



BROEGELMANN RESEARCH LABORATORY

The Gade Institute

University of Bergen



ANNUAL REPORT

2008

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<http://www.uib.no/Broegelmann/brsi/index.html>

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1. The Year in Review

2008 has been another exciting year for the Broegelmann Research Laboratory and its staff.

The Laboratory has continued to bond its place in the top league of international laboratories investigating systemic autoimmune diseases with a focus on Sjögren's syndrome. This year the Laboratory has continued to increase its efforts in tumor immunology. Silke Appel was awarded a major 4-year grant support from *Bergens Forskningsstiftelse* and the contract was officially signed in Nov 2008, while this support was celebrated 30. May 2008.

Professor Jonsson's standing in the field of Sjögren's syndrome research was recognized by invitations to give a number of key-note lectures and/or chair scientific sessions worldwide (Zürich, Paris, Stockholm, Berlin, Antalya). Laboratory members were invited to speak at other national and international meetings or author articles and/or chapters in scientific publications/books.

The Laboratory has published extensively this year in major international journals. The breadth of the Laboratory's approach to study autoimmunity and mucosal immunity is reflected in the diversity of fields in which publications have appeared, including Immunology, Biomedicine, Cancer, Oral Medicine and Rheumatology.

Our Editorial Office for *Scandinavian Journal of Immunology* has received continuous attention by obtaining a steady influx of manuscripts in 2008. The impact factor for *Scandinavian Journal of Immunology* is stable after launch of electronic submission and handling of manuscripts was set to Feb 1, 2006 through <http://mc.manuscriptcentral.com/sji>.

The Laboratory has a track record of success in obtaining international funding (EU, NATO). One success was the grant support from *the Translational Medical Research Consortium* to Silke Appel as well as from *Kreftforeningen*. Our grant support from *the Strategic Research Program at Helse Bergen*, and *Western Norway Regional Health Authority* continues.

A major challenge will be to establish modern and up to date laboratory equipment and infrastructure. This is essential for being eligible and competitive for additional funding. Time and energy has during the year been spent on planning the laboratory facilities in the new Laboratory Building for spring 2009. 2008 has also been a productive year for cementing and establishing translational clinical and scientific collaborations. As an initiative to further increase the Laboratory's activity, interaction and integration, for the Research School Program at the University of Bergen "*The Bergen Research School in Inflammation (BRSI)*" established 5 separate research courses/seminars (HUIMM901-905), among those an advanced 3 day lecture workshop at Voss with highly renowned international speakers.

The Laboratory has a number of ongoing research projects including:

- Molecular studies of autoantibodies and biomarkers in Sjögren's syndrome
- Functional genomics and genetic basis of the autoimmune exocrinopathy (human/murine)
- Influenza and mucosal immunity
- Dendritic cells and tumor vaccines

Roland Jonsson
Head, Broegelmann Research Laboratory

2. Administration - personnel - scientists

The Broegelmann Research Laboratory (BRL) is an immunology research unit with a focus on *Autoimmunity and Mucosal Immunobiology* at the University of Bergen and Haukeland University Hospital. The Laboratory was initiated in 1957 after a donation to the University of Bergen and is co-localized and integrated with the Department of Microbiology and Immunology, the Gade Institute. Internationally the unit is one of the leading groups on *Experimental, Clinical and Genetic Studies of Sjögren's syndrome* and currently holds a EU funded *Marie Curie Training Site*. A broad repertoire of molecular and cellular methods in immunology and molecular biology has been established.

The core financial support comes from the Broegelmann Foundation. Other major funding agencies have been EU (five contracts – four as coordinator), the Research Council of Norway (“miljøstøtte”), Helse Vest, the Foundation Health and Rehabilitation, and more recently the Strategic Research Program at Helse Bergen. Between 1962 and 2008 BRL has contributed to the finalization of >60 PhD/doctoral and 15 Master degrees. BFL has been the organizer of three international immunology meetings in Bergen 1997, 2001 and 2002. Since 1999 the unit is one of three *Editorial offices for the Scandinavian Journal of Immunology* with Prof R. Jonsson as Editor-in-Chief. Currently, the major activity of the Journal is localized to Bergen.

RESEARCH AREAS:

The research activity at BRL has been devoted to the following areas: autoimmunity/chronic inflammation; molecular medicine; functional genomics; mucosal immunity; immunopathology; tumor immunology.

HEAD OF LABORATORY (from 1991):

Roland Jonsson DMD, PhD
Professor of medicine (The Broegelmann Chair in Immunology)
Director Bergen Research School in Inflammation

TECHNICAL/ADMINISTRATIVE PERSONNEL:

Kate Frøland (100% adm [70% BFL, 30% SJI])
Marianne Eidsheim (100% BFL)
Kjerstin Jacobsen (100% UiB) (incl. teaching)
Dagny Ann Sandnes (80% UiB)

POSTDOCTORAL/SENIOR RESEARCH FELLOWS:

| | |
|------------------------------------|-------------------------------------|
| Silke Appel PhD | (cellular/molecular immunology) |
| Oddmund Bakke PhD, (prof II) | (cellular/molecular immunology) |
| Anne Isine Bolstad DMD, PhD (prof) | (molecular biology/genetics) |
| Karl A. Brokstad PhD | (molecular immunology/cell biology) |
| Arnt-Ove Hovden PhD | (cellular/molecular immunology) |
| Malin V. Jonsson DMD, PhD | (clinical immunology/rheumatology) |

VISITING SCIENTISTS:

Vera Lindh MSc trainee

TRAINEES:

Rheumatological immunology

| | Principal supervisor(s) |
|--|--------------------------------|
| Elisabeth Sivy Nginamau MD, doctoral degree student | Jonsson |
| Nicolas Delaleu MSc, doctoral degree student | Jonsson |
| Sergio Carracedo Huroz, MSc, doctoral degree student | Gullberg/Jonsson |
| Petra Vogelsang MSc, doctoral degree student | Appel/Jonsson |
| Ewa Szyszko MSc, doctoral degree student | Brokstad/Skarstein/Jonsson |
| Karstein Halvorsen MD, doctoral degree student | Brun/Appel/Bolstad |
| Tove Ragna Reksten MPharm, doctoral degree student | Brokstad/Jonsson MV |

Tumor immunology

| | |
|---|----------------------|
| Lene Frøyen Sandvik MD, doctoral degree student | Appel/Nilsen/Jonsson |
|---|----------------------|

Genetics in chronic inflammatory disease

| | |
|---|-----------------|
| Trond Ove Hjelmervik MSc, doctoral degree student | Bolstad/Jonsson |
|---|-----------------|

Mucosal immunobiology

| | |
|---|--------------------|
| Jens-Christian Eriksson MD, doctoral degree student | Davidsson/Brokstad |
|---|--------------------|

Affiliated with Broegelmann Research Laboratory (doctoral/master degree studies):

| | |
|--|---------|
| Carla Olsnes Msc, Dept of ENT, UoB | Aarstad |
| Pål Voltersvik MD, Dept of Medicine, UoB | Åsjö |

ADDITIONAL SCIENTISTS/KEY-COLLABORATORS AFFILIATED WITH THE LABORATORY AND WITH E.G. SUPERVISION FUNCTIONS PLUS JOINT PUBLICATIONS:

professor Vidar Bakken, Laboratory for Oral Microbiology
assoc prof Johan G. Brun, Div of Rheumatology, Med Dept B, Haukel Univ Hospital
professor Jan Olofsson, Department of Otolaryngology/Head & Neck Surgery, Haukeland Univ Hospital
assoc prof Kathrine Skarstein, Dept of Oral Pathology, The Gade Institute
professor Hans-Jørgen Aarstad, Department of Otolaryngology/Head & Neck Surgery, Haukeland Univ Hospital
professor Birgitta Åsjö, Center for Virology, the Gade Institute
professor Harald G. Wiker, Section for Bacteriology, the Gade Institute
professor Donald Gullberg, Dept of Physiology, Inst of Biomedicine

3. Teaching

POSTGRADUATE TEACHING

Continuously during the spring and fall semesters a *seminar series in immunology* was conducted every week with presentations from research fellows or invited speakers. On a weekly basis seminars were given related to research areas of the students/trainees (*project-meetings*). *Guest lectures* are an important part of intellectual stimulation. The scientists were teaching immunological techniques, autoimmunity, mucosal immunity and oral medicine in postgraduate courses and at other invited situations both at national and international gatherings.

Broegelmanns Forskningslaboratorium, (Gades Institutt, Forskerskolen i Inflammasjon og Norsk Selskap for Immunologi arrangerer):

Immunologiens dag 2008

PUBLIKUMSMØTER

Tid: **Onsdag 30. April 2008, kl. 13.00 – 16.00**

Sted: Store Auditorium, 3. etg. Sentralblokken, Haukeland Universitetssjukehus

Program: Autoimmunitet og allergi

| <u>Autoimmunitet</u> | <u>Allergi</u> |
|---|--|
| Kl. 13.00 Hva er autoimmunitet? Ved professor Roland Jonsson | Kl. 14.30 Hostesaften som forsvant Ved professor Erik Florvaag |
| Kl. 13.20 Moderne behandling av revmatisk sykdom. Ved professor Roald Orndal | Kl. 15.00 Matallergi - hvor alvorlig er det? og hva er det man ikke tåler? Ved professor Harald G. Wiker |
| Kl. 13.40 Kan man forebygge MS med behandling? Ved professor Kjell-Morten Myhr | Kl. 15.20 Kan vi vaksinere mot allergi? Ved professor Sverre Steinsvaag |

Kl. 14.00 Pause

www.helse-bergen.no

 **HELSE BERGEN** - ALT HANDELER OM MENNEKE
Haukeland Universitetssjukehus



Abbott Norge har gleden av å invitere leger ved revmatologiske avdelinger og Broegelmann forskningslaboratorium til kveldsmøte.

Dato: 12. november 2008

Sted: Haukeland Universitetssjukehus

Program:

Kl. 14.00 Velkommen Morten André Torvund, KAM Abbott Norge

Kl. 14.05 Introduksjon til møtet ved chair Roland Jonsson

Kl. 14.15 Korrekt bestemmelse av ANA's spesifisitet og dets betydning for klinisk vurdering.

Antifosfolipid antistoffer, praktisk betydning hos pas med eller uten bindevevssykdom.

Allan Wiik

Kl. 16.00 Østrogen – ett viktig molekyl i immunologi og rheumatologi Hans Carlsten

Kl. 16.45 Autoreaktivitet – helt naturlig Elling Ulvestad

Kl. 18.30 Middag på Lucullus

GUESTLECTURES AND VISITORS AT BRL

- 16/3 Professor Birgitta Heyman, Dept of Genetics and Pathology, The Rudbeck Laboratory, Uppsala University: "Complement and CD23 in regulation of antibody responses"
- 16/5 "The 12th Broegelmann Lecture" by Professor Göran K. Hansson, MD, PhD Center for Molecular Medicine, Karolinska Institute, Stockholm "Atherosclerosis – an immune-mediated disease"
- 19/6 Professor Ammon Peck, University of Florida, Gainesville, USA: "Presenting "Blood, Spit and Tears" by Sjögren's syndrome"
- 22/10 Assoc Prof Robert Harris, Dept of Clinical Neurosciences, Applied Immunology, Centre for Molecular Medicine L8:04, Karolinska Hospital "Personalised cellular therapy - macrophages in cure (and cause) of autoimmune diseases"
- 13/11 Prof Olli Vainio, Univ of Oulo, Finland: "Analysis of early lymphoid progenitor cells using chicken embryo as a model"

4. Scientific activity

COMPLETED THESIS IN 2008 WITH CONTRIBUTIONS FROM BRL:

Hjelmervik TO: Gene expression and protein profiling in human and experimental Sjögren's syndrome; Degree of philosophiae doctor (PhD), thesis defence April 11, 2008. *Principal Institutes: Department of Clinical Dentistry and Broegelmann Research Laboratory, The Gade Institute. Supervisors: Anne Isine Bolstad and Roland Jonsson.*

Voltersvik P: Human immunodeficiency virus Type I (HIV-1) infection and highly active retroviral therapy; Degree of philosophiae doctor (PhD), thesis defence April 25, 2008. *Principal Institute: The*

Gade Institute, University of Bergen. Supervisors: Birgitta Åsjö, Leif Bostad, Roland Jonsson.

Delaleu N: The autonomy of different aspects of Sjögren's syndrome and their treatment in an experimental model; Degree of philosophiae doctor (PhD), thesis defence June 20, 2008. *Principal Institute: Broegelmann Research Laboratory, The Gade Institute, University of Bergen. Supervisor: Roland Jonsson*

Kross K: Mononuclear phagocytes in head and neck carcinoma patients. In vitro studies focusing on the clinical relevance of monocyte and macrophage responses in tumour cell interaction. *Principal Institutes: Inst f Surgery and Broegelmann Reserach Laboratory. Supervisor: Hans-Jørgen Aarstad*

Eriksson JC: Influenza vaccination with focus on the immunobiology of the upper respiratory tract. *Principal Institutes: Inst f Surgery and Broegelmann Reserach Laboratory. Supervisors: Karl Brokstad, Åke Davidsson*

SPECIFIC AIMS OF THE RESEARCH AT BRL:

The laboratory targets its efforts within the fields of autoimmunity, mucosal immunity, immunopathology and tumour immunology. *The work is directed towards basic immunological questions incl. genetics in rheumatological and mucosal immunity as well as clinical immunological topics.* Furthermore, experimental autoimmune/rheumatological research is conducted in murine systems. The laboratory work is performed with immunomorphological and functional immunological techniques at both cellular and molecular levels in human and murine tissues, sera, and secretions as well as in tissue- and cell-cultures. Specific areas of interest are summarized below:

- **AUTOIMMUNITY**

Autoimmune reactions are of central importance in the etiology of many somatic diseases. Different tissues can be affected in different ways but a common denominator is a **chronic inflammation**, which can result in tissue damage and accompanying loss of function. Our aim is to study disease mechanisms in connective tissue diseases (Sjögren's syndrome and rheumatoid arthritis) with special reference to exocrine gland and joint tissue. For this purpose we combine studies in both human and murine systems, which hopefully will help us in elucidating pathogenic mechanisms and more recently the genetic background as a basis for better diagnosis and therapy. The immunological aspect is concerned with cellular and molecular characterization of lesions, quantitation of humoral and cellular immune responses against endogenous and exogenous antigens, as well as attempts at immunomodulation. Special attention is given to programmed cell death (apoptosis) in relation to the chronic inflammatory disorders (Sjögren's syndrome, rheumatoid arthritis, adult periodontitis).

- **MUCOSAL IMMUNITY**

Mucous membranes constitute important defence mechanisms for the body and contain important humoral effector functions via the humoral immune system. A change in the regulation of immunity can however give rise to undesirable side effects which may result in tissue lesions in mucous membranes of the oral cavity, the gastro-intestine, the vagina, the lungs, the exocrine glands etc. Furthermore, the body is normally confronted with the first antigen contact/stimulation through the mucous membranes. Our aim is to study antigen presentation in mucous membranes and to characterize defence mechanisms and pathological immunological situations. Knowledge obtained within this field is of particular importance for better diagnostic and preventive/treatment measures e.g. vaccines.

- **TUMOR IMMUNOLOGY**

The immune system obviously has an important role in the development of malignant tumors. Our interests within this are: role of dendritic cells, T cells, macrophages, cytokines and apoptosis incl.

regulating molecules in tumor development.

The scientific activity at BRL is concentrated much on an international profile with a vast network. Internationally BRL has kept and established contact with more than 10 foreign research institutions, mainly in Sweden, other European countries, Australia and USA. The work is characterized by "crossing" scientific fields aiming both towards clinical and basic research, laying the ground for truly translational medicine.

COLLABORATION IS ESTABLISHED WITH THE FOLLOWING LOCAL RESEARCH INSTITUTIONS:

University of Bergen – Haukeland University Hospital

- A. Department of Microbiology and Immunology, Sections for immunology, bacteriology and virology, The Gade Institute
- B. Section of Rheumatology, Institute of Medicine
- C. Department of Otolaryngology/Head & Neck Surgery
- D. Centre for Clinical Molecular Medicine/Dept of Medical Genetics
- E. Centre for International Health
- F. Department of Pathology and Oral Pathology, The Gade Institute
- G. Laboratory for Oral Microbiology

H. In addition, collaboration (joint grants/publications and/or sharing of reagents/materials) is established with the following laboratories/institutions:

1. *Experimental rheumatic disease in murine models* (R. Holmdahl, Dept of Medical Inflammation Research, Karolinska Institutet, Sweden)
2. *Genetic studies in Sjögren's syndrome and Potential viral etiology of autoantibody (Ro) production* (J. Harley, Arthritis and Immunology Program, Oklahoma Medical Research Foundation, OK, USA)
3. *Anti-Ro and anti-La antibody studies* (M. Wahren, Centre for Molecular Medicine, Department of Rheumatology, Karolinska Institute, Stockholm, Sverige)
4. *Human/murine Ro and La antigens, aquaporins and muscarinic receptors* (T. Gordon, Tissue Typing and Immunogenetics, Flinders University Hospital, Adelaide, Australia)
5. *Muscarinic receptors and autoimmunity* (Ammon B. Peck, University of Gainesville, FL, USA)
6. *Clinic/Epidemiology of inflammatory rheumatic disease* (R. Omdal, Section for Clinical Immunology, Stavanger Hospital)
7. *Experimental model of Sjögren's syndrome* (Hal Scofield, Arthritis and Immunology Program, Oklahoma Medical Research Foundation, OK, USA)
8. *Integrins and matrix biology* (Donald Gullberg, Section for Physiology, Institute of Biomedicine, UoB)
9. *Mycobacterial immunity and vaccine development* (Harald G. Wiker, Section for Bacteriology, the Gade Institute, UoB)
10. *Design of tumor specific immunotherapies* (Hans-Jørgen Aarstad, Dept of Otolaryngology/Head & Neck Surgery, Haukeland University Hospital)

MAJOR PROJECTS

Antigen induced immune modulation and autoimmunity (PhD thesis work for Nicolas Delaleu)

Role of dendritic cells in primary and experimental Sjögren's syndrome (PhD thesis work for Petra Vogelsang)

B cells, autoantigens and autoantibodies in Sjögren's syndrome (PhD thesis work for Elisabeth Nginamau and Ewa Szyszko)

Autoimmunity and pathogenesis of murine sialadenitis – lymphoid neogenesis (part of this is PhD thesis post-doc work for MV Jonsson)

The genetics of Sjögren's syndrome; identification of susceptibility genes and global gene expression studies (part of this is PhD thesis work for Hjelmervik)

Influenza and mucosal immunobiology group (FLUMID) (PhD thesis work for Eriksson and Mittelholzer, post doc project Davidsson)

OTHER COLLABORATIVE PROJECTS:

- **Relations between immune functions/cytokines, psychological status and cancer development** (Heimdal/Aarstad)
- **B-cell activity (anti-p24 and anti-gp120) in tonsils and peripheral blood from humans with HIV infection** (Voltersvik)

PUBLICATIONS from the LABORATORY in 2008

- Bergeland T, Haugen L, Landsverk OJ, Stenmark H, Bakke O. Cell-cycle-dependent binding kinetics for the early endosomal tethering factor EEA1. **EMBO Rep.** 2008 Feb;9(2):171-8. Epub 2008 Jan 11.
- Brun JG, Jonsson R. Sjögrens syndrom. **Nor J Epidemiol** 18(1): 67-72, 2008.
- Delaleu N. The autonomy of different aspects of Sjögren's syndrome and their treatment in an experimental model. The use of comprehensive biomarker analyses to characterize the disease and the effect of heat-shock proteins in treatment intervention. **PhD thesis**, University of Bergen, 2008. ISBN: 978-82-308-0597-8
- Delaleu N, Immervoll H, Cornelius J, Jonsson R. Biomarker profiles in serum and saliva of pre-diabetic NOD mice – identification of discriminant factors associated with autoimmune manifestations. **Arthritis Res Ther.** 2008 Feb 20;10(1):R22 [Epub ahead of print]
- Delaleu N, Jonsson MV, Appel S, Jonsson R. New concepts in the pathogenesis of Sjögren's syndrome. **Rheum Dis Clin N Am**, 2008 Nov;34(4):833-45, vii.
- Delaleu N, Jonsson R. Altered fractalkine cleavage results in an organ-specific 17kDa fractalkine fragment in salivary glands of NOD mice. **Arthritis Res Ther.** 2008, **10**:114 (31 July 2008) (invited editorial).
- Delaleu N, Madureira AC, Immervoll H, Jonsson R. Inhibition of experimental Sjögren's syndrome through immunization with HSP60 and its peptide amino acids 437-460. **Arthritis Rheum** 58: 2318-2328, 2008.
- Fladeby C, Gupta SN, Barois N, Lorenzo PI, Simpson JC, Saatcioglu F, Bakke O. Human PARM-1 is a novel mucin-like, androgen-regulated gene exhibiting proliferative effects in prostate cancer cells. **Int J Cancer.** 2008 Mar 15;122(6):1229-35.
- Gupta, Fladeby, C, S. Barois, N. Lorenzo, P, Saatcioglu, F, and Bakke O. Human PARM-1 is a novel mucin-like, androgen-regulated gene exhibiting proliferative effects in prostate cancer cells. **Int J Cancer.** 2008 Mar 15;122(6):1229-35.
- Haldorsen K, Moen K, Jacobsen H, Jonsson R, Brun JG. Exocrine function in Sjögren's syndrome. Natural course and prognostic factors. **Ann Rheum Dis.** 2008 Jul;67(7):949-54. Epub 2007 Oct 25.
- Hjelmervik TOR. Gene expression and protein profiling in human and experimental Sjögren's syndrome. **PhD thesis**, University of Bergen, 2008. ISBN: 978-82-308-0544-2
- Isaksen K, Jonsson R, Omdal R. Anti-CD20 treatment in primary Sjögren's syndrome. **Scand J Immunol**, 2008 Dec;68(6):554-64. Epub 2008 Oct 23.

Jonsson MV, Skarstein K. Follicular dendritic cells confirm lymphoid organization in the minor salivary glands of primary Sjögren's syndrome. **J Oral Pathol Med**, 2008 Jul 22. [Epub ahead of print]

Jonsson R. The Nobel prize in physiology or medicine for 2008. **Scand J Immunol**. 2008 Dec;68(6):553.

Jonsson R, Ljunggren HG, Natvig JB, Örn A. Editorial - Göran Möller 1936-2008. **Scand J Immunol** 2008 Aug;68(2):113.

Szodoray P, Nakken B, Gaal J, Jonsson R, Szegedi A, Zold E, Szegedi G, Brun JG, Gesztelyi R, Zeher M, Bodolay E. The complex role of vitamin D in autoimmune diseases. **Scand J Immunol**, 2008 Sep;68(3):261-9. Epub 2008 May 29.

Walseng, E., Bakke, O and Roche, PA. Major Histocompatibility Complex Class II-Peptide Complexes Internalize Using a Clathrin- and Dynamin-independent Endocytosis Pathway. **J Biol Chem**, 283;14717-14727, 2008.

Abstracts 2008

Carracedo S, Popova S, Jonsson R, Gullberg D. Regulation of integrin $\alpha 11\beta 1$ expression in vitro. FECTS 2008, Marseille

Carracedo S, Gullberg D and Popova S. Distribution of the integrin $\alpha 11\beta 1$ in adult mouse tissues. FECTS 2008, Marseille

Cobb B, Kaufmann K, Wang Y, Kelly J, Jonsson R, Bolstad AI, Brun J, Rischmueller M, Lester S, Witte T, Mariette X, Kimberly R, Edberg J, Bae S-C, Jacob C, Alarcon-Riquelme M, Vyse T, Gilkeson G, Kamen D, Moser K, Gaffney P, Merrill J, James J, Harley J. Association of Sjögren's syndrome (SS) and systemic lupus erythematosus (SLE) with BLK. *Clin Immunol* 127:S41-S41, Suppl. S, 2008.

Delaleu N, Madureira AC, Immervoll H, Jonsson R. Inhibition of experimental Sjögren's syndrome through immunization with heat-shock protein 60kDa and its peptide aa437-460. World Immune Regulation Meeting II, Davos, Switzerland, 17-20.03.2008

Delaleu N, Madureira AC, Immervoll H, Jonsson R. Inhibition of experimental Sjögren's syndrome through immunization with heat-shock protein 60kDa and its peptide aa437-460. ACR 2008, San Fransisco.

Delaleu N, Madureira AC, Immervoll H, Jonsson R. Inhibition of experimental Sjögren's syndrome through immunization with heat-shock protein 60kDa and its peptide aa437-460. the Gade Institute Research Day, 14.05.2008 (oral presentation)

Delaleu N, Madureira AC, Immervoll H, Jonsson R. Inhibition of experimental Sjögren's syndrome through immunization with heat-shock protein 60kDa and its

peptide aa437-460. Inter-departmental Poster Day, Department of Biomedicine, 12.06.2008

Delaleu N, Madureira AC, Immervoll H, Jonsson R. Inhibition of experimental Sjögren's syndrome through immunization with Hsp 60kDa and its peptide aa437-460 - predicting treatment efficacy using multi-plex biomarker profiling. 2nd World Conference on Magic Bullets (Ehrlich II), Nürnberg, Germany, 3-5.10.2008 (invited speaker)

Delaleu N. The autonomy of different aspects of Sjögren's syndrome and their treatment in an experimental model. The use of comprehensive biomarker analyses to characterize the disease and the effect of heat-shock proteins in treatment intervention. Department of Rheumatology and Clinical Immunology, Inselspital, University of Bern, Switzerland, 27.10.2008 (invited speaker)

- Poster; World Immune Regulation Meeting II, Davos, Switzerland, 17-20.03.2008
- Oral presentation; the Gade Institute Research Day, 14.05.2008
- Poster; Inter-departmental Poster Day, Department of Biomedicine, 12.06.2008
- **Invited speaker**; 2nd World Conference on Magic Bullets (Ehrlich II), Nürnberg, Germany, 3-5.10.2008
- **Invited speaker**; Department of Rheumatology and Clinical Immunology, Inselspital, University of Bern, Switzerland, 27.10.2008

Gatumu MK, Jonsson MV, Øijordsbakken G, Skarstein K. BCL10 nucleus positive cells in primary Sjögren's syndrome lymphocytic infiltrates. Scandinavian Journal of Immunology (2008), 68;2 SSI abstract A41, 205. Poster.

Hovden A-O, Sandnes DA, Jonsson R, Aarstad HJ, Appel S. Maturation of monocyte derived dendritic cells with OK432 leads to altered expression of surface markers. BCCR 2008, Solstrand

Hovden A-O, Sandnes DA, Jonsson R, Aarstad HJ, Appel S. Maturation of monocyte derived dendritic cells with OK432 leads to altered expression of surface markers. The 10th International Symposium on Dendritic Cells, Kobe, Japan

Hovden A-O, Sandnes DA, Jonsson R, Aarstad HJ, Appel S. Maturation of monocyte derived dendritic cells with OK432 leads to altered expression of surface markers. SSI, 2008 – Sthlm

Jonsson MV, Brun JG, Jonsson R. Histopathology in seropositive focus score negative primary Sjögren's syndrome. Annals of Rheumatic Diseases ? The EULAR Journal (2008), EULAR abstract SAT0108.

Jonsson MV, Brokstad KA, Skarstein K, Berggreen E. Interstitial fluid cytokines in the target organ of Sjögren's syndrome-like disease. ACR abstract 1703, poster. San Fransisco.

Nginamau ES, Jonsson R. Autoantigens Ro52 and Ro60 but not La48 are associated to membrane structures in HeLa cells. SSI, 2008 – Sthlm

Nordmark G, Kristjansdottir G, Theander E, Eriksson P, Brun JG, Elonranta M-L, Padjukov L, Truedsson L, Alm GV, Jonsson R, Rönnblom L, Syvänen A-C. Additive effects of the major risk alleles of IRF5 and STAT4 in primary Sjögren's syndrome. ACR 2008, San Fransisco.

Szyszko EA, Skarstein K, Jonsson R, Brokstad KA. Heterogeneity of plasma cell subsets found in the bone marrow of autoimmune NOD.B10.H2b mice. SSI, 2008 – Sthlm

Vogelsang P, Deswaerte V, Jonsson MV, Jonsson R, Appel S. Age-related distribution of cDC and pDC in salivary glands of NOD mice. Scandinavian Journal of Immunology (2008), 68;2 SSI abstract A43, 206. Poster.

Ytrehus Y, Jonsson R, Brun JG. Use of bladder capacity and uroflowmetry to elucidate lower urinary tract symptoms (LUTS) in primary Sjögren's syndrome. EULAR 2008, Paris.

5. EDITORIAL ACTIVITIES – *Scandinavian Journal of Immunology*

Since 1999 BRL has been serving as the central Editorial Office for *Scandinavian Journal of Immunology*. This activity means a number of international contacts in addition to the reviewing of scientific immunology papers. K. Frøland is part-time employed as Editorial Assistant with responsibilities for contacts with the publisher Blackwell Science, address lists for subscribers, economy etc.

Jonsson - Editor-in-Chief: Scandinavian Journal of Immunology (1999 - present)

Jonsson - Editorial Board Member/Advisory Editor: Scandinavian Journal of Immunology (1995 - 1999); European Journal of Oral Sciences (1999 - 2005); Scandinavian Journal of Rheumatology (2000 – present); Arthritis & Rheumatism (2000 – 2004); Current Rheumatology Reviews (2004 – present); Up-to-date Rheumatology (2005 – present); Annals of Rheumatic Diseases (2008 – present).

Referee: Annals of the Rheumatic Diseases, Arthritis & Rheumatism, Journal of Oral Pathology & Medicine, Journal of Rheumatology, Scandinavian Journal of Immunology, Scandinavian Journal of Rheumatology.

6. LECTURES – SEMINARS - OTHER ACTIVITY

Roland Jonsson - 2008

Invited speaker:

Zürich: **Autoimmunity of the oral cavity**

Paris: **Sicca syndrome and oro-dental complications**

Stockholm: **How to survive peer-review**

Berlin: **Oral manifestations of systemic lupus erythematosus**

Antalaya: **Current concepts on Sjögren's syndrome**

Evaluation of research grant proposals:

Sahlgrenska Academy

VINNOVA

Royal Swedish Academy of Sciences

During this year R. Jonsson has been involved in preparations for organizing the following International Scientific Meeting(s): The 2nd European Congress of Immunology, Berlin, 2009; The 4th European Congress of Immunology, Copenhagen?, 2015.

Appointed vice-chairman, the Gade Institute, with main responsibility for teaching, from 2005.