

PERSONAL INFORMATION

Luca Vannucci



President  
Czech immunological Society

Head  
Laboratory of Immunotherapy  
Institute of Microbiology of the Czech Academy of Sciences (IMIC CAS), Vídeňská 1083, 142 20  
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🌐 <https://mbucas.cz/vyzkum/immunologie/laborator-imunoterapie/>

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Sex male | Date of birth 05/05/1956 | Nationality Italian

WORK EXPERIENCE

2012 – present

**Head of the Laboratory of Immunotherapy**

IMIC CAS, Vídeňská 1083, 14220 Prague 4, Czech Republic, <http://mbucas.cz/>

- Scientific direction and managing, tutoring of students, preparation of papers and projects, scientific results propagation, national and international contacts and conferences organization and financial support recruitment

2009 – 2011

**Business or sector** tumor microenvironment immunology, immunotherapy, and theranostics

**Head of the Laboratory of Natural Cell Immunity,**

IMIC CAS, Prague 4, CZ

- As above

2005 – 2009

**Business or sector** tumor microenvironment immunology and innate immunity

**Senior researcher in the Laboratory of Natural Cell Immunity**

IMIC CAS, Prague 4, CZ

- Tumor modelling, fluorescence and confocal microscopy, immune cell modulation

**Business or sector** innate immunity and anticancer immunomodulation

1990 – 2004

**Surgeon/assistant professor**

Department of Transplants, Oncology and New Technics in Surgery, University of Pisa, Medical Faculty, Pisa, Tuscany, IT

- Cancer surgery, teaching and tutoring students, research laboratory organization, development of experimental tumor models for anticancer research

**Business or sector** Cancer surgery, oncology, experimental surgery, cancer modelling

1989 - 1990

**Assistant surgeon**

Department of General Surgery, Polo Riabilitativo di Fivizzano: Fivizzano, Tuscany, IT

- General surgery, treatment and follow-up of cancer patients

## EDUCATION AND TRAINING

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- 2001 -2008 **PhD in immunology**  
 Faculty of Sciences, Charles University in Prague and IMIC CAS, Prague, CZ
- Innate immunity modulation, comparison of immunity and cancer development in germ-free and conventional animals in original colorectal cancer model (Vannucci, 1994)
- Score: 80/80 with mention
- 1988-1991 **Postgraduate Specialization in Medical Oncology (diploma)** t  
 Faculty of Medicine, Department of Oncology, University of Milan: Milan, IT
- Cancer biology, pathology, diagnosis, treatment, prevention and follow-up
- Score: Full cum laude
- 1982 -1987 **Postgraduate Specialization in General Surgery (diploma)**  
 Faculty of Medicine, Department of Clinical Surgery, University of Pisa: Pisa, Toscana, IT
- General surgery operation training, diagnosis, treatment and follow-up of the surgical patients, including transplantation and vascular surgery patients, emergency and regular practices at the bedside, intensive care, experimental surgery.
- Score: Full cum laude
- 1986-1987 **International Fellowship in cancer surgery (Surgical research fellow) and Certificate in Experimental Carcinogenesis (*with commendation for excellence*)**  
 The Billings Hospital Department of Surgery (tutor: Prof. F. Michelassi) and the Ben May Laboratory for cancer research (Tutor: Nobel Laureate Prof. C.B. Huggins, Head), Faculty of Medicine, University of Chicago, Chicago, IL, USA
- Attendance to regular surgery, transplantation surgery, cancer surgery, clinical research, laboratory cancer research and experimental cancer modelling in vivo (course of Experimental Carcinogenesis with Prof. C.B. Huggins). Selected by concourse for The International Rotary Club Foundation Fellowship.
- 1975 -1981 **M.D.** t  
 Faculty of Medicine, University of Pisa, Pisa, IT
- Score: 110/110

## PERSONAL SKILLS

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- Communication skills
- good communication skills gained through my experience as a doctor and a conference speaker

## Organisational / managerial skills

- President of the Czech Immunological Society 2018-2021; 2021-2024
- 2010-2018 member of the Czech Immunological Society Board
- currently responsible for a team of 12 people + 1 high school students in the program Otevřená věda/Open science CAS and 1 ERASMUS+ student.
- Grants:
  - Grant Agency of the Czech Academy of Sciences IAA500200510 and IAA500200917
  - Ministry of Education, Youth and Sports (COST LD15135, ended 2017),
  - Associazione Italiana per la Ricerca sul Cancro – AIRC: AIRC MFAG10545 and AIRC IG 2015 Id.16776 (external collaborator)
  - Co-responsible of AZV NU23-08-00071 Grant (Czech Ministry of Health)
  - Co-responsible of the project National Institute for Cancer Research (Programme EXCELES, ID Project No. LX22NPO5102) - Funded by the European Union –Next Generation EU;
  - ELIUPM4-117 ELI Beamlines Facility grant, Dolní Břežany (2024)
  - responsible of donations for research granted by Generali/Ceska pojišťovna Foundation, and UniCredit Bank CZ&SK.
  - crowdfunding for the Laboratory with donations from companies, private donors and foundations (Anna Villa e Felice Rusconi Foundation, Varese, IT)
  - commercial contracts: PROTERA s.r.l., Sesto Fiorentino (IT), FERBI s.r.l. Mosciano Sant'Angelo (IT), BIOINTEGRATED MEDICAL SERVICE LIMITED, Brentford, London, GB), APIGENEX s.r.o, Prague (CZ), AUMED a.s. Prague (CZ)
  - running traineeships ERASMUS+ (students and scientists since 2010, except on COVID period)
  - organization of visits and lectures of international scientists in the Lab and in IMIC since 2010 (e.g. Prof. A. Mantovani, Prof. P. Srivastava, Prof. R. Apte, Prof. V. Umansky, Prof. V. Bronte, Prof. A. Albini, Prof. H. Okamura, Prof. B. Saha, Prof. G. Trinchieri, Prof. A Gomez Munon, etc.)
- Organization of symposia, workshops, congresses in onco-immunology since 2004:
  - 2004 Local organizer of the Cancer Microenvironment Society International Conference, Prague
  - 2010 International Workshop on Natural Immunity and Cancer, Prague
  - 2012 Celebrative Symposium for the 50<sup>th</sup> anniversary of the Institute of Microbiology IMIC CAS, Prague
  - 2017 International congress CITIM 2017 Prague
  - 2017 International Workshop (COST Action) on Theranostics, Prague
  - Co-organizer of the biannually joint congress of the Society of Clinical Immunology & Allergology and the Czech immunological Society since 2020
  - 2021 Steering Member of the organizing committee of the European Congress of Immunology
  - MESIA 2022 in Prague – collecting 11 Central-European Societies of Immunology
- Czech Manager and Area Leader of WG2Theranostics in the COST Action MiMED 2014-2017
- founder of the CIS-ARPA “M.Pospíšil, M.Campa and F. Mosca Award” for Czech Immunological Society for young researchers working on innate immunity and tumor immunology, since 2008
- 2023 and 2024 Creator and Organizer of the CIS-IMIC SUMMER SCHOOL on Tumor Microenvironment and Immunity, Nove Hradky in South Bohemia

Job-related skills

- **Reviewer for national** (GAUK, IGA MZ) and **international** grant agencies and institutions (InCa Paris, FR, 2012-2014; MIUR, IT; VEGA, SK)
- 2012-2014 member of the international board for evaluation of research projects at the Institut National du Cancer – INCa, Paris, FR
  
- **Reviewer for international journals** (Nature Communications, Cancer Imm Immunoth, Carcinogenesis, Carbohydrate Polymers, Nanomedicine, Int J Oncol, PlosOne, Molecules, Folia Microbiol, Curr Opinion In Pharmacology etc.)
  
- **Member of editorial board** of Carcinogenesis (Oxford, GB until 2023); Molecules (Basel, CH), Journal of immunotoxicology (New York, USA); Molecular Medicine Reports (Athens, GR/London, GB); Experimental and Therapeutic Medicine (London, GB); The World Academy of Sciences Journal (Athens/London); Asian Pacific Journal of Tropical Medicine; Journal of Hainan Medical University (Hainan, China; Medicine International (Athens/London)
  
- Scientific consultant and coordinator of the Italian researchers in CZ for the Italian Embassy and Italian Institute of Culture in CZ
  
- Member of the Scientific Board of Arpa Foundation, Pisa (IT)
  
- Chair-person in national and international congresses
  
- Teaching activities
  - 1988-1999 at the Faculty of Medicine (surgery), University of Pisa, IT, lectures, training and exams in Surgical Pathology, Clinical Surgery and Semeiotics.
  - 2001-2004 Lectures in English of Experimental Surgery and Cancer Surgery at the 1<sup>st</sup> Medical Faculty Charles University, Prague, course for foreign students.
  - 2010-present. Tutoring of Bc., Mgr., and Ph.D. students with accreditation at the Faculty of Sciences, Charles University, Prague,
  - from 2009 Specialist consultant at Faculty of Electrotechnics and Medical Engineering, Czech Technical University in Prague
  - from 2011-today Tutoring of Erasmus+ fellows from Spain, Italy and England.

Computer skills

- good command of Microsoft Office™ tools, Corel

Other skills

- painting, singing

Driving licence

- B

ADDITIONAL INFORMATION

HONORS AND AWARDS

- 2019 Officer of the Order of the Star of Italy - appointed by the President of the Italian Republic Sergio Mattarella, as a relevant representative of Italy in the Czech Republic for merits in the medical-scientific field and social and international relationships
- 2011 Golden Budge of the Italian-Czech Commercial Chamber (Prague, CZ) eminent Italian in CZ
- 2011 Invited lecture at Humanitas Institute (Milano, IT), moderated by Prof. A. Mantovani
- 2011 Invited lecture at the German Cancer Research Center (DKFZ)

- 2010 invited lectures at the NCI (Frederick, MD, USA) and NIH (Bethesda, MD, USA)
  - 2008 Award of the World Congress on Advances in Oncology, Crete, Greece
  - 1998, 2008 National Award of the Italian Society for Microwaves “MW in anticancer therapy”
  - 1998 Special guest and Award at the Celebrative Congress of the Nepalese Society of Surgeons, Kathmandu
  - 1997 Special guest and Award at the 10<sup>th</sup> Congress of the Cancer Research Foundation of Pakistan in Lahore.
  - 1991 Farini Award for GI tract cancer research (University of Padua, IT)
  - 1985 Winner of Rotary Foundation International Fellowship - University of Chicago (Chicago, IL, USA, 1986 –87)
- Other:
- 2022 Elected member of COMITES Repubblica Ceca (Italian Ministry of Foreign Affairs)

STATISTICS

PUBLICATIONS	Total times cited: 3,506	H-index 29	(ResearchGate)
	Total times cited: 2,675	H-index 26	(Scopus)
	Total times cited: 2,410	H-index 25	(WoS)

Publications  
(selected):

- Kalkusova K, Taborska P, Stakheev D, Rataj M, Smite S, Darras E, Albo J, Bartunkova J, Vannucci L, Smrz D. Impaired Proliferation of CD8+ T Cells Stimulated with Monocyte-Derived Dendritic Cells Previously Matured with Thapsigargin-Stimulated LAD2 Human Mast Cells. *J Immunol Res.* 2024 Jul 18;2024:5537948. doi: 10.1155/2024/5537948. PMID: 39056014; PMCID: PMC11272405.
- Taborska P, Lukac P, Stakheev D, Rajsiglova L, Kalkusova K, Strnadova K, Lacina L, Dvorankova B, Novotny J, Kolar M, Vrana M, Cechova H, Ransdorfova S, Valerianova M, Smetana K Jr, Vannucci L, Smrz D. Novel PD-L1- and collagen-expressing patient-derived cell line of undifferentiated pleomorphic sarcoma (JBT19) as a model for cancer immunotherapy. *Sci Rep.* 2023 Nov 4;13(1):19079. doi: 10.1038/s41598-023-46305-7. PMID: 37925511; PMCID: PMC10625569.
- Sushytskyi L, Synytsya A, Čopíková J, Lukáč P, Rajsiglová L, Tenti P, Vannucci LE. Perspectives in the Application of High, Medium, and Low Molecular Weight Oat  $\beta$ -d-Glucans in Dietary Nutrition and Food Technology-A Short Overview. *Foods.* 2023 Mar 7;12(6):1121. doi: 10.3390/foods12061121. PMID: 36981048; PMCID: PMC10048208.
- Saha B, Vannucci L, Saha B, Tenti P, Baral R. Evolvability and emergence of tumor heterogeneity as a space-time function. *Cytokine.* 2023 Jan;161:156061. doi: 10.1016/j.cyto.2022.156061. Epub 2022 Oct 15. PMID: 36252436.
- Kalkusova K, Smite S, Darras E, Taborska P, Stakheev D, Vannucci L, Bartunkova J, Smrz D. Mast Cells and Dendritic Cells as Cellular Immune Checkpoints in Immunotherapy of Solid Tumors. *Int J Mol Sci.* 2022 Sep 21;23(19):11080. doi: 10.3390/ijms231911080. PMID: 36232398; PMCID: PMC9569882
- Casula, F.; Lodi, M.B.; Curreli, N.; Fedeli, A.; Scapatucci, R.; Muntoni, G.; Randazzo, A.; Djuric, N.; Vannucci, L.; Fanti, A. Microwaves as Diagnostic Tool for Pituitary Tumors: Preliminary Investigations. *Electronics* 2022, 11, 1608. <https://doi.org/10.3390/electronics11101608>
- Mucciolo G, et al. IL17A critically shapes the transcriptional program of fibroblasts in pancreatic cancer and switches on their protumorigenic functions. *Proc Natl Acad Sci U S A.* 2021 Febr 9; 118(6):e2020395118. doi: 10.1073/pnas.2020395118
- Čaja F, et al. Local Immune Changes in Early Stages of Inflammation and Carcinogenesis Correlate with the Collagen Scaffold

- Changes of the Colon Mucosa. *Cancers (Basel)*. 2021 May 18;13(10):2463. doi: 10.3390/cancers13102463
- Čaja F, et al. Immune activation by microbiome shapes the colon mucosa: Comparison between healthy rat mucosa under conventional and germ-free conditions. *J Immunotoxicol*. 2021 Dec;18(1):37-49. doi: 10.1080/1547691X.2021.1887412. PMID: 33749490
  - Vetvicka V, Sima P, Vannucci L. Trained Immunity as an Adaptive Branch of Innate Immunity. *Int J Mol Sci*. 2021 Oct 1;22(19):10684. doi: 10.3390/ijms221910684. PMID: 34639025; PMCID: PMC8508929.
  - Raskova Kafkova L, et al. Secretory IgA N-glycans contribute to the protection against E. coli O55 infection of germ-free piglets. *Mucosal Immunol*. 2021 Mar;14(2):511-522. doi: 10.1038/s41385-020-00345-8
  - Sushytskyi L, et al. Immunoactive polysaccharides produced by heterotrophic mutant of green microalga *Parachlorella kessleri* HY1 (Chlorellaceae). *Carbohydr Polym*. 2020 Oct 15;246:116588. doi: 10.1016/j.carbpol.2020.116588. Epub 2020 Jun 12. PMID: 32747247.
  - Tenti P, Vannucci L. Lysyl oxidases: linking structures and immunity in the tumor microenvironment. *Cancer Immunol Immunother*. 2020 Feb;69(2):223-235. doi: 10.1007/s00262-019-02404-x.
  - Vetvicka V, Vannucci L, Sima P.  $\beta$ -glucan as a new tool in vaccine development. *Scand J Immunol*. 2020 Feb;91(2):e12833. doi: 10.1111/sji.12833
  - Castaño LF, et al. New chalcone-sulfonamide hybrids exhibiting anticancer and antituberculosis activity. *Eur J Med Chem*. 2019 Aug 15;176:50-60. doi: 10.1016/j.ejmech.2019.05.013
  - Marelli G, Sica A, Vannucci L, Allavena P. Inflammation as target in cancer therapy. *Curr Opin Pharmacol*. 2017 Aug;35:57-65. doi: 10.1016/j.coph.2017.05.007
  - Vannucci L, et al. In Vivo Targeting of Cutaneous Melanoma Using an Melanoma Stimulating Hormone-Engineered Human Protein Cage with Fluorophore and Magnetic Resonance Imaging Tracers. *J Biomed Nanotechnol*. 2015 Jan;11(1):81-92. doi: 10.1166/jbn.2015.1946. PMID: 26301302.
  - Vannucci L, et al. Immunostimulatory properties and antitumor activities of glucans (Review). *Int J Oncol*. 2013 Aug;43(2):357-64. doi: 10.3892/ijo.2013.1974.
  - Vannucci L, et al. Selective targeting of melanoma by PEG-masked protein-based multifunctional nanoparticles. *Int J Nanomedicine*. 2012;7:1489-509. doi: 10.2147/IJN.S28242
  - Tlaskalová-Hogenová H, et al.. The role of gut microbiota (commensal bacteria) and the mucosal barrier in the pathogenesis of inflammatory and autoimmune diseases and cancer: contribution of germ-free and gnotobiotic animal models of human diseases. *Cell Mol Immunol*. 2011 Mar;8(2):110-20. doi: 10.1038/cmi.2010.67
  - Chernyavskiy O, Vannucci L, et al. Imaging of mouse experimental melanoma in vivo and ex vivo by combination of confocal and nonlinear microscopy. *Microsc Res Tech*. 2009 Jun;72(6):411-23. doi: 10.1002/jemt.20687.
  - Vannucci L, et al. Colorectal carcinogenesis in germ-free and conventionally reared rats: different intestinal environments affect the systemic immunity. *Int J Oncol*. 2008 Mar;32(3):609-17
  - Michelassi F, Vannucci LE, et al. Ras oncogene expression as a prognostic indicator in rectal adenocarcinoma. *J Surg Res*. 1988 Jul;45(1):15-20. doi: 10.1016/0022-4804(88)90015-7.
  - Michelassi F, Block GE, Vannucci L, et al. A 5- to 21-year follow-up and analysis of 250 patients with rectal adenocarcinoma. *Ann Surg*. 1988 Sep;208(3):379-89. doi: 10.1097/00000658-198809000-00016. PMID: 3421761; PMCID: PMC1493650.

## Presentations

(selected)

- Vannucci L. - Smoldering inflammation models the tissue and tumor microenvironment. ISCR & IIS joint Immuno-Oncology meeting “A tale of cytokines, immunity, microenvironment and cancer” in memory of Prof. Roni Apte. Invited lecture as Dozor Visiting Scholar at the Faculty of Health Sciences, Ben-Gurion University of the Negev. 17-18/04/2024, Ben-Gurion University of the Negev, Beer Sheva, Israel
- Vannucci L., Sushytskyi L., Lukáč P., Rajsiglová L., Tenti P. Beta glucans as an integrative treatment for breast cancer patients. 29<sup>th</sup> international conference SEKCAMA SOS SLS, 23-24/05/2024, Bratislava, Slovakia, (invited)
- L. Vannucci, P. Tenti, P. Lukáč, L. Rajsiglová, F. Čaja, D. Stakheev, D. Vondrášek, Renata Štěpánková, T. Hudcovic, P. Makovický, Petr Šima, Daniel Smrz. Gut microbiome can influence local and distant immune environment and tissue structures: a germ-free animal lesson perspective also for cancer-microbiome relationships. Czech Annual Cancer Research Meeting, Olomouc (CZ), 20-22/11/2023, (invited)
- L. Vannucci, F. Čaja, D. Stakheev, P. Lukáč, L. Rajsiglova, P. Tenti, D. Vondrasek, G. Mucciolo, R. Štěpánková, P.



- Makovický, P. Makovický, T. Hudcovic, P. Šima, D. Smrz. Smoldering inflammation sustains tissue structure changes and tumor microenvironment development. 26th International Symposium on Molecular Medicine – Tivoli (Rome, IT) 2-4 /11/2023 (invited)
- Luca Vannucci, Fabián Čaja, Dmitry Stakheev, Pavol Lukáč, Lenka Rajsiglova, Paolo Tenti, et Al. Smoldering inflammation, an insidious support to the tumor microenvironment development. INTERNATIONAL CONFERENCE on CANCER IMMUNOTHERAPY AND IMMUNOMONITORING (CITIM) 2023 – Vilnius (Lithuania) April 24-27, 2023 (invited)
  - Luca Vannucci, Fabián Čaja, Dmitry Stakheev, Pavol Lukáč, Lenka Rajsiglová, Paolo Tenti, et al.: Smoldering inflammation: from tissue remodeling to cancer niche. 5th meeting of Middle European Societies of Immunology and Allergology - MESIA, 23-26/11/2022, Prague, CZ. Eur. J. Immunol. 2023. 53(Suppl. 1): 24-25; DOI: 10.1002/eji.202370200 (chair of the congress)
  - Luca Vannucci, Fabián Čaja, Dmitry Stakheev, Pavol Lukáč, Lenka Rajsiglova, Paolo Tenti, et al.. Microbiota and smoldering inflammation shape the colon mucosa microenvironment. XXXIX. sjezd českých a slovenských alergologů a klinických imunologů, XVIII. kongres českých a slovenských imunologů. 5–8/10/2022, Prague (CZ). Alergie Suppl 1/2022 p. 39 (invited)
  - Vannucci L., et al. Morphology and immunity in transforming tissues: looking for the tumor niche. 6th International Conference Cancer Immunotherapy and Immunomonitoring (CITIM), Tbilisi Georgia, April 29 - May 2 2019
  - Luca Vannucci, et al.. Gadolinium-based nanoparticles for targeting the tumor microenvironment. 22nd World Congress on Advances in Oncology, Athens, Greece, 5-7/10/2017, (invited)
  - Vannucci L. Theranostics - Nanoconstructs for tumor microenvironment and tumor cell targeting. COST TD1301 MiMed Meeting Bristol, Great Britain, 25 – 27 /03/2015, (invited)
  - Vannucci L. Microbiota and stroma in colon carcinogenesis. International Meeting “Cancer: Inflammation and Immunity” of NCI- NIH Friederik/Bethesda USA, NCT Heidelberg GE & NITB Siena IT, Finalborgo (Finale Ligure, Italy), 16-18/09/2015 (invited)
  - Vannucci L., et al. Modelling inflammatory micro-environment: stroma and antitumor immunity interactions. 18th World Congress on Advances in Oncology and 16th International Symposium on Molecular Medicine, October 10-12, 2013, Hersonissos, Crete, Greece (invited)
  - L. Vannucci, et.al. Gut in local and systemic anticancer response: a lesson from germ-free and conventionally reared animals. Proceedings of the 12th International nutrition & diagnostics conference – INDC 2012, 27-30 August 2012 – Charles University, Prague (CZ) (invited)
  - Vannucci L, et al: New perspectives in the treatment of melanoma by a glycobiological approach: results in mouse experimental model. Invited lecture at the EHRLICH II –2nd World Conference on Magic Bullets [http://www.ehrlich2008.org/Abstractbook\\_2008.doc](http://www.ehrlich2008.org/Abstractbook_2008.doc) (invited)
  - Vannucci L: Tumor microenvironment, inflammation and anticancer vaccines: looking for new perspectives. Key-note lecture at the BIT Life Sciences' World Vaccine Congress-2008, December 1-5, 2008, Foshan, China, Book of Abstracts, p.167, 2008 (invited)
  - Vannucci L: A paradoxical hypothesis: might a controlled immune suppression help to rescue the immune response in a pro-inflammatory tumor microenvironment? Book of Program and Abstracts of the 4th International Conference on "Tumor Microenvironment: Progression, Therapy and Prevention" - (March 6-10, 2007, Florence, Italy), p.47, 2007 – Lecture