PA, Dittrich MT, Herzog BA, Guerkov R, Gottlieb PA, Putnam AL, Durinovic-Bello I, Boehm BO, Tary-Lehmann M, Lehmann PV. *T cells recognize multiple GAD65 and proinsulin epitopes in human type 1 diabetes, suggesting determinant spreading. J. Clin. Immunol.*, 2004, 24, 327-339. ([Link](#))
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- Hofstetter HH, Karulin AY, Forsthuber TG, Ott PA, Tary-Lehmann M, Lehmann PV. *The cytokine signature of MOG-specific CD4 cells in the EAE of C57BL/6 mice. J. Neuroimmunol.*, 2005, 170, 105-14. ([Link](#))
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- Ott PA, Herzog BA, Quast S, Hofstetter HH, Boehm BO, Tary-Lehmann M, Durinovic-Bello I, Berner BR, Lehmann PV. *Islet-cell antigen-reactive T cells show different expansion rates and Th1/Th2 differentiation in type 1 diabetic patients and healthy controls. Clin. Immunol.*, 2005, 115, 102-14. ([Link](#))
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- Kawalec-Carroll JS, Hetherington VJ, Dockery DS, Shive C, Targoni OS, Lehmann PV, Nadler D, Prins D. *Immunogenicity of unprocessed and photooxidized bovine and human osteochondral grafts in collagen-sensitive mice. BMC. Musculoskelet. Disord.*, 2006, 7, 32. ([Link](#))
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E. Former Trainees who became Faculty:

Patrick Ott, MD, PhD, now Associate Professor, Dana-Farber Cancer Institute, Harvard Medical School
 Peter Heeger, MD, now Professor at Mount Sinai, NY
 Thomas Forsthuber, MD, PhD, now Professor University of Texas, San Antonio
 Michael Anderson, M.D., now Professor, UCSF Benioff Children Hospitals' President
 Don Anthony, MD, now Professor of Medicine, at CWRU
 Heinfried Radeke, MD, PhD, now Professor at Goethe University Frankfurt, Germany
 Clara Pelfrey, PhD, now Associate Professor at CWRU/CCF
 Stefanie Kuerten, MD, PhD, now Professor at University of Bonn, Germany

Postdoctoral trainees:

Doctoral thesis mentor to:

Alexey Karulin, Ph.D.
 Oleg Targoni, Ph.D.
 Patrick Ott, MD
 Frauke Rininsland, Ph.D.
 Beate Berner, MD
 Wenji Zhang, MD
 Tobias Schlingman, MD
 Ioana Moldovan, MD
 Thomas Kleen, Ph.D.
 Thomas Hattier, Ph.D.
 Peter Heeger, MD
 Thomas Forsthuber, MD, Ph.D.
 Michael Anderson, MD
 Heinfred Radeke, MD, Ph.D.
 Clara Pelfrey, Ph.D.
 Don Anthony, MD
 Srividya Sundararaman, Ph.D.
 Anna Przybyła, Ph.D.
 Greg Kirchenbaum, Ph.D.
 Maneewan Suwansaard, Ph.D.
 Xing-Huang Gao, Ph.D.
 Loral Showalter, Ph.D.

Kristina Feldman
 Maike Hesse
 Judith Gottwein
 Jan Baus
 Thomas Kleen
 Christian Kreher
 Wolf Bartholomae
 Harald Hofstaetter
 Kamruz Darabi
 Britta Stern
 Christian Kreher
 Robert Gurkov
 Anke Lonsdorf
 Jan Baus
 Bernhard Herzog
 Tobias Schlingman
 Stephan Quas
 Hayder Kuckrek

Stefanie Kuerten
 Tobias Nowacki
 Felix Lichtenegger
 Justine Tingo
 Annemarie Schiller
 Marie Wunsch
 Fredrik Terlutter
 Philipp Fecher
 Andrea Duechting
 Fridolin Franke
 Carla Wolf
 Sebastian Koeppert
 Alex A. Lehmann