1. **Ixekizumab study adds to evidence that targeting IL-17A potentially gives patients with psoriasis new, effective therapy options**


**Summary**

In this report of 2 separate, identical, company-sponsored, phase 3 clinical trials, the investigators compared the efficacy and safety of ixekizumab (ixe), a humanized monoclonal antibody specifically targeting Interleukin 17A, with etanercept and with placebo. A total of 1,224 patients in one study and 1,346 patients in the other were randomized in a 2:2:2:1 ratio to either ixe 160-mg loading dose followed by 80 mg every 2 weeks; 160-mg loading dose followed by ixe 80 mg every 4 weeks; etanercept 50 mg twice weekly; or placebo for 12 weeks. Blinding was maintained by double dummy placebo injections for both ixe and etanercept. A Psoriasis Area Severity Index (PASI) score of 75 was the primary endpoint. PASI 75 results were 87%, 84%, 53% and 7%. About 50% of the patients reached PASI 75 by week 4, and about 20% had reached PASI 75 by week 2. PASI 90 was achieved by 71%, 60%, 18% and 1% in the first study, and by 68%, 65%, 26% and 3% in the second study. PASI 100 was achieved by 41%, 31%, 5% and 1% in the first study, and by 38%, 35%, 7% and 0% in the second study. sPGA improvement correlated with the PASI responses, as did improvement in Dermatology Life Quality Index (DLQI) scores and in an itch-rating scale. Adverse events were more common in the ixe and etanercept groups when compared to placebo. Most common adverse events were nasopharyngitis, upper respiratory infection, injection site reactions, pruritus, headache, and arthralgia. Most were mild or moderate in severity. Less than 2% in each treatment group experienced serious adverse events (SAEs), but overall infections occurred more frequently in the ixe group versus etanercept or placebo. Of note were proven...
Dear colleagues,

Together with the board and staff of the International Psoriasis Council (IPC), I want to wish you a happy, healthy new year and welcome you to the January 2016 issue of the IPC Psoriasis Review newsletter. Over the past year, the IPC made great strides in our mission to advance knowledge of psoriasis and enhance patient care, and 2016 promises to be another year of great opportunity and growth.

Among the accomplishments that moved us forward in 2015, the IPC:

• Convened a symposium on the epidemiology of psoriasis during the European Society for Dermatological Research (ESDR) annual meeting;

• Co-sponsored, with the IMPACT psoriasis research programme and the University of Manchester, the “Pso Well” training workshop for healthcare providers;

• Initiated a Global Paediatric Psoriasis Registry that will collect demographic, comorbidity and other data on paediatric patients with psoriasis;

• Used the Delphi process to survey IPC councillors, identifying 21 psoriasis research priorities, which have been published online by the British Journal of Dermatology and will be featured in an upcoming print issue of the journal.

In the coming year, the IPC will build on these initiatives and launch new ones, including increasing our presence in Latin America and Asia, and sponsoring educational meetings and other programmes in new locations, such as Singapore and São Paulo. As part of our global expansion, we recently welcomed for the first time councillors from Japan and Iran, along with new colleagues from Mexico, Colombia and the United States (see page 24).

We have revived our “Hot Topics Roundtable” meetings, which the IPC began in 2006 and has presented on occasion. We sponsored two “Hot Topics” discussions – on biosimilars in Latin America and on expectations for treatment outcomes – in 2015. Already scheduled for 2016 is a Hot Topics discussion about the changing landscape of global psoriasis management, which we will present at the 74th annual meeting of the American Academy of Dermatology.

Thanks to the hard work of our biosimilars and topical therapy working groups, the IPC is producing for publication more psoriasis-related research papers. Two papers – on biosimilars and research priorities – have been published in the British Journal of Dermatology (see page 22), and six other papers are in development. We also look forward to launching a Latin America working group.

Also in 2016, we:

• Will initiate a public database stemming from our Exome Chip Project, which aims to complete the genetic map of psoriasis. The project, started in 2013, has identified more than 50 independent genetic signals at 36 common psoriasis susceptibility loci.

• Are about to launch the first phase of our ambitious project, the Global Psoriasis Atlas, which the IPC has formed with the International Federation of Psoriasis Associations (IFPA) and the International League of Dermatological Societies (ILDS), to document the global burden of psoriasis.

• Warmly welcome Christy Langan as the IPC’s new CEO.

You will find details of these projects and initiatives in this issue of the IPC Psoriasis Review, as well as on our website at www.psoriasiscouncil.org.

All of these activities are the result of dedicated collaboration among IPC’s board, councillors, and partners. With your hard work, time and commitment, the IPC is becoming increasingly visible as a prominent resource for those interested in research, education and management of psoriasis and its comorbidities. Here’s to an exciting and prosperous year ahead.

With best wishes,

Chris Griffiths
President, International Psoriasis Council
COMMENTARY This is yet another study demonstrating the significance of IL-17A as an important cytokine in the pathogenesis of psoriasis and the clinical superiority of this agent to etanercept, which acts as a TNF-α inhibitor. Statistically significant and clinically meaningful differences in PASI 75 responses of ixe versus both etanercept and placebo were achieved by about 90% of

For additional copies of the IPC Psoriasis Review newsletter, or to learn more about IPC, please visit www.psoriasiscouncil.org.
2. Tofacitinib study shows potential of inhibiting Janus kinase enzymes to treat moderate to severe psoriasis


**Summary**
This study by Bachelez et al is a phase 3, randomized, multicentre, double-dummy, placebo-controlled, 12-week, non-inferiority trial comparing two doses of tofacitinib, an oral Janus kinase (JAK) inhibitor, with high-dose etanercept or placebo in patients with moderate to severe chronic plaque psoriasis. In particular, eligible patients (n = 1,106) were randomly assigned in a 3:3:3:1 ratio to receive tofacitinib 5 mg (n = 330) or 10 mg (n = 332) twice daily, etanercept 50 mg (n = 336) subcutaneously twice weekly, or placebo (n = 108). At week 12, PASI 75 responses were achieved in 39.5% of patients in the tofacitinib 5 mg, 63.6% in the tofacitinib 10 mg, 58.8% in the etanercept and 5.6% in the placebo groups. A Physician Global Assessment (PGA) of “clear” or “almost clear” was achieved by 47.1% of patients in the tofacitinib 5 mg, 68.2% in the tofacitinib 10 mg, 66.3% in the etanercept and 15% in the placebo groups. The rate of adverse events was similar across the four groups, with serious adverse events occurring in 2% of patients in the tofacitinib 5 mg, 2% in the tofacitinib 10 mg, 2% in the etanercept group and 2% in the placebo group. The proportion of patients who discontinued the assigned treatment was similar across the groups, ranging 1-3%. In conclusion, it was found that the 10-mg, twice-daily dose of tofacitinib was non-inferior to etanercept 50 mg twice weekly at week 12 as measured by PASI 75 and PGA responses. The safety profile of the two treatments was also similar.

**COMMENTARY**
This study provides confirmation that signalling through the JAK pathway is an important component of psoriasis pathogenesis, and supports the clinical benefit of targeted inhibition of JAK family members. Indeed, the JAK–STAT pathway has a key role in activating signals induced by several inflammatory cytokines involved in psoriatic inflammation, such as interleukin (IL) 2, IL-12, IL-20, IL-22, IL-23, interferon (IFN) α/β, and IFN γ. Tofacitinib (dosed 10 mg twice daily) could provide a convenient and well-tolerated therapeutic option for patients with moderate to severe plaque psoriasis in the future. The inferior dose of tofacitinib (5 mg twice daily) did not meet the statistical criterion for non-inferiority to etanercept and is less effective than 10 mg twice daily. Moreover, rapid and significant reductions in patient-reported itch severity with both doses of tofacitinib have been reported. Itching is a very frequent complaint among patients with psoriasis. The onset of action of tofacitinib (dosed 10 mg twice daily) was clearly evident by week 4, and this is very important because rapid treatment response is generally associated with increased patient compliance. As far as safety, modest changes of cholesterol, creatine phosphokinase, lymphocyte counts and hemoglobin concentration were reported. Oral drugs could be very appreciated by some patients because they overcome the injection-related issues. However, the effect of associated laboratory monitoring procedures on patient satisfaction remains to be established. Long-term studies of tofacitinib in plaque psoriasis are needed to confirm the efficacy and safety profile beyond the 12-week period assessed in this trial. – Prof. Paolo Gisondi
3. Genetic-variants study shows importance of identifying genetic biomarkers that could lead to effective personalized therapies


**Summary**
The aim of the study by Nikamo et al was to investigate whether mild and severe psoriasis are characterized by different genetic profiles. The researchers compared profiles of known psoriasis-associated genetic variants between patients with a severe (n = 715) and mild disease (n = 696) focusing on the interleukin 23 (IL-23) and nuclear factor-kappa B (NF-κB) pathways. They included a control group (n = 1,529). Psoriasis was considered severe when requiring systemic therapy and mild when only topical or no treatment was prescribed for a time period of 6-14 years. All patients were examined and treated at the same department, ensuring a reasonable consistency in assessment. The authors found that HLA-C*06 is the strongest associated gene in psoriasis, either in mild or severe forms. In contrast, the case–case analysis comparing severe and mild psoriasis phenotypes revealed significant differences between the two groups for single nucleotide polymorphisms in IL-23R, NFKB1, IL-21, IL-12B, NFKBII1 and IL-23A. Strong additive effects when combining HLA-C*06 with IL-23A, IL-23R, IL-12B, NFKB1 or TNIP1 were restricted to the severe cohort, indicating that activation of these pathways may influence disease severity in psoriasis. No protective gene was identified in the mild cohort, suggesting that current screens have primarily identified psoriasis variants associated with a more severe phenotype.

**COMMENTARY** Psoriasis is a common inflammatory skin disease with a complex genetic background. The genetic contribution to disease is extensive, with HLA-C*06 showing the most significant association, although genome-wide association studies have identified multiple risk regions. Susceptibility genes are involved in the immune system and in pathways playing a critical role in the pathophysiology of psoriasis. Psoriasis shows large clinical variation, but few studies have explored the genetic profiles in stratified phenotypes. This study describes association with genes in the IL-23, IL-21 and NF-κB pathways in carefully characterized Swedish patients with psoriasis stratified by disease severity. Severity of psoriasis was not based on the PASI score, but on the need for a systemic therapy. Several studies have previously highlighted the importance of genes and haplotypes in the IL-23 and NF-κB pathways in psoriasis as well as in many others immune-mediated diseases, inflammatory bowel diseases, ankylosing spondylitis, celiac disease and multiple sclerosis. IL-23 has a crucial role in the development of pathogenic Th17 cells and fuel psoriatic inflammation. Indeed, therapy blocking the p40 subunit shared between IL-23 and IL-12 shows impressive clinical efficacy in psoriasis. IL-21 is produced by activated CD4+T cells (among others), has an important regulatory role in the immune system, promotes epidermal hyperplasia, and expands pathogenic Th-cell responses in psoriasis. Nuclear factor-kappa B (NF-κB) transcription factors regulate the expression of many cytokines involved in the pathogenesis of psoriasis including TNF-α. These results demonstrate the importance of identifying genetic biomarkers that will pave the way for personalized medicine. –PG
4. Selective targeting of interleukin 23 appears to be effective, safe for treating psoriasis; more study needed


Summary
Tamara Kopp with Austrian and other investigators participated in this phase 1, multicenter, company-sponsored, placebo-controlled clinical trial of tildrakizumab, a monoclonal antibody that specifically binds the IL-23p19 subunit of IL-23 without binding the IL-12/23 p40 heterodimer and IL-12p35. Seventy-seven patients were enrolled and 65 completed the study. In part 1 of the study, subjects received either placebo or 0.1 mg/kg, 0.5 mg/kg, 3 mg/kg or 10 mg/kg on days 0, 56 and 84. In part 2 of the study, subjects received placebo, 3 mg/kg or 10 mg/kg on days 1, 28 and 56. Another set of patients in the study’s part 3 received placebo or 0.05 mg/kg or 0.1 mg/kg on days 1, 56, and 84. Although the study was not powered to detect dose response, the mean reduction of PASI score at day 112 was 50-80% in all groups except placebo and the lowest active dose. A “large proportion” of 3- and 10-mg/kg subjects achieved PASI 90 by day 112, but the numbers were too small to be statistically meaningful. The drug was generally well tolerated with the usual adverse events of headache, nasopharyngitis, upper respiratory infection, and cough. Although there were 11 serious adverse events in 8 subjects, only one event (convulsions) was deemed to be possibly related to the drug, but there were confounding factors in this patient.

COMMENTARY
This very early phase proof-of-concept study again highlights the importance of IL-23 in the pathogenesis of psoriasis. The clinical results of this study have to some degree been eclipsed by the results of a more robust, recently published, phase 2 dose-finding study, adding more to our understanding of the value of this agent. It appears that selective IL-23 blockade results in positive efficacy without any surprising new safety concerns. The phase 3 trials now underway will characterize it even further. –DP
5. Investigational biologic BI 655066 targets IL-23 pathway, showing promise as a rapid, effective psoriasis treatment


Summary
In this multi-center, randomized, placebo-controlled, first-in-human trial of BI 655066, a fully human IgG monoclonal antibody specific for the IL-23p19 subunit, Krueger et al treated 39 patients with moderate to severe plaque psoriasis with a single dose of 0.01, 0.05, 0.25, 1, 3 or 5 mg/kg or placebo. The primary objective was safety evaluation, but efficacy evaluations were also carried out. Sixty-five percent of the BI 655066-treated patients and 88% of the placebo-treated patients experienced at least one adverse event (AE). Most frequent in the placebo-treated group was worsening of psoriasis; otherwise, nasopharyngitis, headache and upper respiratory tract infection were the most commonly reported AEs in both groups. There was no discernable difference in AEs among any of the active-dose groups. Four serious adverse events (SAEs) were reported, all in one of the treatment groups: thalamic stroke and transient ischemic attack (TIA), both of which occurred approximately 3 months after dosing; stroke in a patient with “significant” risk factors including prior stroke; and alcoholic pancreatitis. At week 12, the primary endpoint, no patients receiving placebo attained a PASI 75, 90 or 100. Considering all patients who received active drug, the percentage of patients attaining PASI 75/90/100 were 87%/58%/15%, respectively. At week 24, the patients who received 0.25 mg/kg or greater had PASI 75/90/100 improvements of 100%/85%/54%. Eight patients were followed long-term, and 6 of them maintained PASI 100 improvement for 41 to 66 weeks.

COMMENTARY The rich pipeline of biologics in development for treatment of psoriasis continues to flow. Although this was a small study and not powered as a dose-ranging trial, patients receiving higher doses seemed to do better clinically. The efficacy of the drug and its apparent sustained clinical improvement add strong evidence to the role of IL-23 in the pathogenesis of psoriasis. No serious safety signals were reported, even though there were 4 SAEs, all in patients who received active drug and none in the placebo group. Larger studies will be needed to further characterize the safety and efficacy profile, and particular attention will need to be directed to the possibility of major adverse cardiovascular events (MACE), as there was some controversy over their relevance in trials of both ustekinumab and briakinumab. From this very early data, it appears that BI 655066 has a promising future path for development. –DP
Psoriasis-related topics included genetics, targeted therapies, biological treatment in children, and psoriasis-associated comorbidities

By Peter Jensen, MD, PhD

Contributing writer Dr. Peter Jensen is currently in his third year of dermatology residency training in the dermatology departments of Gentofte and Bispebjerg Hospitals, University of Copenhagen, Denmark. Dr. Jensen’s research is supervised by Professor Lone Skov and is primarily focused on psoriasis-associated cardiovascular comorbidity and obesity. In 2012, he earned his PhD degree from the University of Copenhagen, Faculty of Health Sciences, when he defended his thesis entitled “Psoriasis: Cardiovascular risk factors and effects of weight reduction.”

Genetics, targeted therapies, psoriasis in children, including the use of biologics in these patients, and psoriasis-associated comorbidities were notable topics of discussion during the 24th European Academy of Dermatology and Venereology Congress in Copenhagen, Denmark, in October 2015. Renowned international speakers also presented updates in patient care. Following are summaries of the most significant topics.

**Genetics and targeted therapies**

Professor Jonathan Barker, St John’s Institute of Dermatology, King’s College London, presented a lecture entitled “Genetics: Their impact on understanding the pathophysiology,” which focused on the genetics of psoriasis from a clinical point of view. Knowledge about the genetics of psoriasis helps health care providers determine the natural history of the disease, why it debuts at an earlier age in some and later in life in others, and it may also help medical professionals understand how the severity of psoriasis and the presence of comorbidities may vary from to person to person. Currently, researchers have found at least 40 psoriasis-related regions of the genome (susceptibility loci). Each of these loci contains numerous genes, and the candidate causal genes within suggest that adaptive and innate immunity and skin barrier functions play a key role in the pathogenesis of psoriasis. However, genetic studies have accounted for only 25% of psoriasis heritability, and the remaining heritability is likely to be attributable to less important genetic variants.1

The primary genetic component in the pathogenesis of psoriasis is the PSORS1 region containing human leukocyte antigen C (HLA-C), coiled-coil-a-helical rod protein (CCHCR1), and corneodesmosin (CDSN). The HLA-Cw6-allele is associated with psoriasis in many different populations and its genetic effect is greater than all the other known psoriasis-related regions of the genome. Professor Barker said that emerging evidence indicates that HLA-Cw6-positive patients are more likely to respond rapidly and with greater efficacy to ustekinumab than those who are HLA-Cw6-negative. HLA-Cw6 positivity is also associated with early-onset psoriasis and, based on these observations, it is possible that HLA-Cw6 status should be used to stratify patients participating in clinical trials. Genetics is increasingly providing knowledge about the specific molecules involved in the pathogenesis of psoriasis, including the Th17 pathway. The importance of IL-17 in the pathogenesis of psoriasis has led researchers to focus increasingly on IL-17-targeted therapies. In 2014, Langley et al demonstrated superior effects of anti-IL17A antibody secukinumab on the severity of psoriasis when compared to the TNF-inhibitor etanercept and placebo.2 Professor Barker finished with a future perspective and noted that, looking forward, providers need to be able to stratify patients by establishing a phenotype/genotype correlation because treatment efficacy varies with the particular genetic profile of a given individual. Detailed phenotype information with genetic data may potentially aid in the development of diagnostic and prognostic markers, predictors of drug responsiveness, and more efficacious targeted therapies with less toxicity.
Psoriasis in children and adolescents
In his lecture, Professor Knud Kragballe, Aarhus University, Denmark, provided an overview of pediatric psoriasis, including treatment guidelines, summarized here.

Except for severe psoriasis, the number of ongoing clinical trials in pediatric patients is limited, treatment guidelines are without consensus, and too many patients are left without sufficient therapy. Topical corticosteroids, vitamin D derivatives, and calcineurin inhibitors are first-line therapies for psoriasis in children. Clobetasol is approved for use in children older than 12; experience is lacking for mometasone under the age of 6. Also, there is no experience for betamethasone 17-valerate and dipropionate in children, which are contraindicated below the age of 1 year. In general, less potent corticosteroids are considered safe. As for the vitamin D derivatives, calcipotriol is approved from the age of 6, and fixed combination of calcipotriol and betamethasone 17-valerate has a documented efficacy and safety in children, but is currently not approved. The presenter cited a recent study of combination therapy with calcipotriol and betamethasone, which found the treatment both efficacious and safe in children aged 3 to 18 years.3 In the United States, the gel/topical solution is approved for scalp psoriasis in patients over the age of 12, with a maximum dose of 60g/week. Of particular note here was the news that a spray (calcipotriol/betamethasone combination) will become available in 2016 in Europe, which should be more effective and better accepted by patients, with increased adherence. (Subsequent to the EADV meeting, a calcipotriene/betamethasone dipropionate aerosol foam – Enstilar made by Leo Pharma Inc. – was approved by the U.S. Food and Drug Administration for patients ages 18 and older.)

Calcineurin inhibitors are not approved for psoriasis, but are often used in skin areas prone to atrophy such as the face and flexural areas.4 Due to lack of general consensus and inadequate guidelines, topical therapy in this age group is often prescribed off label, which mandates thorough explanation to the patient and family in order to secure treatment adherence. Phototherapy should be reserved for moderate to severe disease and preferably in the form of narrow-band ultraviolet light B (NB-UVB) since it is more effective than broad-band UVB, does not cause ocular damage, and has lower long-term skin cancer risk than PUVA therapy (ultraviolet light A with light-sensitizer psoralen). Systemic treatment for moderate to severe psoriasis in children and adolescents is a challenging problem due to fear of adverse events (AEs) and drug toxicity, and in turn, this may lead to undertreatment of these patients.

Systemic anti-inflammatory treatment for psoriasis in children and adolescents
For psoriasis resistant to topicals and phototherapy, methotrexate (MTX) is usually recommended, although it is not approved for pediatric psoriasis.4 In addition, cyclosporine can be administered in 3-4 monthly intervals, while retinoids are usually avoided in teenage girls and young women because of the need to wait three years after cessation before getting pregnant. In pediatric patients without response to MTX or phototherapy, etanercept is usually the first biologic to consider.5 In Europe, etanercept is approved for use in children with moderate to severe psoriasis above the age of 6, adalimumab has recently been approved for use in patients with moderate-to-severe plaque psoriasis above the age of 4, and ustekinumab has been approved for use in children above the age of 12. No biologic has yet been licensed by the U.S. Food and Drug Administration for use in pediatric psoriasis.

Systemic treatment for moderate to severe psoriasis in children and adolescents is a challenging problem due to fear of adverse events (AEs) and drug toxicity, and in turn, this may lead to undertreatment of these patients.

Fortunately, our knowledge about efficacy and safety of biologics in children and adolescents with psoriasis is steadily increasing. Recent and still unpublished evidence from a 52-week, phase 3, international, multicenter, randomized trial (registered at clinicaltrials.gov

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Evidence is emerging that biologics are both effective and safe for long-term use in children and adolescents with psoriasis.
switched from MTX to adalimumab 0.8 mg/kg for 52 weeks. Eighty percent and 58% achieved PASI 75 and PASI 90, respectively, and the effect was maintained at 52 weeks without safety issues.

In conclusion, evidence is emerging that biologics are both effective and safe for long-term use in children and adolescents with psoriasis. In light of this encouraging research, it is possible that we will see guidelines updated in the near future that will include the use of biologics in children with moderate to severe psoriasis who have had adverse events or failed to respond after treatment with MTX and phototherapy.

Psoriasis-associated comorbidity
Psoriasis-associated comorbidity continues to be an area of intensive research and was also among the many topics presented at the EADV congress. Epidemiological studies have shown that psoriasis is associated with being overweight, and that increased adiposity and weight gain are risk factors for incident psoriasis. The link between obesity and psoriasis can be explained, in part, by the systemic low-grade inflammation that characterizes both conditions. Also, in theory, the obesity-induced inflammatory mechanisms might exacerbate the psoriatic lesions in overweight individuals. It is well established that psoriasis is associated with an increased prevalence of traditional cardiovascular risk factors, e.g., diabetes, hypertension, hyperlipidemia, smoking, obesity, and excessive alcohol intake. Also, there is growing evidence, including nationwide Danish registry data, that psoriasis may confer independent risk of atherosclerotic cardiovascular diseases such as myocardial infarction, stroke, and cardiovascular mortality, especially in young adults with severe psoriasis. Like psoriasis, atherosclerosis is characterized by Th1-driven inflammation both systemically and locally in arterial walls and atherosclerotic plaques. Thus, it appears that the inflammatory mechanisms in psoriasis and atherosclerosis show considerable overlap.

Less well described is the relationship between psoriasis and renal disease. Evidence is emerging that the risk of incident chronic renal disease and end-stage renal disease may be increased in patients with psoriasis. However, evidence is conflicting and based on small-scale case control studies as well as larger United Kingdom- and Taiwan-based population studies. Dr. Ching-Chi Chi, Chang Gung University, Taiwan, presented data from a large registry-based population study aiming to evaluate the risk of incident chronic kidney disease and end-stage kidney disease in patients with psoriasis compared to healthy control subjects. The study included 4,180 subjects with mild psoriasis, 453 with severe psoriasis, and 922,354 healthy controls. After adjusting for concomitant comorbidity and MTX treatment, the hazard ratio for severe psoriasis was 1.90 (95% confidence intervals 1.33-2.70) where the risk among people with mild psoriasis was comparable to that of controls. Mechanisms linking psoriasis and renal disease are unknown but could be due to inflammatory damage in small renal vessels. During the ensuing discussion, participants concluded that health care providers should take into consideration the potential nephrotoxicity of MTX and cyclosporine, which are often used for moderate to severe psoriasis. Based on current knowledge, it is possible that health care providers should consider screening for early-stage renal disease in patients with severe psoriasis. However, evidence for an association with renal disease still is scarce and based largely on registry studies, which are prone to various forms of misclassification bias and lack relevant clinical laboratory variables and pathology findings.

Another session, chaired by Professors Wolf-Henning Boehncke, University Hospitals, Geneva, Switzerland, and Richard Langley focused on psoriasis and the metabolic syndrome. During the session, Professor Boehncke referred to data demonstrating that weight reduction may diminish the severity of psoriasis. The role of weight loss as part
of the treatment for psoriasis remains to be determined, but in theory, weight loss in overweight patients with psoriasis may reduce the inflammation induced by obesity, with a potentially beneficial effect on the psoriatic lesions. In addition, weight reduction significantly improves all components of the metabolic syndrome including diabetes, arterial hypertension, and hyperlipidemia, further highlighting the importance of weight reduction in obese patients with psoriasis.

Professor Boehncke mentioned that data from case reports of overweight patients with psoriasis undergoing weight-reduction surgery suggest that psoriasis may improve with weight loss. However, there is a paucity of randomized reports in this area of research, with only one study reporting on the effect of weight reduction using the severity of psoriasis as the primary endpoint. The study showed that patients randomized to weight reduction therapy lost an average of 15 kg more than controls and a trend in favor of a clinically important reduction in PASI. Data derived from the same study showed statistically significant effects on several cardiovascular endpoints such as blood pressure, resting heart rate, total cholesterol, triglyceride, glucose, and glycosylated hemoglobin.

Dr. Peter Jensen, University of Copenhagen, Denmark, presented unpublished data from a one-year extension study of the previously mentioned weight-loss trial, demonstrating that, despite a weight regain of 5 kg, the initial effect on PASI was maintained.

During the ensuing discussion, the presenters and chairs discussed the important role of weight reduction in obese patients with psoriasis. Professor Ulrich Mrowietz, Universitätsklinikum, Schleswig-Holstein, Campus Kiel, Germany, noted that weight counseling has become standard care in overweight patients with psoriasis nationwide in Germany. Also discussed were the potentially beneficial effects of systemic anti-inflammatory therapy on cardiovascular risk, but research is still limited.

Summary
Research presented at the 24th 2015 EADV conference highlighted the significant progress researchers have made in our understanding of therapeutics and comorbidities of psoriasis. This is bound to increase the potential for more effective treatment of the disease.

Contributing writer Peter Jensen acknowledges Professor Lone Skov, Gentofte Hospital, Copenhagen, Denmark, and the International Psoriasis Council team for the honor of contributing to and for their assistance with this article.

References
A REPORT FROM THE 24TH CONGRESS OF THE EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY


Advances in psoriasis diagnosis, treatment are focus of World Congress

By Mahir Patel, MD

Contributing writer Dr. Mahir Patel has completed a three-year clinical research fellowship focusing on psoriasis under the supervision of Drs. Alan Menter and Caitriona Ryan at Baylor University Medical Center-Dallas. He has a Bachelor of Arts degree in biochemistry from Austin College in Sherman, Texas, and received his doctor of medicine degree from University of Texas Southwestern Medical Center in Dallas.

Various approaches to the diagnosis and treatment of psoriasis were among the topics discussed at the 23rd World Congress of Dermatology, which took place in Vancouver, British Columbia, Canada, in June 2015. Following are summaries of the most significant psoriasis-related discussions presented at the congress.

Psoriasis and comorbidities

Psoriasis is associated with multiple comorbidities such as dyslipidemia, hypertension, diabetes, and liver steatosis/elevated liver enzymes that should be considered prior to initiating biologic therapy. The effect of biologic treatments on metabolic parameters is currently not well established, although they appear to be safer than conventional systemic treatments, especially in the long term. A few studies have shown an improvement in insulin sensitivity in patients treated with etanercept and adalimumab after 24 weeks. Other studies have shown TNF-α treatment to be associated with statistically significant weight gain, while methotrexate and ustekinumab treatment showed no effect. Use of TNF-α therapy has demonstrated a reduction in cardiovascular biomarkers and may be associated with reduced adverse cardiovascular disease in preliminary epidemiologic studies, but larger, more robust controlled trials are necessary to establish this effect. In general, more studies are needed to better establish the effect of biologics on comorbidities in psoriasis. Beyond the use of biologics, nonpharmacologic interventions such as following the Mediterranean diet and weight loss might improve metabolic syndrome in psoriasis patients. Furthermore, it has been demonstrated that weight loss (5%) by hypo-caloric diet improved clinical response to low-dose cyclosporine in obese patients with moderate to severe chronic plaque psoriasis.

Combination therapy with biologics

This discussion addressed combination therapy for patients who do not initially respond to a biologic or who experience loss of response. Options for these patients include intensifying treatment by increasing dosage or frequency, combination therapy, or switching classes of drugs, eg, TNF-α to IL-12/23 (which may have pharmacoeconomic benefit). Advantages of combination therapy include synergistic response, reduced dosage of individual therapies resulting in reduced toxicity, and improved tolerability and compliance. Potential disadvantages include problems with metabolism and additive adverse effects. Combinations include topical plus biologic/systemic medications, systemic plus biologic, or a combination of conventional systemic therapies. Combining methotrexate and biologics is the only combination therapy with grade I evidence, and increased efficacy has been demonstrated in 16 clinical studies.1 Combination therapy with retinoids has a lower degree of evidence and is predominantly used in pustular and palmoplantar disease. Increased efficacies have also been seen with both TNF-α and IL-12/23 inhibitor in combination therapy with narrow-band ultraviolet light B.2 Cyclosporine is not commonly used in combination therapy and its published use has been limited to 7 nonrandomized studies and case reports of 94 patients. Combined use of biologics has scarce data only reported in recalcitrant psoriasis and is not recommended at this time. Optimal safety monitoring for combination therapy has not been established and doctors using combination therapy should follow monotherapy guidelines. In general, monotherapy is preferred, but accumulating evidence supports the administration of a systemic agent with a biologic when needed. Emerging highly selective IL-17 biologics may provide required efficacy as monotherapy.

Biologics in pregnancy

Most of the data on TNF-α inhibitor use during pregnancy are from studies of patients with rheumatoid arthritis (RA) and Crohn’s disease. These studies are limited by small
numbers and include the use of concomitant medications. Incidences of VATER syndrome (vertebral abnormalities, anal atresia, cardiac defect, tracheoesophageal defects, renal defects, and limb defects) have been reported in neonates born to mothers given TNF-α antagonists,3 but these results have not been reproduced and are controversial. In general, TNF-α therapy in pregnancy is considered safe, but should be used with caution.

The effect on neonatal immunity when a pregnant woman is taking TNF-α inhibitors is not well understood. In one case report, an infant born to a 28-year-old patient with refractory Crohn’s disease who took infliximab during pregnancy died of granulomatous process at 4.5 months after being vaccinated at 3 months with Bacillus Calmette-Guérin (BCG) vaccine. BCG vaccination is contraindicated in individuals who are receiving immunosuppressive drugs.4 Another study has shown that infliximab does not cross the placenta prior to 30 weeks, but does during the third trimester, and detectable levels in infants’ serum can be seen between 2-7 months.5 Thus, the recommendation is to postpone live vaccines in children born to women who received TNF-α therapy during the third trimester and until an infant is at least 7 months of age. It is not advised to use ustekinumab or secukinumab in patients who are pregnant or planning to become pregnant, as data are limited at this time.

Live vaccines are attenuated natural pathogens and are contraindicated for all patients taking biologics. They should be dosed 2-4 weeks prior to the initiation of TNF-α inhibitors.

Biologics and vaccines
Live vaccines are attenuated natural pathogens and are contraindicated for all patients taking biologics. They should be dosed 2-4 weeks prior to the initiation of TNF-α inhibitors. If live vaccination is necessary, a washout of at least 1-3 months from a biologic is necessary prior to vaccination. Inactivated vaccines are safe during biologic therapy but overall response may be compromised.6

Perioperative use of biologics
A few studies have looked at perioperative use of biologics, and most involve the use of TNF-α inhibitors in inflammatory bowel disease (IBD) and RA patients. Most studies reveal no statistically significant increased risk in post-surgical complications in terms of infections or delayed wound healing. However, they do reveal a slight trend toward an increase in infections and post-operative wound healing. Most reviews in the rheumatology literature recommend discontinuing any TNF-α inhibitor for one week prior to surgery and 2-4 weeks after surgery.

Biologics and adverse events
Infection and malignancy are the primary adverse events of concern for patients taking biologics. The risk of infection is more evident, whereas risk for malignancy is less clear. Data from 11,466 patients treated with biologics in the PSOLAR registry with up to 8 years of follow-up, demonstrate a cumulative incidence rate of serious infections of 1.45 per 100 patient-years, with most commonly reported serious infections being pneumonia and cellulitis.7 The data were further delineated among each biologic, which showed an incidence of 0.83, 1.47, 1.97 and 2.49 per 100 patient-years in the ustekinumab, etanercept, adalimumab and infliximab cohorts, respectively. In general, patients on biologics should be monitored closely and treatment should be discontinued in those who develop serious infection or sepsis. Treatment should not be initiated in patients with active infection.

There is questionable increased risk of lymphoma with biologics, and this risk is confounded by the inherent risk of lymphoma in psoriasis alone. It is not recommended to start a biologic on a patient with lymphoma or positive history of lymphoma. However, treatment of patients with a history of solid organ cancer appears promising, but data are preliminary. In a nationwide cohort study of RA patients with a history of breast cancer, those who started TNF-α inhibitor treatment did not experience greater breast cancer recurrences than RA patients treated otherwise.8 It is not known if these results can be generalized. It is recommended that patients discuss the use of biologics with their oncologist, taking into account the overall impact of psoriasis on their lives and the risk of not treating them. Currently, psoriasis patients on biologics should be screened for early detection of skin cancer, according to
American Cancer Society guidelines, in the same manner as the general population.

Anti-TNF-α agents should be prescribed with caution in patients with stage III or IV congestive heart failure (CHF) and should be discussed with the patient’s cardiologist before initiating therapy. Risk of worsening CHF in patients taking TNF-α agents varies in the literature but appears to occur more in elderly patients. A prior history of CHF carries a fourfold risk of death among patients taking anti-TNF-α biologics, compared to methotrexate. A recent large metaanalysis of randomized controlled trials of biologics show no increased risk of CHF.9

Psoriasis and cardiovascular disease
Considerable scientific and clinical evidence now shows that patients with moderate to severe psoriasis have increased risk for cardiovascular (CV) disease. Increase in CV risk is seen across all ages, but appears to affect younger males in particular. Even when controlling for traditional CV risk factors, there is still a 6.2% attributable risk of major adverse cardiac events (MACE) within 10 years, providing further evidence for psoriasis as an independent risk factor for CV disease. In a clinical study comparing coronary artery calcium scores of patients both with and without psoriasis, the calcium scores of patients with psoriasis were increased, compared to those of age- and sex-matched controls, none of whom had known cardiovascular disease.10 Perhaps the most talked-about topic related to the pathogenesis of psoriasis was that similar proinflammatory mediators/cells are found in both psoriasis and atherosclerotic plaques.11 Additionally, inflammation can be seen throughout the systemic vasculature in PET-CT scans, which may explain CV inflammation as well.12

Appropriately managing CV disease is therefore an integral part of care for patients with moderate to severe psoriasis. It is imperative for dermatologists to educate both the patient and other providers about the associations with cardiovascular disease in addition to other comorbidities. Prevention should be emphasized and patients should be asked about their blood pressure. Blood glucose and lipids should be checked annually. Additionally, lifestyle modifications should also be discussed including diet, alcohol intake, and weight loss. As of now, there is no definitive role for systemic treatment in reducing cardiovascular risk, but clinical studies are looking further into this potential. Conclusive biomarkers to monitor for CV risk have not yet been identified; therefore, CV disease should be considered in all patients with moderate to severe disease for now.

Perhaps the most talked-about topic related to the pathogenesis of psoriasis was that similar proinflammatory mediators/cells are found in both psoriasis and atherosclerotic plaques.

Pediatric psoriasis
Pediatric dermatologist Dr. Amy Paller, Northwestern University, Illinois, United States, reported that psoriasis affects 0.4-7% of all children in the US and is often misdiagnosed, with only 9.4% diagnosed prior to referral. Facial involvement is more common in pediatric psoriasis and is the sole manifestation in 4-5% of patients. Diaper-area (napkin) psoriasis is due to koebnerization from stool and urine and often clears when the child is out of diapers. No data exist for recurrence later in life. There is a higher prevalence of guttate psoriasis (~30%), which typically occurs 1 to 3 weeks after streptococcal infection. It may clear spontaneously; however, 40% may progress to plaque-type psoriasis.13

Comorbidities in pediatric psoriasis
Comorbidities in the pediatric population have not been studied as well as in the adult population but have similar implications. Studies have shown there is a profound psychological effect on the pediatric population, showing increased risk of depression, anxiety, and bipolar disorder.14 Psoriatic arthritis can also be seen in pediatric patients with psoriasis and is predominantly classified as juvenile idiopathic arthritis (JIA). There is also an increased incidence of Crohn’s disease in patients with psoriasis, while there has been no increase in ulcerative colitis. TNF-α inhibitor-induced psoriasiform dermatitis
can also be seen in the pediatric population and favors periorificial skin, scalp, dorsal hands/feet, nails, and palmoplantar pustulosis. Theories about the pathogenesis of TNF-α inhibitor-induced dermatitis include increased interferon expression, homozygous IL-23R polymorphisms with less HLA-CW*602, or an infectious trigger, such as streptococcus or staphylococcus. The association of psoriasis and metabolic disease is well established in the adult psoriasis population, and evidence is growing for the pediatric population. Several studies have shown that pediatric patients with psoriasis are more obese. It has also been shown there is more psoriasis among obese children, with odds ratios (OR) of 1.31, 1.39, and 1.78 for developing psoriasis in overweight, moderately obese, and extremely obese pediatric populations. Furthermore, severity of psoriasis may also play a role in the risk of developing obesity, with greater risk for obesity and higher waist circumference seen in patients with severe disease. However, the idea of improvement in psoriasis through weight loss remains controversial. Also, there are increased rates of hyperlipidemia and diabetes in pediatric psoriasis patients. Current monitoring and management recommendations for pediatric patients with psoriasis include recording the patient’s BMI and waist circumference measurement, lab monitoring of fasting lipids and glucose, and recommending a healthy lifestyle for overweight or obese pediatric patients.

Investigative drugs
Another discussion focused on data from the UNCOVER-1 trial, which studied the maintenance of efficacy in ixekizumab patients at week 60. Ixekizumab patients with an sPGA (0,1) or PASI 75 at week 12 who were subsequently treated with the drug in either 12- or 4-week intervals maintained a PASI 75 response of 86.2% and 87.9% at week 60, respectively. Additionally, data on suicide-related thoughts and behaviors were also presented. In more than 6,000 patient-years exposure to ixekizumab, there have been no suicides to date. Furthermore, rates of suicide-related thoughts and behaviors of all clinical trial patients are consistent with results reported in a psoriasis patient population cohort study. Safety, efficacy and patient-reported outcomes in up to 52 weeks of treatment with tofacitinib, an oral janus kinase inhibitor, for chronic plaque psoriasis were also presented. Two patient groups were randomized to twice-daily dosages of 5 mg or 10 mg. Safety profiles were similar at 52 weeks in both treatment groups. The most common adverse events reported were nasopharyngitis, upper respiratory tract infection, and elevated blood creatine phosphokinase. However, no clinically meaningful changes in lab parameters were observed over 52 weeks, including neutrophil count, creatine phosphokinase, and LDL. Maintenance of response was also demonstrated, with 59% and 43% PASI 75 response at week 16, compared with 52% and 40% in the tofacitinib 5-mg-twice-daily and the 10-mg-twice-daily dosage groups, respectively, at week 52. Those who received placebo initially were treated with tofacitinib at week 28, while non-responders (<PASI 75) were discontinued.

Phase 3 results from the ESTEEM 1 and 2 studies of apremilast show modest PASI 75 rates of 33.1% and 28.8%, respectively, in patients receiving apremilast, 30 mg twice daily. Safety data show increased rates of diarrhea, nausea, and headaches, which, while common, are not serious adverse events and do not generally lead to discontinuation. Furthermore, 2-year safety data offer compelling evidence for tolerability of the drug, with rare reports of any side effects. ESTEEM 2 studies also offer statistically significant results for apremilast use in palmoplantar disease with palmoplantar PGA of 0 or 1 in 65.4% of patients.

Secukinumab
The results of two phase 3 trials that studied secukinumab, an interleukin-17A inhibitor, were discussed. In the studies – Efficacy of Response and Safety of Two Fixed Secukinumab Regimens in Psoriasis (ERASURE) and Full Year Investigative Examination of Secukinumab vs Etanercept Using Two Dosing Regimens to Determine Efficacy in Psoriasis (FIXTURE) – patients were randomly given either 150-mg or 300-mg doses of the drug. PASI 75 response in the 300-mg dosage group exceeded the response in the 150-mg group by more than 10% in both studies. Maximal PASI response was seen at week 16 in the 300-mg dosage group, with PASI 75 seen in 86.1% and 86.7% of patients, in ERASURE and FIXTURE studies respectively. Efficacy was also maintained, with a similar PASI 75 score at week 52 as week 12: 74.3% and
78.6%, respectively. In addition, collective data from both studies demonstrate the 300-mg dosage acts early, as it reduces mean PASI by 50% at week 3. Moreover, the 300-mg dosage provides better efficacy for two weight groups: <90 kg and >90 kg. Alternative “as needed” treatment with initiation at start of relapse was shown to be ineffective. Patients treated at fixed intervals showed better IGA and PASI responses than “as needed” counterparts for both 150 mg and 300 mg dosage arms. There were rare reports of adverse events, mostly notable the presence of candidal infections, mostly mild or moderate in severity. This is not surprising, as errors of IL-17 immunity underlie chronic mucocutaneous candidiasis.

Brodalumab
The results of several pivotal studies of investigational drugs in the final stages of clinical development were discussed, including the results of an open-label extension of a phase 2 study of brodalumab, an IL-17R inhibitor. (The results were reported shortly after Amgen announced it was ending its participation with AstraZeneca in developing brodalumab due to “events of suicidal ideation and behavior in the brodalumab program.” Since then, AstraZeneca and Valeant Pharmaceuticals International Inc. agreed to continue to develop the drug.) According to the results reported at the World Congress, week 144 of the study illustrated the long-term maintenance of response in 181 patients with chronic plaque psoriasis. During the study’s extension phase, patients received 210 mg every 2 weeks unless the patient’s weight was <100 kg. Those patients received 140 mg every 2 weeks, with the possibility of dose escalation to 210 mg if there was an inadequate response. A PASI 100 response was reported in 62.9% of patients in week 12, 61.8% patients at week 48, and in 51.4% patients at week 144. Also at week 144, a PASI 75 response was observed in 85.4% of patients, PASI 90 in 73.6% of patients, and PASI 100 in 51.4% of patients, compared with 95.4%, 85.1%, and 62.9% at week 12 respectively. Adverse events were similar among all treatment groups, including placebo. Four serious adverse events were seen, but were not believed to be related to treatment.

Pathogenesis – IL-36
Psoriatic skin lesions show increased expression of the IL-17/TNF gene cluster; however, many are nonspecific and found in other inflammatory skin conditions, including eczema and lichen planus, which have overlapping inflammatory genes and pathways. When comparing psoriasis with other skin diseases, IL-36 is the most distinct gene expressed in psoriasis compared to other skin disorders. IL-36 shows increased gene expression, immunohistochemistry and serum levels in psoriasis. Thus there is potential for IL-36 to be a valuable future biomarker both for diagnostic purposes and monitoring of disease. It may also be investigated further as a therapeutic target.

References
REPORT FROM THE 23RD WORLD CONGRESS OF DERMATOLOGY


IPC board names Christy Langan new CEO

Christy Langan, who joined the IPC in 2009 and has served in various roles at the organization, including as interim CEO in the latter part of 2015, has been named CEO by the IPC board of directors.

Langan also has served as the IPC’s chief operating officer for the past two years. She has more than 20 years of experience in nonprofit management, including serving in senior leadership positions with two national nonprofit organizations, the National Psoriasis Foundation and the Points of Light Foundation. She also served as executive director of Volunteer San Diego.

At the National Psoriasis Foundation, Langan served in various capacities, including senior director of education and outreach, where she was responsible for developing and managing education programs for patients and medical professionals, and as director of corporate relations, where she raised support for the organization and worked closely with the pharmaceutical industry to develop outreach and awareness programs.

“Christy brings to IPC a diverse set of skills, an entrepreneurial spirit and a passion for improving the lives of those living with psoriasis,” said IPC board president Professor Chris Griffiths. “Her background and years of experience with the IPC are valuable assets that will advance IPC’s vision to improve scientific knowledge of psoriasis and enhance the care of patients worldwide.”

ACCESS TO CARE

IPC disappointed with Medicare/Medicaid rule on payments for biosimilars

Members of the IPC Biosimilars Working Group have expressed significant concerns over final rules issued by the US Center for Medicare and Medicaid Services (CMS) regarding payment rates for biosimilar drugs.

Biosimilars are highly similar to already-existing (reference) drugs, with minor differences, and are expected to produce similar clinical results. Biosimilars for several medical conditions, including psoriasis, are being developed and beginning to appear on the market.

In comments submitted to CMS before the final rules were issued on Oct. 30, the Biosimilars Working Group and more than 80 other medical and stakeholder groups expressed concern over the agency’s plan to place all biosimilar products of a single reference product under the same code. They asked CMS to reimburse biosimilars as unique products that would be given unique codes to ensure accurate monitoring of each drug. However, CMS declined to change the reimbursement rule, which will go into effect Jan. 1, 2016.

“We are disappointed that CMS finalized the payment schedule without making the changes we believe are necessary to ensure accurate pharmacovigilance for each biosimilar and for the competitive development of safe and effective biosimilars,” said IPC Councilor Andrew Blauvelt, MD, who heads the working group. “We will continue to monitor this issue with CMS, and also examine other important topics, such as extrapolation and interchangeability across the global landscape of biosimilar development and clinical practice.”

PATIENT CARE

Prospective pediatric registry

As a result of a daylong meeting in London last August, IPC has taken initial steps to create a global pediatric psoriasis registry. The meeting included a review of three psoriasis registries – the IPC Retrospective Pediatric Psoriasis Registry, the British Association of Dermatologists Biologic Interventions Register, and the German registry Pso-BEST. Information and lessons learned from these registries will be used to guide the development of the IPC Global Pediatric Psoriasis Registry. IPC councilors serving on the committee are Amy Paller and Bruce Strober, United States, and Marieke Seyger, the Netherlands.

They’re back! IPC’s Hot Topics Roundtables

Since 2005, IPC has on occasion convened Hot Topics Roundtable discussions, which have provided excellent opportunities for the exchange of ideas among councilors and IPC partners on “hot topics” critical to advancing
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IPC NEWS

Psoriasis research, treatment and education. Past topics have included phenotypes, obesity in patients with psoriasis, comorbidities, and biosimilars. These discussions entail debating solutions to problems and key issues that are global or local to a specific country. The roundtable events are facilitated for equal exchange among all attendees to ultimately result in a position statement or solution for the chosen topic. IPC sponsored two roundtable discussions in October:

• IPC councilors from Latin America and other regional experts gathered prior to the European Academy of Dermatology & Venereology (EADV) Congress in Copenhagen, Denmark, for a Hot Topics Roundtable titled “Biosimilars in Latin America.” At the meeting, which built upon IPC’s ongoing focus on the role biosimilars will play in psoriasis treatment worldwide, representatives from originator and biosimilar drug manufacturers discussed their perspectives on the science, manufacturing processes, trial development, and strategies of market entry. These topics led to a discussion of the benefits and challenges of biosimilars entering the psoriasis market in Latin America. Resulting from the meeting was the formation of a new IPC working group to focus on this topic, with several educational symposia slated to be presented at regional dermatology meetings throughout 2016. A manuscript on the topic is currently in development.

• IPC continues its efforts to enrich the knowledge and advancement of care of patients with psoriasis. These efforts focus on defining and setting expectations for the overall health of patients with psoriasis. In late October, the IPC hosted a Hot Topics Roundtable discussion titled “Setting the Expectations for Treatment Outcomes: Focusing on the Overall Health of Psoriasis Patients.” Topics included tailoring effective treatment for overall health, including psychosocial issues; comorbidities; improving treatment adherence; and achieving optimal treatment outcomes. Twenty IPC Councilors attended the discussion. Chairing the meeting were IPC Board Members Craig Leonardi and Bruce Strober. A manuscript is also currently in development.

RESEARCH

IPC symposium focuses on epidemiology of psoriasis
Psoriasis experts from the United Kingdom, Germany, Italy, and the Netherlands led discussions about the epidemiology of psoriasis during an IPC-sponsored symposium as part of the 45th annual meeting of the European Society for Dermatological Research (ESDR) held in Rotterdam, the Netherlands, in September. Titled “The Epidemiology of Psoriasis: Towards a Global Psoriasis Atlas,” the symposium addressed topics that included the temporal trend in the epidemiology of psoriasis in the United Kingdom, which focused on a population-based...
study using the Clinical Practice Research Datalink; the use of multi-source data to determine the epidemiology of psoriasis; lessons from studies on the epidemiology of atopic dermatitis; insights gained through registry data about the clinical epidemiology of psoriasis; and psoriasis and cardiovascular disease.

IPC board president Chris Griffiths, Manchester, United Kingdom, led a discussion about the Global Psoriasis Atlas, an international research program aiming to define the global burden of psoriasis. It is a collaboration of the IPC, the International League of Dermatological Societies (ILDS), and the International Federation of Psoriasis Associations (IFPA). Serving as faculty for this session were Professor Darren Ashcroft, Manchester, United Kingdom; Professor Matthias Augustin, Hamburg, Germany; Dr. Carsten Flohr, London, United Kingdom; Professor Luigi Naldi, Bergamo, Italy; and Professor Dr. Tamar Nijsten, Rotterdam, the Netherlands. The Global Psoriasis Atlas Project will begin development in 2016.

British Journal of Dermatology publishes two IPC articles
Two articles submitted by the International Psoriasis Council have been published online in the British Journal of Dermatology and will appear in future print editions of the journal.

The first article, “Prioritizing the global research agenda in psoriasis: An International Psoriasis Council Delphi consensus exercise,” lists the results of an IPC survey that identified 21 top priorities that will guide future psoriasis research. IPC launched the survey because gaps exist in the understanding of psoriasis, said lead author Dr. Bruce Strober, director of the University of Connecticut dermatology department and an IPC board member. “This list will provide both institutions and individuals a better sense of the pressing and relevant research needs in psoriasis.”

For the survey, the IPC used the Delphi method, a technique that uses a series of anonymous written discussions to collect data from a panel of experts, eventually reaching a consensus. IPC surveyed psoriasis experts from around the world who belong to the council. After repeated voting online, these specialists reached consensus on the 21 priorities. Find these priorities along with an abstract of each at www.psoriasiscouncil.org/Delphi2014.

The second article, “Biosimilars for psoriasis: pre-clinical analytical assessment to determine similarity,” explores the science behind the pre-clinical development of biosimilars. In the article, IPC councilors discuss this development and offer suggestions for producing biosimilars in a high-quality and standardized manner.

Although the U.S Food and Drug Administration has not yet approved any biosimilars for psoriasis, the agency has established an approval pathway for them. South Korean biopharmaceutical manufacturer Celltrion has filed for FDA approval of Remsima, a biosimilar version of the psoriasis drug infliximab (Remicade) and a decision could come soon. (Celltrion has been approved by the European Medicines Agency [EMA] and is on the market in Europe.)

Both articles are available through The British Journal of Dermatology through the Wiley Online Library. The article about IPC’s research priorities is available at bit.ly/DelphiPaper. The biosimilars article is at bitly.com/IPCbiosimilars.

EDUCATION AND OUTREACH
Meet the Experts programs
Manchester, United Kingdom
In July, the IPC sponsored a Meet the Experts panel discussion as part of its participation in the 95th meeting of the British Association of Dermatologists. Topics discussed included “The impact of liver comorbidity on management

Among those on hand at the well-attended Meet the Experts program in Manchester were, from left, Ruth Murphy, Elise Kleyn, Jonathan Barker, Brian Kirby, and Chris Griffiths.
of psoriasis,” “A child with psoriatic arthritis and psoriasis,” “Severe psoriasis and concomitant malignancy,” and “A challenging case from Manchester on the brain-skin axis.” IPC board president Chris Griffiths moderated the discussions. Panelists were Jonathan Barker, London, St John’s Institute of Dermatology, King’s College; Ruth Murphy, Nottingham University Hospital; Brian Kirby, Dublin, St. Vincent’s University Hospital; Elise Kleyn, Manchester, University of Manchester.

Copenhagen, Denmark
Lars Iversen, Aarhus University Hospital, Denmark, chaired this Meet the Experts program held during the 24th Congress of the European Academy of Dermatology & Venereology. Discussions included the relationship between psoriasis and kidney complications, renal comorbidities, and malignant melanoma and biologics. Panelists were IPC Councilors Claus Zachariae, Gentofte Hospital, Copenhagen, Denmark; Lluís Puig, Hospital de la Santa Creu i Sant Pau, Barcelona, Spain; and Charles Lynde, University of Toronto, Markham, Canada.

Providers learn patient-care strategies at IPC-sponsored workshop
Strategies for motivating patients who have psoriasis to adopt behaviors that would improve their health were the focus of a training workshop sponsored by the IPC during the International Federation of Psoriasis Associations (IFPA) World Conference of Psoriasis & Psoriatic Arthritis in Stockholm, Sweden, in July.

The daylong Pso Well Training Workshop was offered in conjunction with IMPACT Psoriasis, a research program at the University of Manchester, United Kingdom. Health care providers attending the workshop practiced communication skills and strategies. Following discussions of psoriasis and comorbidities and behaviors associated with them, the group learned to use a technique called motivational interviewing, a patient-centered and evidence based approach to help people make positive changes in their health-related behaviors. Attendees were encouraged to incorporate these skills in practice with patients with psoriasis. IPC Councilor Christine Bundy and Anna Chisholm, both experts in behavioral medicine and health psychology at the University of Manchester, served as faculty.

The IFPA World Conference, attended by psoriasis experts from around the world, takes place every three years in Stockholm. Find out about IMPACT Psoriasis at www.impactpsoriasis.org.uk.

Psoriasis experts meet in Iran
More than 60 Iranian dermatologists attended the first National Psoriasis Seminar in Rasht, Iran, on Nov. 5. The meeting was organized by new IPC Councilor Dr. Omid Zagari and dermatologist Dr. Narges Alizadeh, both of Rasht. Lecturers were psoriasis experts from Shahid Beheshti and Guilan universities of medical sciences. The meetings focused on several aspects of psoriasis, including the phenotypes of psoriasis, psoriasis mimickers, psoriatic arthritis, and new treatments.

New IPC Councilor Omid Zargari (second from left) and his Iranian colleagues attend the first national psoriasis seminar in Rasht, Iran.
NEW IPC COUNCILORS

Wei-Sheng Chong, MBBS, MMed, MRCP, FAMS, FRCP
Singapore
Dr. Chong is a senior consultant dermatologist and heads the photodermatology unit at the National Skin Centre in Singapore. He also heads the dermatology unit in the department of general medicine at Khoo Teck Puat Hospital. He received his bachelor degrees in medicine and surgery from the National University of Singapore in 1997. Dr. Chong has served as clinical senior lecturer for National University’s Yong Loo Lin School of Medicine, the Duke-NUS Graduate Medical School, and the National Healthcare Group Family Medicine Residency Programme in Singapore. He is the medical advisor for the Psoriasis Association of Singapore, a fellow of the Asian Academy of Dermatology and Venereology, and a faculty member of F1000Prime, whose members rate and explain top articles in the life sciences. An internationally recognized speaker, Dr. Chong has also written book chapters, compiled a handbook on common skin diseases, and published more than 70 articles in national and international journals. Among many awards, he has received the National Healthcare Group Excellence in Action Award. His research interests are in photodermatology and psoriasis.

Kristina Callis Duffin, MD, MS
Salt Lake City, Utah, United States
Dr. Duffin, board-certified in dermatology and internal medicine, is an assistant professor of dermatology at the University of Utah in Salt Lake City. She is the co-director of the Utah Psoriasis Initiative, a research project aimed at correlating the phenotypic and genotypic features of psoriasis. Her primary clinical focus is the management of psoriasis with all types of therapeutics. She has participated as principal or sub-investigator in more than 40 clinical trials, mostly for therapeutic agents for psoriasis. Dr. Duffin is an internationally recognized speaker and serves on several National Psoriasis Foundation boards, including medical advisory and editorial. From 2011-2013, she received the Translational Comparative Effectiveness Research Scholars Fellowship. Dr. Duffin is the author or co-author of many scientific papers and book chapters on psoriasis and psoriatic arthritis. She is the past president of Intermountain Dermatology Society.

Andrew Johnston, PhD
Ann Arbor, Michigan, United States
Dr. Johnston is a research assistant professor in the University of Michigan dermatology department whose primary interest is the identification of immunological pathways involved in the pathogenesis of psoriasis. He completed his PhD at the University of Warwick Medical Research Institute in Coventry, England, and did post-doctoral training on psoriasis immunology under Professor Helgi Valdimarsson in the immunology department at National University Hospital, Reykjavik, Iceland. In addition, he completed post-doctoral training on keratinocyte biology under the direction of Dr. James T. Elder at the University of Michigan. Currently, Dr. Johnston is investigating how recently-identified members of the IL-1, IL-17 and IL-36 families of cell signaling molecules contribute to the immune cell activation and infiltration that are characteristic and necessary for the development of psoriatic skin lesions. Additionally, Dr. Johnston is examining the role of the bacteria that colonize the tonsils and the skin (the microbiome) in the triggering and maintenance of psoriasis skin lesions.

Angela Londoño, MD
Medellín, Colombia
Dr. Londoño, professor of dermatology at CES University in Medellín, specializes in clinical and surgical dermatology. She graduated from the University Pontifica Bolivariana’s dermatology program in 2004 and received her master’s degree in epidemiology from CES University in 2009. She is the co-coordinator of the Colombian Group of Psoriasis and Psoriatic Arthritis (ColPsor), a group of dermatologists and rheumatologists interested...
in promoting psoriasis knowledge and improving the quality of life of patients who have these conditions. The group is supported by the Colombian Association of Dermatology and Dermatologic Surgery (Asocolderma). A founding member of the Latin American Society of Psoriasis (SOLAPSO), Dr. Londoño also served as editor of evidence-based guidelines for the management of psoriasis in Colombia in 2012. She has participated in various psoriasis clinical trials and has authored various articles in national and international journals.

Akimichi Morita, MD, PhD
Nagoya, Japan
Dr. Morita is professor and chairman of the department of geriatric and environmental dermatology at Nagoya City University Graduate School of Medical Sciences, a post he has held since 2003. A graduate of Nagoya City University, Dr. Morita received his MD degree in 1989 and his PhD in basic immunology at Aichi Cancer Center in Nagoya. He studied photobiology and photoimmunology at Dusseldorf University as a Humboldt Foundation fellow, where he discovered UVA1-mediated human T helper cell apoptosis as a fundamental mechanism of UVA1 phototherapy. He also trained at the University of Texas Southwestern Medical Center in Dallas and developed a Langerhans cell-targeted vaccination. Dr. Morita has introduced numerous standard phototherapies to Japan. His research interests include phototherapy, cutaneous immunology, and skin aging. He is author or co-author of more than 140 papers in international journals. He served as an editor of the *Journal of Dermatological Science* from 2008 to 2013. Currently, Dr. Morita serves as secretary-general of the Japanese Society of Investigative Dermatology (JSID) and vice director of Nagoya City University Hospital.

Nancy Podoswa, MD
Naucalpan, Mexico
Dr. Podoswa is an attending physician in the dermatology department of the Hospital General Regional No. 1 Dr. Carlos MacGregor Sanchez Navarro, Mexican Institute of Social Security, in Mexico City, where she also maintains a private practice. She is a professor of dermatology at the Universidad Nacional Autónoma de México and the Universidad Anáhuac in Mexico City. She attended the Universidad Nacional Autónoma de México School of Medicine and completed residencies in internal medicine at the Hospital General de Zona No. 1 Gabriel Mancera, in dermatology at the Hospital de Especialidades Centro Médico Nacional Siglo XXI, and in dermatopathology at the Hospital General de México. Dr. Podoswa has authored numerous papers and made several national and international psoriasis-related presentations. She was named best dermatologist by the Carlos MacGregor Sanchez Navarro regional hospital in 1991. She is a member of the Mexican Society of Dermatology, a founding member of the Latin American Society of Psoriasis (SOLAPSO), and a founding member of PSOMEX, the Mexican Group for the Study of Psoriasis.

Omid Zargari, MD, FAAD
Rasht, Iran
Dr. Zargari is the chief of the Society of Dermatologists of Guilan and a consultant dermatologist at the DANA clinic in Rasht. He obtained his medical and dermatology degrees from the Shahid Beheshti University of Medical Sciences in Tehran. He is a former assistant professor of dermatology at the Guilan University of Medical Sciences and, in 2003, was selected as the university’s best researcher. Dr. Zargari has published numerous scientific articles in different fields of dermatology and is a member of several professional organizations, including the American Academy of Dermatology. He has served as an editor and reviewer for various dermatology journals. Dr. Zargari’s main dermatological interest is in psoriasis, and he is active in psoriasis-related research projects and educational programs in his country. He serves as a national representative for PIN (Psoriasis International Network).
HOT TOPICS IN PSORIASIS

The Changing Landscape of Global Psoriasis Management

American Academy of Dermatology 74th Annual Meeting

Thursday, March 3, 2016
Washington, D.C.

Hear the latest in "hot topics" from world-renowned faculty and IPC board members:

Christopher Griffiths, MD, FRCP, FMedSci
University of Manchester, United Kingdom

Alan Menter, MD
Baylor University, Texas, United States

Craig Leonardi, MD
St. Louis University, Missouri, United States

Peter van de Kerkhof, MD, PhD
Radboud University, The Netherlands

Register for the Hot Topics discussion at:
www.surveymonkey.com/r/IPCHotTopics
Catching up on the IPC Psoriasis Review during conference breaks are (top, left to right) board members Chris Griffiths, United Kingdom, Ricardo Romiti, Brazil, and Alan Menter, United States, at the European Academy of Dermatology and Venereology Congress in Copenhagen, Denmark, and (bottom) IPC councilor Ron Vender, Canada, during the World Congress of Dermatology in Vancouver, British Columbia.

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IPC PSORIASIS REVIEW

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RESOURCES
The International Psoriasis Council is pleased to bring you the following educational opportunities and resources to advance your knowledge of treating patients with psoriasis.

UPCOMING IPC EVENTS

March 3, 2016
Hot Topics In Psoriasis: The changing landscape of global psoriasis management | Washington, D.C.
74th Annual Meeting of the American Academy of Dermatology

April 24, 2016
IPC’s Meet the Experts | Singapore
22nd Regional Conference of Dermatology

May 11-14, 2016
IPC Scientific Symposium | Scottsdale, Arizona
75th Annual Meeting of the Society of Investigative Dermatology (SID)

June 4, 2016
Biosimilars in Latin America & Meet the Experts symposium | São Paulo, Brazil
34th Reunión Anual de Dermatólogos Latinoamericanos (RADLA)

July 7, 2016
IPC’s Meet the Experts | Birmingham, UK
96th Annual Meeting of the British Association of Dermatologists

August 13, 2016
IPC’s Meet the Experts | Newport Beach, CA
67th Annual Meeting of the Pacific Dermatologic Association

September 6-10, 2016
IPC Scientific Symposium | Munich, Germany
46th Annual Meeting of the European Society of Dermatological Research (ESDR)

IPC’S ONLINE RESOURCES
Challenging Cases Webcasts
Recorded over the years at our Meet the Experts Programs around the world, these challenging cases are now listed online by topic:
• Psoriasis and pregnancy
• Palmoplantar psoriasis
• Psoriasis and Hodgkin disease
• Juvenile psoriasis
• Many more
www.psoriasiscouncil.org/education/webcasts_date.htm

IPC’s Crossfire Symposium: the Advent of Biosimilars
On-Demand webcasts featuring Point-Counter Point debates on:
• Degree of Similarity
• Pharmacovigilance
• Biosimilars in Dermatology Practice
www.bitly.com/ipccrossfire

Scan this code with your smartphone to connect to the IPC Psoriasis Review online.
No smartphone? Visit www.psoriasiscouncil.org/psoriasisreview.htm

Advancing Knowledge | Enhancing Care
The International Psoriasis Council (IPC) is a dermatology-led, voluntary, global nonprofit organization dedicated to innovation across the full spectrum of psoriasis through research, education and patient care. IPC’s mission is to empower our network of global key opinion leaders to advance the knowledge of psoriasis and its associated comorbidities, enhancing the care of patients worldwide.