

APPLICATION

For the position of full professorship at the Department of Immunology,

University of Pécs, Clinical Center

(#6325 reg. No.)



Applicant: Dr. Péter Balogh

associate professor

Department of Immunology and Biotechnology

University of Pécs, Clinical Center

2015

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2. Applicant's response to the call

Dr. József Bódis

Rector

University of Pécs

Vasvári Pál u. 4

7622 Pécs

Pécs, 2015. November 21st, 2015

APPLICATION REQUEST

Dear Rector Bódis,

Upon the call for the full professorship at the Department of Immunology and Biotechnology, University of Pécs Clinical Center, issued by the University of Pécs and announced by the Office of Public Administration and Justice under registration number #6325, herewith I submit my application for the offering. My research field is immunology and developmental biology.

To the best of my knowledge and based upon measurable parameters concerning my research and teaching achievements and professional activities, I fully comply with the requirements set out, and I humbly request the supportive evaluation of my present application.

Yours sincerely,

Dr. Péter Balogh

associate professor

DECLARATION

Herewith I confirm that I duly accept the due handling of the details in my application pertaining to the call issued by the University of Pécs and announced by the Office of Public Administration and Justice, under registration number #6325, for the position of full professorship at the Department of Immunology and Biotechnology.

Dr. Péter Balogh
associate professor

3. Professional curriculum vitae

3.1. SCIENTIFIC CAREER

Personal data:

Name: Dr. Péter Balogh

Address: 7625 Pécs Mihály u. 14. Phone: (72) 324-222

Date of birth: July 3, 1963

Place of birth: Hódmezővásárhely

Nationality: Hungarian

Marital status: married (Spouse: Dr. Andrea Petz, science [maths and chemistry] high school teacher)

Children: Orsolya Lilla, 1989, Bendegúz Lázár, 1992.

Present employment: Department of Immunology and Biotechnology, University of Pécs, Clinical Center

H-7643 Pécs, Szigeti út 12.

Tel: 72 536-001/36524

E-mail: balogh.peter@pte.hu

Schools and education:

Garai János High School, Szekszárd - 1977-1981

University Medical School of Pécs - 1982-1988 (general medicine)

Scientific degree: Candidate of Biological Sciences (issued by the Hungarian Academy of Sciences), 1996

Language exams: Advanced level/C – 1204/1995

Honors: HAS Bolyai János Fellowship (1998-2001)

HAS Széchenyi Postdoctoral Fellowship (2004-2007)

National Research and Technology Office Öveges Postdoctoral Fellowship (2008)

National Council of Student Research “Golden medal Teacher” award (2011)

Rector’s recommendation (2013)

“For the Hungarian Higher Education” placquette award (2015)

Board examination and specialization:

- General medicine (69-6/1988, seal #45738), University Medical School of Pécs.

- Clinical laboratory medicine board certificate (1320/2005)
- Biotechnology and Intellectual Property, World Intellectual Property Organization (WIPO, Geneva, Switzerland, 2008 April-June).
- FACS Aria III operator (BD Biosciences, Erembodegen, Belgium, 2012 July).

Habilitation: University of Pécs, Faculty of Medicine (2010)

Previous employment:

- 1988-1989 – Research associate (Biotechnika Ltd, Budapest)
- 1989-1990 – visiting scientist, University of Oxford, Sir William Dunn School of Pathology
- 1990-1992 – resident (Biotechnology Laboratory, University Medical School of Pécs)
- 1992-1993 – postdoctoral fellow, Royal Society Hungarian Fellowship, University of Oxford, Sir William Dunn School of Pathology
- 1993-1996 – assistant professor (Laboratory of Immunology and Biotechnology, University Medical School of Pécs)
- 1996-2000 – university lecturer (Department of Immunology and Biotechnology, University Medical School of Pécs)
- 2000-2002 – postdoctoral scientist, Department of Anatomy, Virginia Commonwealth University, Medical College of Virginia, USA
- 2000 – associate professor (Department of Immunology and Biotechnology, University of Pécs)

Membership: Hungarian Society of Immunologists – Board member (<http://www.mit.hu>)

American Association of Immunologists (AAI) – member

(<http://www.aai.org>)

EuroMabNet (network of European laboratories specialized in monoclonal antibody production - member (<http://www.euromabnet.com>))

Senior positions and public affairs:

- 2004 – Member of the Immunology section of the Pecs committee of HAS
- 2006-2015 – Student Research Board chairman of the Faculty of Medicine
- 2007 – Member of the Animal Welfare and Ethics Committee of the Faculty of Medicine
- 2008 – Member of the Immunology working committee of HAS
- 2007-2011 – National Council for Student Research, Chairman of Medicine and Health Sciences Section
- 2013 – Deputy director of the Department of Immunology and Biotechnology

- 2013 – Organizing member of the 42nd Conference of the Hungarian Society of Immunologists
- 2015 – Member of the Committee on Gene Technology, University of Pecs

3.2. TEACHING/EDUCATIONAL ACTIVITIES

I have been involved in teaching undergraduate students since 1991 at the Medical School/Medical Faculty of the University of Pécs. For two years I taught Basic Immunology offered by the Biotechnological Laboratory (predecessor of our Department) as facultative subject, in Hungarian language 2x2 classes weekly.

Since 1993 I have taught the subject of **Basic Immunology**, introduced as new comprehensive subject by our Department, for medical students, pharmacology students, biology teacher students and biologists. Since 2009 I have participated in teaching in **Medical Biotechnology MSc course**.

Based on the students' feedback I receive favorable evaluation on the comprehensibility and professional quality/content of my lectures.

3.2.1. Graduate teaching:

(a) Faculty of Medicine:

- **Basic Immunology** – for medical and dentistry students since 1991 (developing concept and education material, giving lectures and practices, examinations) in Hungarian and English languages
 - I give approximately one-fourth of 28 lectures
 - 28 classes for 20 Hungarian and English program students (1 group each)
 - I participate in composing exam tests and corrections
- **Basic Immunology - Pharmacology**
2000 – I participated in developing the concept and teaching material for the Basic Immunology subject for pharmacology students since 2000, I also give lectures and participate in the examinations.
 - I give approximately 15% of 28 lectures for 45 pharmacology students.

Medical Biotechnology MSC:

This English language program was accredited by the Hungarian Accreditation Board in 2009. I have contributed to it with developing 4 new subjects (concept and teaching materials, giving lectures and practices, and also examinations).

Supported by TÁMOP-4.1.2-08/1/A-2009-0011 grant:

- **Developmental Biology** since 2009 as subject coordinator
- **Molecular Developmental Biology** since 2009 as subject coordinator
- **Transdifferentiation** since 2009 as subject coordinator
- **In Vivo Animal Test Systems** since 2009 as subject coordinator

(b) Faculty of Sciences:

- **Immunobiology lectures** – since 2010 as compulsory subject - coordinator
I give lectures for 2nd year Biologist MSc students since 2010, covering approximately 50% of the 28 lectures during the term, and also participate in the examinations.
- **Immunology practices** – For 2nd year Biology MSc students as elective subject - coordinator
- 100% of the 28 classes during the term

Other subjects:

- **Immunodeficiencies** – subject coordinator. (14 classes)
- **Introduction to stem cell biology (Hungarian/English)** – subject coordinator (14 classes) supported by TÁMOP-4.1.1.C-13/1/KONV-2014-0001 grant

The topics of the subjects can be found at our Departmental website: www.immbio.hu

3.2.2. Postgraduate training:

- **University of Pécs, Faculty of Medicine, Theoretical Medicine Doctoral School (senior member)**
- **University of Pécs, Faculty of Sciences, Biology and Sports biology Doctoral School (participant)**

I take part as mentor for PhD students and also as participant in the postgraduate training courses (lectures and practicals) organized by our Department.

To date I have supervised 6 PhD students, 5 of them have obtained degree; one student is currently working on her PhD. (for details please see section 3.3.2).

Courses of postgraduate training:

- **Advanced immunology – theoretical PhD course**
I participate in this 14 weeks course by organizing the concept and also as presenter.
- **Immunological methods PhD course**
5 x 6 classes theory and practice for 10-15 PhD students

Participation in PhD thesis reviewing and referee

Preliminary evaluation of PhD theses:

- Komócsi András, 2003 Faculty of Medicine, University of Pécs

- Veres Balázs, 2003 Faculty of Medicine, University of Pécs
- Herold Róbert, 2004 Faculty of Medicine, University of Pécs
- Kovács Krisztina, 2004 Faculty of Medicine, University of Pécs
- Pálfi Anita, 2005 Faculty of Medicine, University of Pécs
- Bánvölgyi Ágnes, 2006 Faculty of Medicine, University of Pécs
- Lukács András, 2006 Faculty of Medicine, University of Pécs
- Nagy Attila, 2006 Faculty of Medicine, University of Pécs
- Nagy Tamás, 2006 Faculty of Medicine, University of Pécs
- Karsai Árpád, 2007 Faculty of Medicine, University of Pécs
- Péterfalvi Ágnes, 2008 Faculty of Medicine, University of Pécs
- Sándor Katalin, 2008 Faculty of Medicine, University of Pécs
- Vető Sára, 2010 Faculty of Medicine, University of Pécs
- Tóth Dániel Márton, 2011 Faculty of Medicine, University of Pécs
- Ujfalusi Zoltán, 2011 Faculty of Medicine, University of Pécs
- Ács Péter, 2012 Faculty of Medicine, University of Pécs
- Pajor Gábor, 2012 Faculty of Medicine, University of Pécs

Reviewer of PhD theses:

- Kövesdi Dorottya, 2004 Eötvös University, Budapest
- Medgyesi Dávid, 2006 Eötvös University, Budapest
- Igyártó Botond, 2006 Semmelweis University, Budapest
- Karen L. Brown, 2008 University of Edinburgh (external examiner)
- Knisz Judit, 2010 Faculty of Sciences, University of Pécs
- Kremlitzka Mariann, 2014 Eötvös University, Budapest

3.2.3. Talent management and students' research

Since 2008 the Student Research has been a set of 4 facultative/elective subjects worth 8 credit points, for which I have established both the concept and criteria.

I regularly receive and supervise undergraduate project students, on a yearly average 2-3 students since 1991. My mentored students have successfully participated in students' competitions and the conferences of the Hungarian Association of Immunologists.

7 former project students have been admitted to the PhD program of the Faculty of Medicine, 5 of them pursued their PhD work under my supervision. One of my former PhD students (Dr. Krisztián Kvell) has remained in our Department as an independent researcher, now deputy head of the Department of Pharmaceutical Biotechnology.

Three of my other former undergraduate project students have remained at the

University of Pécs after graduation: Dr. Péter Jakus at the Department of Biochemistry and Medical Chemistry, Dr. Viktória Fisi at the Department of Laboratory Medicine and Dr. Donát Sarlós at the Department of Urology.

3.2.4. Teaching abroad:

- Giving seminar (2004 October) Institute of Toxicology and Genetics, Karlsruhe, Germany, upon the invitation of Professor Falk Weih
- Giving seminar (2008 November) Technical University of Braunschweig Braunschweig, Germany, upon the invitation of Professor Hans-Henning Arnold
- Invited ERASMUS lecturer (2013 February), Medical Faculty University J. J. Strossmayer, Osijek, Croatia

3.2.5. Textbooks/lecture notes:

Chapters in textbooks:

László Czirják (Ed): Clinical immunology (in Hungarian), Medicina Publisher, Budapest 2006

- Cells and tissues of the immune system. pp. 17-28.
- Experimental animal models for studies and therapy of GvHD pp. 657-660.

I have also participated in producing the Basic immunology lecture notes in Hungarian and English.

The lecture notes are available at the website of our Department: www.immbio.hu

3.3 SCIENTIFIC RESEARCH AND INNOVATION ACTIVITIES

Scientific research fields:

My main research focuses on the organization and phenotypic characterization of the stromal elements of the murine peripheral lymphoid tissues, with particular emphasis on their vascular development. More recently I have initiated studying the homeostasis and regulation of in vivo distribution of lymphoid cells. In this field the main research is aimed at the role of Nkx2-3 transcription factor in determining the vascular patterning of the gut and spleen, now with the incorporation of preimplantation mouse embryo manipulation. My research also involves analyzing the establishment and mechanism of in vivo resistance to antibody-mediated depletion, and the effect of aging on the functionality of the stromal components of lymphoid tissues.

Results and achievements:

- I have established a **technological platform for the production and antigen definition of rat and hamster monoclonal antibodies against mouse lymphohemopoietic markers**;
- With novel rat monoclonal antibodies I have **demonstrated the heterogeneity of fibroblastic reticular cell compartments and vasculature** and their postnatal rearrangement in murine peripheral lymphoid organs;
- Of the stromal components I have **defined the postnatal maturation process of follicular dendritic cells (FDCs) and demonstrated their precursors' resistance** to ionizing irradiation;
- I have demonstrated **the phenotypic changes of FDCs associated with their activation** during germinal center formation;
- We have established in animal models that **in immunological aging the decline of B-cell memories is due to the impairment of FDC functionality**;
- With my research group I have demonstrated that **Nkx2-3 transcription factor plays a fundamental role in the establishment of tissue-specific vasculature in the spleen**, and this role is different from that exerted by lymphotoxin beta receptor (LT β R);
- With my research group have established that **the ectopic vessels formed in the spleens in Nkx2-3-deficient mice are structurally similar to the high endothelial venules (HEV) present in lymph nodes** and possess similar addressin/chemokine regulation in lymphocyte homing;

- I have **developed in situ tracing and photoconversion methods** for studying the in vivo distribution of mouse peritoneal B-1 B cells and lymphocytes in Peyer's patches;
- With my research group I have demonstrated that the **FDCs of splenic follicles and marginal zone macrophages establish a tunel-based transport pathway for the follicular distribution of MARCO scavenger receptor** in a tissue-specific manner, with the involvement of follicular B cells;
- With my research group I have established that **in the absence of Nkx2-3 the vasculature of mouse Peyer's patches displays a peripheral lymph node-like addressin expression**;
- With my research group I have found that following **Thy-1/CD90-specific T-cell depletion the Peyer's patches act as selective rescue sites for follicular T helper (T_{FH}) cells**;
- I have demonstrated that **the red pulp sinus network of the human spleen contains segments expressing Nkx2-3 protein**, which may correspond to the sinuses affected by Nkx2-3-deficiency in mice;
- With my research group I **have isolated and characterized a novel spontaneous mouse B-cell lymphoma** which may provide a new model for B-cell lymphoma propagation via the lymphatics.

In this research I have gained the following expertise:

- basic and applied immunology
- tissue culture, monoclonal antibody production
- immunohistological and immunochemical procedures,
- flow cytometry and cell sorting,
- in vivo and in vitro models using mice,
- development and application/characterization of chimeric and transgenic mice
- R&D activity: monoclonal antibody production, characterization, labeling, immunoassay development

3.3.1. Research degree:

Candidate of biological sciences 1996. „Analysis of the heterogeneity of murine peripheral B cells by IBL-2 monoclonal antibody” (issued by the HSA)

Habilitation 2010. University of Pécs, Faculty of Medicine

3.3.2. Training of next generation scientists:

Mentoring project students and tutoring for diploma thesis (the PhD students working at our University or Department [underlined] or tutoring Medical Biotechnology students' thesis [*italic*])

- Böhm Tamás 1987-89
- Kumánovics Attila 1991-95
- Balázs Mercedesz 1992-99 (Dean's assay 1st award, Pécs Academy 1st award)
- Mezősi Andrea 1992-93
- Plander Márk 1994-97
- Jakus Péter 1995-98
- Jármay Gergely 1996-98
- Wéber Balázs 1995-99
- Kvell Krisztián 1997-2001 (Faculty Student Research competition, 2nd award)
- Lábadi Árpád 2003-2006 (Faculty Student Research competition 1st award, Pécs Academy 1st award)
- Rákos Alexandra 2005-2007 (Faculty Student Research competition 3rd award)
- Sarlós Donát Péter 2007-2011 (Faculty Student Research competition 1st and 2nd awards, Dean's assay 2nd award)
- Fisi Viktória 2006-2010 (Faculty Student Research competition 1st award, Dean's assay 1st award, national Students Research competition 2nd award)
- Kellermayer Zoltán 2006-2010 (Faculty Student Research competition 1st award, Dean's assay 3rd award)
- Ernszt Dávid (2012)
- Rezes Renáta 2009-2013
- Vojkovics Dóra (2013)
- Csabai Tímea Judith (2013)
- Anthony Ifeanyi Emele (2013, IMC University of Applied Sciences Krems, Ausztria) MSc thesis diploma
- Emenike Chibuike Jude (2014, IMC University of Applied Sciences Krems, Ausztria) BSc thesis diploma
- Kolláth Dóra 2011- 2015 (Faculty Student Research competition 1st and 2nd awards, national Students Research competition 2nd award, Astellas prize, Dean's assay 1st award with distinction)

PhD training:

PhD students graduated under my supervision (year) and current students:

- **Dr. Balázs Mercedesz** (2003): *"Complexity of the mouse spleen vascular stroma: phenotypic functional and developmental characteristics"*
- **Dr. Kvell Krisztián** (2007): *"Analysis of B cell – viral interactions in pathogen (EBV) and lentiviral vector (HIV-1) mediated transduction"*
- **Dr. Martina Mihalj** (2013, University of Osijek, Croatia) *"Monoclonal antibody-mediated modulation of lymphocyte homeostasis"*
- **Dr. Lábadi Árpád** (2014) *"Developmental reprogramming of splenic vasculature and homeostasis of B-1a cells in Nkx2.3 homeodomain transcription factor deficient mouse model"*
- **Dr. Kellermayer Zoltán** (2015) *"Role of Nkx2-3 transcription factor in the vascular development and identity of visceral lymphoid tissues in mice"*
- **Vojkovics Dóra** (2014-) *"Intestinal distribution and homeostatic regulation of innate lymphoid cells"*

Scholarships and studies of my PhD students abroad:

Dr. Balázs Mercedesz (University of Alabama, Birmingham 1999-2002) now Amgen senior researcher

Dr. Kvell Krisztián (Division of Hematology, Department of Medicine, University Hospital, Geneva, Switzerland. 2001-2004) formerly my PhD student, currently habilitated associate Professor (University of Pécs, Department of Pharmaceutical Biotechnology)

Dr. Kellermayer Zoltán (University of Alabama, Birmingham 2013-14) formerly my PhD student, now resident at our Department.

Vojkovics Dóra (Institut Pasteur, 2015 February) PhD student

3.3.3. Publication activities

Summary table for publications and citations (<http://www.mtmt.hu>)

Péter Balogh (2015.11.21.)

Type of publications	Numbers		Citations	
In extenso full publications	Sum	Details	Independent	All
I. Scientific article	44	---	---	---
in international periodicals	---	40	350	504
in foreign language in a periodical published in Hungary	---	1	1	2
in Hungarian in a periodical published in Hungary	---	3	6	7
II. Books	1	---	---	---
a) Book, authored	0	---	---	---
in foreign language	---	0	0	0
in Hungarian	---	0	0	0
b) Book, edited	1	---	---	---
in foreign language	---	1	---	---
in Hungarian	---	0	---	---
III. Book chapter	7	---	---	---
in foreign language	---	7	1	3
in Hungarian	---	0	0	0
IV. Conference editions in periodicals or conference volumes	1	---	---	---
in foreign language	---	1	3	7
in Hungarian	---	0	0	0
Scientific publications together (I.-IV.)	53	---	361	523
Other scientific publications	---	4	1	1

Number of citations	---	---	361	523
Hirsch index⁵	12	---	---	---

Educational works				
Higher education textbooks	0	---	---	---
in foreign language	---	0	0	0
in Hungarian	---	0	0	0
chapter of textbook in foreign language	---	0	0	0
chapter of textbook in Hungarian	---	0	0	0
Other educational works	2	---	0	0

Patents	0	---	0	0
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Others	0	---	0	0
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Popular science works				
Books	0	---	0	0

Further works	0	---	0	0
Uncategorized works	0	---	0	0
Abstract	14	---	0	0
Other authorship	0	---	0	0
Citations in edited works	---	---	4	4
Citations in theses and other works	0	---	68	69
Citations combined, all types and forms	---	---	433	596

First/last author IF: 61,562
Other: 49,302
Combined: 110,864

For detailed list of publications and citations please see 1st Appendix

3.3.4. Scientific achievements:

Foreign scholarships:

- British Council Scholarship (1989-1990), University of Oxford
- Royal Society Hungarian Postdoctoral Fellowship, Sir Edward Penley Abraham Fellowship (1992-93), University of Oxford
- Travel for Technique (American Association of Immunologists) 2015, Mount Sinai Hospital Toronto.

National awards:

- HAS Bolyai János postdoctoral fellowship: 1998-2001
- HAS Széchenyi István postdoctoral fellowship: 2004-2007
- National Research and Technology Office (NKTH) Öveges postdoctoral fellowship: 2008
- National Council of Student Research "Golden medal Teacher" award (2011)
- Rector's recommendation (2013)
- „For the Hungarian higher education" placquette award (2015)

Grants received:

- 2 junior OTKA (1994-97 [2,610 Th Ft] and 1998-99 [880 Th Ft]) projects principal investigator
- 1 ETT project (2004-6 [1,500 Th Ft]) principal investigator

- NKTH project (2006-2008 [15,000 Th Ft]) principal investigator
- University of Pécs, Faculty of Medicine research grant 2009 [1,500 Th Ft]
- In OTKA grants (K68452: 2007-2012; K75912: 2008-2013) senior participant
- TÁMOP-4.2.2-08/1/2008-0011 SP! IKT - Science, Please! innovative research team seed grant
- Broad Medical Research Program/Broad Foundation (2012-2014 [88,270 USD]) principal investigator
- OTKA research grant (K108429: 2013-2017 [24,252 Th Ft]) principal investigator

Membership:

National: Hungarian Society for Immunology – board member

HAS Pécs regional committee, Immunology working group

HAS Immunology working group

International: American Association of Immunologists (AAI) - member

EuroMabNet (European network of laboratories specialized in monoclonal antibody production) - member

Professional innovation activities: Establishment and improvement of technology for the structural dissection and functional analysis of mouse lymphohematopoietic system.

In my work I have pursued the development and improvement of experimental systems for the detailed in vivo analysis of mouse lymphoid tissues. This aim necessitated the development of novel monoclonal antibodies preferentially directed against stromal constituents, and the introduction of relevant in vivo technologies (hematopoietic chimeras and transgenic/knock-out mice and pre/perinatal analyses). As a result the production of rat and hamster monoclonal antibodies, their use in detailed structural analyses as well as various cell isolation/depletion, labeling and transplantation procedures in different allogeneic and xenogeneic chimera production have become routine protocols in our Department. These efforts also include the establishment of alloantigen-based (MHC or Thy-1/CD90) or photoconvertible Kikume-based detection protocols, hybrid and congenic mouse strains and the generation of appropriate monoclonal antibodies. Recently I have initiated national and international collaboration (Dr. Elen Góczy, Gödöllő, Dr. András Nagy, Toronto) to introduce preimplantation mouse diploid embryo complementation procedure for the developmental biological analysis of embryonic lymphoid tissues in mice.

List of monoclonal antibodies against mouse lymphohematopoietic antigens produced at the Department of Immunology and Biotechnology

Clone	Specificity (mouse marker)	References
IBL-1, IBL-6/13, IBL-6/23	Thy-1.2 (CD90)	Balogh P. et al., 1992; Balogh P. et al, 1994; Mihalj M. et al., 2013
IBL-2	Mouse B cell and erythroid antigen	Balogh P. et al., 1995; Balogh P. et al., 1998
IBL-3/5, IBL-5/22	MHC II (I-A)	Balogh P. et al. 2004; Cenci E. et al., 2006;
IBL-3/14	CD24	Unpublished
IBL-3/25	CD8	Boldizsár F. et al., 2003; Kroner A. et al., 2010;
IBL-3/16, IBL-5/25	CD45	Balázs M. et al., 1998; Ricciardelli C et al., 2011
IBL-6/2	LFA-1 (CD11/CD18)	Unpublished
IBL-8, IBL-27	CD45RC	Czőmpöly T. et al., 2003
IBL-7/1	Endothelial subset marker	Balázs M. et al., 1999;
IBL-9/2	Endothelial subset marker	Balázs M. et al., 2001; Balogh P. et al., 2007; Kellermayer Z. et al., 2015
IBL-10	B-cell zone ECM	Balogh P. et al., 2004
IBL-11	T-cell zone ECM	Balogh P. et al., 2004; Guo et al., 2007
IBL-12	MARCO scavenger receptor	Kvell K. et al., 2006; Ojala JRM et al., 2007; Angyal A et al., 2010; Szekeres Z. et al., 2010; Szarka E. et al., 2012; Schneider Z. et al., 2015
IBL-13	Sialoadhesin/CD169	Kvell K. et al., 2006; Czőmpöly T et al., 2011; Kellermayer Z. et al., 2011; Kellermayer Z. et al., 2014; Schneider Z. et al., 2015
IBL-16	IgM	Czőmpöly T. et al., 2011
IBL-17	Platelet, megakaryocyte	Unpublished
IBL-28	NK cell/CD49b	Unpublished
IBL-20	Endothelium	Kellermayer Z. et al., 2015
DaB1	H-2K ^b	Kellermayer Z. et al., 2015
DaB2	I-A ^b	Balogh P. et al., 2007
F4/1	fluorescein	Balogh P. et al., 1994

3.4. RESEARCH ADMINISTRATION AND SCIENTIFIC COMMUNITY ACTIVITIES

Senior positions and tasks:

- 2004 – HAS Pecs regional committee Immunology workgroup membership
- 2006 – Chairman of the Student Research board of the Faculty of Medicine
- 2007-2014 – Animal welfare and ethic committee membership
- 2007-2011 – National Council of Student Research – Chairman of the Medical and Health Sciences Section
- 2008 – HAS Immunology workgroup member
- 2013 – Deputy director of the Department of Immunology and Biotechnology. Head of the Medical Biotechnology division.

Organization of conferences

- Section chair in the meetings of Hungarian Society of Immunologists; poster and abstract evaluation committee
- Organizer of Students Research conferences and the 2009 national Students Research Conference – Medical and Health Sciences section
- Organizer of the 2013 Hungarian Society of Immunologists meeting

Evaluation and review boards:

- Reviewer for OTKA and other grant proposals and reports
- Evaluation of PhD theses
- PhD examiner

3.5. PROFESSIONAL (INTERNATIONAL) APPRECIATION:

Invited lectures

- 1991 ÖGAI conference (*Maintenance and propagation of rat hemopoietic stem cells in organotypic culture of fetal liver in vitro*), Vienna, Austria
- 2003 EFIS conference (*„Development of LTb-dependent and LTb-independent elements of the murine splenic vasculature”*), Rhodes, Greece.
- 2006 Conference of Romanian Immunological Society (*“Multiple mechanisms involved in the ontogeny of the vascular network and marginal zone architecture of spleen”*) Marosvásárhely, Romania.
- 2009 16th International Conference on Lymphatic Tissues and Germinal Centres in Immune Reactions (*“Immunological competence of spleen is determined through its prenatal vascular commitment involving homeodomain factor Nkx2-3”*) Frankfurt, Germany.
- 2010 ÖGAI conference (*“Critical role of Nkx2-3 homeodomain transcription factor in the tissue architecture, homing mechanism and peripheral B-cell homeostatic functions of the spleen”*) Vienna, Austria
- 2015 Stromal cells section – chairman and invited lecture, Society for Mucosal Immunology (SMI) conference, Berlin, Germany
- 2015 EuroMabNet 7. conference, Ljubljana, Slovenia

Reviewer for international journals:

- Molecular Immunology (regular); International Immunology, Nature Immunology, Virology, J Histochem Cytochem, PLOS One, Journal of Immunology (occasional)

Former and current international collaborations:

- Andras K. SZAKAL, John G. TEW, Virginia Commonwealth University, Richmond, USA – Follicular dendritic cells homeostasis and aging
- Hans-Henning ARNOLD, Technical University of Braunschweig, Germany – Role of Nkx2-3 homeodomain transcription factor in the stromal differentiation of spleen
- Armin SCHUMACHER, Baylor College of Medicine Houston, USA: Role of ferroportin in spleen development
- Timo PIKKARAINEN, Karolinska Institute, Sweden: Structural and functional analysis of MARCO scavenger receptor
- Falk WEIH Fritz Lippmann Institute, Jena, Germany: Role of lymphotoxin signaling in the vascular development of spleen.

- Jose A. MARTINEZ-CLIMENT, Centro de Investigación Médica Aplicada of the University of Navarra, Pamplona, Spain: Role of Nkx2-3 in marginal zone B-cell derived lymphomas
- Haruko HAYASAKA, Laboratory of Immunoregulation, Osaka University Graduate School of Medicine, WPI Immunology Frontier Research Center, Osaka University, Osaka, Japan: Role of interaction between Dach1 and Nkx2-3 in the organogenesis of peripheral lymph nodes
- Giovanna Roncador, Spanish National Cancer Research Center, Madrid, Spain: Analysis of Nkx2-3-dependent vascular segments in the human lymphoid tissues
- Eugene C. Butcher, Stanford University, USA: Functional and phenotypic assessment of mucosal vessels in the absence of Nkx2-3 homodomain transcription factors
- Angela Schippers: University Hospital RWTH Aachen, Germany: Role of MAdCAM-1 in the homeostasis of mucosal innate lymphoid cells (ILC) type 3.

3.6. PLANS AND PERSPECTIVES CONCERNING THE POSITION OF PROFESSORSHIP

In compliance with the threefold requirements for teaching – research - patient caring the following aims will be pursued:

TEACHING:

- **Continuation and improvement of the courses (detailed above) in Hungarian and English languages at different faculties of the University trainings by developing interactive teaching materials**, integrating the two main fields (immunology and developmental biology/regenerative medicine). For introducing the latter field we have recently compiled a paired new subject entitled „Introduction to the stem cell biology” comprised of lectures and practices, supported by TÁMOP-4.1.1.C-13/1/KONV-2014-0001 consortium grant
- **Adaptation of the Medical Biotechnology curriculum to promote enrollment to and acquisition of skills necessary for the qualification of clinical laboratory specialist.**
- **As part of the education I aim to continue to maintain the traditionally strong student research at the Department**, by encouraging the students’ participation in national and international scientific events, and expand our current spectrum of available research by incorporating experimental embryological topics and practical training for PhD students.
- **Increased participation in laboratory diagnostic courses and trainings.**

RESEARCH:

- **My task is to coordinate the research activity and enhance the productivity of our research team studying the developmental biology of peripheral lymphoid tissues, by ensuring their access to research fundings**, for which national and international grant applications will be submitted, and our team’s junior members will also be encouraged to do so.

- **Maintenance and extension of current national and international collaborations.** Part of this effort will be achieved by promoting my colleagues' regular visits and study trips to the collaborating laboratories, and receiving visitors and partners.
- **Completion of the current (mainly cellular/molecular) immunology technical platform with embryo manipulation and bioimaging procedures.** This would also facilitate the expansion of the current SPF animal house to perform embryo rederivation as a facility service for the other research units of the University.
- **Continuation and extension of R&D activities,** exploiting and strengthening the University's professional and scientific potential, joint applications with industrial partners for research and marketable product development.

DIAGNOSTICS – PATIENTS CARE:

- **Extension of the current diagnostic procedures performed at the Department of Immunology and Biotechnology,** particularly for the B-cell related diseases (autoimmune disorders and primary immunodeficiencies) and their more detailed cellular analysis.
- **I aim to pursue translational research analyzing the in vivo effect of autoantibodies associated with autoimmune diseases with clinical collaboration,** and the development of novel functional assays.

4. Specific research fields

- Theoretical immunology (primary)
- Developmental biology (secondary)

Appendix: List of publications

Péter Balogh's publications

Data are up-to-date until 07/09/2015.

2015

Kellermayer Z, Hayasaka H, Kajtar B, Simon D, Robles EF, Martinez-Climent JA, Balogh P

Divergence of Vascular Specification in Visceral Lymphoid Organs-Genetic Determinants and Differentiation Checkpoints.

1. INTERNATIONAL REVIEWS OF IMMUNOLOGY &: p. &. (2015)

Link(ek): [DOI](#), [PubMed](#)

Journal Article/Article/Scientific

Schneider Z, Jani PK, Szikora B, Végh A, Kövesdi D, Iliás A, Cervenak J, Balogh P, Kurucz I, Kacs Kovics I

Overexpression of bovine FcRn in mice enhances T-dependent immune responses by amplifying T helper cell frequency and germinal center enlargement in the spleen

2. FRONTIERS IN IMMUNOLOGY 6:(JUN) Paper 357. 16 p. (2015)

Link(ek):  [DOI](#), [PubMed](#), [WoS](#), [Scopus](#), [Teljes dokumentum](#)

Journal Article/Article/Scientific

2014

Kellermayer Z, Fisi V, Mihalj M, Berta G, Kóbor J, Balogh P

Marginal Zone Macrophage Receptor MARCO Is Trapped in Conduits Formed by Follicular Dendritic Cells in the Spleen

3. JOURNAL OF HISTOCHEMISTRY & CYTOCHEMISTRY 62:(6) pp. 436-449. (2014)


Link(ek):  [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)

Journal Article/Article/Scientific

Kellermayer Z, Mihalj M, Labadi A, Czompoly T, Lee M, O'Hara E, Butcher EC, Berta G, Balogh A, Arnold HH, Balogh P

Absence of Nkx2-3 Homeodomain Transcription Factor Reprograms the Endothelial Addressin Preference for Lymphocyte Homing in Peyer's Patches.

4. JOURNAL OF IMMUNOLOGY 193:(10) pp. 5284-5293. (2014)

Link(ek):  [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)

Journal Article/Article/Scientific

2013

Mihalj M, Kellermayer Z, Balogh P

Follicles in gut-associated lymphoid tissues create preferential survival niches for follicular Th cells escaping Thy-1-specific depletion in mice.

5. INTERNATIONAL IMMUNOLOGY 25:(7) pp. 423-435. (2013)

Link(ek): [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)

Journal Article/Article/Scientific

Independent citations: 1 All citations: 1

2012

Kellermayer Z, Fisi V, Mihalj M, Kobor J, Balogh P

Role of complement receptor in the acquisition and transport of marginal zone macrophage-associated MARCO scavenger receptor by follicular dendritic cells

6. EUROPEAN JOURNAL OF CLINICAL INVESTIGATION 42:(Suppl. 1) p. 7. (2012)

Link(ek): [WoS](#)

Journal Article/Abstract/Scientific

Kellermayer Z, Mihalj M, Balogh P

MadCAM-1 independent lymphocyte homing to GALT of Nkx2.3(-/-) mice

7. IMMUNOLOGY 137:(1) p. 390. 1 p. (2012)

Link(ek): [WoS](#)


Journal Article/Abstract/Scientific

Shah AA, Mihalj M, Ratkay I, Lubka-Pathak M, Balogh P, Klingel K, Bohn E, Blin N, Baus-Loncar M

Increased Susceptibility to Yersinia enterocolitica Infection of Tff2 Deficient Mice.

CELLULAR PHYSIOLOGY AND BIOCHEMISTRY 30:(4) pp. 853-862. (2012)

- 8.

Link(ek):  [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)

Journal Article/Article/Scientific

Independent citations: 3 All citations: 3

Simon D, Kellermayer Z, Engelmann P, Balogh P, Nemeth P, Farkas N, Minier T, Kumanovics G, Czirjak L

Characterization of peripheral blood B-cell subsets in early phase of systemic sclerosis

9. EUROPEAN JOURNAL OF CLINICAL INVESTIGATION 42:(Suppl. 1) p. 58. (2012)

Link(ek): [WoS](#)

Journal Article/Abstract/Scientific

Simon D, Kellermayer Z, Engelmann P, Balogh P, Németh P, Farkas N, Minier T, Kumanovics G,

10. Czirják L

Characterization of human blood B-cell subsets in early phase of systemic sclerosis

EUROPEAN JOURNAL OF CLINICAL INVESTIGATION 42:(Suppl. 1) p. 58. (2012)

46th Annual Scientific Meeting of the European Society for Clinical Investigation.
Budapest, Magyarország: 22/03/2012 -24/03/2012.

Link(ek): [DOI](#), [Teljes dokumentum](#)

Journal Article/Abstract/Scientific

Szarka E, Neer Z, [Balogh P](#), Adori M, Angyal A, Prechl J, Kiss E, Kovesdi D, Sarmay G

Exacerbation of collagen induced arthritis by Fcγ receptor targeted collagen peptide due to enhanced inflammatory chemokine and cytokine production.

11. BIOLOGICS: TARGETS & THERAPY 6: pp. 101-115. (2012)

Link(ek):  [DOI](#), [PubMed](#), [Scopus](#), [Pubmed Central](#)

Journal Article/Article/Scientific

2011

Czompoly T, Labadi A, Kellermayer Z, Olasz K, Arnold HH, [Balogh P](#)

Transcription Factor Nkx2-3 Controls the Vascular Identity and Lymphocyte Homing in the Spleen

12. JOURNAL OF IMMUNOLOGY 186:(12) pp. 6981-6989. (2011)

Link(ek): [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)

Journal Article/Article/Scientific

Independent citations: 3 Dependent (self-) citations: 3 All citations: 6

Kellermayer Z, Labadi A, Czompoly T, Arnold HH, [Balogh P](#)

Absence of Nkx2-3 Homeodomain Transcription Factor Induces the Formation of LYVE-1-Positive Endothelial Cysts without Lymphatic Commitment in the Spleen.

13. JOURNAL OF HISTOCHEMISTRY & CYTOCHEMISTRY 59:(7) pp. 690-700. (2011)

Link(ek): [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)

Journal Article/Article/Scientific

Independent citations: 2 Dependent (self-) citations: 2 All citations: 4

[Peter Balogh](#) (ed.)

Developmental Biology of Peripheral Lymphoid Organs

14. Heidelberg: Springer Verlag, 2011. 176 p.
(ISBN:[978-3-642-14428-8](#))

Book/Monograph/Scientific

[Péter Balogh](#)

15. Evolution of Peripheral Lymphoid Organs

In: Peter Balogh (ed.)

Developmental Biology of Peripheral Lymphoid Organs. 176 p.
Heidelberg: Springer Verlag, 2011. pp. 1-3.
(ISBN:[978-3-642-14428-8](#))

Chapter in Book/Foreword, afterword/Scientific

Fejezetek szerzői:

Peter Balogh; Árpád Lábadi; Ann Ager; Mark C Coles; Jens V Stein; Tom Cupedo; Henrique Veiga-Fernandes; Cecile Benezech; Emma Mader; Falk Weih; Jorge Caamaño; Peter J L Lane; Fiona M McConnell; David Withers; Rania M El Sayed; John G Tew; Andras K Szakal

Péter Balogh, Árpád Lábadi

Structural Evolution of the Spleen in Man and Mouse

In: Peter Balogh (ed.)

Developmental Biology of Peripheral Lymphoid Organs. 176 p.
Heidelberg: Springer Verlag, 2011. pp. 121-141.
(ISBN:[978-3-642-14428-8](#))

16.

Chapter in Book/Study/Scientific

Fejezetek szerzői:

Peter Balogh; Árpád Lábadi; Ann Ager; Mark C Coles; Jens V Stein; Tom Cupedo; Henrique Veiga-Fernandes; Cecile Benezech; Emma Mader; Falk Weih; Jorge Caamaño; Peter J L Lane; Fiona M McConnell; David Withers; Rania M El Sayed; John G Tew; Andras K Szakal

Independent citations: 1 Dependent (self-) citations: 1 All citations: 2

Péter Balogh

Homeostatic Chemokines, Cytokines and Their Receptors in Peripheral Lymphoid Organ Development

In: Peter Balogh (ed.)

Developmental Biology of Peripheral Lymphoid Organs. 176 p.
Heidelberg: Springer Verlag, 2011. pp. 39-45.
(ISBN:[978-3-642-14428-8](#))

17.

Chapter in Book/Study/Scientific

Fejezetek szerzői:

Peter Balogh; Árpád Lábadi; Ann Ager; Mark C Coles; Jens V Stein; Tom Cupedo; Henrique Veiga-Fernandes; Cecile Benezech; Emma Mader; Falk Weih; Jorge Caamaño; Peter J L Lane; Fiona M McConnell; David Withers; Rania M El Sayed; John G Tew; Andras K Szakal

Péter Balogh

Developmental Relationship and Convergence Between the Formation of Lymphoid Organs and Lymphatic Vasculature

In: Peter Balogh (ed.)

18. Developmental Biology of Peripheral Lymphoid Organs. 176 p.
Heidelberg: Springer Verlag, 2011. pp. 49-58.
(ISBN:[978-3-642-14428-8](#))

Chapter in Book/Study/Scientific

Fejezetek szerzői:

Peter Balogh; Árpád Lábadi; Ann Ager; Mark C Coles; Jens V Stein; Tom Cupedo; Henrique Veiga-Fernandes; Cecile Benezech; Emma Mader; Falk Weih; Jorge Caamaño; Peter J L Lane; Fiona M McConnell; David Withers; Rania M El Sayed; John G Tew; Andras K Szakal

Péter Balogh

Lymphotoxin/Tumour Necrosis Factor Family Members as Morphogenic Factors

In: Peter Balogh (ed.)

Developmental Biology of Peripheral Lymphoid Organs. 176 p.

19. Heidelberg: Springer Verlag, 2011. pp. 15-24.
(ISBN:[978-3-642-14428-8](#))

Chapter in Book/Study/Scientific

Fejezetek szerzői:

Peter Balogh; Árpád Lábadi; Ann Ager; Mark C Coles; Jens V Stein; Tom Cupedo; Henrique Veiga-Fernandes; Cecile Benezech; Emma Mader; Falk Weih; Jorge Caamaño; Peter J L Lane; Fiona M McConnell; David Withers; Rania M El Sayed; John G Tew; Andras K Szakal

Péter Balogh

Cellular Partners in the Embryonic Induction of Lymphoid Territories: Origins and Transcriptional Regulation

In: Peter Balogh (ed.)

Developmental Biology of Peripheral Lymphoid Organs. 176 p.

20. Heidelberg: Springer Verlag, 2011. pp. 7-13.
(ISBN:[978-3-642-14428-8](#))

Chapter in Book/Study/Scientific

Fejezetek szerzői:

Peter Balogh; Árpád Lábadi; Ann Ager; Mark C Coles; Jens V Stein; Tom Cupedo; Henrique Veiga-Fernandes; Cecile Benezech; Emma Mader; Falk Weih; Jorge Caamaño; Peter J L Lane; Fiona M McConnell; David Withers; Rania M El Sayed; John G Tew; Andras K Szakal

Sipka S, Csipo I, Czompoly T, Balogh P, Vadasz G, Zeher M

Searching for antigen epitope specificities in the monoclonal IgG molecules of patients with multiple myeloma. The description of a monoclonal antibody with a dynein-specific antigen epitope character.

21. ANNALS OF HEMATOLOGY 90:(10) pp. 1227-1228. (2011)

Link(ek): [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)

Journal Article/Comment, Correction/Scientific

2010

Angyal A, Szekeres Z, Balogh P, Neer Z, Szarka E, Virag V, Medgyesi D, Prechl J, Sarmay G

CD16/32-specific biotinylated 2.4G2 single-chain Fv complexed with avidin-FITC enhances FITC-specific humoral immune response in vivo in a CD16-dependent manner

22. INTERNATIONAL IMMUNOLOGY 22:(2) pp. 71-80. (2010)

Link(ek): [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)

Journal Article/Article/Scientific

Dependent (self-) citations: 4 All citations: 4

Kvell K, Czompoly T, Hiripi L, Balogh P, Kobor J, Bodrogi L, Pongracz JE, Ritchie WA, Bosze Z

Characterisation of eGFP-transgenic BALB/c mouse strain established by lentiviral transgenesis

23. TRANSGENIC RESEARCH 19:(1) pp. 105-112. (2010)


Link(ek): [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)

Journal Article/Article/Scientific

Independent citations: 9 Dependent (self-) citations: 4 All citations: 13

Rekasi Z, Czompoly T, Balogh P, Boldizsar F, Simon D, Kvell K, Laszlo T, Orosz K, Zarandi M, Varga JL, Nemeth P, Schally AV

Role of the tumoral GHRH receptor in the cell proliferation

24.  ENDOCRINE JOURNAL 57:(2) pp. S590-S591. (2010)

Link(ek): [WoS](#)

Journal Article/Abstract/Scientific

Szekeres Z, Herbath M, Angyal A, Szittner Z, Virag V, Balogh P, Erdei A, Prechl J

Modulation of immune response by combined targeting of complement receptors and low-affinity Fcgamma receptors

25. IMMUNOLOGY LETTERS 130:(1) pp. 66-73. (2010)

Link(ek): [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)

Journal Article/Article/Scientific

Independent citations: 3 Dependent (self-) citations: 6 All citations: 9

2009

Csipő I, Czömpöly T, Balogh P, Németh P, Vadász Gy, Gergely L, Illés Á, Kiss A, Udvardy M, Sipka S

Antigénspecificitások keresése myeloma multiplexben szenvedő betegek monoklonális IgG molekuláin

- 26.

III. Miskolci Myeloma Konferencia, Lillafüred (2009)

Miscellaneous/Not classified/Scientific

Labadi A, Balogh P

Differential preferences in serosal homing and distribution of peritoneal B-cell subsets revealed by in situ CFSE labeling

27. INTERNATIONAL IMMUNOLOGY 21:(9) pp. 1047-1056. (2009)

Link(ek): [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)

Journal Article/Article/Scientific

Independent citations: 6 All citations: 6

2008

Balogh P, Fisi V, Szakal AK

Fibroblastic reticular cells of the peripheral lymphoid organs: Unique features of a ubiquitous cell type

28. MOLECULAR IMMUNOLOGY 46:(1) pp. 1-7. (2008)

Link(ek): [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)

Journal Article/Survey paper/Scientific

Independent citations: 19 All citations: 19

Par A, Par G, Berki T, Balogh P, Miseta A, Hegedus G, Hunyady B, Vincze A

PEG-IFN Plus Ribavirin Treatment Down-Regulates Serum Fibrosis Markers Independently of Virological Response in Chronic Hepatitis C

29. INTERNATIONAL JOURNAL OF INFECTIOUS DISEASES 12:(Suppl. 1) p. E429. (2008)

Link(ek): [DOI](#), [WoS](#), [Teljes dokumentum](#)

Journal Article/Abstract/Scientific

2007

Balogh P, Balazs M, Czompoly T, Weih DS, Arnold HH, Weih F

Distinct roles of lymphotoxin- β signaling and the homeodomain transcription factor Nkx2.3 in the ontogeny of endothelial compartments in spleen.

30. CELL AND TISSUE RESEARCH 328:(3) pp. 473-486. (2007)

Link(ek): [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)

Journal Article/Article/Scientific

Independent citations: 5 Dependent (self-) citations: 6 All citations: 11

Balogh P

A működő immunrendszer fejlődésének dinamikus szövetszerveződési szemlélete és vizsgálatának orvosi perspektívái

31. ORVOSI HETILAP 148:(8) pp. 351-356. (2007)

Link(ek): [DOI](#), [PubMed](#), [Scopus](#)

Journal Article/Article/Scientific

Balogh P

The vascular bed of spleen in health and disease

In: William C Aird (ed.)

32. Endothelial Biomedicine. Cambridge: Cambridge University Press, 2007. pp. 1255-1264. (ISBN:[978-0-521-85376-7](#))

Chapter in Book/Study/Scientific

Dependent (self-) citations: 1 All citations: 1

Bovari J, Czompoly T, Olasz K, Arnold HH, Balogh P

Complex organizational defects of fibroblast architecture in the mouse spleen with Nkx2.3 homeodomain deficiency

33. PATHOLOGY AND ONCOLOGY RESEARCH 13:(3) pp. 227-235. (2007)

Link(ek): [PubMed](#), [WoS](#), [Scopus](#), [Egyéb URL](#)

Journal Article/Article/Scientific

Independent citations: 1 Dependent (self-) citations: 4 All citations: 5

Hajtó Tibor, Fodor Krisztina, Aponyi Ildikó, Pallai Zsolt, Balogh Péter, Németh Péter, Perjési Pál

Unexpected different binding of mistletoe lectins from plant extracts to immobilized lactose and N-acetylgalactosamine.

34.  ANALYTICAL CHEMISTRY INSIGHTS 2007:(2) pp. 43-50. (2007)

Link(ek): [PubMed](#)

Journal Article/Article/Scientific

Independent citations: 2 Dependent (self-) citations: 4 All citations: 6

Molnár MJ, Perényi J, Pávics L, Nagy F, Balogh P, Berki T, Illés Zs

Krónikus perifériás Th-sejt-aktiváció és intrathecalis B-sejtes immunválasz az oculomotoros apraxiával járó ataxia 2. típusában

35. MAGYAR IMMUNOLÓGIA 7:(4) Paper 65. (2007)

A Magyar Immunológiai Társaság XXXVI. Vándorgyűlése. Hajdúszoboszló, Magyarország: 17/10/2007 -19/10/2007.

Journal Article/Abstract/Scientific

Prechl J, Molnár E, Szekeres ZS, Isaák A, Papp K, Balogh P, Erdei A

Murine CR1/2 targeted antigenized single-chain antibody fragments induce transient low affinity antibodies and negatively influence an ongoing immune response

36. ADVANCES IN EXPERIMENTAL MEDICINE AND BIOLOGY 598: pp. 214-225. (2007)

Link(ek): [DOI](#), [PubMed](#), [WoS](#), [Scopus](#), [Scopus](#)

Journal Article/Conference paper in journal/Scientific

Independent citations: 3 Dependent (self-) citations: 4 All citations: 7

Wathne GJ, Brown KL, Balogh P, Mabbott NA

The cellular localisation of the prion protein, PrPc, in the neonatal lymphoid system

37. IMMUNOLOGY 120: p. 31. (2007)

Link(ek): [WoS](#)

Journal Article/Abstract/Scientific

2006

Balogh P, Balázs M, Schumacher A, Weih F, Arnold HH

Ontogeny and postnatal development of the splenic vascular beds: regional cues, phenotypic responses

38. In: Grier EV (ed.)

Embryonic Stem Cell Research. Hauppauge: Nova Science Publishers, 2006. pp. 143-169.
(ISBN:[1-59454-849-8](#))

Chapter in Book/Study/Scientific

Balogh Péter

Állatkísérletes modellek a GVHD vizsgálatára és terápiájára

In: Czirják L (ed.)

39. Klinikai immunológia. 941 p.
Budapest: Medicina Könyvkiadó, 2006. pp. 657-660.
(ISBN:[963-226-057-0](#))

Befoglaló mű link(ek): [Egyéb katalógus](#)

Chapter in Book/Chapter/Educational

Berki Tímea, Balogh Péter, Németh Péter

Az immunrendszer szerveződésének sejtes és szöveti elemei: A B-sejtek fejlődésbiológiájának fontosabb jellemzői

In: Czirják L (ed.)

40. Klinikai immunológia. 941 p.
Budapest: Medicina Könyvkiadó, 2006. pp. 17-28.
(ISBN:[963-226-057-0](#))

Befoglaló mű link(ek): [Egyéb katalógus](#)

Chapter in Book/Chapter/Educational

Kellermayer R, Hsu AP, Stankovics J, Balogh P, Hadzsiev K, Vojcek A, Marodi L, Kajtar P, Kosztolányi Gy, Puck JM

A novel IL2RG mutation associated with maternal T lymphocyte engraftment in a patient with severe combined immunodeficiency

41. JOURNAL OF HUMAN GENETICS 51:(5) pp. 495-497. (2006)

Link(ek): [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)


Journal Article/Article/Scientific

Independent citations: 5 Dependent (self-) citations: 4 All citations: 9

Kvell K, Czompoly T, Pikkarainen T, Balogh P

Species-specific restriction of cell surface expression of mouse MARCO glycoprotein in murine cell lines.

42. BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS 341:(4) pp. 1193-1202. (2006)

Link(ek):  [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)

Journal Article/Article/Scientific

Independent citations: 4 Dependent (self-) citations: 8 All citations: 12

Par G, Berki T, Palinkas L, Balogh P, Szereday L, Halasz M, Szekeres-Bartho J, Miseta A, Hegedus G, Mozsik G, Hunyady B, Par A

A hepatitis C-vírus-infekció immunológiája: az elégtelen celluláris immunválasz okai és az antivirális kezelés hatásai

43. ORVOSI HETILAP 147:(13) pp. 591-600. (2006)

Link(ek): [PubMed](#), [MOB](#), [Scopus](#), [Matarka](#)

Journal Article/Article/Scientific

Independent citations: 7 Dependent (self-) citations: 1 All citations: 8

Sipka S, Brath E Toth F F, Aleksza M, Kulcsar A, Fabian A, Barath S, Balogh P, Sipka S, Furka I, Miko I

Cellular and serological changes in the peripheral blood of splenectomized and spleen autotransplanted in mice

44. TRANSPLANT IMMUNOLOGY 16: pp. 99-104. (2006)

Link(ek): [PubMed](#), [DOI](#), [WoS](#), [Scopus](#)

Journal Article/Article/Scientific

Independent citations: 8 Dependent (self-) citations: 5 All citations: 13

2005

Balogh P, Petz A

Selective binding of biotinylated albumin to the lymphoid microvasculature

HISTOCHEMISTRY AND CELL BIOLOGY 123:(4-5) pp. 357-363. (2005)

45.

Link(ek): [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)

Journal Article/Article/Scientific

Independent citations: 5 Dependent (self-) citations: 1 All citations: 6

2004

Aydar Y, Balogh P, Tew JG, Szakal AK

Follicular dendritic cells in aging, a "bottle-neck" in the humoral immune response

AGEING RESEARCH REVIEWS 3:(1) pp. 15-29. (2004)

46.

Link(ek): [DOI](#), [WoS](#), [Scopus](#)

Journal Article/Article/Scientific

Independent citations: 45 Dependent (self-) citations: 2 All citations: 47

Balogh P, Horvath G, Szakal AK

47.

Immunoarchitecture of distinct reticular fibroblastic domains in the white pulp of mouse

spleen

JOURNAL OF HISTOCHEMISTRY & CYTOCHEMISTRY 52:(10) pp. 1287-1298. (2004)

Link(ek): [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)

Journal Article/Article/Scientific

Independent citations: 36 Dependent (self-) citations: 10 All citations: 46

Mok H, Mendoza M, Prchal JT, [Balogh P](#), Schumacher A

Aberrant ferroportin-1 regulation and iron homeostasis interferes with development of the spleen stroma during murine embryogenesis

48. BLOOD 104:(11) p. 872A. (2004)

Link(ek): [Google scholar hash](#)

Journal Article/Abstract/Scientific

Mok H, Mendoza M, Prchal JT, [Balogh P](#), Schumacher A

Dysregulation of ferroportin 1 interferes with spleen organogenesis in polycythaemia mice

DEVELOPMENT 131:(19) pp. 4871-4881. (2004)

49.

Link(ek): [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)

Journal Article/Article/Scientific

Independent citations: 21 Dependent (self-) citations: 7 All citations: 28

Par G, [Balogh P](#), Palinkas L, Hegedus G, Kosztolanyi S, Nemeth P, Par A, Mozsik G, Berki T

Alteration of Cd81 (HCV coreceptor) expression in chronic HCV infection during interferon therapy

50. CYTOMETRY 59A:(1) p. 137. (2004)

Link(ek): [WoS](#)

Journal Article/Abstract/Scientific

2003

Aydar Y, [Balogh P](#), Tew JG, Szakal AK

Altered regulation of Fc gamma RII on aged follicular dendritic cells correlates with immunoreceptor tyrosine-based inhibition motif signaling in B cells and reduced germinal center formation

51. JOURNAL OF IMMUNOLOGY 171:(11) pp. 5975-5987. (2003)

Link(ek): [DOI](#), [PubMed](#), [WoS](#), [Scopus](#), [Google scholar](#)

Journal Article/Article/Scientific

Independent citations: 32 Dependent (self-) citations: 9 All citations: 41


Czompoly T, Labadi A, Balazs M, Nemeth P, [Balogh P](#)

52.

Use of cyclic peptide phage display library for the identification of a CD45RC epitope

expressed on murine B cells and their precursors.

BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS 307: pp. 791-796. (2003)

Link(ek):  [DOI](#), [PubMed](#), [WoS](#), [Scopus](#)

Journal Article/Article/Scientific

Independent citations: 5 Dependent (self-) citations: 2 All citations: 7

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