

## Winning abstracts from the British Rhinologic meeting held in Liverpool, UK, May 2008

### A Preliminary Study to Assess Cell Types in Nasal Polyposis and their Correlation with Nasal Symptoms and CT Scan Scores

I. Khodaei, C. Low, E. Osman, M. Haqqani, A.C. Swiftes

Department of Otorhinolaryngology, Head and Neck Surgery, University Hospital Aintree, Liverpool, Merseyside, United Kingdom

**Aims:** Nasal polyps were examined histologically in order to accurately describe the inflammatory cellular constituents, their relative numbers, and their correlation with clinical symptoms and radiological findings.

**Method:** A series of 25 consecutive patients with polypoidal chronic rhinosinusitis who were undergoing endoscopic sinus surgery had samples of their polyps sent for histology.

Patients' demographic data, symptoms and CT scoring based on the Lund-Mackay system was collected from their case-notes prior to surgery. Nasal polyps were removed from both sides of the nose and sent for histological examination. All the polyps were processed and fixed in 10% formalin. Sections were cut to 3-4 micron thickness and stained with Haematoxylin and Eosin (H&E). Five separate fields of  $1\text{mm}^2$  were randomly selected from each section and the inflammatory cells within the fields were counted by a specially calibrated graticule. The total cell counts were divided by 5 to obtain the average cell count per  $1\text{mm}^2$ . The following inflammatory cell types were quantified: eosinophils, lymphocytes, plasma cells, neutrophils, macrophages, and mast cells. For each patient, the histological analysis took an average of 1 hour. The average cell counts were then correlated with symptoms and CT scan scores. For the purposes of analysis, patients were divided into two groups: those with only 1-2 symptoms were assigned the "low symptoms" group, and those with 3-6 symptoms were allocated into the "high" symptoms group.

**Results:** The objective and subjective measures of total nasal flow did not correlate significantly ( $r = 0.17$ ,  $p = 0.21$ ). A significant correlation was measured for the unilateral nasal flow ( $r = 0.5$ ,  $p < 0.001$ ). When participants compared the difference in flow between the nasal cavities a large and significant correlation was measured ( $r = 0.68$ ,  $p < 0.001$ ).

#### Conclusion:

- 1 Counting individual inflammatory cell types in nasal polyposis is a labour-intensive and time-consuming process.
- 2 In this particular cohort of patients, nasal polyps show a heavy infiltration of lymphocytes, eosinophils and plasma cells. However, the infiltration by eosinophils and mast cells were much lower than that reported by other investigators.
- 3 The amount of cellular infiltration is similar on both sides of the nose for all inflammatory cell types except for neutrophils: the numbers of the latter were low and their distribution was non-parametric.
- 4 An association was demonstrated between the low and high symptom groups and the mean macrophage count but the clinical significance of this is unknown. This association did not occur for other inflammatory cell types.
- 5 A statistically significant correlation was demonstrated between the CT scan score and the numbers of lymphocytes, macrophages and neutrophils. However, a correlation between the CT score and the number of eosinophils was not found.

Table 1. CT scan score vs. mean cell counts.

CT Score vs.	*r	**p
Mean Neutrophil Count	0.5	0.02
Mean Lymphocyte Count	0.57	0.006
Mean Macrophage Count	0.51	0.02

\*r = correlation coefficient (Spearman's rho) for the mean neutrophils count, and Pearson's correlation for the mean lymphocyte and macrophage counts.

\*\*p = correlation is significant at the 0.05 level

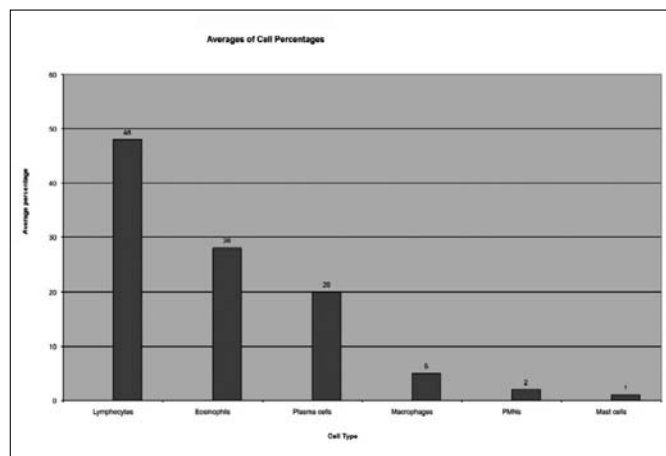


Figure 1. The average inflammatory cell counts in this group of nasal polyps. (PMN: Polymorph Neutrophils).

Table 2. A comparison of mean cell count for low and high symptom groups.

	Mean Difference [CI 95%]	SE of the Mean	*K-S test	**p <sup>1</sup>	***p <sup>2</sup>
	2.1				
Macrophage	[-0.36, 0.07]	0.068	0.99	0.005	
	1.9				
Eosinophils	[-4.6, 0.77]	1.27	0.06	0.15	0.38
	0.16				
Lymphocytes	[-1.3, 0.99]	0.55	0.97	0.78	
	0.47				
Plasma Cells	[-1.2, 0.3]	0.37	0.38	0.21	
	0.02				
Mast Cell	[-0.11, 0.8]	0.045	0.124	0.71	
	0.122				
Neutrophils	[-0.37, 0.07]	0.046	0.004	□-	0.211

\* Kolmogorov-Smirnoff test: detect differences in both the locations and the shapes of distributions.

\*\*p<sup>1</sup> T-test

\*\*\*p<sup>2</sup> Mann-Whitney U test

□ As neutrophils have a non-parametric distribution, the T-test was not used.

## Anticoagulation and Epistaxis

David Walker, Charlotte Rutter, Gerald McGarry

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**Introduction:** Epistaxis is the most common cause for emergency admission to an ENT ward. Secondary epistaxis accounts for a significant proportion of admissions with warfarin, aspirin and clopidogrel the most commonly encountered secondary causative agents. Should these be stopped during the admission?

**Aims:** To determine current practice relating to anticoagulants. In addition to assess whether secondary agents should be stopped on admission and what the effects are of stopping medication on the epistaxis or the underlying cardiac condition.

**Method:** A retrospective audit of current practice. Notes were retrieved and the patient management reviewed for all epistaxis admissions during 2006. In addition a literature review was undertaken and opinion sought via email from local cardiology and haematology consultants.

**Results:** 155 patients were admitted with epistaxis during the study period. 124 sets of casenotes were retrieved (80% data capture). 72 (57%) were on anticoagulant medication. 11 patients (9%) were on two or more agents, 18 patients (14%) were on warfarin alone, 39 (31%) were on aspirin alone and 4 (3%) were on clopidogrel alone. In over 80% of cases both aspirin and warfarin were stopped only for the duration of their admission (around 2 days). There was no increased rate of theatre or transfusion in patients on anticoagulants.

Returns from cardiology and haematology concurred with literature reviews. Of the most common indications for anticoagulation, patients with AF, hypertension or ischaemic heart disease could have their anticoagulants stopped without undue risk. Mechanical valves and coronary stents however should never have their anticoagulants stopped.

**Conclusions:** Current practice involves stopping anticoagulants for inpatient time only. Given that platelets are permanently deactivated for their lifetime (up to 10 days) this will lead to only minimal improvement in platelet function. We propose that there is no need to stop aspirin or warfarin (within its therapeutic range). If however aspirin is stopped it should be withheld for a full week to allow repopulation with active platelets, Warfarin should be adjusted to allow INR to reduce to within its therapeutic range.

## Letter to the Editor

Dear Editor,

We have read with great interest the article by Skoczyński et al. <sup>(1)</sup> in *Rhinology*, 46, 144-150, 2008 reporting that CPAP therapy may evoke a local nasal inflammation in patients with obstructive sleep apnea without significant changes in nasal patency.

We reported similar findings in 2005 <sup>(2)</sup>. It was noted that the median nasal neutrophil count rose by 15.4 cells (inter-quartile range of 0.4 to 39.6) per high-powered field in patients who had been on CPAP therapy for 1 to 3 months ( $p = 0.045$ ,  $n = 25$ ). Although a slight increase in nasal flow was noted following initiation of CPAP, it was not found to be significant ( $p = 0.052$ ,  $n = 26$ ). We incidentally noted that patients with increased nasal neutrophils before starting CPAP had a greater tendency to discontinue therapy ( $p = 0.004$ ).

Given the paucity of published data regarding the effect of CPAP on nasal inflammation and flow, we thought that it would be appropriate to bring these findings to the attention of your readers.

Farhad F. Shadan MD Ph.D. DABSM

Arthur Dawson, MD

Lawrence E. Kline D.O. FAASM FCCP

Scripps Clinic Sleep Center, La Jolla, CA, USA

### REFERENCES

1. Skoczyński S, Ograbek-Król M, Tazbirek M, Semik-Orzech A, Pierzchała W. Short-term CPAP treatment induces a mild increase in inflammatory cells in patients with sleep apnoea syndrome. *Rhinology*. 2008; 46: 144-150.
2. Shadan F, Jalowayski A, Fahrenholz J, Kline LE, Dawson A. Nasal cytology: A marker of clinically silent inflammation in patients with obstructive sleep apnea and a predictor of noncompliance with nasal CPAP. *J Clin Sleep Med*. 2005; 1: 266-270.

## Reply from Authors

Dear Editor,

I am happy to be informed that my findings were found to be interesting, and that another team has gained similar results. As I mentioned in my paper, I was not aware of this fact until I was informed by yourselves that: "According to our knowledge, this study is one of the first, which analyzes an impact of initial CPAP treatment on local nasal inflammation longitudinally with testing nasal patency in SAS patients".

I assume from this that they have included all patients with a new diagnosis of SAS, irrespective of their complaints, nasal disease or dysfunction: In contrast "*in our experiments we have excluded subjects with initial running nose or history of nasal obstruction. We have also excluded patients treated with systemic and/or local drugs, which potentially might interfere with nose function and influence CPAP usage compliance, such as systemic or topical glucocorticosteroids, histamine-receptor antagonists, cromoglycate, ketotifen, mast cell stabilizing drugs and topical decongestants*". The reason for choosing our inclusion criteria was because we know that rhinitis among others is one of the important factors influencing compliance for CPAP treatment in SAS patients. Secondly according to the literature nasal lavage is more a better method assessing nasal inflammation than nasal scrapings. These two methods are not equivalent. As presented in our paper we have not assessed the concentration of inflammatory molecules so in our opinion nasal lavage was the method of choice in this case. Thirdly our studies were undertaken in different ways as we have created two control groups not only following treated patients, but comparing them with healthy subjects. It is therefore interesting to find that despite different methodology, we have similar findings to another team of researchers.

Szymon Skoczyński

## Letter to the Editor

Dear Editor,

We are writing to comment on the review of "Postnasal drip syndrome, two hundred years of controversy between UK and USA", that appeared in *Rhinology*, Vol. 46 (2) 86-91, June 2008 and authored by A. Sanu and R. Eccles<sup>(1)</sup>. The authors presented an excellent review of PNDS.

Our purpose in writing is to point out recent information related to PNDS.

Historically, practitioners have identified nasopharyngeal secretions from chronic rhinosinusitis as a likely etiology. However, clinicians frequently note that patients with PNDS do not have objective evidence of paranasal sinus inflammatory disease. Furthermore, treatment for rhinosinusitis, either medically or surgically frequently fails. Thus recent studies have assessed for non-rhinogenic sources of PNDS, specifically, extra-esophageal reflux (EER) of duodenogastric contents<sup>(2)</sup>. Thus while there remain many unanswered questions with regard to PNDS, it appears that, at least in some patients, that the disorder maybe related to EER<sup>(3-5)</sup>.

In addition, the suggestion that postnasal drip caused chronic cough is probably not the case. More likely, both are the result of extra-esophageal reflux and treatment will improve and in some cases relieve the patient of both symptoms. The authors are to be congratulated for bringing this troublesome symptom to attention of clinicians after two centuries of discussion. There certainly will be more studies in the future to promote better diagnosis and treatment.

Sincerely,

Todd A. Loehrl, M.D., professor and Chief  
Department of Otorhinology and Communication Sciences  
Division of Rhinology and Sinus Surgery  
The Medical College of Wisconsin

Robert J. Toohill, M.D., professor  
Department of Otolaryngology and Communication Sciences  
The Medical College of Wisconsin  
Milwaukee, WI 53226, USA

### REFERENCES

1. Sanu A, Eccles R. Postnasal drip syndrome. Two hundred years of controversy between UK and USA. *Rhinology*. 2008; 46: 86-91.
2. Loehrl TA, Smith TL, Merati A, et al. Pharyngeal pH probe findings in patients with postnasal drainage. *Am J Rhinol*. 2005; 19: 340-343.
3. Poelmans J, Feenstra L, Tack J. The role of (duodeno) gastroesophago pharyngeal reflux in unexplained excessive throat phlegm. *Dig Dig Sci* 2005; 50: 824-832.
4. Pawar S, Lim HJ, Gill M, et al. Treatment of postnasal drip with proton pump inhibitors: a prospective, randomized placebo - controlled study. *Am J Rhinol* 2007; 21: 695-701.
5. Wise SK, Wise JC, DelGaudio JM. Association of nasopharyngeal and laryngopharyngeal reflux with postnasal drip symptomatology in patients with and without rhinosinitis. *Am J Rhinol* 2006; 20: 283-289.

## Reply from Authors

Dear Editor,

We thank Drs Loehrl and Toohill for their letter concerning the involvement of extra-esophageal reflux (EER) in the etiology of post nasal drip syndrome (PNDS). EER and PNDS are often put forward as separate causes of chronic cough, but we acknowledge the thesis put forward by the authors that EER may cause a syndrome that may overlap or be similar in presentation to PNDS. This is an interesting observation and we thank the authors for raising this issue.

R. Eccles and A. Sanu

Common Cold Centre  
Cardiff University  
Wales  
United Kingdom

## Endoscopic Surgery of the Paranasal Sinuses and Anterior Skull Base

by Malte Erik Wigand

With the collaboration of Heinrich Iro

Thieme Publishers, Stuttgart, New York 2008  
2<sup>nd</sup> Edition 2008; 237 pp., 583 illustrations, hardcover  
\$ 139.95 / € 119,95; ISBN: 9783137494027

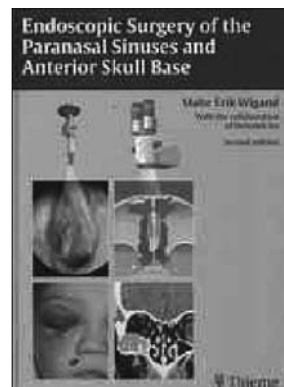
As Professor Wigand points out in his preface to this second edition, it is seventeen years since the landmark publication of his book at a time when endoscopic surgery was far from the accepted technique it is today. This new edition is much expanded, particularly in the area of extended techniques of endoscopic surgery at the sinonasal interface between orbit and skull base. This again, is testimony to the impact that Professor Wigand has had on the

acceptance of these techniques by ophthalmologists and neurosurgeons as part of our ENT armamentarium. There is also an important chapter on the management of complications of infection and on the reasons for and management in failure of surgery.

The book, as might be anticipated, is beautifully illustrated and each chapter is now referenced, an omission in the original edition.

I have a minor quibble with a few terms, which are slightly out of date, but these are of no consequence in what is an indispensable monograph for anyone with an interest in this area. Professor Wigand remains one of the giants of otorhinolaryngology.

*Valerie J. Lund CBE MS FRCS FRCSEd  
Professor of Rhinology, Honorary Consultant ENT Surgeon  
London, United Kingdom*



## Head and Neck Cancer: An Evidence Based Team Approach

by Eric Genden, Mark Varvares

Thieme Publishing Group, Stuttgart, New York, 2008.  
217 pages, hardcover. € 119.95; ISBN 978-1-58890-508-6

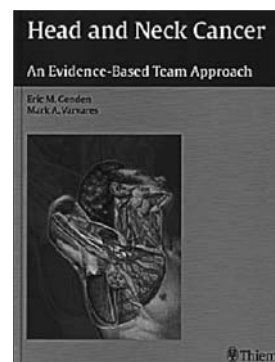
This is yet another of the beautifully produced monographs in Thieme's otorhinolaryngologic collection with a stated aim of looking at head and neck tumours from a multi-disciplinary evidence based approach.

The book covers in a systematic way the tumours according to site, with contributions from both surgical and medical oncologists and, where appropriate, other disciplines, such as endocrinology. All the authors, including the senior editors are North American, with the exception of the contribution on the nasopharynx, which may limit its interest to a European readership, as this geographical bias is also reflected in the referencing.

In the chapter on "Carcinoma of the Nasal Cavity and Paranasal Sinus", little mention is made of the significant contribution from a variety of European centres, which is a significant omission. The chapter itself covers the usual aspects of epidemiology, anatomy, aetiology, presentation, diagnosis and treatment. No mention is made of mid-facial degloving or endoscopic resection and the authors adopt a rather curious histological classification that is somewhat at odds with conventional wisdom.

Sinonasal malignancy is, fortunately rare, and the book as a whole offers a reasonably comprehensive approach to head and neck cancer for the trainee, albeit with a distinctly North American bias. For someone with a special interest in the nose and sinuses, it is perhaps of more limited interest.

*Professor Valerie Lund CBE MS FRCS FRCGS (Ed)  
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## BOOK NEWS

The textbook Functional Reconstructive Nasal Surgery by Egbert H. Huizing and John A.M. de Groot has now, apart from the English edition, also been published in Chinese (2006), Italian (2006) and Turkish (2008).



## ERS Delegates Questionnaire

Readers are probably already aware that every country with 10 or more members of the society are entitled to a voting member of the ERS Advisory Board. In addition we have a number of European countries with less than 10 members or affiliated non-European countries who also have non-voting representatives on the committee. Having taken on the mantle of General Secretary to the Society this summer I was anxious to find out from these national delegates some basic information about the rhinology set-up in their own countries and to this end a questionnaire was emailed. From a potential cohort of 33, it was somewhat disappointing to receive only 26 responses despite several requests and we are pursuing this further as it suggests either a serious problem of communication or possibly a lack of interest on the part of the delegate!

I was encouraged to find that the majority of countries now have a specific rhinologic society (60 %) which if not completely separate from their national ENT society is often affiliated in some way. Where no separate rhinology society existed, there was usually a rhinology sub-section or working party within the national organisation.

The age of these rhinology societies ranged from brand new (Belgium created in 2008) to the oldest in the case of Denmark at 24 years old. Numbers of members also varied quite markedly from <20 to >300 reflecting to some extent the number of ENT specialists in each country.

Most (64%) hold an annual meeting and would welcome greater input from ERS in various ways which I am looking into.

Interestingly virtually all respondents (92%) confirmed the presence of a separate allergy society in their respective countries.

In answer to the question as to how ERS could help with the promotion of rhinology, several delegates suggested creation of an exchange network at both trainee and consultant level and I would welcome the comments of readers on this and any other aspects of this article.

Obviously one of our most important tasks is to increase the membership of the society and with it interest in the nose and sinuses. The work of our ERS representatives is clearly important at a national level but I would encourage any reader who is not already a member to join – the 10% reduction in the fees for just one meeting run under the auspices of ERS to which all full members of the society are entitled will quickly pay for your subscription apart from the other benefits of membership such as the journal!

Finally please encourage all the young people (<35 years) in your department to sign up as 'junior members' which gives them free electronic access to 'Rhinology' – almost a no-brainer!

Once again I would like to thank those who responded, admonish those that didn't and conclude that nonetheless, rhinology is alive and well but could still benefit from regular injections of enthusiasm for which we rely and thank our Advisory Board members.

Valerie J. Lund CBE

*General Secretary ERS, European Rhinologic Society*

Thanks to Drs Arndal, Baudoin, Danielsen, Davris, Fenton, Fokkens, Hirschberg, Holmstrom, Hosemann, Jakimovska, Jorissen, Khvadagiani, Kozlov, Krzeski, Lacroix, Milosevic, Montserrat Gilli, Muhlfay, Rautiainen, Serrano, Sicak, Sousa Veira, Vicheva and Wolf.

## Gerhard Rettinger - An Appreciation

As many of you will know, Professor Rettinger demitted office as General Secretary of the European Rhinologic Society, a post that he held from 2002 to 2008, and one to which he brought enormous energy, enthusiasm and commitment.

Gerhard has pursued an interest in all aspects of rhinology throughout his career with a particular interest in facial plastic and reconstructive surgery, rhinoplasty and all aspects of skull base and sinus surgery. He has been Head of the ENT Department at the University of Ulm since 1995 and has made a major contribution through his many articles, books and in particular courses, which include his annual Rhinoplasty courses in Erlangen and Ulm, which has been running since 1986.

He has found time to contribute to many international committees, editorial boards and is presently on the board of the German ENT Society and the board of the European Academy of Otorhinolaryngology/Head and Neck Surgery.

In 2002, he ran an extremely successful meeting of the European Rhinologic Society in Ulm, so he was a natural choice as General Secretary of the Society. During this period, he has made a number of contributions and innovations, including a well overdue renovation of the statutes and by-laws, instigated an overhaul of the membership database and worked closely with 'Rhinology' to improve the profile of the society through publications, prizes and fellowships.

Through his own example, he has encouraged the society to embrace all aspects of the nose and sinuses, a job which I hope to continue at a time when medicine seems intent on increasing fragmentation and super-specialisation. The society owes him its thanks and congratulations on a job well done.

*Professor Valerie J. Lund CBE MS FRCS FRCSEd*  
General Secretary, ERS



*Professor Gerhard Rettinger*

## MEETING CALENDAR

### 2ND ALPINE NASAL COURSE

Crans Montana, Switzerland, January 17-24, 2009

*Information:* Director Dr Ph Rombaux, Department of Otorhinolaryngology, Cliniques Universitaires Saint Luc, Av Hippocrate, 10 - 1200 Brussels. Tel: +32-2-764 1949; Fax: +32-2-764 8935; E-mail: info@alpinenasalcourse.be; Website: www.alpinenasalcourse.be

### 6TH INTERNATIONAL COURSE IN ADVANCED SINUS SURGERY TECHNIQUES

Amsterdam, the Netherlands, March 19 - 20, 2009

Teacher of honour: Berrylin J. Ferguson, MD, Pittsburgh, USA

*Information:* Prof. dr. W.J. Fokkens, dept. of Otorhinolaryngology, Academic Medical Centre of the University of Amsterdam, the Netherlands. Tel: +31-20-566 8586; Fax: +31-20-566 9573; E-mail: m.b.vanhuiden@amc.uva.nl

### 1ST MIDDLE EAST-ASIA ALLERGY ASTHMA IMMUNOLOGY CONGRESS

Dubai, United Arab Emirates, March 26-29, 2009

Director: Ruby Pawankar and Fares Zaitoun

*Information:* Informed Events; Tel: +9714-268-9040; Fax: +9714-268-9030; E-mail: info@infomedevents.ae; Website: www.meaaic.com

### 5TH BIENNIAL INTERNATIONAL "MILANO MASTERCLASS" "IN QUEST OF EXCELLENCE"

1. Sinonasal & Skull Base Endoscopic Surgery 2. Rhinoplasty  
Milano, Italy, March 27 - 31, 2009

Directors: Prof. Paolo Castelnuovo, Prof. Pietro Palma

*Information:* mail@pietropalma.it. Secretariat CQ-Travel, Via Pagliano, 3 - 20149 Milano, Italy. Tel: +39-02-4804.951; Fax: +39-02-4391.1650; E-mail: masterclass@cq-travel.com; Website: www.milanomasterclass.it

### RHINOLOGY WORLD 2009, INTERNATIONAL CONGRESS OF IRS, ISIAN AND ARS

Philadelphia, PA, USA, April 15-18, 2009

Course Organizers: David W. Kennedy, MD, James N. Palmer, MD, James Stankiewicz, MD

*Information:* Bonnie Rosen. Tel: +1-215-662-2137; E-mail: bonnie.rosen@uphs.upenn.edu; Website: www.rhinologyworld.com

### 3RD INTERNATIONAL CONGRESS OF RHINOLOGY - OTOLOGY & SKULL BASE SURGERY

Athens, Greece, May 14-17, 2009

Director: Dr John Xenelis;

*Information:* Website: rhinotoskull2009.com

### XIX WORLD CONGRESS OF OTO-RHYNO-LARYNGOLOGY IFOS 2009

São Paulo, Brazil, June 1-5, 2009

Director: Paulo Pontes, MD

*Information:* Ricardo Bento, MD IFOS 2009 Secretary General. Tel: +55-11-3849-0379; E-mail: scientificifos@meetingeventos.com.br; Website: www.ifossaopaulo2009.com.br

### XXVIII CONGRESS OF THE EUROPEAN ACADEMY OF ALLERGOLOGY AND CLINICAL IMMUNOLOGY

Warsaw, Poland, June 6-10, 2009

Director: Prof Marek Kowalski

*Information:* Dept of Immunology, Rheumatology and Allergy, Medical University of Lodz, 215 Pomoska Str, 92-213 Lodz, Poland. Tel: +48-42-675 7309; Fax: +48-42-678 2292; E-mail: marek-kowalski@csk.umed.lodz.pl; Website: www.congrex.com/eaaci2009

### ENDOSCOPIC COURSE FOR PARANASAL SINUS AND SKULL BASE SURGERY

Bern, Switzerland, September 10 - 12, 2009

Faculty: Swiss Rhinology Group

Director: Prof. Dr. M. Caversaccio, Prof. Dr. P. Egli

*Information:* Department of ORL, Head and Neck Surgery, Inselspital and Institute of Anatomy, University of Bern, Freiburgstrasse 20, CH- 3010 Bern, Switzerland. Tel: + 41-31-632-4174; Fax: + 41-31-632-4900; E-mail: marco.caversaccio@insel.ch or paranasal@swiss-meeting.org; Website: http://paranasal.swiss-meeting.org

### 23RD CONGRESS OF EUROPEAN RHINOLOGIC SOCIETY, 29th I.S.I.A.N

Geneva, Switzerland, June 20 - 26, 2010

*Information:* JS Lacroix or Kuoni Destination Management Geneva Business Center Avenue des Morgines 12 CH-1213 Petit-Lancy Switzerland. E-mail: ers-isian.gva10@kuoni.ch, Website: www.ers-isian-gva10.ch. This congress is under ERS-Auspices

### 24TH CONGRESS OF EUROPEAN RHINOLOGIC SOCIETY, 31TH I.S.I.A.N

Toulouse, France, June 17-21, 2012

Director: E. Serrano,

*Information:* European Organisation; ENT Head & Neck Surgery Department, 5, Rue Saint Pantaleon- BP 61508, 31015 Toulouse cedex 6, France. Tel: +33-5-34-452645; Fax: +33-5-34-452646; Email: regist-ers@europe-organisation.com. This congress is under ERS-Auspices

### 25TH CONGRESS OF EUROPEAN RHINOLOGIC SOCIETY, 31st I.S.I.A.N

Amsterdam, the Netherlands, June 2014

*Information:* Prof. dr. W.J. Fokkens, dept. of Otorhinolaryngology, Academic Medical Centre of the University of Amsterdam, the Netherlands. Tel: +31-20-566 8586; Fax: +31-20-566 9573; E-mail: m.b.vanhuiden@amc.uva.nl; This congress is under ERS-Auspices