

29th Nordic Congress of Dermatology and Venereology

June 7-10, 2001 in Göteborg, Sweden



WELCOME TO GÖTEBORG



Abstracts in the 29th Nordic Congress of Dermatology and Venereology and Information from the Nordic Societies

Organizing and Scientific Committee

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Supplement No 2, 2001, Forum for Nordic Dermato-Venereology

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PLENARY LECTURE 1 Chair: Yaar, M., U.S.A.	<i>The Role of Telomere Damage in Melanogenesis</i> +Yaar, Mina; Eller, Mark S.; Gilchrest, Barbara A.	PL1:1
PLENARY LECTURE 2 Chair: Meheus, A., BELGIUM	<i>Epidemiology of sexually transmitted infections in Europe</i> +Meheus, André	PL2:1
PLENARY LECTURE 3 Chair: Ruzicka, Th., GERMANY	<i>Immunomodulating therapy in dermatology: Today and into the next millennium</i> +Ruzicka, Thomas	PL3:1
COURSE 1 - IMMUNOLOGY FOR THE DERMATOLOGIST Chair: Ranki, A., FINLAND Co-Chair: Nordlind, K., SWEDEN	<i>Immunology for the dermatologist</i> +Ranki, Annamari; Nordlind, Klas	C1:1
	<i>Combining histamine with tumour necrosis factor-α leads to greatly enhanced inhibition in keratinocyte growth</i> +Harvima, Ilkka; Kivinen, Petri K.; Horsmanheimo, Maija; Hyttinen, Mika	C1:2
COURSE 2 - MYCOLOGY RELEVANT FOR THE DERMATOLOGIST Chair: Faergemann, J., SWEDEN Co-Chair: Svejgaard, E., DENMARK	<i>Mycology relevant for the dermatologist</i> +Faergemann, Jan; Svejgaard, Else	C2:1
	<i>Onychomycosis - Diagnosis and treatment</i> +Sigurgeirsson, Bárður	C2:2
COURSE 3 - LASER COURSE Chair: Bjerring, P., DENMARK Co-Chair: Troilius, A., SWEDEN	<i>Laser course</i> +Troilius, Agneta	C3:1
	<i>Treatment of Hailey-Hailey disease and Mb. Bowen with ultrapulsed CO₂-laser.</i> +Lauritzen, Edgar; Troilius, Agneta	C3:2
COURSE 4 - COURSE ON BASIC SKIN SURGERY Chair: Jemec, G., DENMARK Co-Chair: Stenquist, B., SWEDEN	<i>Course on basic skin surgery</i> +Jemec, G.; Stenquist, B.	C4:1
COURSE 5 - SELF-ASSESSMENT DERMATOPATHOLOGY COURSE Chair: Barr, R.J, U.S.A.	<i>Self-assessment dermatopathology course</i> +Barr, Ronald J.	C5:1
SYMPOSIUM 1 - PSORIASIS Chair: Badsgaard, O., DENMARK Co-Chair: Reitamo, S., FINLAND	<i>Psoriasis genetics</i> +Samuelsson, Lena	S1:1
	<i>New therapies</i> +Skov, Lone	S1:2
SYMPOSIUM 2 - LEG ULCERS Chair: Hansson, C., SWEDEN Co-Chair: Gottrup, F., DENMARK	<i>Conservative treatment</i> +Hansson, Carita	S2:1
	<i>Organisation of the wound healing area</i> +Gottrup, Finn	S2:2
	<i>Diagnostics in venous leg ulcer</i> +Karlsmark, Tonny	S2:3

<u>Session and Chairmen</u>	<u>Titles</u>	<u>Abstract No</u>
	<i>Conservative treatment – compression</i> +Bjellerup, Mats	S2:4
	<i>A surgical approach for the treatment of leg ulcer</i> +Jørgensen, Bo	S2:5
SYMPOSIUM 3 - SEXOLOGY Chair: Moi, H., NORWAY Co-Chair: Voog, E., SWEDEN	<i>Lubrikasjonsproblemer hos kvinner - vestibulitt - psykologiske faktorer.</i> +Langfeldt, Thore	S3:1
SYMPOSIUM 4 - ATOPIC DERMATITIS Chair: Langeland, T., NORWAY Co-Chair: Thestrup-Pedersen, K., DENMARK	<i>What regulates T lymphocyte migration?</i> +Thestrup-Pedersen, Kristian	S4:1
	<i>Discrepancies in prevalence of atopic dermatitis</i> +Broberg, Ann	S4:2
	<i>Environmental factors influencing the expression of atopic dermatitis - With focus on the possible influence of measles mumps and rubella-vaccination, measles infection, hormonal contraception use and insulin-dependent diabetes mellitus.</i> +Braae Olesen, Anne	S4:3
	<i>Treatment options in atopic dermatitis</i> +Reitamo, Sakari	S4:4
SYMPOSIUM 5 - HIV-INFECTION Chair: Pehrsson, PO., SWEDEN Co-Chair: Sandström, E., SWEDEN	<i>Adverse effects of HIV-treatment</i> +Sandström, Eric	S5:1
	<i>HIV treatment - from death to survival</i> +Gisslén, Magnus	S5:2
SYMPOSIUM 6 - PEDIATRIC DERMATOLOGY Chair: Kalimo, K., FINLAND Co-Chair: Broberg, A., SWEDEN	<i>Fungal infections in children</i> +Faergemann, Jan	S6:1
	<i>Papular eruption secondary to molluscum contagiosum</i> +Olafsson, Jon Hjaltalin; Davidsson, Steingrímur	S6:2
	<i>Treatment of small children with portwine stains</i> <i>What sort of anaesthesia do we use?</i> +Mørk, Nils-Jørgen	S6:3
	<i>Child with chronic skin disease: How is the family getting along?</i> +Koulu, Leena	S6:4
	<i>Fraud and non-medicinal treatments in pediatric dermatology</i> +Serup, Jørgen	S6:5
SYMPOSIUM 7 - PHOTODYNAMIC THERAPY Chair: Wennberg, A-M., SWEDEN Co-Chair: Wulf, H.C., DENMARK	<i>Photodynamic therapy. Mechanisms and procedures</i> +Moan, Johan; Juzenas, Petras; Juzeniene, Asta; Ma, Li-Wei; Iani, Vladimir	S7:1
	<i>Photodynamic therapy with 5-aminolevulinic acid of recalcitrant foot and hand warts.</i> +Stender, Ida Marie; Renhua, N.; Fogh, H.; Gluud, C.; Wulf, HC	S7:2
	<i>Imaging fluorescence of basal cell carcinomas</i> +Ericson, Marica; Sandberg, Carin; Wennberg, Ann-Marie; Gudmundsson, Fredrik; Rosén, Arne; Larkö, Olle	S7:3

<u>Session and Chairmen</u>	<u>Titles</u>	<u>Abstract No</u>
	<i>Skin autofluorescence in demarcation of basal cell carcinoma</i> +Renhua, Na; Rossen, Kristian; Stender, Ida-Maria; Wulf, Hans Christian	S7:4
	<i>Photodynamic therapy for psoriasis and extramammary Paget's disease</i> +Ros, Anne-Marie	S7:5
SYMPOSIUM 8 - OCCUPATIONAL DERMATOLOGY Chair: Björkner, B., SWEDEN Co-Chair: Bruze, Magnus, SWEDEN	<i>Epoxy dermatitis – what is new?</i> +Bruze, Magnus	S8:1
	<i>Occupational Plant Dermatoses.</i> +Paulsen, Evy	S8:2
	<i>Irritant contact dermatitis - clinical and experimental aspects.</i> +Lindberg, Magnus	S8:3
	<i>Trends in occupational dermatology</i> +Björkner, Bert	S8:4
SYMPOSIUM 9 - URETHRITIS Chair: Skov-Jensen, J., DENMARK Co-Chair: Lidbrink, P., SWEDEN	<i>Treatment of mycoplasma genitalium infections</i> +Falk, L.; Skov Jensen, J.	S9:1
SYMPOSIUM 10 - GENODERMATOSES Chair: Vahlquist, A., SWEDEN Co-Chair: Gedde-Dahl, T., NORWAY	<i>Genodermatoses - An Introduction</i> +Vahlquist, Anders	S10:1
	<i>Epidermal transglutaminase (TGM1) mutations in lamellar and non-lamellar ichthyoses – a larger spectrum than anticipated</i> +Pigg, Maritta; Vahlquist, Anders; Gedde-Dahl, Tobias; Gånemo, Agneta; Virtanen, Marie; Westermarck, Per; Haußer, Ingrid; Dahl, Niklas	S10:2
	<i>Life Quality Assessment in Ichthyosis Patients.</i> +Gånemo, A.; Vahlquist, A.; Sjöden, P-O; Lindberg, M.	S10:3
	<i>"Scandinavian" keratin mutations in epidermolytic hyperkeratosis (bullous ichthyosis).</i> +Virtanen, M.; Gedde-Dahl, T.; Mørk, N-J; Bowden, P.; Vahlquist, A.	S10:4
	<i>Epidermolysis bullosa simplex: Molecular characterization of the mutational spectrum in Danish patients</i> +Sørensen, C.B.; Ladekjær-Mikkelsen, A.-S.; Andresen, B.S.; Brandrup, F.; Veien, N.K.; Buus, S.K.; Anton-Lamprecht, I.; Kruse, T.A.; Jensen, P.K.A.; Eiberg, H.; Bolund, L.; Gregersen, N.	S10:5
	<i>The role of plectin for the integrity of human skin</i> +Koss-Harnes, Dörte; Høyheim, B.; Gedde-Dahl, T.	S10:6
	<i>Hereditary hypotrichosis simplex of the scalp. Clinical and molecular investigations in a Danish family.</i> +Bygum, Anette; Betz, RC; Nöthen, MM; Ibsen, HHW; Rasmussen, HB; Brandrup, F	S10:7
	<i>Ichthyosis-Prematurity Syndrome – an unknown, frequent and ancient "Mid-Scandinavian disease"</i> +Kampman, Petra T	S10:8
SYMPOSIUM 11 - SKIN INFECTIONS Chair: Olafsson, J., ICELAND Co-Chair: Christensen, O., NORWAY	<i>Resistance to antibiotics in dermatology</i> +Gaustad, Peter	S11:1

<u>Session and Chairmen</u>	<u>Titles</u>	<u>Abstract No</u>
	<i>Skin manifestations of streptococcal infections</i> +Broberg, Ann	S11:2
	<i>Dermatomycoses of the feet - more than meets the eye at first sight?</i> +Sigurgeirsson, Bárður	S11:3
	<i>Tropical skin infections/infestations in travellers</i> +Brandrup, Flemming	S11:4
SYMPOSIUM 12 - NORDIC DERMATOLOGY IN EUROPE Chair: Jemec, G., DENMARK Co-Chair: Bergbrant, Ing-Marie, SWEDEN	<i>The European Specialist Section (U.E.M.S) - Responsibilities and rights.</i> +Bergbrant, Ing-Marie	S12:1
SYMPOSIUM 13 - SKIN TUMOURS Chair: Helland, S., NORWAY	<i>Solar keratosis, Bowen's disease and keratoacanthoma - are they all squamous cell carcinoma?</i> +Sviland, Lisbet	S13:1
	<i>PUVA and skin tumours</i> +Karvonen, Jaakko	S13:2
	<i>Incidence of skin cancer in patients following organ transplantation.</i> +Lindelöf, Bernt	S13:3
SYMPOSIUM 14 - PHOTODERMATOLOGY Chair: Mörk, N-J., NORWAY Co-Chair: Jansén, C., FINLAND	<i>Narrowband UVB phototherapy for psoriasis</i> +Ferguson, James	S14:1
	<i>UVA1 Phototherapy.</i> +Podda, Maurizio; Grundmann-Kollmann, Marcella; Kaufmann, Roland	S14:2
	<i>UVA exposure and the risk of cutaneous malignant melanoma</i> +Moan, Johan	S14:3
	<i>UVA radiation enhances metastatic properties of melanoma cells</i> +Pastila, Riikka; Leszczynski, Dariusz	S14:4
	<i>UVA and photoprotection</i> +Larkö, Olle	S14:5
SATELLITE SYMPOSIUM 1 - ROCHE	<i>Inflammatory acne: Can resistance reveal how antibiotics work?</i> +Cove, Jonathan H.	SAT1:1
SATELLITE SYMPOSIUM 2 - GALDERMA	<i>Do We Need Combination Therapy?</i> +Faergemann, Jan	SAT2:1
	<i>Amorolfine + Terbinafine Combination: Results of a Clinical Trial in France</i> +Baran, Robert L.	SAT2:2
	<i>Rationale for Combination Therapy</i> +Evans, E.G.V.	SAT2:3
	<i>Amorolfine + Itraconazole Combination: Results of a Clinical Trial in Spain</i> +Lecha, Mario	SAT2:4
SATELLITE SYMPOSIUM 3 - SCHERING-PLOUGH	<i>Treatment of urticaria with antihistamines - new aspects</i>	

Session and Chairmen	Titles	Abstract No
SATELLITE SYMPOSIA 4 – PHOTOCURE	<i>Photodynamic therapy – an effective treatment in AK and BCC. An overview of its practice and benefits</i>	
FREE COMMUNICATIONS, FRIDAY a.m. Chair: Helland, S., NORWAY	<i>Arthritis and quality of life among members of the Nordic Psoriasis Associations. Data from the Nordic quality of life study</i> +Molin, Lars; Zachariae, Hugh; Zachariae, Robert; Blomqvist, Kirsti; Davidsson, Steingrímur; Mørk, Cato; Sigurgeirsson, Bardyr	O-1
	<i>Prevalence of fibromyalgia in patients with psoriasis</i> +Thune, Per	O-2
	<i>Use of alternative therapy in psoriatics from the nordic countries: A survey from 5739 members of the Nordic Psoriasis Associations</i> +Mørk, Cato; Zachariae, Hugh; Zachariae, Robert; Blomqvist, Kirsti; Davidsson, Steingrímur; Molin, Lars; Sigurgeirsson, Bardyr	O-3
	<i>Erythromelalgia: A syndrome of dysfunctional vascular dynamics</i> +Mørk, Cato; Asker, C.; Sælerud, G.; Kvernebo, K.	O-4
	<i>Treatment of Psoriasis in the Nordic Countries: A Survey from 5739 Members of the Nordic Psoriasis Associations.</i> +Zachariae, Hugh; Zachariae, Robert; Blomqvist, Kirsti; Davidsson, Steingrímur; Molin, Lars; Mørk, Cato; Sigurgeirsson, Bardyr	O-5
	<i>Psoriasis-related quality of life in 6497 Nordic patients</i> +Zachariae, Robert; Zachariae, Hugh; Blomqvist, Kirsti; Davidsson, Steingrímur; Molin, Lars; Mørk, Cato; Sigurgeirsson, Bardyr	O-6
	<i>Palmoplantar pustulosis, smoking and autoimmunity</i> +Michaëlsson, Gerd; Hagforsen, E; Nordlind, K	O-7
	<i>Botulinum toxin A improves life quality in severe primary focal hyperhidrosis</i> +Swartling, Carl; Naver, Hans; Lindberg, Magnus	O-8
	<i>An 8-year experience with routine SL mix patch testing supplemented with compsite mix</i> +Andersen, Klaus E.; Paulsen, E.; Hausen, B.M	O-18
FREE COMMUNICATIONS, FRIDAY p.m. Chair: Andersen, K.E., DENMARK	<i>Measurements of colour in port wine stains using a quantitative method</i> +Helsing, Per; Lyngsnes Randaberg, L.; Mørk, NJ	O-9
	<i>Treatment of chronic hand dermatoses with UVB/TL01</i> +Nordal, Eli J.	O-10
	<i>Ichthyosis-Prematurity Syndrome - an unknown, frequent and ancient "Mid-Scandinavian" recessive disease</i> Kampman, Petra	O-11
	<i>A randomized double-blind study comparing photodynamic therapy (PDT) with Metvix® to PDT with placebo cream in actinic keratosis</i> +Bjerring, Peter; Funk, J.; Roed-Petersen, J.; Söderberg, U.	O-12
	<i>A pivotal study of photodynamic therapy (PDT) with Metvix® 160 mg/g cream in patients with basal cell carcinoma (BCC) with a risk of complications and poor Cosmetic outcome using conventional therapy.</i> +Wennberg, AM; Horn, M; Wulf, HC; Warloe, T; Rhodes, I; Fritsch, C; Kaufmann, R; de Rie, M; Wolf, P; Stender, I; Solér, A; Wong, G; Lang, K; Legat, K; Pavel, S; Larkö, Olle	O-13

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	<i>Differences in sun exposure doses in SED and sun burning episodes when sunbathing at the beach on holidays in Southern versus Northern Europe</i>	O-14
	+Thieden, Elisabeth; Philipsen, P.A.; Heydenreich, J.; Sandby-Møller, J.; Wulf, H.C.	
	<i>Dermatan sulphate is released by proteinases of common pathogenic bacteria and inactivates antibacterial α-defensin</i>	O-15
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	<i>Allergic contact dermatitis from 2,2-bis[4-(2-hydroxy-3-methacryloxypropoxy)phenyl]-propane (BIS-GMA)</i>	O-19
	+Kanerva, Lasse; Jolanki, Riitta; Estlander, Tuula	
	<i>NOSQ - The Nordic Occupational Skin Questionnaire - a tool for surveying work-related skin diseases</i>	O-20
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	<i>Allergic contact dermatitis to budesonide reactivated by inhalation of the allergen</i>	O-21
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	<i>The ASP84 glu variant of the MC1R gene in Norwegian melanoma patients</i>	O-23
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	+Søyland, Elisabeth	
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	<i>Twisted collagen fibrils. Significance for hypermobile patients</i>	O-26
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	<i>Congenital onset ichthyosis in Norway: Are our patients satisfied with their treatment?</i>	O-27
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	<i>HSV-2 antibodies in STD-patients, healthy pregnant females, blood donors and medical students in Bergen.</i>	O-30
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- Antibodies against nicotinic acetylcholine receptors in sera from patients with palmo plantar pustulosis* P-33
+Michaëlsson, Gerd; Hagforsen, E; Nordlind, K; Lefvert, A-K; Mustafa, A
- Methotrexate and Psoriasis - Can we reduce the need of Liver Biopsies? An evaluation of aminoterminal propeptide of type III procollagen (PIIINP) in routine screening for methotrexate induced liver fibrosis.* P-34
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- Sensitization to inhalant and food allergens in childhood* P-35
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- Syndrome of endogenous intoxication in patients with mycrobial eczema* P-36
+Prokhorov, Dimitry
- Study of expression of fas-receptor on the lymphocytes of peripheral blood in patients with pemphigus* P-37
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- MED/MPD in thin and thick skin* P-38
+Nordal, Eli J.
- The potential role of oxidative stress in elicitation of contact allergy* P-39
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- Does imiquimod normalise hair growth in alopecia areata?* P-42
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- Successful treatment for multiple superficial basal cell carcinoma using imiquimod 5% cream - A case report* P-43
+Eklind, Jan; Lidbrink, Peter
- Photodynamic therapy (PDT) with Metvix® cream versus topical treatment with Efudix® cream in patients with multiple actinic keratosis on undamaged skin.* P-44
+Kampman, Petra; Lützow-Holm, Claus; Christensen, Ole
- Misoprostol improves symptoms in patients with erythromelalgia* P-45
+Mørk, Cato; Kvernebo, K
- Improved quality of life and disease severity in Norwegian patients with psoriasis after climatotherapy at the Canary Island* P-46
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Session and Chairmen

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+Broberg, Ann; Landys, Karl; Ternesten-Bratel, Annika

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+Selvaag, Edgar

Phototoxicity to diuretics and antidiabetics in the cultured keratinocyte cell line HaCaT. Evaluation by clonogenic assay and single cell gel electrophoresis (Comet assay) P-50

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+Kukk, Terje; Poder, A.; Kangur, A.; Silm, H.

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+Thune, Turid; Rustad, Lisbeth

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+Vagoras, Andrius; Sumila, A.; Lapinskaite, G.; Marciukaitiene, I.

Infectious skin diseases in recently returned travellers P-55

+Gasior-Chrzan, Barbara; Falk, Edvard S.

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THURSDAY 7/6		FRIDAY 8/6		SATURDAY 9/6		SUNDAY 10/6	
8			S: Psoriasis S: Leg ulcers	Case Reports	S: Photodynamic therapy S: Occupational dermatology	S: Skin Tumours S: Photodermatology	8
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10			COFFEE - Exhibition/poster visit	Free communications	COFFEE - Exhibition/poster visit	COFFEE - Exhibition/poster visit	10
11			S: Sexology S: Atopic dermatitis		S: Urethritis S: Genodermatoses	Plenary lecture Th. Ruzicka: Immuno-Modulating therapy in dermatology: today & into the next millennium	11
12			LUNCH		LUNCH	AWARDS CEREMONY CLOSING REMARKS	12
13			Plenary lecture M. Yaar: What controls melanogenesis?		Plenary lecture A. Meheus: Epidemiology of sexually transmitted infections in Europe: A changing pattern		13
14	REGISTRATION <i>Satellite Symposiums:</i> 15.00 PhotoCure Photodynamic Therapy - an effective treatment in AK and BCC. An overview of it's practice and clinical benefits. 16.00 Roche Inflammatory acne: can resistance reveal how antibiotics work. 17.00 Galderma Onychomycosis. 17.30 Schering-Plough Treatment of uteraria with antihistamines – new aspects		COFFEE - Exhibition/poster visit		Nordic Dermatology Association General Assembly		14
15			S: HIV-infection S: Pediatric dermatology	Free communications	COFFEE - Exhibition/poster visit		15
16					S: Skin infections S: Nordic dermatology in Europe	Free communications Poster discussion	16
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18			17.45 Bus to the Opera House: Musical Evita Buffet before performance				18
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* **Courses:**
Myology
Skin Surgery

** **Courses:**
Dermatopathology
Immunology
Laser Surgery

PL1:1

THE ROLE OF TELOMERE DAMAGE IN MELANOGENESIS

+Yaar, Mina* (U.S.A.); Eller, Mark S. (U.S.A.); Gilchrist, Barbara A. (U.S.A.)

*Boston University School of Medicine

Delayed tanning, a photoprotective cutaneous response to UV irradiation, appears within 3–4 days after a single UV exposure and clinically parallels increased tyrosinase activity in melanocytes. The action spectrum for the tanning response closely parallels the action spectrum for DNA damage as determined by pyrimidine dimer formation, suggesting that UV-induced DNA damage may be a melanogenic signal. In prokaryotes, photoprotective SOS responses are initiated during the repair of DNA damage through single-stranded DNA fragments (ssDNA) excised by nucleotide excision repair enzymes. To determine if in eukaryotes melanogenesis is part of an SOS-like response, and because almost all UV-induced DNA damage as thymine dimers or (6-4) photoproducts involves adjacent thymidines, we stimulated cells with the substrate for these photoproducts, thymidine dinucleotides (pTpT). pTpT entered the nucleus and led to a substantial increase in melanin content, compared to deoxyadenine dinucleotide (pdApdA), a dinucleotide rarely involved in photoproduct formation, used as control. Furthermore, pTpT increased tyrosinase mRNA and protein in cells, establishing that pTpT affects gene expression. Interestingly, as with UV irradiation, pTpT responses were mediated, at least in part through induction of p53 and p53-regulated genes. pTpT applied topically to guinea pig skin also induced pigmentation. Moreover, the pTpT-induced tanning was protective against UV irradiation as determined by histologic evaluation of UV-irradiated skin. Some but not all other ssDNA could induce melanogenesis, and effective sequences were noted to have homology to telomeres, the terminal portions of eukaryotic chromosomes that consist of tandem repeats of TTAGGG. Prior studies have suggested that telomeres form a loop structure at the end of chromosomes. Telomere loop disruption results in degradation of the 3' single-stranded overhang and, similar to the active ssDNA, induces p53 and p53-regulated genes. These findings suggest that telomere damage during UV irradiation might disrupt the loop structure and thereby serve as one signal for melanogenesis. To test this hypothesis, three 11-base oligonucleotides were designed: one homologous to the telomere, one complementary and one unrelated. In cultured pigment cells, pTpT increased melanin content 3-fold above control, but the telomere homologue increased it by 10-fold. No effect on melanogenesis was observed with the complementary or unrelated ssDNA. To determine the role of p53 in ssDNA stimulated melanogenesis in vivo, we examined their effect on pigmentation of p53 (+/+) and p53 (-/-) mice ears. After 15 daily topical applications over 3 weeks, Fontana-Masson staining revealed substantial increase of epidermal melanin in the ears of p53 (+/+) mice related with telomere homologues but not control sequences. In contrast, p53 (-/-) ears did not pigment in response to any of the ssDNA. We propose that, at least in part, tanning is a response to UV-induced telomere damage resulting in exposure of the TTAGGG repeat, activation of p53 and upregulation of tyrosinase. Topi-

cal applications of telomere homologues may stimulate photoprotective responses in human skin.

PL2:1

EPIDEMIOLOGY OF SEXUALLY TRANSMITTED INFECTIONS IN EUROPE

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*University of Antwerp

HIV/AIDS, genital herpes (HSV-2 and HSV-1), genital human papillomavirus (HPV) infection and *C. trachomatis* infection are the sexually transmitted infections (STI) of major public health importance in Europe during the last decade.

For HIV/AIDS the highest rates are seen in Spain, Portugal and Italy where the main exposure category is through sharing equipment for injecting drug use; the lowest rates are seen in the United Kingdom and the Scandinavian countries where the main exposure category is through homosexual transmission. Incidence of HIV infection is now relatively stable in most countries while the incidence of AIDS decreased significantly due to effective and earlier treatment.

The number of clinical cases of genital herpes has levelled off in recent years, but HIV 2 antibody rates in the general population (5% in teenagers, 10% in 20–29 years and 20% above 35 years) indicate the importance of asymptomatic infection.

HPV infection is also largely asymptomatic with 3 to 10% of adult women being infected with high-risk (oncogenic) HPV genotypes and 10 to 35% of women being infected with any type. Algorithms for cervical cancer screening combining testing for oncogenic HPV and Pap smear are actually evaluated.

Chlamydial infections have decreased considerably in countries that established comprehensive control programmes (e.g. Sweden), but in most countries infection rates remained high. In the UK, median prevalence in women was 4.5% in general practice, 4.6% in antenatal units, 4.8% and 5.1% in gynaecology clinic and family planning clinic attenders respectively, 8% in women seeking abortion and 16.4% in STD clinic attenders.

Gonorrhoea and syphilis have reached very low levels in Western Europe, but a major epidemic of syphilis and of the other STI occurred in Russia and the other Newly Independent States (NIS) of the former Soviet Union since 1992. This epidemic peaked in 1997/98. While incidence of syphilis is now below 5 per 100,000 in Western European countries, rates are between 100 and 300 per 100,000 in NIS countries.

Hepatitis B (HB) infection is the only STI for which an effective vaccine is available. Universal HB vaccination of infants and/or adolescents in Central and Southern European countries shall nearly eliminate HB infection as an STI there. Northern European countries still adhere to a vaccination policy of high-risk groups, an ineffective and inefficient approach.

PL3:1**IMMUNOMODULATING THERAPY IN DERMATOLOGY:
TODAY AND INTO THE NEXT MILLENIUM**

+Ruzicka, Thomas* (GERMANY)

*Heinrich-Heine-University

Immunomodulating drugs are developing to become the most important class of compounds for dermatology for the next years. Among these, immunosuppressive macrolides seem particularly promising. The prototype drug cyclosporine is highly efficient in a number of inflammatory skin diseases, but its use is restricted due to side effects and is recommended only in severe cases. For the topical treatment of mild to intermediate severity diseases, topical immunomodulating agents are preferable. Among these, Tacrolimus and Ascomycin seem particularly promising. Tacrolimus has been shown to be effective in atopic eczema, but its efficacy in psoriasis is limited to occlusive treatment only. Other possible applications for Tacrolimus are emerging such as Pyoderma gangraenosum and rheumatoid ulcers. The mechanism of action of Tacrolimus includes the modulation of a number of cytokines in epidermis and inflammatory cells.

Besides immunosuppressive macrolides, other classes of immunomodulating agents are emerging, such as TNF-antagonists and Imiquimod.

The rapidly expanding field of topical and systemical immunomodulators hold particularly promise for improved therapeutic possibilities in dermatology at the beginning of the 3rd millennium.

C1:1**IMMUNOLOGY FOR THE DERMATOLOGIST**

+Ranki, Annamari* (FINLAND); Nordlind, Klas** (SWEDEN)

*Helsinki University Hospital, **Karolinska Hospital

Immunological mechanisms play a pivotal role in a vast majority of skin disorders. Skin and mucous membranes first meet environmental noxious compounds, and many reactions we see are the results of either innate immunity defence mechanisms or of immunocompetent cells residing in the skin. The complement system bridges innate and adaptive immunity. For an inflammatory reaction to develop, inflammatory cells must be recruited from the blood stream to the skin. This is mediated by an orderly expression of several types of adhesion molecules both on the inflammatory cells and on e.g. endothelial cells and keratinocytes. The role of innate immunity in skin diseases will be addressed by Hanna Jarva and Kristian Thestrup-Pedersen will discuss what regulates T lymphocyte migration into the skin.

Antigen take up, whether of microbial or autoimmune origin, by dendritic cells and presentation to T lymphocytes is a central initial event in many skin diseases. The network of cytokines regulating the outcome of the T cell response is complex. The use of new immunosuppressive drugs targeting specific phases of T cell-mediated reactions are in the frontline of treatment of atopic dermatitis and psoriasis. This area will be discussed by Sakari Reitamo. Also,

new in vitro diagnostic methods for delayed hypersensitivity reactions of the skin will be described by Lena Lundberg.

Mast cells, abundant in the dermis, are a group of pluripotent inflammatory cells that play a role not only in atopy and urticaria but also in psoriasis. The latest knowledge about the role of mast cells in skin immune and allergic reaction will be highlighted by Ilkka Harvima.

In the group of blistering skin diseases, either an autoimmune reaction towards or a hereditary mutation of a specific structure of the epidermis-dermis adhesion junction may be present. Kaisa Tasanen-Määttä will enlighten the specificity of the autoantibodies in bullous skin diseases.

C1:2**COMBINING HISTAMINE WITH TUMOR NECROSIS
FACTOR- α LEADS TO GREATLY ENHANCED INHIBITION IN KERATINOCYTE GROWTH**

+Harvima, Ilkka* (FINLAND); Kivinen, Petri K.* (FINLAND); Horsmanheimo, Maija* (FINLAND); Hyttinen, Mika* (FINLAND)

*Kuopio University Hospital

Increased mast cell numbers can be found in the upper dermis and in contact with the epidermis of the psoriatic lesion and chronic leg ulcers. However, the role of mast cells in epidermal pathology is not known. In this work, we have studied the effect of mast cell mediators, histamine and TNF- α , on the growth and viability of cultured human keratinocytes by using 3H-thymidine incorporation and MTT assays of proliferating keratinocytes in the presence of Keratinocyte-SFM medium (Gibco). In addition, an in vitro epithelialization model was developed to study the effect of histamine and TNF- α on the growth area of keratinocyte epithelium in the presence of 10% fetal calf serum and Dulbecco's modification of Eagle's medium. Histamine at 0.5 mM and TNF- α at 500 U/ml alone inhibited maximally by about 40% and 20%, respectively, the 3H-thymidine incorporation. However, the combination of 1 μ M or 0.5 mM histamine with increasing concentration of TNF- α resulted in clear potentiation in this inhibition. The growth of keratinocyte epithelium was inhibited dose-dependently by 17–46% at 0.01–1 mM histamine, respectively, but was inhibited by only up to 25% at 500 U/ml TNF- α . The combination of 0.05 mM or 0.5 mM histamine with 100 U/ml or 500 U/ml TNF- α led to potentiation in inhibition (up to 87% inhibition) of epithelium growth. MTT assay revealed that the potentiation in growth inhibition by simultaneous effect of histamine and TNF- α is due to greatly enhanced cytotoxicity. However, histamine and TNF- α alone were not cytotoxic under experimental conditions. In conclusion, the concentration of histamine in mast cell granules is about 100 mM and in the dermal skin about 0.05–0.1 mM. Thus, mast cells can be inhibitory, and even cytotoxic, to keratinocytes in the microenvironment between mast cells and keratinocytes.

C2:1

MYCOLOGY RELEVANT FOR THE DERMATOLOGIST

+Faergemann, Jan* (SWEDEN); Svejgaard, Else** (DENMARK)

*Sahlgrenska University Hospital,**Bispebjerg Hospital

This course will try to cover the important aspects of dermatomycology. Basal knowledge in the taxonomy and laboratory diagnostic methods of fungi is essential for all dermatologists. Dermatophyte infections of skin and hair are increasing in several Nordic countries due to an increase in immigrants from countries where tinea capitis is more common. The problem of correct diagnosis and treatment of onychomycosis will be discussed. Cutaneous *Candida* infections are still a problem and to be able to diagnose and treat the various clinical manifestations correctly is important. The various predisposing factors, diagnostic procedures and treatments of *Malassezia* (*Pityrosporum*) related skin diseases will be discussed.

C2:2

ONYCHOMYCOSIS - DIAGNOSIS AND TREATMENT

+Sigurgeirsson, Bárður* (ICELAND)

*University Hospital

When considering onychomycosis, sample technology is of paramount importance. A recent study showed that positive cultures in patients with onychomycosis ranged from 56% to 88% depending on the sampling technology used. Sampling technology also depends on the type of onychomycosis and different technologies will be discussed. Sampling of patients with tinea pedis will also be discussed.

Regarding treatment of onychomycosis a recent study where the long-term efficacy of terbinafine and itraconazole are compared will be reviewed. In this study the objective was to examine long-term cure and relapse rates, after treatment with continuous terbinafine and intermittent itraconazole in onychomycosis. This is a long-term prospective follow-up study in three centers in Iceland. Included were 151 patients aged 18 to 75 years with a clinical and mycological diagnosis of dermatophyte toenail onychomycosis. In a previous double-blind, double-dummy study, patients were randomized to receive either terbinafine (250 mg/day) for 12 or 16 weeks or itraconazole (400 mg/day) for 1 week in every 4 weeks for 12 weeks or 16 weeks (first intervention). Patients who did not achieve clinical cure at month 18, or experienced relapse/re-infection were offered an additional treatment with terbinafine (second intervention).

The primary efficacy criterion was mycological cure, defined as negative results on microscopy and culture at the end of follow-up without requiring second intervention treatment. Secondary efficacy criteria included clinical cure without second intervention treatment, and mycological and clinical relapse rates.

Median duration of follow-up was 54 months. At end of study mycological cure without second intervention treatment was found in 34/74 (46%) of terbinafine-treated subjects and 10/77 (13%) of itraconazole-treated subjects

($p < 0.001$). Mycological and clinical relapse rates were significantly higher in itraconazole vs. terbinafine-treated patients (53% vs. 23% and 40% vs. 17%, respectively). Of the 72 patients who received subsequent terbinafine treatment, 82% achieved mycological cure, and 92% clinical cure.

Continuous terbinafine provided superior long-term mycological and clinical efficacy and lower rates of mycological and clinical relapse, when compared to intermittent itraconazole, in the treatment of onychomycosis.

C3:1

LASER COURSE

+Troilius, Agneta* (SWEDEN)

*Malmö University Hospital

This laser course will give you an idea of what is possible to do today with different kind of lasers and intense pulsed light sources within the field of dermatology. The technology is improving and it has given us many more possibilities to help our patients.

We will discuss:

Treatment of vascular lesions including vascular tumours and malformations.

Pigment lesions-possibilities and drawbacks.

Tattoos - cultural and traumatic.

Different colours e.g. green can sometimes be resistant for treatment and also hard materials e.g. metal car paint. There is also been some reports of allergies after treatment.

Vaporisation with CO₂ or Erbium - possibilities and problems. Abstract of a dissertation regarding CO₂-treatment of hidradenitis will be given and also treatment results after CO₂ treatment of Morbus Hailey-Hailey and Morbus Bowen.

Hair removal - good results with dark hair on pale skin however multiple treatments are needed.

PDT and it's possibilities will also be discussed.

C3:2

TREATMENT OF HAILEY-HAILEY DISEASE AND MB.

BOWEN WITH ULTRAPULSED CO₂-LASER.

+Lauritzen, Edgar* (SWEDEN); Troilius, Agneta* (SWEDEN)

*Malmö University Hospital

A 50-year-old man displayed Hailey-Hailey disease in the axillae, the groin and scrotum. The disease had earlier been treated with local steroids, disinfectants, and antibiotics without any significant improvement. The patient had many flares intense local treatment. We decided to resume CO₂-laser evaporation with the ultrapulsed laser, and he was followed during a three-year period, which showed that the vegetative erosions could be removed. The patient had little adverse effect from the laser and was treated several times during the period.

The case is presented and a short survey of the subject is presented.

An 80-year-old man had a squamous cell carcinoma in situ on an ear, which spread superficially involving the concha and part of the helix. It was removed by surgery and skin-transplantation but recurred at the same site. It was decided to apply CO₂-laser evaporation for tumour removal and avoid skin grafting in the area. We used ultrapulsed CO₂-laser for the tumour area and took biopsies to determine the tumour. The patient has had a 4 months period where the tumour has not revived. He is submitted to follow-up during an extended period of time to define efficacy of tumour removal.

The case is presented and a short survey of cases from the literature treated for M.Bowen with the CO₂-laser is discussed.

C4:1

COURSE ON BASIC SKIN SURGERY

+Jemec, G.* (DENMARK); Stenquist, B. (SWEDEN)

*Roskilde Hospital

This 3 h-course will cover the essentials in skin surgery for those who plan to start dermatologic surgery or have some experience of the procedures in beforehand. The facilities, equipment and instruments necessary for surgery will be presented in detail. The outlines of the main danger zones, especially of the face, will be demonstrated and how to avoid lesions to nerves and arteries. Most important is a careful planning of all excisions and incisions. The relaxed skin tension lines (RSTL) or wrinkle lines should be used if possible. Skin marking is frequently helpful particularly when dealing with malignant lesions. Local infiltration anesthesia with adrenaline is normally used but regional blocks could be an alternative. An adequate undermining using a skin hook and blunt-ended scissors helps eversion of the wound edges and eases closure. The fusiform elliptical excision with primary suture should be the first option for repair but small flaps or a skin graft could be an alternative. Haemostatic equipment should always be available in the operating theatre. The postoperative care is essential and written instructions to the patients are a good routine. Complications can be avoided by careful planning of the procedure and discussion with your patient before surgery.

C5:1

SELF-ASSESSMENT DERMATOPATHOLOGY COURSE

+Barr, Ronald J.* (U.S.A.)

*University of California

This is a self-assessment course with an emphasis on clinicopathological correlations utilizing actual microscopic slides with a multiple choice examination. Twenty (20) cases will be selected which will include a variety of interesting and important inflammatory and neoplastic lesions of the skin. Most cases will be basic but important lesions, but some will be newly described or unusual ones. The first portion of the course will be devoted to studying the slides. This will be followed by a discussion of the cases emphasizing important diagnostic clues and clinical correlations when relevant. The Course objective will be for the participant to evaluate his or her knowledge of dermatopathology and also learn additional diagnostic criteria and an understanding of some unusual but significant disorders.

S1:1

PSORIASIS GENETICS

+Samuelsson, Lena* (SWEDEN)

*Sahlgrenska University Hospital

Psoriasis is a chronic skin disorder affecting 2% of the population in northern Europe. The disease is characterised by hyperproliferation of keratinocytes and inflammatory infiltration. Several clinical forms exist although chronic plaque psoriasis is the most common variant. No major cause of psoriasis have been identified but current evidence suggest a central role for T lymphocytes.

Evidence for a strong genetic component in psoriasis susceptibility comes from familial clustering of the disease as well as a high concordance rate in monozygotic twins. The disease is today regarded to be a multifactorial disease with a complex genetic background, although in some large pedigrees a simple Mendelian inheritance pattern can be identified.

In order to identify genetic alterations rendering predisposition to psoriasis several genome scans have been performed by different groups using family set of configuration. This has led to the identification of several candidate loci but as of today, no single gene have been identified as disease-causing. One locus, PSORS1, has been identified and replicated in all genome scans. This locus resides within the HLA-region on chromosome 6p but seems to be different from the psoriasis-associated HLA-antigen Cw6. In this talk the present understanding of genetic causes to psoriasis will be reviewed. In addition, work on the PSORS5 locus identified in a family set from Southwest Sweden will be described in more detail.

S1:2

NEW THERAPIES

+Skov, Lone* (DENMARK)

*Gentofte Hospital

The immune system and especially the T cells play an essential role in the pathogenesis of inflammatory skin diseases as psoriasis. During the recent years our detailed understanding of the pathogenesis of psoriasis has increased. This together with the development in biotechnology has made it possible to design specific response modifiers with a potential for greater effectiveness and fewer side effects than the known systemic therapies currently used for treatment of severe psoriasis. Several of the biological response modifiers such as monoclonal antibodies, recombinant cytokines and fusion proteins are already on the way in clinical trials.

S2:1

CONSERVATIVE TREATMENT

+Hansson, Carita* (SWEDEN)

*Sahlgrenska University Hospital

There is consensus concerning some, but not all, of the conservative measures used to induce or speed venous ulcer healing, as for example the use of compression bandaging to counteract venous hypertension and to control oedema. Clinical infections and necrotic tissue are factors known to inflict negatively upon ulcer healing, and there is consensus about treating clinical infections with systemic antibiotics. Local ulcer treatment is also known to be of importance. Fibrin and necrotic tissue can be removed surgically, by larval therapy or by autolytic debridement. A moist environment is considered to enhance ulcer healing, which most modern topical wound dressings or wound preparations provides.

Still under debate for the treatment of venous ulcers are some topical therapies (like growth factors, hyperbaric oxygen, ultrasound, lasers, and electrical stimulation), as well as some systemic medical treatments (like zinc, fibrinolytics, hydroxyrutosides, prostaglandins, and methylxanthines).

S2:2

ORGANISATION OF THE WOUND HEALING AREA

+Gottrup, Finn* (DENMARK)

*Copenhagen Wound Healing Center

Purpose: Improvements in prophylaxis and treatment of patients with all types of problem wounds could be achieved by focusing on the following topics: centralised treatment and care; standardised treatment plans; education for health care personnel; new drugs and materials; economical systems; societies, associations and publications.

Methods: The main organisatory effort should be the establishment of centralised treatment systems like wound centres integrated in the normal health care system. These systems should generate standardised treatment plans and generate the scientific basis for these. This development has to go along with the new economical systems, which presently are established in many health care systems. Education and information on wound treatment and care will be provided through societies, associations, journals and review systems.

Results: This development has been started some years ago in Denmark by the establishment of Copenhagen Wound Healing Centre in 1996. The Centre is a full-integrated hospital unit in the socialised government health care system of Denmark and consists of an outpatient clinic (8.000 consultations/year) and an inpatient ward (20 beds). All types of wound problems can be referred. The multi-disciplinary staff consists of 52 clinical and 8 research related persons employed full time for treatment of problem wounds. The structure of a national system for wound treatment and

care has been prepared, and presently negotiations for a full acceptance and integration in the health care system are going on.

Conclusion: The future goal for the organisation of wound healing and care is to be a full integrated part of the National Health Care Systems. With the establishment of the European Union this development should be realisable in this part of the World.

S2:3

DIAGNOSTICS IN VENOUS LEG ULCERS

+Karlsmark, Tonny* (DENMARK)

*Copenhagen Wound Healing Center

Leg ulcers can be caused by many diseases. Venous leg ulcers are the most common cause, but an increasing amount of ischaemic and diabetic ulcers are seen. In order to choose the right treatment to the ulcer it is urgent to have established the correct diagnosis.

Clinical differential diagnosis as well as diagnostic tools including ankle/brachial index and examination for venous insufficiency using continuous wave ultrasound Doppler will be demonstrated.

S2:4

CONSERVATIVE TREATMENT - COMPRESSION

+Bjellerup, Mats* (SWEDEN)

*Helsingborg Hopsital

The prerequisite for venous ulceration is venous hypertension. Venous hypertension is almost always secondary to incompetent venous valves or in rare cases to venous out-flow obstruction. Venous hypertension results in elongated, tortuous capillaries producing microedema and cellular hypoxia. Venous hypertension may be counteracted by external compression delivered by compression bandages or pneumatic pumps or a combination.

Treatment with compression bandages has been shown to heal up to 85% of patients within three months and almost all patients are healed within 12 months.

Bandages may be classified according to three parameters, namely; interval between changes, elasticity and adhesive properties.

Interval between changes: In young and mobile patients it is preferred to remove bandages during night time. This may be achieved with compression stockings and non-adhesive bandages applied by the patient. Stay-on bandages replaced with weekly intervals by health personnel are preferred in older patients unable to apply bandages on their own.

Elasticity: Bandages are classified as short-stretch, long-stretch and intermediates. Short-stretch bandages deliver no sub-bandage pressure in rest but high pressure during work. Long-stretch bandages deliver high pressure during rest and intermediate during work.

Adhesive properties: Bandages are classified as unprepared, adhesive and cohesive. The two latter have better stay-on properties.

Hints about choice of compression bandages:

Mobile patients: Any type of bandage may be used.

Immobile patients: Long-stretch or medium-stretch bandages should be used since muscle pump function is absent. Compression pump may be supplemented.

Patients with arterial insufficiency: Low-stretch bandages should be used. Compression pump may be supplemented.

S2:5

A SURGICAL APPROACH FOR THE TREATMENT OF LEG ULCER

+Jørgensen, Bo* (DENMARK)

*Bispebjerg University Hospital

The policy of the Wound Healing Centre of Copenhagen is to perform excision of the ulcer followed by transplantation with an auto-split-skin-graft when conservative treatment does not give satisfactory results.

Local surgery for venous insufficiency may be carried out at the same time. The indications and contra indications for the procedure are displayed and the surgical methods are presented. The results of a one year follow up are displayed.

We stress that the venous leg ulcer is a chronic disease eventually demanding repetitive surgery.

S3:1

LUBRIKASJONSPROBLEMER HOS KVINNER - VESTIBULITT - PSYKOLOGISKE FAKTORER.

+Langfeldt, Thore* (NORWAY)

*Institutt for Klinisk Sexologi og Terapi

Selv om lubrikasjons variasjoner hos kvinner tilsvarende ereksjonsvariasjoner hos menn, har ikke begrepene vært anvendt identisk. I litteraturen har man anvendt frigiditet, kjønnskulde, om manglende evne til å lubrikere, mens ereksjonssvikt aldri har vært beskrevet som kjønnskulde. Jeg skal i dette foredraget ta opp ulike kulturelle og psykologiske aspekter ved lubrikasjon hos kvinner og sette dette inn i en utviklingsmessig sammenheng. Samt belyse de psykoterapeutiske implikasjonene.

S4:1

WHAT REGULATES T LYMPHOCYTE MIGRATION?

+Thestrup-Pedersen, Kristian* (DENMARK)

*University of Aarhus

Inflammatory skin diseases represent accumulations of activated leukocytes in the skin. Besides pustular psoriasis, bullous pemphigoid or Sweet's syndrome, where neutrophils or eosinophils form the majority of cells, most other inflammatory diseases show a predominance of activated T lymphocytes. This is remarkable as both neutrophil granulocytes and monocytes are able to move both quicker and through more narrow pores in vitro than lymphocytes.

We have used an in vitro technique to measure T lymphocytes chemotaxis. Approx. 10% of blood lymphocytes are capable of showing in vitro chemotaxis towards various cytokines, but there are specific patterns of reactivity. Thus, pro-inflammatory cytokines like IL-8 induce chemotaxis of both CD4+ and CD8+ T lymphocytes via the upregulation of IL-8 receptors on the T cells. IL-10 only attracts CD8+ cells, but not CD4+ cells; psoriasin is vice versa. The T cell derived cytokines, IL-2 and IL-4, do not exhibit any chemotactic activity on T lymphocytes themselves, but will block a continued chemotactic response by down-regulating chemokine receptors on the T lymphocytes.

We have put forward a hypothesis which includes the dynamics of T lymphocyte chemotaxis by showing how pro-inflammatory cytokines released from damaged cells in the skin will attract T lymphocytes into the area ("migration"). Once the T cells meet IL-2 and IL-4 i.e. they recognized other activated T lymphocytes, migration is stopped ("focussing"). The capacity to migrate is likely regulated via chemokine receptor expression.

S4:2

DISCREPANCIES IN PREVALENCE OF ATOPIC DERMATITIS

+Broberg, Ann* (SWEDEN)

*Sahlgrenska University Hospital

Epidemiologic studies including the prevalence and severity of Atopic Dermatitis (AD) are important to discover specific environmental risk factors in AD (1). In order to compare prevalence rates in different studies, a common disease definition is essential. We performed a study in Göteborg and Kristianstad during October 1997-March 1998 with the aim to evaluate the cumulative incidence (Schultz Larsen's questionnaire), point prevalence (clinical examination) and severity of AD (SCORAD) among 5.5 year old children (2). The UK working party's criteria were used for the clinical diagnosis of AD. There was a significantly higher point prevalence of eczema in Kristianstad (12%) than Göteborg (8%). This may be a true difference, but we cannot exclude the possibility that differences in the treatment, and in the dermatologists' assessments may be the reason for the discrepancy.

S4:3

ENVIRONMENTAL FACTORS INFLUENCING THE EXPRESSION OF ATOPIC DERMATITIS.

- With focus on the possible influence of measles mumps and rubella-vaccination, measles infection, hormonal contraception use and insulin-dependent diabetes mellitus.

+Braae Olesen, Anne* (DENMARK)

*University Hospital of Aarhus

The incidence of AD seems to have increased substantially over the past 40 years. This has led to an intense search for environmental causes of AD. Up to 2/3 of children with AD have IgE-mediated allergic reactions. Studies suggest that these children have a Th-2 immune reactivity pattern with low interferon- γ and increased interleukin-4 production. Measles virus (MV) seems to induce a prolonged Th-2 type immune response. In contrast, IDDM seems to be associated with a Th-1 immune reactivity pattern.

A historical follow-up was performed among a random population sample of 10,000

3-15-year-old children drawn from the Danish Medical Birth Register. Data were collected by a mailed questionnaire, from the Danish National Population Register and the Children's database at Statistics Denmark to study the association between MMR-vaccination, measles infection, hormonal contraception and AD. In a case-control study of the association between AD and IDDM, 920 diabetic children were identified in the Danish Registry for Childhood Diabetes while the population sample served as a control group.

The incidence ratio of AD increased after MMR-vaccination and after measles infection compared with children who were not exposed to MMR-vaccination and measles infection.

The cumulated AD incidence up to age 15 was one third lower among diabetic cases than among non-diabetic controls. The AD incidence was decreased before but not after onset of IDDM. Atopic dermatitis was not associated with pre-pregnancy use of hormonal contraception.

The main results have established an association between MV exposure (measles, mumps and rubella-vaccination and measles infection) and increased AD incidence, which suggest that MV may play a causative role in the immune response modulation and hence initiation of AD expression. The inverse association between AD and later development of IDDM indicates that an inherited or acquired propensity to develop Th-2 immune responses protects against IDDM development.

The main findings are in agreement with the Th1/Th2 hypothesis, which provide a strong argument for continued research into association between atopic diseases and possible short and long term changes of the immune system that may initiate disease expression.

S4:4

TREATMENT OPTIONS IN ATOPIC DERMATITIS

+Reitamo, Sakari* (FINLAND)

*Helsinki University Hospital

All current treatment options of atopic dermatitis depend on corticosteroids, as the secondary treatments (UV and immunosuppressive therapies) act usually only as steroid-sparing therapies. In contrast, numerous studies with the new topical immunomodulatory agents have shown promising results for both adults and children as corticosteroid-replacing agents. Currently two such compounds, tacrolimus (FK 506) and the ascomycin derivative pimecrolimus (SDZ-ASM 981) are available for clinical studies. These compounds show a similar structure with differences at two sites of the molecule, that are responsible for differences in affinity to the binding-protein and lipophilicity. Treatment with these agents has been tolerated well, with adverse events reported mainly at site of treatment. The most common adverse events have been a burning and/or stinging sensation, and itch at site of application. Other reported adverse events include folliculitis and alcohol intolerance. The main difference between corticosteroids and tacrolimus/pimecrolimus is the lack of atrophogenicity of the new treatments. As there has been no signs of local or systemic immune suppression it seems that the new topical immune modulatory agents could have a potential to replace corticosteroids as the primary treatment of atopic dermatitis.

S5:1

ADVERSE EFFECTS OF HIV-TREATMENT

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Introduction of HAART has made a dramatic change in the life expectancy of HIV-infected patients. Since its introduction in 1996 it has been drastic decrease in HIV-related conditions and deaths due to AIDS. There are now 13 drugs on the market and the standard of care is to use three or more in combination. Since many of these drugs, notably the protease inhibitors, affect the cytochrome P450 system a number of drug interactions can influence the efficacy and adverse effects of these and other drugs. Most patients experience adverse effects after starting HAART. The most common are nausea, headache, fatigue and loose stools. However, some adverse effects seem to be class specific. Mitochondrial toxicity seems to be a property of nucleoside analogues while metabolic toxicity seems to be most prominent with protease inhibitors and skin rashes seem to be primarily caused by non-nucleoside analogues. Furthermore a number of adverse effects seem to be drugspecific. Zidovudine causes anaemia, and myopathy. Stavudine has been associated with pancreatitis and probably lipodystrofi. Zalcitabine has been shown to be a potent cause of neuropathy and oral ulcers, while lamivudine seems to be the least toxic among this class of drugs. Didanosine is mostly known by the patients because of its unpleasant formula-

tion and diarrhoea. It can also cause pancreatitis and neuropathy. Finally abacavir has been free from common sideeffects causes though it causes a hypersensitivity syndrome in about 3 percent of the patients. Among the nonnucleoside analogues nevirapine frequently causes rashes which can sometimes be fatal and classified as Steven Johnson syndrome. Efavirenz causes rashes and is mostly plagued by night mares and other symptoms from the nervous system. The protease inhibitors as a class metabolic disturbances lead to increased insulin resistance and elevated blood lipid levels with concerns as to the future effect on coronary heart disease. Among the specific adverse effects indinavir can cause renal stones and renal toxicity in addition to dry skin and toe nail changes. Rashes have been documented in a number of studies. Ritonavir frequently causes perioral paresthesia and gastrointestinal upset, particularly if not phased in. Saquinavir seems to be the drug with least recorded adverse effects, however, most of its use has been with suboptimal doses. Nelfinavir is a frequent cause of gastrointestinal upset but otherwise seems well tolerated. The latest addition lopinavir, also causes gastrointestinal upset.

Thus the use of these drugs have many subjective adverse effect that are important to the quality of life, as well as an increasing number of medical concerns mainly would regard to change in the habitus and future risk of coronary heart disease. These difficulties should however not overshadow the dramatic change in life expectancy in HAART treated patients.

S5:2

HIV-TREATMENT - from death to survival

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The introduction of highly active antiretroviral therapy (HAART) against HIV must be considered a significant milestone in medical history. Since 1996, when protease inhibitors were made available and combination therapy became the treatment of choice against HIV, the morbidity and mortality have significantly declined in the western world. To date, 13 different drugs with three different target mechanisms are available for HIV treatment (Nucleoside analogues Reverse Transcriptase Inhibitors (NRTI), Non-Nucleoside Reverse Transcriptase Inhibitors (NNRTI) and Protease Inhibitors (PI)). Treatment with a combination of at least 3-4 drugs from at least 2 different groups of drugs dramatically decrease the viral replication and leads often to a significant increase in the CD4-cell count. In parallel, a considerably increase in quality of life is seen in most patients but drug intolerance and high pill burden are major drawbacks that limit the use of HAART in some patients. With a lot of patients harboring drug-resistant virus the treatment regimens are getting more complicated and more individualized, to fit each patient and each virus. Several new drugs, some with new mechanisms to fight the virus, are under development and hopefully could some of these problems be solved within the soon future.

S6:1

FUNGAL INFECTIONS IN CHILDREN

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The panorama of fungal infections in children is different from that of adults. Tinea unguium and tinea pedis are rare in children. However, tinea capitis and tinea corporis due to both zoophilic and antropophilic dermatophytes are more common in children. Especially tinea capitis due to *Trichophyton violaceum*, *T. tonsurans* or *T. sudanense* is now common in several of the Nordic countries. Skin infections due to yeasts are generally more common in adults. However, chronic mycotic candidiasis is a disease that usually starts in childhood. Fungal infections in immunosuppressed patients are seen both in children and adults.

S6:2

PAPULAR ERUPTION SECONDARY TO MOLLUSCUM CONTAGIOSUM

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"Papular acrodermatitis of childhood" also named Gianotti-Crosti syndrom (GCS) is a selflimiting eruption originally believed to be connected to hepatitis-B infection but now considered an unspecific reaction related to several viral diseases. In 1998 one case of CGS and poxvirus was reported (Cutis 1998, vol 61, 265-267).

In a 3-year period we have observed 29 patients with molluscum contagiosum in our practice, who have also had a papular eruption similar to GCS. Their mean age was 4.4 years (range 2-8 years) 14 boys and 15 girls. Atopic eczema was observed in 13 patients (6 boys, 7 girls). The eruption healed within 4 weeks in all instances but it seems that there is not a connection between the disappearance of molluscum and the eruption. The eruption was treated with a medium strength steroid cream in 24 cases but no treatment was given in 5 cases. Healing time of the eruption was 1-4 weeks. Skin biopsies from CGS lesions are often non-specific.

S6:3

TREATMENT OF SMALL CHILDREN WITH PORTWINE STAINS. WHAT SORT OF ANAESTHESIA DO WE USE?

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The golden standard for the treatment of portwine stains in children is the flashlamp-pumped dye laser with a wave-

length of 585 nm and a pulse duration of 450 microseconds. Marked improvement is experienced by 70-80 % of the patients after several treatments. The younger patients require fewer treatment sessions indicating the benefit of starting the treatment during the first year of life.

Optimal analgesia and deep sedation are required for laser treatment of portwine stains in children. This can be performed with little anaesthetic equipment but skilled anaesthetic personnel is a prerequisite.

To relieve pain the patients have topical local anaesthetic (prilocain-lidocain EMLA) at the site of venous cannulation. Sedation is induced either by thiopental 5 mg/kg or propofol 2-2.5 mg/kg. The use of opioids will provide sufficient general analgesia for the laser treatment. Alfentanil has an optimal kinetic profile for short procedures. The doses should be titrated by giving 10 µg/kg iv each time deepening of analgesia is needed. If the laser treatment is scheduled to be longer than 5-10 minutes, it is beneficial to use fentanyl at a dose of 2 µg/kg. Additional doses of sedative or analgetic drugs are given when needed.

The anaesthetic challenge during these procedures is to balance the need for analgesia and sedation to the risk of respiratory depression. Additional oxygen reduces the need for assisting the patients with mask ventilation. Post procedure pain is relieved by rectal administration of paracetamol or paracetamol in combination with codeine.

In conclusion these procedures can be performed without complications in an open ward/day care unit. A sufficient level of sedation and analgesia is achieved by drugs with a short duration. A close collaboration between the dermatologist and the anaesthesiologist is necessary during laser treatment.

S6:4

CHILD WITH CHRONIC SKIN DISEASE: HOW IS THE FAMILY GETTING ALONG ?

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The general experience among dermatological patients, as well adults as adolescents, is that they are not taken seriously. Chronic illness in the family easily provokes depression. Based on a material of written personal stories by adolescents emotional experiences of the families are presented.

A psychoeducational, cognitive-behavioral coping program for families is described in the lecture. The method is closely modeled after the Coping with Depression Course by Lewinsohn et al. The course is designed for use with groups of six to eight participants and consists of ten 2-hour sessions. The areas covered are relaxation, pleasant events, irrational and negative thoughts, social skills, communication, and problem solving. The aim of the course is to prevent major depression and to improve quality of life in families having children with chronic dermatitis. The parents and adolescents have their own sessions.

S6:5**FRAUD AND NONMEDICINAL TREATMENTS IN PEDIATRIC DERMATOLOGY**

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Dermatologists often recommend nonmedicinal treatments as exemplified by moisturisers used for ichthyosis and atopic dermatitis. Patients themselves frequently use cosmetic products, special branded products and alternative medicine parallel to or substituting topical medicines.

Registered medicine is the only category where the claimed content of active chemical(s) is strictly assured including stability during the shelter life period of the product. The established manufacturers of cosmetic products of course share a similar interest that the content of their products is honest and assured.

In recent years nonmedicinal products especially branded or launched for use in skin diseases were noted in Scandinavia exemplified by the product Skin-Cap produced in Spain. This product contained clobetasole propionate. Another product named Psorial contained halcionide and triamcinolone. A British study found dexamethasone in 8 of 11 Chinese herbal creams analysed with gas chromatography. Fraudulent manufacturers operate internationally and easily replace problem markets with convenient markets and internet trade.

Complementary treatments which may interfere with regular treatment also include acupuncture, homeopathy and others.

Dermatologists should actively detect fraud related to nonmedicinal products and treatments and notify authorities about suspected cases. Unauthorized enrichment of inefficient products with high potency steroids seems to be especially frequent. The product is typically produced by some unknown manufacturer and promoted directly to the patient who, shopping the dermatologist's office, may enthusiastically report on some "wonderful" alternative remedy miraculous in his case, and even ask the dermatologist to recommend it to other sufferers of skin diseases.

S7:1**PHOTODYNAMIC THERAPY. MECHANISMS AND PROCEDURES**

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Photodynamic therapy (PDT) of cancer is based on the tumour selective uptake and retention of certain photosensitizers, and on light exposure of the tumour. The selective uptake/retention is related to a number of physiological factors in tumours: A low pH, a large vascular volume, a large number of macrophages, a leaky vasculature, and a poor lymphatic drainage. PDT acts through vascular damage (water-soluble sensitizers, short incubation times),

through direct tumour cell inactivation (lipophilic sensitizers, long incubation times) and through immunological effects. Tumour tissue appears to be more sensitive to PDT than normal tissue. The most recent version of PDT, so-called ALA-PDT, is based on the tumour selective production of the photosensitizer protoporphyrin IX from 5-aminolevulinic acid (ALA). Determinants for tumour selectivity of ALA-PDT are: Differences in enzyme activities between tumour tissue and normal tissue, a high permeability of the stratum corneum of skin overlaying tumours, a high tumour blood flow and a high tumour temperature. PDT is efficient only in the presence of O₂. Since O₂ is consumed during PDT, since vascular damage develops, whereby the oxygen supply is reduced, and since the optical penetration depth changes during PDT (oxy-hemoglobin has a lower absorbance at 630 nm than hemoglobin), the mode of light delivery (fluence rate, fractionation of the exposure) is of crucial significance for the outcome of PDT. The use of ALA derivatives with different lipophilicities and the choice of other wavelengths than 630 nm may be advantageous under certain conditions.

S7:2**PHOTODYNAMIC THERAPY WITH 5-AMINOLEVULINIC ACID OF RECALCITRANT FOOT AND HAND WARTS**

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Photodynamic therapy (PDT) with topical 5-aminolevulinic acid (ALA) followed by irradiation with incoherent light (ALA-PDT) for warts have had beneficial results.

In 45 patients, 232 recalcitrant foot and hand warts were in a parallel, double-blind clinical trial randomly assigned to six repetitive ALA-PDT or placebo-PDT interventions combined with standard treatment encompassing paring followed by a keratolytic.

Both the number of vanishing warts and the difference in relative wart area of persisting warts one and 2 months after last treatment were significant ($p < 0.05$) in favor of ALA-PDT.

ALA-PDT is superior to placebo-PDT both when wart area and number of vanishing warts are considered.

S7:3**IMAGING FLUORESCENCE OF BASAL CELL CARCINOMAS**

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It has been shown that the photodynamic technique for treatment of skin cancer also can be applied for diagnostic purposes. By imaging the fluorescence from the photosensitizer in the skin, the tumor extension can be determined.

In a study carried out at the Sahlgrenska University Hospital in Göteborg, the fluorescence from protoporphyrin IX, Pp IX, in ALA treated basal cell carcinoma, BCC, was investigated as a function of ALA application time.

The Pp IX fluorescence was recorded by using a CCD camera equipped with filter during irradiation of light in the wavelength region 360–405 nm. The contrast, defined as the ratio between the fluorescence intensity in tumor and normal skin, was evaluated as a function of ALA application time. 40 patients were included in the study. The patients were randomly allocated to 4 groups, each group with a certain ALA application time of 1, 2, 3 and 4 hours respectively.

A significant difference in contrast between the groups with 1 and 3 hours of ALA application was obtained. Between the other groups no significant difference could be detected due to the large variance within the groups. However, the trend indicated that the 3 hour ALA application yields a better contrast in general. The fluorescence variance in normal skin is up to 40%, which means that a contrast value above the normal variance level could indicate abnormality.

The study showed a correlation between the fluorescence images and histological pattern however the individual variations were large. Further studies are planned in order to further improve and optimise the technique.

S7:4

SKIN AUTOFLUORESCENCE IN DEMARCATION OF BASAL CELL CARCINOMA

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In skin cancer treatment, it may be difficult to find the borders (e.g. demarcation) of the tumors, since part of it may not be visible to the naked eyes. This may result in incomplete removal of tumor tissue, and consequent recurrence and repeated treatments, which may cause tissue destruction and cosmetic morbidity.

Employed a fluorescence spectrometer system, we measured in vivo the autofluorescence of BCCs and normal surrounding skin for its potential in tumor demarcation. Protoporphyrin IX (PpIX) fluorescence and histopathology examination were used as control methods.

The 370:452 nm fluorescence was 53% (18–84%) (median (range)) lower in the BCCs than in normal skin ($p < 0.001$). This low intensity fluorescence extended beyond the visible tumor border for at least 3 mm in 56% of the tumors. The extension was comparable to that of the protoporphyrin IX fluorescence. Gross detection of the autofluorescence provoked by 370 nm radiation enabled finding the borderlines of the BCCs, of which 58% were verified by histopathology examination.

The autofluorescence detection may be useful in skin cancer demarcation. Gross detection of autofluorescence is sim-

ple, fast and non-invasive. Yet its effectiveness is limited in deeply located tumors. Its clinical utility remains to be tested in practice.

S7:5

PHOTODYNAMIC THERAPY FOR PSORIASIS AND EXTRAMAMMARY PAGET'S DISEASE

+Ros, Anne-Marie* (SWEDEN)

*Karolinska Institute

Photodynamic therapy (PDT) for psoriasis using 5-aminolevulinic acid (ALA) topically has been tried in recent years, since long-term side effects are supposed to be less than after PUVA. A few studies have been published and shown moderate effectiveness in the treatment of psoriasis. Our study confirm this. The moderate clinical effect and the intense patient discomfort during therapy makes PDT with ALA not suitable for psoriasis according to our experience.

Extramammary Paget's disease is a neoplasm that is usually treated with surgery or radiation. It is common with recurrences after therapy. PDT with ALA for extramammary Paget's disease may be effective according to a few case reports. Our experience confirm the effectiveness although several treatments are often necessary. Pain during and after therapy is a problem.

S8:1

EPOXY DERMATITIS - WHAT IS NEW?

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Epoxy resin systems always consist of a resin and a hardener and may also contain a reactive diluent. The most commonly used epoxy resin is based on the monomer diglycidylether of bisphenol A (DGEBA), which is the major contact sensitizer in resins of this type. Commercial epoxy resins are mixtures of oligomers of different molecular weights and it is the concentration of DGEBA which determines their sensitizing capacity. Other types of epoxy resin used are based on diglycidylether of tetrabromobisphenol A, tetraglycidyl-4,4'-methylenedianiline, triglycidyl derivative of p-aminophenol and o-diglycidyl phthalate.

There are many hardeners which may act at either room temperature (cold curing) or elevated temperature (thermal curing). The cold curing hardeners are mostly polyamines, polyamides or isocyanates. The hardeners used for thermal curing are acids and anhydrides or aldehyde condensation products, e.g. phenol-formaldehyde resins, melamin-formaldehyde resins and urea-formaldehyde resins.

Reactive diluents contain one or more epoxide groups and they are used primarily to reduce the viscosity of the epoxy resin system. The epoxy reactive diluents are either aromatic, like phenyl and cresyl glycidylether or aliphatic, e.g. butyl and allyl glycidylether, all being potent sensitizers.

In the standard patch test series an epoxy resin based on DGEBA is present. To trace contact allergy to other resins,

hardeners and reactive diluents, these must be tested separately. Test series with epoxy substances are available from the major suppliers of patch test preparations. In a finished product there will always be residual monomers, higher concentrations when cold curing has been used and it is therefore often advisable to patch test finished products to which the patients are exposed. In the lecture attention will be paid to news within the epoxy dermatitis area.

S8:2

OCCUPATIONAL PLANT DERMATOSES.

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The development of the sesquiterpene lactone (SL) mix and the Compositae mix has made routine screening for Compositae allergy possible and has substantiated the leading role of this plant family in plant dermatitis in Europe today.

The prevalence of occupational sensitization to Compositae ranges between 11% (SL mix) (1) and 28% (Cornpositae mix) (2) in consecutively tested Compositae-allergic patients. A Danish study in gardeners and greenhouse workers detected a sensitization rate almost twice as high as in consecutively tested persons (3).

This presentation deals with the results of routine screening with the SL mix supplemented with various Compositae extracts and allergens in consecutive eczema patients in the Danish county of Funen where a large greenhouse industry is located.

In the first 8 years the prevalence of Compositae sensitization was 190/4386 (4.3%) and 42 (22%) of these were suspected to be occupationally sensitized. This group was characterized by a lower mean age and a larger proportion of persons without any other contact allergies compared to the non-occupationally sensitized. Chrysanthemum (*Den-dranthema*), marguerite daisies (*Argyranthemum frutescens*) and lettuce (*Lactuca sativa*) were the most important sensitizers. Most of the patients were/had been employed in some kind of greenhouse job or floristry, but home helps (attending clients' plants) and a zone therapist (sensitized by among other things arnica in a massage oil) were also diagnosed as occupationally sensitized.

Finally, some rare causes of occupational plant dermatoses will be presented.

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S8:3

IRRITANT CONTACT DERMATITIS - CLINICAL AND EXPERIMENTAL ASPECTS.

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During the past decade there has been an increasing interest in irritant contact dermatitis. It has been demonstrated that chemically different irritants will produce different responses at the cellular and sub-cellular level following application on the skin surface. From a clinical point of view, irritant contact dermatitis can also be presented in different clinical forms and can also be a negative worsening factor in other skin diseases.

The presentation will cover aspects on the mechanisms of irritancy and the implications for the clinical appearance of irritant contact dermatitis.

S8:4

TRENDS IN OCCUPATIONAL DERMATOLOGY

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Since the father of occupational dermatology, Bernardino Ramazzini, published his book *Diseases of Tradesmen*, 1700, an increasing number of chemicals, that can cause hazards in the workplace has been introduced during the years. On the other hand there is a greater knowledge of the offending chemicals in the environment and their effects on humans. During the years, there has been a greater awareness among dermatologists and others of the importance of occupation in the causation of dermatologic diseases. New offending substances are repeatedly introduced on the market, while other chemicals are expelled, not because of the possible hazard they can cause on exposed workers, but mostly for technical and economical reasons. The industrial world is complex and ever changing. For instance, service industries have slowly enlarged in the last century to become the largest employers, rather than manufacturing. The knowledge of a few key industrial processes is in order to understand the exposure that may have produced a patient's dermatosis and to establish an occupational association. Without such basic information, it is difficult to intelligently approach the problem of work-related skin disease or, often, to manage it effectively. A knowledge of industrial processes is also vital if primary preventive measures are to be taken to protect other workers who may be at risk.

S9:1

TREATMENT OF MYCOPLASMA GENITALIUM INFECTIONS.

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Aim: To compare signs, symptoms and efficacy of treatment among STD-clinic attendees with urethritis and cervicitis and to estimate the prevalence of Mycoplasma genitalium (Mg) and Chlamydia trachomatis (Ct)

Methods: 464 women and 532 men attending an STD outpatient clinic were tested for Mg and Ct by PCR on first voided urine and for women also by PCR (Mg) and cell culture on endocervical swab (Ct). Patients with cervicitis and/or urethritis were treated with doxycycline for 8 days or lymecycline ten days. All Mg and Ct positive patients were requested for a check up visit. Asymptomatic untreated Mg positive patients or patients attending due to Mg contact tracing or Mg positive at check up were treated with azithromycin 500 mg first day and 250 mg the following 4 days.

Results: 26 Mg positive women (prevalence 5.6%) aged 16-39 years (median 22) and 41 Mg positive men (7.7%) aged 18-55 years (median 27) were found. Corresponding figures for Ct were 44 women (prevalence 9.5%) aged 16-32 years (median 22) and 60 men (11.3%) aged 16-56 years (median 23.5). There was no significant difference in symptoms between Mg positive and Ct positive women (OR 1.4, 95% CI 0.48 to 4.17), but fewer Mg positive women had signs of cervicitis and/or urethritis (OR 0.49, 95% CI 0.14 to 0.60). Mg positive men more often had symptoms of urethritis than Ct positive men (OR 2.9, 95% CI 1.82 to 5.12) whereas signs were more common among Ct positive men (OR 0.35, 95% CI 0.09 to 0.79). 4/41 Mg positive men and 4/26 Mg positive women had a concurrent Ct infection. 20 of 31 (64.5%) of the Mg positive patients initially treated with tetracyclines were still Mg positive at check up. None of the 38 patients with a 5-day course of azithromycin were Mg positive at follow up.

Conclusion: Only slight differences in the distribution of signs and symptoms between Mg and Ct positive patients were found. Whereas the standard treatment for uncomplicated urethritis and cervicitis with tetracyclines appeared to have a good clinical efficiency at follow-up, it did not eradicate Mg. A five day-course of azithromycin eradicated Mg efficiently, however, further studies are needed since patients treated with azithromycin were not directly comparable to those treated with tetracyclines.

S10:1

GENODERMATOSES - AN INTRODUCTION

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No aspect of Dermatology has gained so rapidly in knowledge over the past 10 years as the genodermatoses. To date the etiologies have been unravelled for more than 30 mono-

genetic skin disorders, including epidermolysis bullosa, lamellar ichthyosis, Netherton's syndrome, erythrokeratoderma variabilis, ectodermal dysplasia, Darier's and Hailey-Hailey diseases. It is now often possible not only to make a correct diagnosis in ambiguous cases, but also to offer prenatal diagnosis and carrier analysis to parents in need of that. This symposium will exemplify ongoing research in the field of epidermal genodermatoses where Nordic scientists have made considerable contributions both to the advance of molecular genetics and to the understanding of skin biology. Hopefully, this knowledge will soon lead to more sophisticated treatments and eventually also to gene therapy for the most disabling diseases. In the meantime it is important to try to improve current therapies and to learn more about how we can help our patients to improve their quality of life.

S10:2

EPIDERMAL TRANSGLUTAMINASE (TGM1) MUTATIONS IN LAMELLAR AND NON-LAMELLAR ICHTHYOSSES - A LARGER SPECTRUM THAN ANTICIPATED

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Autosomal recessive congenital ichthyosis (ARCI) is a clinically and genetically heterogeneous disorder of keratinization. Mutations in the transglutaminase 1 (TGM1) gene may be associated with the clinical subtypes lamellar ichthyosis (LI) and non-bullous congenital ichthyosiform erythroderma (CIE). LI and CIE usually represent severe phenotypes of ARCI with general scaling of the skin. We investigated the TGM1 gene in ARCI patients of various phenotypes. In patients from 29 families, clinically classified as LI or CIE, TGM1 gene 16 different mutations were found in 86% of the alleles. In four patients from three unrelated families, clinically presenting a milder phenotype (non-LI, non-CIE) five different missense mutations in the TGM1 gene were found (Val209Phe; Arg687His; Tyr365Cys; Arg396Leu; Asp306Glu). Electron microscopy (EM) of skin biopsies showed a picture consistent with

IC type I or IC type II in patients showing TGM1 gene mutations despite of the clinical expression. The findings indicate that mutations in the TGM1 gene may cause ARCI clinically classified as neither LI nor CIE but with the EM diagnosis IC type I or IC type II. The five missense mutations found in the non-LI, non-CIE patients might result in less severe phenotypic consequences than in LI/CIE, due to conservative amino acid substitutions or the specific heterozygous combination of mutations.

S10:3**LIFE QUALITY ASSESSMENT IN ICHTHYOSIS PATIENTS.**

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Non-bullous ichthyosis is either present at birth (Lamellar ichthyosis 'LI') or develops in early childhood (Ichthyosis vulgaris 'IV' or X-linked recessive ichthyosis 'XRI'). Today there is no cure for ichthyosis. Skin diseases, such as psoriasis and atopic eczema, have been shown to have a significant adverse impact on the Health-Related Quality Of Life (HRQOL). The overall aim of the present study was to investigate the HRQOL in patients with LI, XRI and IV. To this end we used the Dermatology Life Quality Index (DLQI) and SF-36, and a subjective measure of disease activity, using a visual analogue scale (VAS). One aim was to study the correlation between VAS and the Quality of Life instrument DLQI and SF 36. All participants received the following questionnaires: DLQI, SF-36, VAS and sociodemographic questions. A total of 121 persons aged 17-78 years completed the questionnaires (LI 37, XRI 36, IV 48). The proportion of males was 55% in the group as a whole. The mean total score for DLQI was 6.1, significantly higher for LI than for XRI (7.70 vs 4.17). SF-36 showed significantly lower (worse) scores for the study group compared to the Swedish norm scores, in 6 of the 8 dimensions. No difference in SF-36 was found between men and women or between the groups LI, XRI or IV. The estimated correlation between the instruments were in the expected direction and mostly statistically significant. The results confirm the general impression that ichthyosis has an adverse impact on the HRQOL. However, the clinical symptoms may not always give a good guidance as to how the patient experiences her quality of life.

S10:4**"SCANDINAVIAN" KERATIN MUTATIONS IN EPIDERMOLYTIC HYPERKERATOSIS (BULLOUS ICHTHYOSIS).**

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Epidermolytic hyperkeratosis is a rare inherited disease of the skin caused by a dominant-negative mutation in keratin 1 (K1) or 10 (K10). Keratins are the major structural proteins in epidermis and mutations cause instability of the intermediate filament and keratinocyte fragility. No curative treatment is available, but some patients benefit from retinoid therapy. More knowledge is needed about the genotype/phenotype correlation in epidermolytic hyperkeratosis and the mechanism of action of retinoids including the regulation of keratin expression.

Fifteen patients were identified in Scandinavia, 13 with a generalised disease and 2 with localised lesions. Different types of mutation were identified such as point, splice site, deletion, and deletion-insertion mutations. An association was found between mutations in K1 and the appearance of palmoplantar keratoderma. Only patients with K10 mutation benefited from retinoid treatment, although no differences in the effects on mRNA levels for K1 and K10 were detected. However, retinoids caused a pronounced down-regulation of K2e in upper epidermis and upregulation of K4 not normally present in the skin.

In conclusion, several novel keratin mutations have been shown to cause epidermolytic hyperkeratosis, and a few examples of genotype/phenotype correlations have been found. Treatment with retinoids is only useful for patients carrying a K10 mutation, possibly because they are less vulnerable to the pronounced down-regulation of K2e also seen in normal skin.

S10:5**EPIDERMOLYSIS BULLOSA SIMPLEX: MOLECULAR CHARACTERIZATION OF THE MUTATIONAL SPECTRUM IN DANISH PATIENTS**

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Epidermolysis Bullosa Simplex (EBS) is a group of autosomal dominant inherited skin disorders caused by mutations in the keratin 5 or 14 genes. Three major subtypes of EBS has been classified clinically, Weber-Cockayne (WC), Koebner (K), and Dowling-Meara (DM), of which the DM form is the most severe. The severity of the disease seems to correlate with the position of the mutation in the genes.

We have investigated three Danish families with EBS-WC, two families with EBS-K, and two sporadic cases with the DM form of EBS in order to analyse the mutational spectrum in Danish EBS patients. PCR amplification was performed of all exons and flanking intron regions in the two genes using genomic DNA purified from the patients, relatives, and unrelated normal individuals. Automatic sequencing revealed three novel EBS-associated mutations in K14, as well as a novel and a known mutation in K5. None of these mutations were found in 100 normal alleles. An identical mutation in K14 was found in the three seemingly unrelated EBS-WC families indicating that these families were related by a common ancestor. This was supported by molecular haplotyping of the mutant chromosome in the three families.

S10:6

THE ROLE OF PLECTIN FOR THE INTEGRITY OF HUMAN SKIN

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Plectin (from greek: plectin, web or network), one of the plakin proteins, is a plaque protein and acts as a general crosslinking element of intermediate filaments and is expressed in a wide variety of tissues.

The human plectin gene PLEC1 consists of 32 exons. Various isoforms exist, produced by alternative splicing of different first coding exons into exon 2 including a rodless isoform. Plectin ablation in mice by gene targeting lead to a severe phenotype. Plectin has also been shown to serve as a autoantigen in paraneoplastic pemphigus.

Mutations in the human plectin gene, first reported in 1996, cause a recessive type of Epidermolysis bullosa with muscular dystrophy. Recently a dominant mutation in the plectin gene was shown to cause Epidermolysis bullosa Simplex-Ogna (EBS-O). The clinical signs of plectin skin diseases as well as their ultrastructural and genetical background will be discussed.

S10:7

HEREDITARY HYPOTRICHOSIS SIMPLEX OF THE SCALP. CLINICAL AND MOLECULAR INVESTIGATIONS IN A DANISH FAMILY

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A nine generation Danish family with Hereditary Hypotrichosis Simplex of the Scalp, Toribio-Quinones type (HHS) is presented with clinical data and the results of molecular genetic studies.

50 family members were examined and 21 were affected. A genomewide linkage scan (using highly polymorphic microsatellite markers) was performed on DNA from the Danish family. Spanish descends from the originally described family (reported by Toribio and Quinones) were included in the linkage study.

The patients start to loose scalp hair in childhood or early puberty and it progresses to an almost total alopecia by the early twenties. There is no sign of cicatricial alopecia or other associated ectodermal defects. There is no sex difference. Morphological examination of hairs by light and scanning electron microscopy shows a normal hair shaft morphology.

The study identified the locus for HHS on the short arm of chromosome 6 (6p21.3). A search for candidate genes in the region has identified several candidate genes for HHS. The locus is distinct from the locus for other primary hair disorders, namely monilethrix, on chromosome 12q13 and alopecia universalis congenitalis on chromosome 8p21. Further research based on a candidate gene approach is going on. The identification of the HHS gene may shed light on the molecular mechanisms of human hair development.

S10:8

ICHTHYOSIS-PREMATURITY SYNDROME - AN UNKNOWN, FREQUENT AND ANCIENT

"MID-SCANDINAVIAN" RECESSIVE DISEASE

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In Norway a new case of the Ichthyosis-Prematurity Syndrome (IPS) is born annually. IPS is a previously unrecognized syndrome of obstetric, pediatric and dermatological significance (1). It was first observed as unique in the early 1980ies by its skin ultrastructural features and published as "Ichthyosis congenita type IV" (2). IPS is an autosomal recessive disease. The mutation, carried by 2% of the population of Middle Norway, must be of prehistorical origin. A few cases are reported from Finland and Italy. In IPS the pregnancy is complicated by polyhydramnion and an opaque amnion fluid due to shedding of large amounts of epidermally derived cells. Premature birth occurs in the 32nd week of pregnancy. Due to aspiration of the amnion debris the child may become severely asphyctic after delivery, and in unrecognized cases these children might not survive. At birth the skin is covered by thick caseous desquarnating epidermis which surprisingly improves to a benign dryness of the skin within the first 1-2 weeks. The dry skin may later be misdiagnosed as atopic skin, partly due to the accompanying dermatographism and atopic manifestations during infancy. A typical case-history will be presented.

1. Gedde-Dahl T Jr. The Ichthyosis-Prematurity Syndrome (IPS) (abstr.) Case presentation at Syndromdiagnostikk, Dept.s of Medical Genetics and Pediatrics, Ullevål Hospital, Oslo (K.H. Ørstavik) on Aug. 28th, 1996.
2. Anton-Lamprecht I. The Skin. In: Papadimitriou JM, Henderson DW, Spagnolo DV (eds.): Diagnostic ultrastructure of non-neoplastic diseases. Churchill Livingstone, Edinburgh, 1992 b, pp. 459-550.

S11:1

RESISTANCE TO ANTIBIOTICS IN DERMATOLOGY

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Bacterial resistance has compromised the effectiveness of antibiotics and resistance is one of the major problems of medicine today. Resistance can be defined as the situation where the minimal inhibitory concentration is higher than the concentration in the focus of infection. The evolution of resistance in Gram positive cocci, a major group of pathogens in dermatology, started in the 60ties with penicillin-resistant Staphylococcus aureus. In the 80ties emerged the MRSA (methicillin resistant S. aureus), in the 90ties the vancomycin-resistant enterococci and at present we have to handle with vancomycin-intermediate resistant S. aureus. Resistant bacteria can occur by mutation. More commonly resistance emerge from the ability of bacteria to pick up resistance genes by three mechanisms: transformation, transduction or conjugation. The genes might code for 1)

efflux pumps ejecting antibiotics from bacteria, 2) decreased permeability of the bacteria 3) enzymes that degrade the antibiotics 4) decreased binding of antibiotics to the target. Resistance genes can be transferred from Gram positives to Gram negatives and vice versa. Resistance genes can reside on the bacterial chromosome or on plasmids. In dermatological patients the most important resistance problems are found in the Gram positive pathogens *S. aureus*, *Propionibacterium acnes* and, to some extent, streptococci. More than 90% of *S. aureus* are resistant to penicillin, and more than 50% of the strains are methicillin resistant. Multiresistance including macrolides and tetracyclines is common and resistance to quinolones is developing rapidly. *Streptococcus pyogenes* is still susceptible to penicillin, but increasing problems with macrolides and tetracyclines have been reported. After oral or systemic treatments, *P. acnes* develops resistance in more than 50% of the cases. To limit the development of antibiotic resistance, it is necessary to establish an antibiotic policy.

S11:2

SKIN MANIFESTATIONS OF STREPTOCOCCAL INFECTIONS

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The major streptococcal pathogens in humans belong to group A, commonly referred to as *Streptococcus pyogenes* (*S. pyogenes*). Group B, C and G streptococci can also act as pathogens in humans. Involvement of streptococci in cutaneous diseases can be by 1) direct infections of skin or subcutaneous tissue, 2) secondary infection, 3) tissue damage from circulating toxin, 4) skin lesions attributed to allergic hypersensitivity to streptococcal antigens. Streptococci can also provoke other skin disease. Red infiltrate in the face was seen in four patients (3 females and one male, aged 8, 9, 10 and 24 years) with sore throat. *S. pyogenes* was isolated from throat swabs and the skin lesions disappeared during treatment with antibiotics in all patients. The skin lesions are suggested to be a reaction to the streptococcal infection.

S11:3

DERMATOMYCOSES OF THE FEET - MORE THAN MEETS THE EYE AT FIRST SIGHT?

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*University Hospital

Dermatomycoses of the feet are common. Recent studies have shown a prevalence of 2-10% for onychomycosis and 10-20% for tinea pedis. Both ailments are sometimes considered trivial, but this is not the case. Onychomycosis is often accompanied with dermatomycoses of the adjacent skin such as interdigital or plantar ("moccasin type") tinea pedis. Several studies have shown that these diseases can have severe impact on quality of life and should not be trivialized. Fissuring, inflammation, itching and pain are signs and symptoms, and patients may also have reduced

self-esteem. Recently dermatomycoses of the feet and toe-web intertrigo have been linked to erysipelas, a severe and potentially life-threatening disease. Individual case reports in the literature and personal experience has shown that dermatomycoses can aggravate the symptoms of atopic dermatitis, can cause hand eczema, erythema nodosum and other reactive dermatoses.

Several cases from the literature, individual studies and the author's cases will be presented.

S11:4

TROPICAL SKIN INFECTIONS/INFESTATIONS IN TRAVELLERS

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In recent decades we have witnessed a remarkable growth in international travel, resulting in considerable variation in exposure to - not only cultural and climatic conditions - but also to infectious agents and toxic stings and bites; e.g. when young backpackers are touring tropical areas for a few months. An increasing occurrence of rare tropical skin diseases has been recorded among travellers, some of which will be presented in a short clinical review, covering dermatoses caused by protozoan (cutaneous leishmaniasis), helminths (cutaneous larva migrans, strongyloidiasis, onchocerciasis, swimmers itch), arthropods (tungiasis, myiasis, bed bugs, tick bites) and some bacterial infections (swimming pool-granuloma, ecthyma, buruli ulcer). Treatment with the anti-parasitic drugs Ivermectin, Albendazole and Sodium stibogluconate will be discussed.

S12:1

THE EUROPEAN SPECIALIST SECTION (U.E.M.S) - RESPONSIBILITIES AND RIGHTS.

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European Union of Medical Specialists was created in 1958 when representatives delegated by the professional organisations of medical specialists of the six member countries of the very new European Community (EEC) met in Brussels. Membership was further expanded as additional countries joined the EEC. In addition three European Free Trade Association (EFTA) countries - Iceland, Norway and Switzerland - are full members of U.E.M.S.

U.E.M.S. is the European representative organisation of the various National Associations of medical specialists in the member countries, working through 36 Specialists Sections. The objectives of U.E.M.S. includes the promotion of quality patient care through the harmonisation and improvement of quality of specialist medical care in the member countries and the encouragement and facilitation of Continuing Medical Education for European specialists.

U.E.M.S. has produced charters on Specialists Training, Visitation of Training Institutions and Continuing Medical Education (CME) and in January 2000 formally established the European Accreditation Council for CME.

S13:1

SOLAR KERATOSIS, BOWEN'S DISEASE AND KERATO-ACANTHOMA - are they all squamous cell carcinoma?

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*Haukeland Sykehus

There can be no doubt that solar UVR is a potent carcinogenic agent and the entities to be discussed are all associated with sun exposure. There appears to be a general consensus that solar keratosis and Bowen's disease are "precursor" lesions of squamous cell carcinoma, but there is considerable dispute about prevalence and rate and incidence of transformation to invasive malignancy. Regression has been reported by several authors but disputed by others who maintain that both solar keratosis and Bowen's disease are superficial squamous cell carcinoma that keep growing albeit slowly.

A number of viral agents have been implicated in the aetiology of both Bowen's disease and keratoacanthoma (KA). Especially human papillomavirus (HPV) has been studied, but the role of this virus in the aetiology and pathogenesis remains to be elucidated. KA continues to cause diagnostic problems and there are many examples which have been reclassified as squamous cell carcinoma on subsequent clinical grounds. Explanations include malignant transformation of a KA and the possibility that KA is a type of squamous cell carcinoma that usually regress because it is caused by HPV that has disappeared.

S13:2

PUVA AND SKIN TUMOURS

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PUVA is a potentially carcinogenic treatment. Both 8-methoxypsoralen (8-MOP) and trioxsalen plus UVA are mutagenic in bacteria. Topical 8-MOP-PUVA induced multiple squamous cell carcinomas (SCC) in a lifelong study in mice whereas topical trioxsalen-PUVA did not.

In the American PUVA study 618 SCCs were observed in 144 out of 1,380 patients treated with systemic 8-MOP-PUVA and followed-up for 13 years. The relative risk (RR) for contracting SCC in the whole group was 12 and for those patients with more than 300 treatments it was 33. In Sweden, 67 SCCs were observed in 2,447 patients treated with systemic 8-MOP-PUVA (RR 7.7). The risk for melanoma after systemic 8-MOP-PUVA was moderately increased in the American PUVA study but not in European studies.

No increase in SCC has been reported after topical trioxsalen-PUVA. In a Finnish-Swedish 15-year follow-up study on 944 psoriatics only 3 SCCs were observed; the expected value being 2.8 (RR 1.1). Only one small study including 158 patients has been published on the SCC risk of topical 8-MOP-PUVA; no SCCs were found.

In conclusion: Systemic 8-MOP-PUVA causes SCCs in a dose-dependent manner. Topical trioxsalen-PUVA is clearly less carcinogenic. The data on topical 8-MOP-PUVA are too limited for conclusions. The data for the risk of melanoma after 8-MOP-PUVA are contradictory.

S13:3

INCIDENCE OF SKIN CANCER IN PATIENTS FOLLOWING ORGAN TRANSPLANTATION.

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*Karolinska Hospital and Institute

More than 400 000 organ transplantations have been performed in the world since 1960s. The quality of life of these patients is generally good, but along with the new organ follows chronic immunosuppression in order to prevent organ rejection. It is well established that these patients run a high risk of developing cancer and most often the skin is affected.

We linked a population-based cohort of 5356 patients who had received organ transplants in Sweden (1970-1994) with the Swedish Cancer Registry, to identify all cancer cases. After a mean follow-up of 5.6 years post-transplantation, 172 patients developed 325 non-melanoma skin cancers and six malignant melanomas. The relative risk of non-melanoma skin cancer was 108.6 (95% CI = 94.6-123.1) for men and 92.8 (95% CI = 73.2-116.0) for women. The highest risk were noted for upper limbs, and the risk increased with time. No significant increase in malignant melanomas was noted. Except for the lip, which is also sun-exposed, other epithelial sites did not show comparable increases in cancer risk.

The Swedish cohort currently comprising of 6457 patients constitute the basis for ongoing studies on cancer risks of other sites than skin and nested case-control studies of factors possibly influencing carcinogenesis, such as immunosuppression and sun tanning habits. The histopathological characteristics of the non-melanoma skin cancers are presently reviewed and 450 questionnaires have been sent to patients in order to analyse the importance of sun exposure both before and after the transplantation.

S14:1

NARROWBAND UVB PHOTOTHERAPY FOR PSORIASIS

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Narrowband UVB (TL-01) phototherapy plays a significant role in the management of psoriasis and an increasingly reported number of other skin conditions, including atopic dermatitis, vitiligo, mycosis fungoides (patch stage) and a range of photodermatoses.

Although the majority of studies conducted which compare TL-01 efficacy with traditional broadband UVB sources are of a non-controlled type, the weight of evidence points towards greater efficacy with a trend towards faster clearance with less minimal erythema doses required. Broadband UVB has been shown to be less effective than PUVA with a tendency for use in guttate rather than the more problematic plaque psoriasis. Recent studies comparing PUVA with TL-01 suggest a variety of outcomes, presumably dependent on methodology and patient selection. Metanalysis of the clearance data suggests a slight preference for PUVA over TL-01 with, as yet, no significant difference in relapse rate.

The long-term cancer risk of TL-01 in humans is unknown and is likely to remain so for many years. Using mouse cancer studies, which compared TL-01 with broadband, it appears that the TL-01 has a similar carcinogenic effect per course of effective treatment as the broadband source. Limited human data with broadband UVB suggests it to be significantly less carcinogenic than PUVA (1). The current trend of switching from PUVA to narrowband appears justified on current data. There is a need to establish a cohort follow-up skin cancer study of TL-01 treated subjects.

S14:2

UVA1 PHOTOTHERAPY.

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*J.W. Goethe-University of Frankfurt

Ultraviolet A1 (UVA1) phototherapy is a phototherapeutic modality employing long- wavelength ultraviolet A radiation of 340–400 nm. Currently, three different irradiation protocols are in use with a UVA1 single dose above 100 J/cm² in the high-dose regimen, 50–60 J/cm² in the medium-dose or 20–30 J/cm² in the low-dose regimen. High-dose UVA1 phototherapy had been originally described for the treatment of patients with acute, severe exacerbation of atopic dermatitis. These results have been corroborated by several studies indicating that high-dose UVA1 therapy is superior to conventional UVA-UVB phototherapy and at least as effective as topical fluocortolone therapy in atopic dermatitis. Good results have also been reported using a medium or even low -dose protocol, possibly at a price of faster recurrence of symptoms.

In the last years, therapeutic effects of high-, medium- or low-dose UVA1 have also been described for various other dermatoses, like urticaria pigmentosa, localized scleroderma, systemic sclerosis, lichen sclerosus et atrophicus, keloids, cutaneous T-cell lymphoma and graft versus host disease. T-cells are either directly or indirectly responsible for the etiopathology of most of these UVA1 sensitive diseases and, indeed, recent studies indicate that the mechanism of action of UVA1 is through selective cytotoxic effects via induction of apoptosis in infiltrating T-cells. The known induction of collagenase-1 (MMP-1) expression by UVA could, furthermore, account for the effects observed in sclerosing diseases.

UVA1 has broadened and improved phototherapy, however, despite these documented benefits due to the novelty of the therapeutic approach very little is known on potential long-term side effects, e.g. carcinogenic risk. Thus, indications for UVA1 should be considered carefully, the cumulative dose well documented, and patients followed up at regular intervals.

S14:3

UVA EXPOSURE AND THE RISK OF CUTANEOUS MALIGNANT MELANOMA

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Ultraviolet radiation A (UVA) is localised in the wavelength region 320–400 nm. Since cancer induction is believed to be caused by DNA damage, and since DNA practically does not absorb UVA, it was for decades anticipated that UVA exposure had nothing to do with skin cancer. The action spectra of non-melanomas in mice supported this view. However, the first experimental action spectrum for cutaneous malignant melanoma (CMM) indicated that UVA might be of significance. Also epidemiological observations are in argument with this indication. Thus, the latitude gradient for UVA is much smaller than that of UVB. This may explain the fact that the latitude gradient of CMM incidence among Caucasians is smaller than that of non-melanoma skin cancer incidence. The incidence rate of CMM has increased for decades and the introduction of sunscreens absorbing UVB has not reduced the rate of increase. Comparisons of skin cancer incidence rates among Caucasians and Africans and among albinos and non-albinos indicate that melanin may be a chromophore – although not the only one – for CMM induction.

S14:4

UVA RADIATION ENHANCES METASTATIC PROPERTIES OF MELANOMA CELLS

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*STUK

Presently available sunscreens protect relatively well against UVB radiation but are poor absorbers of UVA radiation. Considering that people are spending more and more time in the sun, because of the misconception of the purpose of sunscreen, there is a growing urgency to develop more efficient UVA-protective lotions. UVA, although not as potent as UVB radiation in induction of DNA damage, can also exert significant effect on body's physiology. Previously, we demonstrated (Photochem. Photobiol. 64, 1996, 936) that UVA radiation-induced activation of protein kinase C signaling pathway leads to increase in expression of major histocompatibility antigens (MHC class I and II). Here, we hypothesize that the same mechanism may lead to UVA-induced alteration in expression of adhesion molecules in melanoma cells. If proven, it could suggest that melanoma cells in primary tumors, located in epidermis/dermis, might become prone to metastasis following UVA exposure. As an in vitro experimental model we used C57BL/6 mouse melanoma cell lines B16-F1 and B16-F10 and syngeneic endothelial cells. UVA irradiation induced decline in the surface expression of E-cadherin and increase in the expression of N-cadherin in B16-F1 and B16-F10 cell lines. This change is a well-known marker of metastatic melanoma phenotype. The decline in cadherin E expression was accompanied by a significant decline in homotypic melanoma-

melanoma adhesion (clustering) that is cadherin E-dependent. This suggests, that following UVA irradiation, the bonds between melanoma cells in the primary tumor might weaken/loosen what might facilitate detachment of single cells from the solid tumor mass and their migration into capillary blood vessels. Also, we observed that the single-dose UVA irradiation of melanoma cells (8–12 J/cm²) causes an increase in melanoma cell adhesiveness to non-irradiated endothelium with the peak-response 24 h after irradiation. The use of multiple-dose irradiation protocol of melanoma cells (4×2 J/cm²) increased melanoma adhesion already at 1-h time-point, what suggests that a fractionated dose of UVA-radiation is more efficient than the bolus irradiation. In conclusion, it appears that UVA irradiation might enhance metastatic potential of melanoma cells by weakening melanoma-melanoma binding within solid tumor mass and by enhancing adhesiveness of melanoma cells to endothelium what, in turn, may facilitate extravasation of tumor cells in internal organs. This observation, together with the previously reported UVA-induced expression of MHC antigens, further supports the notion of the urgent need for the development of more effective UVA-absorbing sunscreen lotions.

S14:5

UVA AND PHOTOPROTECTION

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*Sahlgrenska University Hospital

Recent epidemiological data suggest that UVA plays an important role in the development of malignant melanoma. Human experimental data is largely lacking although the increased melanoma incidence among sunbed users indicates that UVA may be important in the induction of malignant melanoma.

The sunscreen layer applied is far less than used in the tests for determining the sun protection factor (SPF).

Sunscreens have been advocated as protection against sun damage. However, many sunscreens still protect poorly against UVA. One of the problems is that UVA protective sunscreens with an absorption spectrum in the long wavelength UVA tend to get coloured. Also, some UVA protective ingredients can be photodegraded during irradiation. Titanium dioxide and zinc oxide may be a solution but these agents can act as photocatalysts. Coating of the particles has been used to overcome this problem. A UVA protection factor has still to be decided upon.

Meanwhile, the basic UVA protection should consist of clothes and suncreening products with a high SPF.

SAT1:1

INFLAMMATORY ACNE: CAN RESISTANCE REVEAL

HOW ANTIBIOTICS WORK?

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It is well known that acne is a multifactorial disease of the pilosebaceous follicles. However, even in cases of severe disease only a small proportion of ducts is affected at any one time. Long standing evidence points to the over-production of sebum, and the involvement of bacteria in acne pathogenesis. Paradoxically, seborrhoea persists after resolution of the disease and it is evident that Koch's postulates cannot be demonstrated in acne. A model in which inflammatory acne can be considered as an infection of functionally blocked pilosebaceous follicles by *Propionibacterium acnes* is proposed which may help explain outstanding issues relating to, initiation, progression and perhaps resolution of the disease. *Propionibacteria* are not found in microcomedones (non-inflamed lesions) which are first visible during the adrenarche in acne-prone individuals. Thus comedogenesis appears to be independent of bacterial infection and may be driven by high levels of bioactive interleukin-1 α derived from ductal keratinocytes. Microcomedones may progress to inflamed lesions but the factors that trigger this are unknown. Evidence for the involvement of *propionibacteria* is inconclusive although antibiotic treatment can be less effective for patients with predominantly antibiotic-resistant *P. acnes*. Analysis of immunological events in early lesions indicates a type IV hypersensitivity response to one or more persistent lesional antigens. These may or may not be bacterial. However it is possible that the potent adjuvant activity of *P. acnes* could up-regulate this immune response. Antibiotics are widely used in the treatment of acne. Although they reduce the numbers of *propionibacteria* on the skin, other modes of action may contribute to or explain their therapeutic efficacy. These not only include anti-inflammatory effects but also activities such as antioxidant and inhibition of keratinocyte proliferation. With current global concern over the rising prevalence of antibiotic resistance among pathogens and commensal bacteria, including *propionibacteria*, it is timely to reappraise the role of antibiotics in the treatment of acne.

SAT2:1

DO WE NEED COMBINATION THERAPY?

+Faergemann, Jan* (SWEDEN)

*Sahlgrenska University Hospital

Jan Faergemann, doctor of medicine 1975, specialist in dermatology and venereology 1980, PhD 1979. Ass.prof. in dermatology and venereology. He has been visiting professor at the Department of Dermatology, University of California. He is the author of 174 papers, published, in press or accepted for publication in various international journals. His main area of interest is in dermato-mycology. He is the referee for several well-known international journals. He is at the advisory board for three international journals. He has been the chairman, co-chairman and speaker at 110

international meetings with 134 presentations. He has been the organiser for joint meetings in mycology. He is the president for the Swedish Society for Clinical Mycology.

Onychomycosis is one of the most common skin conditions. While estimates for prevalence in the general population range from 3% to more than 20%, fungal nail infections are more prevalent in the elderly and in those with peripheral vascular disease or diabetes mellitus.

The current oral treatments for fungal nail diseases, including terbinafine, itraconazole and fluconazole, are superior to griseofulvin. These newer agents achieved mycological cure rates of about 70% in clinical trials of toe nail infections. However, the published efficacy rates vary, particularly with itraconazole. There are some disadvantages associated with these treatments. First, there is a significant failure rate (up to 30%) under clinical trial conditions. Second, drug penetration may be low. In some cases, the location of the infection (for example, in the lateral margins of the nail) is associated with low drug levels, suggesting uneven distribution of the antifungal agent in the nail plate. Third, while adverse events are not common, they occur in about 10% of patients. Serious adverse events are very rare. Finally, one potentially serious limitation is the risk for drug interaction, which is greatest with the azoles. This limits the concomitant use of medications such as terfenadine, digoxin, cyclosporin and tacrolimus. While, individually, these features do not necessarily limit the use of oral antifungals, taken together they constitute a disadvantage.

One potential future management strategy is to use combinations of drugs or treatments to improve success rates and reduce the duration of therapy. Such an approach would potentially include combined antifungal drug and nail removal or antifungal/antifungal drug combinations. The purpose of this symposium is to examine the value of using two or more antifungal drugs - combination therapy - in the management of fungal nail disease.

SAT2:2

AMOROLFINE + TERBINAFINE COMBINATION: RESULTS OF A CLINICAL TRIAL IN FRANCE

+Baran, Robert L.* (FRANCE)

*Nail Disease Centre

Dr. Baran is Head of the Nail Disease Centre in Cannes, France and is the Official Investigator of Drugs at the Cannes General Hospital. He received his medical training at the Hôpital Saint-Louis in Paris, France. Dr. Baran has authored and edited several books focused on diseases of nails and their management. He is a member of many professional societies, and helped to found the International Society for Dermatological Surgery and the European Nail Society. Dr. Baran currently serves on the editorial boards of *Cutis*, *The Journal of Dermatological Treatment*, and *Mikologia Lekarska* (Poland). In addition, he is author or co-author of more than 400 publications in major peer-reviewed journals.

Onychomycosis is a difficult infection to treat, and current interest has focused on combination therapies. A multicenter, randomized, prospective study was conducted to compare the combination of amorolfine and terbinafine

versus terbinafine alone for the treatment of dermatophytic toenail onychomycosis with matrix involvement. Patients were randomly assigned to one of the following treatment groups: 1) 5% amorolfine nail lacquer once weekly for 15 months plus terbinafine 250 mg daily for 6 weeks (AT-6); 2) 5% amorolfine nail lacquer once weekly for 15 months plus terbinafine 250 mg daily for 12 weeks (AT-12); or 3) terbinafine 250 mg daily for 12 weeks (T-12). The primary efficacy criterion was negative culture and microscopy at 3 months. Secondary efficacy criteria included negative culture and microscopy at visits up to 18 months, clinical cure (defined as <10% of disease remaining), and combined mycologic-clinical clearance.

A total of 147 patients were included in the study (50 patients in the AT-6 group; 48 patients in the AT-12 group; and 49 patients in the T-12 group). At week 12, mycologic evaluation revealed a negative examination and culture in 35% of the AT-6 group, 28% of the AT-12 group, and 17% of the T-12 group. Clinical responses at 18 months were significantly improved in the AT-12 group versus the T-12 group (85% vs 59% cure or improvement, $P<.05$); the clinical response in the AT-6 group was numerically superior (66%). The combined clinical and mycologic response at 18 months was also significantly superior in the AT-12 group ($P<.05$), with a 72% cure rate versus a 37% cure rate in the T-12 group and a 44% cure rate in the AT-6 group. An economic evaluation found that the cost per patient cured was in favor of group AT-12, followed by AT-6 and T-12.

In summary, the results of this study show that there is an improvement in the treatment of severe onychomycosis when a combination of amorolfine topical nail lacquer and oral terbinafine therapy is used. Combination therapy is cost effective and the dosing schedule (short systemic therapy plus once-weekly topical treatment) may favor patient compliance.

SAT2:3

RATIONALE FOR COMBINATION THERAPY

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Professor Glyn Evans is Professor of Medical Mycology in the Department of Microbiology, the University of Leeds and also Director of the Mycology Reference Laboratory, an internationally recognized reference laboratory for the diagnosis of fungal infections. Professor Evans is a graduate of both the University of Wales College at Cardiff and the University of Glasgow, where he earned a PhD in Medical Mycology. In 1992 he was admitted as a Fellow of the Royal College of Pathologists (UK) and also as a Fellow of the Institute of Biology (UK). Professor Evans' research interests concern molecular epidemiology, diagnosis and treatment of fungal infections. He has authored or co-authored seven books, contributed a number of chapters to textbooks and published more than 100 original papers and review articles in learned journals. He was until May 2000 the President of the International Society for Human and Animal Mycology (ISHAM). He was also the President of the British Society for Medical Mycology (BSMM) from 1995-1998 and a Member of the Council of the European Confederation of

Medical Mycology from 1997-1998. Professor Evans is frequently invited to give lectures and to chair sessions at national and international meetings.

There are now much improved oral therapies for onychomycosis. This follows the introduction of terbinafine, itraconazole and fluconazole. Amorolfine is also used topically to treat onychomycosis but it is reserved for treating 'mild' distal disease. The *in vitro* activity of these newer drugs is around 10-200 times higher than griseofulvin against dermatophytes; the most active is terbinafine, which is approximately 20 times more potent than itraconazole.

All these drugs inhibit the synthesis of ergosterol, an important component of the fungal cell membrane, and they interfere at different points in the synthetic pathway. The azoles inhibit the enzyme 14- α -demethylase, terbinafine acts earlier on squalene epoxidase, and amorolfine inhibits g-14-reductase and g-7-8 isomerisation. These minor differences in mode of action have subtly varying effects on the fungal cells, and potentially the drugs could be synergistic.

Despite the improvements in therapy, approximately 20% of patients with onychomycosis fail on antifungal therapy. This is not likely to be due to development of resistance by the dermatophyte to the antifungal used to treat the patient. Failure is more likely to be due to kinetic problems or because the fungal forms are not sensitive to the concentrations of antifungal agents that can be achieved in the nail.

One approach to improving cure rates would be to exploit any synergy between drugs by using combination therapy. For example, topical amorolfine could be used in conjunction with oral therapies. Indeed, there is good evidence of synergy *in vitro* between terbinafine and the triazoles and also between amorolfine and griseofulvin, and terbinafine and ketoconazole. Further studies of potential synergy between amorolfine and other antifungals *in vitro* are needed to examine a wider range of fungi than studied to date, and to include all potential nail pathogens.

Synergy between combinations of amorolfine and other antifungals has also been demonstrated in animal models of dermatophytosis. Topical amorolfine has been used concurrently with oral antifungals in patients with onychomycosis. Most of this work was done with amorolfine in combination with griseofulvin, although preliminary studies have also been carried out with terbinafine and itraconazole. The results have been encouraging but further studies are needed. The rationale for this approach is that the amorolfine applied topically will penetrate the nail plate, diffusing to the nail bed, while the orally administered drug penetrates the matrix and nail bed. Any synergy between the two drugs will mean an increased antifungal activity at lower concentrations of both drugs.

In summary, combinations of antifungals, specifically a topical and oral agent, may be able to achieve higher cure rates and in a shorter time than is currently possible.

SAT2:4

AMOROLFINE + ITRACONAZOLE COMBINATION:

RESULTS OF A CLINICAL TRIAL IN SPAIN

+Lecha, Mario* (SPAIN)

*University of Barcelona

Professor Glyn Evans is Professor of Medical Mycology in the Department of Microbiology, the University of Leeds and also Director of the Mycology Reference Laboratory, an internationally recognized reference laboratory for the diagnosis of fungal infections. Professor Evans is a graduate of both the University of Wales College at Cardiff and the University of Glasgow, where he earned a PhD in Medical Mycology. In 1992 he was admitted as a Fellow of the Royal College of Pathologists (UK) and also as a Fellow of the Institute of Biology (UK). Professor Evans' research interests concern molecular epidemiology, diagnosis and treatment of fungal infections. He has authored or co-authored seven books, contributed a number of chapters to textbooks and published more than 100 original papers and review articles in learned journals. He was until May 2000 the President of the International Society for Human and Animal Mycology (ISHAM). He was also the President of the British Society for Medical Mycology (BSMM) from 1995-1998 and a Member of the Council of the European Confederation of Medical Mycology from 1997-1998. Professor Evans is frequently invited to give lectures and to chair sessions at national and international meetings.

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In summary, combinations of antifungals, specifically a topical and oral agent, may be able to achieve higher cure rates and in a shorter time than is currently possible.

O-1

ARTHRITIS AND QUALITY OF LIFE AMONG MEMBERS OF THE NORDIC PSORIASIS ASSOCIATIONS. DATA FROM THE NORDIC QUALITY OF LIFE STUDY

+Molin, Lars* (SWEDEN); Zachariae, Hugh (DENMARK); Zachariae, Robert (DENMARK); Blomqvist, Kirsti (FINLAND); Davidsson, Steingrímur (ICELAND); Mørk, Cato (NORWAY); Sigurgeirsson, Bardyr (ICELAND)

*Örebro Medical Centre Hospital

The aim of the study was to estimate the prevalence of arthritis and evaluate the quality of life, related to psoriasis and arthritis, in a large sample of members of the psoriasis associations from the Nordic countries, and to compare the results with psoriasis patients recruited from Nordic dermatologists and Nordic university clinics.

Material. Answer from 6.849 members of the psoriasis associations were accepted for the analysis and were compared with the answers from 702 patients treated by dermatologists and at university clinics.

Methods. The members and the patients answered a questionnaire including a great number of questions regarding severity and extent of psoriasis lesions and joint involvement together with questions regarding quality of life, stress and health in relation to psoriasis as well as to arthritis.

Results. Arthritis had been diagnosed in 30% of the psoriatics by a rheumatologist or a dermatologist. The prevalence of arthritis was the same among members and patients. Arthritis was more common in Finland, Norway and Sweden than in the other countries. Individuals with arthritis exhibited greater impairment of quality of life, longer psoriasis duration, and greater self-reported psoriasis severity than those without joint complaints. Patients recruited from the clinics reported greater impairment of quality of life than the other groups.

Conclusions. The study indicates that arthritis is more prevalent than previously accepted and is an important factor to include in the evaluation of the quality of life in individuals suffering from psoriasis.

O-2

PREVALENCE OF FIBROMYALGIA IN PATIENTS WITH PSORIASIS

+Thune, Per* (NORWAY)

*OMNIA

The frequency of fibromyalgia (FM) varies in different population studies and is usually estimated to be about 1-3%. A low prevalence of 0.75% has been reported in Finland while one study in Norway showed a very high prevalence of 10.5%. The reason for this discrepancy can be different diagnostic criteria but may also be the result of overdiagnosis. Although the symptoms of FM overlap considerably with those of spondyloarthropathy (SP) the frequency of FM in psoriasis (PS) and particularly among those with musculoskeletal pain, has apparently never been investigated. This was the aim of the present study which comprised 1269 patients with PS who were consecutively investigated during a three years period from 1997 till 2000. There were 704 f. (55.5%) and 565 m. (44.5%), mean age 48 yrs. Among these were 335 patients (26.4%), 217 f. and 118 m. mean age 54 yrs. who complained of musculoskeletal pain. The mean duration of skin symptoms and of joint and muscle pain were 7-yrs and 6-yrs respectively. All patients were seronegative. In 105 patients (8.4%), 95 f. and 12 m. (mean age 50 yrs) the symptoms were compatible with the ACR-90 criteria for FM. The diagnosis of FM was made by a dermatologist in 51, by a rheumatologist in 29 and by a general practitioner and confirmed by a dermatologist in 25 patients. In 70/105 patients with FM was the diagnosis of PS unknown despite the fact that the skin symptoms had lasted for 3½ year at a mean. Their muscle and joint complaints had lasted for about 12 years.

It appeared that 21/105 patients with FM had first-degree relatives with PS while 5/105 had second-degree relatives with PS. The other patients did not know. - Radiological sacroiliitis occurred in 2/66 patients with FM, while arthritis in fingers and/or wrists was observed in 17/66 patients, osteochondrosis and spondylosis occurred in 22/66 and arthritis of the toes in 3/66. - QUESTION: what should the diagnosis be: FM/PS? PS/SP? or PS/SP/FM?

A closer cooperation between dermatologists and rheumatologists seems urgent.

O-3

USE OF ALTERNATIVE THERAPY IN PSORIATICS FROM THE NORDIC COUNTRIES: A SURVEY FROM 5739 MEMBERS OF THE NORDIC PSORIASIS ASSOCIATIONS

+Mørk, Cato* (NORWAY); Zachariae, Hugh (DENMARK); Zachariae, Robert (DENMARK); Blomqvist, Kirsti (FINLAND); Davidsson, Steingrímur (ICELAND); Molin, Lars (SWEDEN); Sigurgeirsson, Bardyr (ICELAND)

*The National Hospital

Alternative therapy is widely used in patients with chronic disorders, and psoriasis is no exception. The aim of this study was to find the present and previous use of "alternative medicine" and "alternative treatment" among psoriasis patients within the Nordic countries. The data were obtained from a questionnaire-based Quality of Life study of 5739 members of the psoriasis associations of Denmark, Finland, Iceland, Norway, Sweden and the Faeroe Islands. 15,9% of psoriatics had tried to be on a diet, more than 40% from Iceland against only 7,2% from Sweden. Dietary measures were more frequent among female and young patients. 17,9% (26,6%) of the patients with psoriasis reported use of alternative medicine; the same figures for alternative treatment were 11,4% (17,1%). The popularity of these therapies were highest in Iceland, where 26,6% (42,1%) took or had taken alternative medicine or 17,2% (26,0%) other alternative treatment. The figures for the same two categories on Faeroe Islands were 8,7% (25,6%) and 8,7% (23,5%), respectively. Women, younger patients and patients with a longer disease duration had a higher previous use of alternative therapies. A relation was seen between present use of alternative therapies and lower Quality of Life, a higher degree of subjective stress and with a greater self-reported disease severity. The patient satisfaction with their contact with the physician was in general high. Different traditions and trends could possibly explain some of the variations in the use of alternative therapies.

O-4

ERYTHROMELALGIA: A SYNDROME OF DYSFUNCTIONAL VASCULAR DYNAMICS

+Mørk, Cato* (NORWAY); Asker, C. (SWEDEN); Salerud, G. (SWEDEN); Kvernebo, K. (NORWAY)

*The National Hospital

Erythromelalgia (EM) is a condition defined by red, hot and burning extremities with exacerbation of symptoms by warming and relief by cooling. Microvascular arteriovenous shunting has been hypothesised to be the common pathogenetic mechanism in patients with EM. During EM attacks the skin blood flow is maldistributed from nutritive, towards increased thermoregulatory perfusion. The anatomical arteriovenous anastomoses (AVA) are located in acral areas, mainly plantar and palmar aspects of hands and feet. By relating the perfusion changes, using Laser Doppler Perfusion Imaging (LDPI) and capillary video microscopy, in plantar and dorsal aspects of the feet in patients with primary EM (n=14) and controls during central body heating with the occurrence of EM symptoms, we wanted to test the shunt-hypothesis.

Symptoms were induced in 8 patients after heat provocation. In the plantar region of the foot, the location of numerous AVA, the symptomatic EM patients significantly increased the LDPI flux as compared to asymptomatic patients with EM and controls. In the dorsal region with few AVA no significant differences between the groups were demonstrated. On the other hand, the number of visible or active capillaries in symptomatic EM patients decreased significantly, as compared to asymptomatic patients and controls.

In conclusion, the combination of increases global perfusion and fewer visible capillaries during EM symptoms indicates a steal phenomenon from the capillaries to the AVA. The blood flow is maldistributed away from the nutritive, towards the increased thermoregulatory perfusion. These findings give further support to the shunt-hypothesis.

O-5

TREATMENT OF PSORIASIS IN THE NORDIC COUNTRIES: A SURVEY FROM 5739 MEMBERS OF THE NORDIC PSORIASIS ASSOCIATIONS.

+Zachariae, Hugh* (DENMARK); Zachariae, Robert (DENMARK); Blomqvist, Kirsti (FINLAND); Davidsson, Steingrímur (ICELAND); Molin, Lars (SWEDEN); Mørk, Cato (NORWAY); Sigurgeirsson, Bardyr (ICELAND)

*Aarhus University Hospital

The aim of the study was to show the present spectrum of psoriasis treatment within the Nordic countries. The data were obtained from a questionnaire-based quality of life study of 5739 members of the psoriasis associations of Denmark, Finland, Iceland, Norway, Sweden and the Faeroe Islands. They showed that the two most commonly used active agents were topical steroids (89.7% total use and 49.4% present use) and calcipotriol (73.1% total use and 35.8% present use) with only small variations in use between the countries. Marked differences between the countries were, however, found within all other types of psoriasis therapy including the patients' use of alternative treatments. The different countries had each their significant priorities. The use of dithranol in Finland was almost the double of the average. While 14.2% of Danish members had received grenz-rays within the last week only 0.1% of the Finns went through the same treatment. 13.1% of the Finnish psoriatics were on PUVA against 3.8% Danes, and PUVA was almost nonexistent for patients from the Faeroe Islands. The use of non-PUVA phototherapy was highest in Norway and Sweden. Almost 10% of the Danes were presently on methotrexate, which was used far more than etretinate or cyclosporin. In contrast, Finnish patients more often received etretinate than other systemic agents, and in Iceland there was a higher present use of cyclosporine than of etretinate. The popularity of alternative therapies was highest in Iceland, where 26.6% had taken "alternative medication" during the last week. For the Faeroe Islands the figure for the same category was 8.7%. The results of the study suggest that different treatment patterns should be taken into consideration, whenever discussing outcome of psoriasis in different countries.

O-6

PSORIASIS-RELATED QUALITY OF LIFE IN 6497

NORDIC PATIENTS

+Zachariae, Robert* (DENMARK); Zachariae, Hugh (DENMARK); Blomqvist, Kirsti (FINLAND); Davidsson, Steingrímur (ICELAND); Molin, Lars (SWEDEN); Mørk, Cato (NORWAY); Sigurgeirsson, Bardyr (ICELAND)

*Aarhus University Hospital

Aim: The aim of the study was to investigate psoriasis-related QOL in a large sample of members of the psoriasis associations from the Nordic countries, and to compare the results with results from psoriasis patients recruited from Nordic dermatologists or Nordic University clinics.

Methods: A total of 5795 members and 702 patients rated their psoriasis severity and completed Nordic versions of the Psoriasis Disability Index (PDI) and the Psoriasis Life Stress Index (PLSI). The respondents also completed a number of questions concerning demographic and life style factors.

Results: Several factors, including age, marital status, smoking, and wine consumption were significantly associated with severity and QOL. When controlling for demographic factors, self-reported severity emerged as the overall most significant predictor, explaining between 24 and 29% of the variation in psoriasis-related QOL, with the remaining factors only accounting for five to seven percent of the variation. Although correlated with self-reported severity, PASI scores did not emerge as a significant predictor of QOL. Norwegian psoriatics generally reported greater disease severity and greater impairments of QOL than psoriatics from the remaining Nordic countries. Whether Norwegian psoriatics have a higher threshold for seeking medical assistance and if this is of importance is not known.

Conclusion: Although self-reported severity may be the most important predictor, further research is needed to determine factors explaining the remaining variance in psoriasis-related QOL.

O-7

PALMOPLANTAR PUSTULOSIS, SMOKING AND AUTOIMMUNITY.

+Michaëlsson, Gerd* (SWEDEN); Hagforsen, E (SWEDEN); Nordlind, K (SWEDEN)

*University Hospital

Aim of the study. 1. To investigate if patients with palmo-plantar pustulosis (PPP) have antibodies to nicotinic acetylcholine receptors (nAChR) in addition to antibodies to thyroglobulin, thyroperoxidase and gliadin. 2. To investigate if PPP sera with/without antibodies to nAChR give a positive immunofluorescence (IF) in palmar skin from healthy non-smokers/smokers.

Methods. Sera were obtained from 45 patients with PPP (43 were smokers), from 23 patients with longstanding palmar hand eczema (15 had been or were smokers). Twenty-five per cent of the PPP patients had antibodies to thyroglobu-

lin, thyroperoxidase and 25% had IgA antibodies to gliadin, some had both types. Palmar skin was obtained from healthy non-smokers/smokers. Antibodies to nAChR were quantified by RIA. Double staining was used for identification of positive structures.

Results. Forty-two percent of the PPP sera had moderately elevated levels of nAChR antibodies in contrast to none of the hand eczema sera. Sixty-eight percent of the positive PPP sera induced a typical IF pattern in the papillary dermis in palmar skin from a non-smoker, with double staining identified as associated with endothelium. Five percent of the hand eczema patients displayed a similar pattern. When palmar skin from a smoker was used there was in addition to the endothelial staining also a staining of the acrosyringium, indicating that there is an upregulation of the autoantigen by smoking. The most intense IF was observed in sera with antibodies both to nAChR and thyroid antigens or gliadin. Furthermore 38% of sera without antibodies to nAChR but with antibodies to thyroglobulin, thyroperoxidase and/or gliadin, displayed the same IF pattern although with lower intensity.

Conclusions. PPP may be an autoimmune disease precipitated by smoking with the autoantigen localized to the papillary endothelium and the acrosyringium. There may be an overlap between this antigen and those in autoimmune thyroid disease and gluten sensitivity explaining the high prevalence of these disorders in PPP patients.

O-8

BOTULINUM TOXIN A IMPROVES LIFE QUALITY IN SEVERE PRIMARY FOCAL HYPERHIDROSIS.

+Swartling, Carl* (SWEDEN); Naver, Hans (SWEDEN); Lindberg, Magnus (SWEDEN)

*Uppsala University

The aim of this study was to assess quality of life with the Dermatology Life Quality Index (DLQI) before and after treatment with intradermal injections of botulinum toxin in a group of patients with severe focal hyperhidrosis. DLQI was administered to 58 randomly chosen patients before and after treatment. All patients answered the DLQI questionnaire prior to treatment and 53/58 at mean 5.2 months after treatment. The mean DLQI score in the 58 patients before treatment was 10.3 (2-23). In the group of 16/53 patients who had a relapse of sweating when answering the DLQI a second time, no significant improvement was seen (score 10.6 before and 8.8 after treatment ($p=0.21$)). In patients without relapse a 76% improvement was obtained (DLQI was reduced from 9.9 to 2.4 - $p<0.0001$). The study showed that focal hyperhidrosis may considerably reduce life quality and the disability experienced by the patients can be largely reversed by botulinum toxin injections.

O-9

MEASUREMENTS OF COLOR IN PORT WINE STAINS USING A QUANTITATIVE METHOD

+Helsing, Per* (NORWAY); Lyngsnes Randaberg, L. (NORWAY); Mørk, NJ (NORWAY)
*National Hospital

Port wine stains are congenital vascular malformations characterised by ectatic blood vessels. Lesions are treated with lasers in early childhood. Few port wine stains clears completely, most have residual changes after treatment.

Evaluation of treatment have so far been based on rather subjective methods, and there has been a substantial need for more objective methods to evaluate treatment success. Skin reflectance measurements produces curves that still have to analysed, and are difficult to use in a clinical setting.

Treatment success must be when treated area are perceived indistinguishable from normal skin. By using the CIE 1976(L*a*b*) system for colour perception, where change in colour is calculated as DE, we have followed 10 children with port wine stains during treatment.

DE was measured between treatments, and the hypothesis was that this value will reach a limit. We will also try to relate DE to the more subjective evaluations we use today.

O-10

TREATMENT OF CHRONIC HAND DERMATOSES WITH UVB/TL01

+Nordal, Eli J.* (NORWAY)
*Ullevål Sykehus

UVB/TL01 irradiation has proven to be efficient in whole body treatment for several chronic inflammatory dermatoses. Chronic hand and foot dermatoses of different genesis represent a great problem in clinical dermatological practice.

The last months we have had available TL01 equipment for hand and foot treatment with plates of 20W tubes × 6, effect 4.3 mW/cm² (Esshå elagentur, Värnamo, Sweden).

So far 20 patients have entered the study with three weekly treatments up to 9 weeks. They have been assessed according to a modified scoring system of Vocks/Plötz/Ringl.

The preliminary results indicate that psoriatics are the best responders. There is little or none effect in PPP, and varying results in eczema/pompholyx where some respond well and some experience increased disease activity.

Detailed results from a relatively large material will be presented.

O-11

ICHTHYOSIS-PREMATURITY SYNDROME - AN UNKNOWN, FREQUENT AND ANCIENT "MID-SCANDINAVIAN" RECESSIVE DISEASE

+Kampman, Petra (NORWAY)
Rikshospitalet

In Norway one new case of the Ichthyosis-Prematurity Syndrome (IPS) is born annually. IPS is a previously unrecognized syndrome of obstetric, pediatric and dermatological significance [1]. It was first observed as unique in the early 1980ies by its skin ultrastructural features and published as "Ichthyosis congenita type IV" [2]. IPS is an autosomal recessive disease. The mutation, carried by 2% of the population of Middle Norway, must be of prehistorical origin.

In IPS the pregnancy is complicated by polyhydramnion and an opaque amnion fluid due to shedding of large amounts of epidermally derived cells. Premature birth occurs in the 32nd week of pregnancy. Due to aspiration of the amnion debris the child may become severely asphyctic after delivery, and in unrecognized cases these children might not survive. At birth the skin is covered by thick caseous desquamating epidermis which surprisingly improves to a benign dryness of the skin within the first 1-2 weeks. The dry skin may later be misdiagnosed as atopic skin, partly due to the accompanying dermatographism and atopic manifestations during infancy.

A typical case-history will be presented.

O-12

A RANDOMIZED DOUBLE BLIND STUDY COMPARING PHOTODYNAMIC THERAPY (PDT) WITH METVIX® TO PDT WITH PLACEBO CREAM IN ACTINIC KERATOSIS

+Bjerring, Peter* (DENMARK); Funk, J. (NORWAY); Roed-Petersen, J. (DENMARK); Söderberg, U. (DENMARK)
*Marselisborg Hospital

Metvix® (methyl 5-aminolevulinate) is a new topical photosensitizer with very high lesion selectivity. In this phase III trial, Metvix® PDT was compared to placebo PDT in patients with actinic keratosis (AK).

Methods: 39 patients with clinically diagnosed AK were randomised blindly to either placebo or Metvix® PDT. Scales and crusts were removed from the lesions before cream application. After 3 h application time a light dose of 75 J/cm² was given using red light (570–670 nm). Lesion response was assessed after 3 months.

Results: 33 patients with 75 lesions were included in the efficacy analysis. 97% of the lesions were located in face/scalp and 93% were of thin or moderate thickness. The lesion complete response rates were:

Lesion type <i>n</i>	Metvix® %	PDT <i>n</i>	Placebo %	PDT
Thin	7/9	78	4/16	25
Moderate	25/32	78	2/16	12
Thick	0/0	0	0/2	0
TOTAL	32/41	78	6/34	18

The expected local phototoxic reactions were transient and mainly of mild or moderate severity.

Conclusions: Metvix® PDT is an efficacious treatment for patients with AK. In the present study, lesions were only treated once. Re-treatment of residual lesions has previously been shown to result in higher response rates (>90%). Lesion preparation, placebo cream application and illumination alone do not have any significant treatment effect on AK lesions.

O-13

A PIVOTAL STUDY OF PHOTODYNAMIC THERAPY (PDT) WITH METVIX® 160 MG/G CREAM IN PATIENTS WITH BASAL CELL CARCINOMA (BCC) WITH A RISK OF COMPLICATIONS AND POOR COSMETIC OUTCOME USING CONVENTIONAL THERAPY

+Wennberg, AM* (SWEDEN); Horn, M (AUSTRIA); Wulf, HC (DENMARK); Warloe, T (NORWAY); Rhodes, L (UNITED KINGDOM); Fritsch, C (GERMANY); Kaufmann, R (GERMANY); de Rie, M (THE NETHERLANDS); Wolf, P (AUSTRIA); Stender, I (DENMARK); Solér, A (NORWAY); Wong, G (UNITED KINGDOM); Lang, K (GERMANY); Legat, K (AUSTRIA); Pavel, S (GERMANY); Larkö, Olle (SWEDEN)
*Sahlgrenska University Hospital

Objective: Patients (pts) with “high-risk” BCC in need of advanced surgery or radiation therapy with a risk of complications and poor cosmetic outcome, received a new selective photosensitizer, methyl 5-aminolevulinate (Metvix®) to determine response rate, cosmetic outcome and side effects.

Methods: Ninety-four pts with clinical and histological diagnosis of BCC (mid-face, large, recurrent) excluding morpheic and highly infiltrating lesions, received one treatment cycle with Metvix® PDT (two treatments one week apart). After lesion preparation and three hrs of occlusion with Metvix® cream, the lesion was illuminated with 75 J/cm² of

red light (570–670 nm). If there was non-complete response after three months as assessed clinically and by histology, the lesion was retreated.

Results: Ninety-four pts with 123 lesions were treated and included in safety analysis. 60% of the lesions were located in face/scalp and 40% of the patients received two treatment cycles. Eighty-five pts with 108 lesions were included in primary efficacy analysis, nine pts were excluded by external reviewer because they did not fulfil the definition of having a “high-risk” BCC lesion. Clinical lesion evaluation resulted in complete response rate of 87%, which dropped to 74% when excluding lesions with a positive histology. 75% of pts had good or excellent cosmetic outcome at three months which increased to 85% by 12 months. 67% of pts reported adverse events, mostly expected local phototoxic reactions like erythema and burning sensation/pain. The symptoms were transient, and mostly of mild severity. Twelve months follow-up of 68 pts with 80 lesions histologically confirmed CR at three months, showed a lesion recurrence rate of 9%. No lesions in face/scalp or on extremities did recur and in the group of pts with complete response after one treatment cycle, only one lesion recurred.

Lesion location	Clinical CR 3 months (all lesions, <i>n</i> =123)	Clinical CR 3 months (high-risk, <i>n</i> =108)	Histology CR 3 months (high-risk, <i>n</i> =108)	Recurrence 12 month (of hist. CR 3 months)
Face/scalp	64/74, 86%	57/65, 88%	45/65, 69%	0%
Extremities	16/17, 94%	14/15, 93%	13/15, 87%	0%
Truncus/neck	27/32, 84%	23/28, 82%	22/28, 79%	7/21, 32%

Conclusion: Metvix® PDT was effective in pts with “high-risk” BCC, and the cosmetic result was good and improved by time. Metvix® PDT was well tolerated and may be a good alternative to conventional modalities which have the risks of disfiguration and inferior cosmetic outcome. Five years follow-up is underway to determine long-term recurrence rate.

O-14

DIFFERENCES IN SUN EXPOSURE DOSES IN SED AND SUN BURNING EPISODES WHEN SUNBATHING AT THE BEACH ON HOLIDAYS IN SOUTHERN VERSUS NORTHERN EUROPE

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*Bispebjerg Hospital

Aim: To investigate differences in solar UVR doses in SED and number and severity of sun burning episodes when sunbathing at the beach in either Southern or Northern Europe.

Methods: From June to October 1999, 298 subjects (4–67 years old, mean 25 years old) participated in an investigation of sun habits. They wore a personal, electronic, UV dosimeter in a wristwatch, Sun-Saver, and filled a sun diary in total 21,119 days hereof 54% days holiday/days off work/school.

Results: 61 persons had holidays in Southern Europe in total 897 days. They spent 54.3% of the days sunbathing at the beach (mean 8 days, range (1–30 days)) while 157 subjects were sunbathing at the beach on holidays/weekends in Denmark and Northern Europe in only 10.3% out of 10,358 possible days (mean 7 days, range (1–26 days)). The mean sun exposure dose per day measured on the UV do-simeter on the wrist when sunbathing at the beach was 5.3 SED in Denmark/Northern Europe and 9 SED in Southern Europe. From a former study, we know, that doses received on the wrist should be doubled to get the total sun exposure doses. The subjects got sunburned 22% of the days in Southern Europe but only 15% of the days in Northern Europe. Severity and the extension of the sunburns were almost the same.

Conclusion: People going to Southern Europe for holidays spent 54% of the days sunbathing at the beach and got almost the double UVR dose per day than in Denmark/Northern Europe. Sun burning episodes are also more frequent when going south.

O-15

DERMATAN SULPHATE IS RELEASED BY PROTEINASES OF COMMON PATHOGENIC BACTERIA AND INACTIVATES ANTIBACTERIAL α -DEFENSIN

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Defensins represent an evolutionarily conserved group of small peptides with potent antibacterial activities. We here report that extracellular proteinases secreted by the human pathogens *Pseudomonas aeruginosa*, *Enterococcus faecalis*, *Proteus mirabilis* and *Streptococcus pyogenes*, release dermatan sulphate by degrading dermatan sulphate-containing proteoglycans, such as decorin. Dermatan sulphate was found to bind to neutrophil-derived α -defensin and this binding completely neutralized its bactericidal activity. During infection, proteoglycan degradation and release of dermatan sulphate may therefore represent a previously unknown virulence mechanism, which could serve as a target for novel antibacterial strategies.

O-17

QUALITY OF LIFE AND HAND ECZEMA

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Hand eczema accounts for an estimated 90 per cent of occupational skin diseases. In Sweden, about 10 per cent of the population of working ages, have hand eczema during a year. Twice as many women as men, most of them young and otherwise healthy, suffer from hand eczema. Reports from the Occupational Injury Information System, at the National Board of Occupational Safety and Health in Sweden, show that work-related skin disease is common in hairdressers, metal-workers, cooks, kitchen maids, dental nurses, cleaners, housekeeping service workers, nurses and

nurse's assistants. About half of the work-related hand eczema cases are related to wet work. Our hypothesis is, that quality of life (QOL) is affected by hand eczema, and that women may report reduced QOL, compared to men, e.g. due to the influence of more frequent wet exposure, at work and at home.

Objectives. The aims of the study are to investigate if the questionnaires Short Form 36 (SF-36) and Dermatology Life Quality Index (DLQI) are suitable instruments for the investigation of QOL in patients with hand eczema. If so, the plan is to use them in a larger regional study in Sweden.

Methods. The two different instruments, SF-36 and DLQI, for assessment of QOL, are used in 100 consecutive patients with hand eczema diagnosis, at the Department of Occupational Dermatology, Stockholm. The questionnaires have earlier been used and evaluated in other diagnoses. SF-36 is one of the most used and reliable instruments for measuring health-related QOL, e.g. the relative influence of different diseases on function and well being. DLQI was designed by Dr AY Finlay, Cardiff, Wales, UK, in the beginning of the 1990s. This questionnaire has since then been used to measure QOL in different skin diseases. These instruments have, as far as we know, not previously been used to study QOL in hand eczema.

Results and conclusion. The data has been collected and results and conclusions will be presented at the congress.

O-18

AN 8-YEAR EXPERIENCE WITH ROUTINE SL MIX PATCH TESTING SUPPLEMENTED WITH COMPOSITAE MIX.

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Routine patch testing with sesquiterpene lactone (SL) mix, supplemented with Compositae mix and other Compositae extracts and allergens where appropriate, was evaluated over an 8-year period. 190 of 4,386 patients tested (4.3%) were Compositae-sensitive, 143 females (mean age 51.5 years) and 47 males (mean age 55 years), and 83% of reactions considered clinically relevant. 62% had 2 or more other contact allergies, most often to nickel, fragrance and colophony. SL mix detected 65%, Compositae mix 87% of Compositae-allergic patients, and the overall detection rate with both mixes was 93%. Few irritant reactions and no cases of clear-cut active sensitization were recorded with the mixes, but our results emphasize the importance of differentiating late-appearing reactivation reactions from patch test sensitization. The weakly positive Compositae mix reactions could reflect some irritancy, but as they were associated with fragrance and/or colophony allergy to a higher degree than weakly positive SL mix reactions, they probably represented cross-reactions. In conclusion, the detection rate with SL mix was high enough to support its continued use as a screening mix and it was very well and rather safely supplemented by aimed testing with Compositae mix.

O-19

ALLERGIC CONTACT DERMATITIS FROM 2,2-BIS[4-(2-HYDROXY-3-METHACRYLOXYPROPOXY)PHENYL]-PROPANE (BIS-GMA)

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Background. Allergenic epoxy di(meth)acrylates (EPODMA) such as 2,2-bis[4-(2-hydroxy-3-methacryloxypropoxy)phenyl]-propane (BIS-GMA) are widely used e.g. in dentistry and in ultraviolet (UV)-curable printing processes.

Objective. We studied concomitant and cross-sensitivity of patients with allergic patch test reactions to BIS-GMA, to other EPODMA and to diglycidyl ether of bisphenol A (DGEBA).

Patients and Methods. Patient records from September 1985 to December 1999 from our patch test clinic were reviewed. Patch tests were performed according to the recommendations of ICDRG.

Results. During 1985–1999 13 patients had an allergic patch test reaction to BIS-GMA. All these patients also reacted to DGEBA. 7 out of 10 patients with an allergic patch test reaction to DGEBA reacted to BIS-GMA. 4/13 patients developed BIS-GMA allergy from dental composite resins. 6/13 patients had apparently been sensitized from DGEBA and no exposure to BIS-GMA was known. One patient (1/13) had been sensitized from 2,2-bis[4-(2-hydroxy-3-methacryloxypropoxy)phenyl]-propane (BIS-GA). 3/13 patients had first been sensitized to DGEBA, and then concomitantly to BIS-GMA or BIS-GA.

Conclusion. To find out the causative agent of allergic contact dermatitis in patients with allergic patch test reactions to BIS-GMA and/or DGEBA, patients with an allergic patch test reaction to DGEBA should also be tested to BIS-GMA and other EPODMA, and patients with an allergic patch test reaction to EPODMA should be tested to DGEBA.

O-20

NOSQ - THE NORDIC OCCUPATIONAL SKIN QUESTIONNAIRE- A TOOL FOR SURVEYING WORK-RELATED SKIN DISEASES

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Objectives: Work-related skin diseases are common in many occupations. For surveying occupational skin diseases and exposure, questionnaire-tools are needed. Questionnaires have to be standardized to facilitate comparable epidemiological research, workplace assessments, and evaluation of workplace interventions.

Methods: A Nordic group supported by the Nordic Council

of Ministers has developed a questionnaire-tool for work-related skin problems.

Results: Nordic Occupational Skin Questionnaire (NOSQ) includes two questionnaires for separate purposes. NOSQ-long is a in-depth survey tool for research purposes. NOSQ-short is a 4-page questionnaire for screening work-related skin problems at workplaces (e.g. by occupational health services). It can also be used for monitoring the frequency of skin conditions in workplaces with known dermatitis risks. NOSQ-short is an excerpt from NOSQ-long. The NOSQ-INFO version of the questionnaire also includes information and instructions to the researcher and can be seen as a manual. The questions included covers e.g. occupational history, atopic symptoms, self-reported hand and forearm eczema, exacerbating factors, self-reported contact urticaria on hands and forearms, consequences and life impact of dermatoses, skin symptoms, skin tests, exposures, and protective glove use.

Conclusions: The NOSQ-short and NOSQ-long questionnaires will be available first in English, Danish, Swedish and Finnish. NOSQ-INFO will be available only in English. NOSQ-short, NOSQ-long, and INFO questionnaires will be placed in a special internet site. The site will also include literature background, translation guidelines, and information to researchers on skin disease questionnaire use.

O-21

ALLERGIC CONTACT DERMATITIS TO BUDESONIDE REACTIVATED BY INHALATION OF THE ALLERGEN

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Aim of the study: To study if inhalation of budesonide would result in reactivation of patch tests caused by budesonide and potentially cross-reacting substances.

Method: A randomized, double-blind, placebo-controlled study was initiated, in which 15 non-asthmatics hypersensitive to budesonide were provoked with budesonide or placebo by inhalation 6 weeks after having been patch tested with budesonide, its R and S diastereomers and potentially cross-reacting substances. Lung function was monitored using spirometry and repeated peak expiratory flow rate measurements.

Results: In 4/7 subjects inhaling budesonide reactivation of previously positive patch tests and other skin lesions occurred in contrast to no one of the 8 who inhaled placebo (P=.026).

Reactivation of a potentially cross-reactive substance was also noted.

Conclusion: A patient hypersensitive to budesonide should not be given budesonide as an inhalant. The study design described may be used in studies on cross-reactivity.

O-22

CROSS-REACTIVITY BETWEEN NICKEL AND COBALT DEMONSTRATED BY SYSTEMIC ADMINISTRATION OF NICKEL AND COBALT?

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Objectives: Concomitant patch test reactions to nickel and cobalt have been frequently reported. The present study was designed to demonstrate if these reactions represent cross-sensitization.

Materials and methods: Females hypersensitive to nickel and cobalt were patch tested with serial dilutions of nickel sulphate and cobalt chloride. If they also were hypersensitive to another allergen they were patch tested also with a serial dilution of this allergen or a serial dilution of the irritant sodium lauryl sulphate. The females were patch tested on the upper back. One month later when the test reactions were healed the patients were randomized into 3 groups which were challenged orally with 3 mg nickel sulphate, 1 mg cobalt chloride or placebo. Flare-up reactions of previous patch test reactions were read in a blind way.

Results: Several flare-up reactions were observed on sites previously tested with nickel and cobalt. No flare-up reactions were however seen in patients given placebo or on sites tested with other allergens or sodium lauryl sulphate.

Conclusion: Flare-up reactions in healed patch tests to both nickel and cobalt after oral administration with either nickel or cobalt, may speak in favour of a cross-reactivity mechanism.

O-23

THE ASP84 GLU VARIANT OF THE MC1R GENE IN NORWEGIAN MELANOMA PATIENTS

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Individuals with red hair and fair skin are at risk of melanoma development. These phenotypic traits are regulated by the melanocyte stimulating hormone receptor, MC1R. Variants of the MC1R gene have been associated with red hair and fair skin in humans, one of these, the Asp84Glu variant with melanoma.

69 melanomas, 9 atypical naevi and 20 benign naevi were analyzed for the Asp84Glu mutation by nested PCR and RFLP, followed by sequencing.

The Asp84Glu allele was found in one melanoma. This finding indicates that the Asp84Glu variant allele is rare in melanoma patients in Norway.

O-24

DERMATOLOGICAL DNA LABORATORY IN OSLO: DIAGNOSTIC SERVICES

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The laboratory at the Department of Dermatology, Rikshospitalet, has since June 1995 focused on DNA-technology for the purpose of basic research and development of a diagnostic service. Its name is DDL for short.

Situated since March 2000 in the "New" Rikshospital, the facilities has been located partly at the Dermatological Out-patient section, partly integrated in the Research Laboratory for Internal Medicine, and in close cooperation with the Institute of Forensic Medicine. Economically it has until now (2001) been run exclusively on external funding raised by voluntary activities by professionals at the Department of Dermatology, but with one research fellow under the Norwegian Council of Science.

This communication restricts focus on its current diagnostic capability which is within monogenic diseases, whereas the long-term goal is also to include genetic predisposition to atopy and to psoriasis, and to perform quick skin fungus diagnostics.

Due to 40 years research activity within epidermolysis bullosa and 30 years within congenital ichthyosis, DNA diagnosis within these groups have been given preference. Due to the high frequency of Herlitz disease in Eastern Scandinavia (i.e. Sweden) and of lamellar ichthyosis in Western Scandinavia (i.e. Norway) the high frequency mutations in the LAMB3-locus and the TGM1-locus are currently tested along with haplotype diagnosis both for neonatal, prenatal and gene carrier purposes. For the many other gene loci which may be involved in junctional EB, haplotyping of minisatellites around these loci are performed to pinpoint the most probable locus involved in individual families.

DDL is additionally using triplex minisatellite-haplotyping around the keratin II cluster on chromosome 12, and is preparing a similar set of haplotype-triplets around the keratin I cluster on chromosome 17 and around the epidermal differentiation cluster (EDC) on chromosome 1, to be able to help pinpointing the correct gene cluster for familial cases of epidermolysis bullosa simplex, dyskeratoses and hair anomalies.

Future diagnostics may derive from our basic research projects: plectin on 8q24 and the "melanoma" gene on chromosome 9p.

O-25**RADIOTHERAPY INCREASES SKIN COLLAGEN SYNTHESIS IN BREAST CANCER PATIENTS**

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To study the mechanisms of irradiation-induced fibrosis, collagen synthesis was analyzed in radiotherapy-treated human skin. The subjects were ten randomly chosen women, who had been treated for breast cancer with operation and radiation therapy. The mean age of the subjects was 53 years and the interval from radiotherapy was 7-94 months. The irradiated skin area was compared to the corresponding healthy skin area of the subject.

Skin biopsies were obtained from both the irradiated skin area and the corresponding control skin area. Suction blisters were also induced on both skin areas of the subjects. The skin biopsies were analyzed for type I and type III collagen synthesis by in situ-hybridization technique. An immunohistochemical staining for type I collagen producing fibroblasts was also performed. Suction blister fluid was analyzed for procollagen propeptides of types I and III collagens (PINP and PIINP) with radioimmunoassay.

The amount of fibroblasts positive for type I collagen synthesis was found to be increased in radiotherapy-treated skin. A slight increase of fibroblasts positive for type III collagen synthesis was also found in irradiated skin. In suction blister fluid, the levels of both PINP and PIINP were markedly increased in irradiated skin compared to non-treated skin.

We conclude that these results confirm the hypothesis that skin collagen synthesis is increased as a result of irradiation. The results provide information on the molecular basis of connective tissue fibrosis induced by radiotherapy.

O-26**TWISTED COLLAGEN FIBRILS. SIGNIFICANCE FOR DIFFERENTIATION OF HYPERMOBILE PATIENTS**

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Twisted collagen fibrils (TCF) show remarkable shapes in dermis. TCF are formed by the enzyme systems with inherited defects. TCF have been found in normal skin of Ehlers Danlos syndrome (EDS) and in the lesions of some other inherited dermatoses. EDS presents the cardinal symptoms of joints, skin and vessel in wide variation at varied degrees. The severe cases show typical clinical symptoms of EDS and the milder are often dubious for the exact diagnosis. The latter, hypermobility syndrome (HS), have been separated from EDS by clinical symptoms. HS patients spread widely among the inhabitants. This study intends to evaluate clinical diagnosis of EDS and HS by the ultrastructural points of view.

Skin biopsy specimens, 450 EDS and HS, 5 Marfan syndrome, 1 Osteogenesis imperfecta, 1 Homocysteinuria, 1 Prolidase deficiency, 6 Tuberous sclerosis and ca 100 normal and other acquired dermatoses were studied by routine electron microscopy. Skin biopsy specimens from 20 hypermobile and 7 normal persons were prepared for immune electron microscopy for collagen types I and III. The results were corresponded with Beighton's score index (BI) as the marker of the clinical symptoms.

TCF in normal skin were characteristic for EDS and HS. TCF appeared in forms of flower-like, zigzag bordered and polygonal cut-surfaces of collagen fibrils. Disarrays and various thickness of the collagen fibrils were the accompanying changes. The patients with BI higher than 5 showed distinct changes of TCF and lower ratio of collagen types I/III than 1.0. Seemingly, BI 5 was the border between EDS and HS. Non-hypermobile and TCF-positive persons were also found. They were considered as hypermobile gene-carriers. Four percent of the normal persons had TCF in the dermis. TCF in the other hypermobile disorder were dubious. Involvement of the internal organs was found in the patients of EDS, HS and gene-carriers at a rate of about 10%. They showed manifold disorders, for instance chronic pains, riskful attacks for life and birth complication.

HS is considered to be formes frustes of EDS. TCF indicate disposition for once of the inherited abnormalities of collagen fibrils.

O-27**CONGENITAL ONSET ICHTHYOSIS IN NORWAY: ARE OUR PATIENTS SATISFIED WITH THEIR TREATMENT?**

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To evaluate treatment modalities in ichthyosis a questionnaire was during year 2000 sent to 98 patients. Up to now 72 (73,4%) have responded. These had been clinically evaluated by one or both of the authors. 34 of the patients previously had an electronmicroscopic examination showing the type of congenital ichthyosis (1) and their mutations were known (2).

Of the 72 questionnaires received 34 patients (47,2%) used acitretin continuously.

In these subjective evaluations by the patients 27 of 34 (79,4%) were very satisfied with their treatment where as 7 (20,6%) reported a moderate effect of the treatment.

The side effects of the retinoids are well known. 4 (11%) of the patients using acitretin had to use a wig because of the hairloss. X-rays of the skeleton was done on a regular basis in 25 patients (73,5%) to detect possible hyperostosis due to the retinoid therapy. These findings will be discussed.

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O-29

STD IN LATVIA IN THE YEAR 2000

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In the Latvia morbidity of STD, particularly of syphilis and gonorrhoea, is one of the highest in Europe. The aim of the study was to characterize and analyse the increase in and epidemiology of STDs and normalizing the situation.

In Latvia, the registration of syphilis and gonorrhoea cases is carried out by the state Centre of Sexually Transmitted and Skin Diseases keeping the file of STDs and contagious skin diseases and summarizing data on the morbidity rate of STDs in the country. Each monthly registered morbidity rate is reported to the State Environment and Health Centre that sends summarized information on all infectious diseases to the State Statistics Committee.

In the past decade the highest level of syphilis morbidity in Latvia was in 1996 when 125 cases were recorded per 100,000 inhabitants.

The highest level of morbidity of gonorrhoea morbidity has been observed in 1993 with 162 cases per 100,000 inhabitants.

Currently a decrease in syphilis and gonorrhoea morbidity has been observed, while the incidence of HIV/AIDS has become most alarming. In 1999, the indices of syphilis and gonorrhoea morbidity in Latvia were 62 and 45 per 100,000 inhabitants, but in 2000 there were 1,021 syphilis new cases (9 of them congenital) and 745 with gonorrhoea, however HIV (466 incidences in 2000) infection has appeared in Latvia.

Conclusion: Syphilis and gonorrhoea are the most widespread STDs in the Latvia showing a tendency towards decrease. The flare-up of HIV presents an alarming threat to the society.

To restrict the spread of STDs and HIV/AIDS in Latvia it is of utmost importance to direct attention prophylactic measures and information among the population, particularly among young people.

O-30

HSV-2 ANTIBODIES IN STD-PATIENTS, HEALTHY PREGNANT FEMALES, BLOOD DONORS AND MEDICAL STUDENTS IN BERGEN.

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We have examined the prevalence of HSV-2 antibodies in 600 patients attending our outpatient clinic for sexually transmitted diseases (STD), using three different assays. For comparison we have also examined healthy pregnant females, blood donors and medical students (100 in each group).

The three assays are one ELISA gG2 assay (1), one peptid-55 based ELISA assay (2) and HSV-2 specific IgG ELISA (GULL laboratories).

Among STD-patients we found 9,7–14,1% to be HSV-2 seropositive, in healthy pregnant women the corresponding figures were 10–11,9%, in blood donors between 5–7%, whereas only 2–3% of the medical students were HSV-2 seropositive. Increasing HSV-2 seropositivity was statistically associated with increasing age, whereas we did not find a correlation to gender, number of sexual partners, age at sexual debut or the presence/absence of previous STDs.

The prevalences are somewhat lower than reported in comparable groups elsewhere. The results will be presented and factors that may relate to the relatively low seroprevalence among our STD-patients will be discussed. The sensitivity, specificity and predictive values will be discussed as possible limitations concerning future use of these assays.

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O-31

HIGHER NUMBER OF LEUCOCYTES IN URETHRAL MALE SMEAR OBTAINED WITH A BLUNT METAL CURETTE IN COMPARISON WITH A CALCIUM ALGINATE SWAB.

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Objectives: In the studies which have determined the cut-off value of polymorphonuclear leukocytes (PMNL) needed for the diagnosis of urethritis in males in high power field microscopy of urethral smear, cotton tipped swabs have been used for urethral sampling. Comparison of a positive DNA amplification tests for *Chlamydia trachomatis* (CT) with microscopy diagnosis of urethritis, have found a highly variable sensitivity of the microscopy ranging from 29% to 88%. In the Nordic countries, metal curette is widely used instead of cotton swab for urethral sampling. Comparison between these two sampling methods has not been published.

Methods: 190 male patients consulting the municipal outpatient department for STD in Oslo were enrolled in a study comparing the two methods of urethral sampling. 130 patients met the inclusion criteria. The patients were random-

mised into two groups based on which method was used first. The urethral smears were stained with methylenblue. The mean number of PMNL of 5 consecutive fields from the area with highest concentration of leukocytes was recorded at high power field (HPF-1000x) microscopy.

Result: Swab was used as first smear in 52 patients with a mean of 6.9 PMNL/HPF and metal curette was used first in 78 patients with a mean of 21.6 PMNL/HPF. The mean difference between the two methods was 14.7 PMNL/HPF (95% CI 8.1-21.4) giving a p-value <0.0001. Swab was used as the second smear in 78 patients with a mean on 7.8 PMNL/HPF and metal curette as second smear in 52 patients with a mean of 5.3 PMNL/HPF giving a non-significant difference. 61 (48%) of the patients had more than 4 PMNL/HPF in the first smear, indicating a urethritis. Sixteen (12.3%) of the patients had positive chlamydia test (LCR), all but one had >4 PMNL/HPF in the first smear with both sampling methods.

Conclusion: Microscopy of urethral smear taken with a blunt metal curette revealed a higher number of PMNL in comparison with urethral smear taken with a calcium alginate swab. Urethral samples for microscopy taken with a metal curette for pre-screening of chlamydia may have a higher sensitivity for a diagnosis of chlamydia urethritis than swab samples. However, the cut-off value for the diagnosis of urethritis for samples taken with a metal curette should be considered.

O-32

AMELANOTIC MALIGNANT MELANOMA - A REPORT OF 5 CASES

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Approximately 2 per cent of all melanomas are amelanotic. These lesions are difficult to diagnose due to their lack of the pigment changes generally associated with melanomas. They are often mistaken for other, more benign, skin lesions, which may lead to a diagnostic delay as well as inadequate treatment and a worsening of the prognosis. In the following we will describe five cases of amelanotic melanoma seen in our department from 1995 to 2000. There was a diagnostic delay in 4 out of five patients, still all except one are doing well with no signs of recurrence or metastases three years or more after removal of their tumour. The fifth patient died from metastases. Three of the patients had had previous melanomas. We conclude that in order to diagnose amelanotic melanoma, awareness of this clinical entity as well as a high index of suspicion is necessary, maybe especially in patients who has had previous melanomas. In addition, early biopsy should be taken from solitary skin lesions that do not respond to seemingly adequate treatment.

P-33

ANTIBODIES AGAINST NICOTINIC ACETYLCHOLINE RECEPTORS IN SERA FROM PATIENTS WITH PALMO PLANTAR PUSTULOSIS

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Aim of the study: 1.To investigate if patients with palmo-plantar pustulosis (PPP) have antibodies to nicotinic acetylcholine receptors (nAChR) in addition to antibodies to thyroglobulin, thyroperoxidase and gliadin. 2. To investigate if PPP sera with/without antibodies to nAChR give a positive immunofluorescence (IF) in palmar skin from healthy subjects.

Methods: Sera were obtained from 45 patients with PPP (43 were smokers), from 23 patients with longstanding palmar hand eczema (15 had been or were smokers). Twenty-five per cent of the PPP patients had antibodies to thyroglobulin, thyroperoxidase and 25% had IgA antibodies to gliadin, some had both types. Palmar skin was obtained from healthy non-smokers. Antibodies to nAChR were quantitaed by RIA. Double staining was used for identification of positive structures.

Results: Forty-two percent of the PPP sera had moderately elevated levels of nAChR antibodies in contrast to none of the hand eczema sera. Sixty-eight percent of the positive PPP sera induced a typical IF pattern in the papillary dermis in palmar skin from a non-smoker, with double staining identified as associated with endothelium. Eight percent of the hand eczema patients displayed a similar pattern. The most intense IF was observed in sera with antibodies both to nAChR and thyroid antigens or gliadin. Furthermore one third of sera without antibodies to nAChR but with antibodies to thyroglobulin, thyroperoxidase and/or o gliadin, displayed the same IF pattern although with lower intensity.

Conclusions: PPP may be an autoimmune disease precipitated by smoking with the autoantigen localized to the papillary endothelium. There may be an overlap between this antigen and those in autoimmune thyroid disease and gluten sensitivity explaining the high prevalence of these disorders in PPP patients.

P-34

METHOTREXATE AND PSORIASIS - CAN WE REDUCE THE NEED OF LIVER BIOPSIES? AN EVALUATION OF AMINOTERMINAL PROPEPTIDE OF TYPE III PROCOLLAGEN (PIIINP) IN ROUTINE SCREENING FOR METHOTREXATE INDUCED LIVER FIBROSIS.

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In hepatic fibrosis there is increased synthesis of predominantly type III collagen, and the radioimmunoassay of aminoterminal propeptide of type III procollagen (PIIINP) measures these propeptides, which are cleaved off during collagen synthesis and released into circulation. A number of studies have shown that although the test is not organ specific, it can be utilised as a valuable non-invasive marker of liver fibrogenesis. Several groups have studied PIIINP as an indicator for development of fibrosis in methotrexate (MTX)-treated psoriatic patients. All these studies demonstrated significantly higher levels in patients with hepatic fibrosis than in patients with normal histological features or steatosis alone. The aim of the study was to evaluate if serial normal serum levels of aminoterminal propeptide of type III procollagen (PIIINP) might indicate, that no significant fibrosis is taking place in the liver, and thereby reduce the need for repeated liver biopsies in psoriatics treated with methotrexate (MTX). The clinical records of seventy psoriatics, who in the years 1989/90 were on MTX and had both a liver biopsy without fibrosis and a normal PIIINP, were examined and followed until the patient stopped taking the drug. The follow-up time was from one to eleven years. A total of 189 liver biopsies and 329 analyses of PIIINP were recorded. Twenty-one patients had only one and no further biopsies, but their data included at least two to three PIIINP samples obtained within a year around the time of the biopsy, and at least two were taken either prior to or at the time of the biopsy. The remaining patients had from two to seven liver biopsies each and a total of 267 analyses of PIIINP. In the study period only four patients developed fibrosis of the liver as shown by liver biopsies, and all these four patients developed elevated serum PIIINP levels. In addition two further patients, one of them with psoriatic arthritis, had elevated PIIINP, but normal liver biopsy. No liver fibrosis was missed in the 63 patients with consistently normal PIIINP levels. Thus the present data support the view, that as long as PIIINP is consistently normal in serial investigations, there is minimal risk of development of substantial liver fibrosis.

P-35

SENSITIZATION TO INHALANT AND FOOD ALLERGENS IN CHILDHOOD

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Aim: To investigate prospectively the prevalence of sensitization to grass, birch, house dust mite, egg and milk in children at birth and at 3, 6, 12 and 18 months of age.

Method: A random sample of 562 newborn infants, born in a one-year period at the University Hospital of Odense between Oct.1998 and Oct.1999, is followed prospectively. At birth and at three months intervals parents are interviewed and infants examined clinically. Environmental factors such as exposure to food, infections, vaccinations, pets, tobacco and socio economic factors are registered. Blood samples are drawn for analysis of total IgE, specific IgE and histamine release. Patch testing with milk and egg is performed synchronously with skin prick test in order to evaluate the possibility of type I and IV allergy. Blood is stored for later DNA analysis and cytokine profile. Data are recorded on the newborns' parents and siblings regarding atopy, and skin prick test are offered.

Results: This presentation reports on the occurrence of sensitization to five common allergens. Sensitization to grass, birch, house dust mite, egg and milk have preliminary been examined in cord blood and in blood from children 3 and 6 months by total IgE, RAST-analysis and basophil histamine release. Measurements showed a sensitization rate of 16%, 25% and 27% to one or more allergens using the basophil histamine release response (HR), and a sensitization rate of 11%, 9% and 13% using the RAST method. Total IgE in cord blood and in blood samples was increased in 21%, 4% and 13% of the children. The most common reactions were to egg and milk. Using the HR response, sensitization to egg showed a rate of 11,3%, 17,2% and 17,5% and to milk a rate of 3,6%, 11% and 11,7%. The RAST method showed a sensitization to egg in 0,3%, 2,8% and 6,7% and to milk in 4,8%, 2,0% and 2,8%.

Conclusion: Newborn children show sign of in utero sensitization or sensitization in early childhood. In cord blood and in blood samples from 3 and 6 months old children positive specific IgE and basophil reactivity was found to allergens such as egg and milk, and to a lesser degree to inhalant allergens as grass, birch and mite.

P-36

SYNDROME OF ENDOGENOUS INTOXICATION IN PATIENTS WITH MYCROBIAL ECZEMA.

+Prokhorov, Dimitry

Nowadays the syndrome of endogenous intoxication is presented by complex pathologic polyetiologic process which attends majority of somatic diseases and dermatosis. I markers of endogenous intoxication were studied in 63 patients with mycrobial eczema. Moleculs middle mass (MMM) was defined by scrinning method, for definition of antibodies method of hard-phase immunoenzymic analysis. Wasneed the increase of level of moleculs middle mass was determined in blood serum and the lowering of MMM in urine (blood - $0,350 \pm 0,09$ conditional units; urine - $35,5 \pm 0,1$ conditional units; normal indexes: blood - $0,242 \pm 0,01$ conditional units; urine - $39,2 \pm 0,3$ conditional units). It was also registered the high level of antibody to lipopolysaccharide Esherichia coli K30 in blood serum in 1,5 times higher, than in healthy people.

Received data show the presence of a considerable extent of endogenous intoxication in patients with mycrobial eczema. Clinical manifestation of endotoxycosis can corulated with the heaviness of flow dermatosis, the extensiveness of skin affection and disturbance of the common state of organism.

P-37

STUDY OF EXPRESSION OF FAS-RECEPTOR ON THE LYMPHOCYTES OF PERIPHERAL BLOOD IN PATIENTS WITH PEMPHIGUS

+Pritulo, Olga

Two-parametric immunophenotypic analysis of expression of antigen CD95 (FAS/APO-1) on superficial membrane of lymphocytes of peripheral blood in patients with pemphigus on the background of hormonotherapy was done by means of running laser cytofluorometry (cytofluorometer FACScan, Becton Dickinson). It was determined, that in the examined patients the number of CD4+CD95+ - lymphocytes were $4,2 \pm 1,6\%$. Within subpopulation of CD4+ - lymphocytes $10,8 \pm 2,4\%$, cells carried marker of activation - antigen HLA-DR. CD95+ - lymphocytes of patients with pemphigus membrano-associated FAS-receptor didn't express. The Number of common population of CD95+ - lymphocytes and immunoregulatory CD4+ - subpopulation of lymphocytes in these patients was within the limits of normative meaning. Received data indicate the presence of inverse interaction in the number of lymphocytes with phenotype CD4+HLA-DR+ and number of CD4+CD95+ - lymphocytes in patients with pemphigus at hormonotherapy.

P-38

MED/MPD IN THIN AND THICK SKIN

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There is no available knowledge of tolerance to UV irradiation by different sources and in different body areas. In UV treatment of hand and foot dermatoses dose enhancement has been done according to experience, and not led by MED/MPD measurements.

In six healthy volunteers we have measured MED after TL01 irradiation in thin skin (dorsal aspect of hands, buttocks) and in thick skin (palms). In the same localizations we have measured MPD after P-TL01 and PUVA irradiation.

As TL01 source we have used a plate of 20W tubes $\times 6$, effect 4.3 mW/cm^2 (Esshå elagentur, Värnamo, Sweden) and as UVA source a PUVA 180, effect 6.4 mW/cm^2 (Waldmann, Germany).

With TL01 irradiation the MED of palms was 20-43 times MED of buttocks, with MED of dorsal aspect of hands lying close above buttocks. Addition of psoralen did not change this ratio, and MPD was only slightly lower than MED. Though the numbers are few the findings are consistent.

PUVA MPD measurements revealed inconsistent results with MPD of palms to be 1.7-6.7 times MPD of buttocks, and the values for dorsal aspects of hands lying in between.

The study should be repeated in a larger number with standardized conditions including measurement of plasma psoralen.

P-39

THE POTENTIAL ROLE OF OXIDATIVE STRESS IN ELICITATION OF CONTACT ALLERGY

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Reactive oxygen species (ROS) are involved in the pathogenesis of inflammatory skin diseases. To evaluate the extent of oxidative stress (OS) in reactive patch test sites, we compared the iron status and the glutathione redox status in the positive to 5% NiSO₄ patch test areas and in the normal skin in eight female volunteers.

We found a 4-fold increase of the iron level in the positive patch test areas in comparison with the healthy skin ($p < 0.001$ by Wilcoxon's signed range test). Iron derives mostly from storage proteins and it is released under the influence of ROS generated by inflammatory cells. The unbound iron binding capacity (UIBC) and possible total binding capacity of iron sequesters (TIBC) were significantly ($p < 0.005$) increased in the positive patch test sites. There was only a slight difference in the diene conjugate amounts between the inflamed and the healthy skin, which indicated that lipid peroxidation did not take place although the iron level was high. The most important low-molecular weight

antioxidant in skin cells is glutathione that removes ROS by conjugation. The oxidized glutathione (GSSG) level was markedly increased in the positive patch test sites in comparison with the normal skin ($p < 0.003$). Because of a concomitant GSH increase in the reactive patch test sites, the difference in the GSSG/GSH ratios was below statistical significance. There was a positive correlation between the iron level and the GSSG amount.

Recently, mechanisms underlying the contact sensitization during patch testing have been investigated. Our results suggest that the positive patch test reaction is accompanied by potent OS. ROS released during inflammation can oxidize metals to higher oxidation states and favour the contact sensitization.

P-40

PATCH TEST REACTIONS WITH DENTAL SCREENING SERIES

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Background. Dental products contain many allergens and may cause problems both to patients undergoing dental treatment and to dental personnel from occupational exposure. Single patch test clinics may not study sufficient numbers of patients to get reliable data on uncommon allergens.

Objective. To get information on dental allergens based on a multicenter study.

Material and Methods. The Finnish Contact Dermatitis Group tested more than 4000 patients (for most allergens 2300–2600 patients) with dental screening series. Conventional patch testing was performed. The total number and percentage of irritant [scored as irritant (IR) or doubtful (?)] and allergic (scored as +, ++ or +++) patch test reactions, respectively, were calculated, as well as the highest and lowest percentage of allergic patch test reactions recorded by the different patch test clinics. A reaction index (RI) was calculated giving information on the irritancy of the patch test substances.

Results. The most frequent allergic patch test reactions were caused by nickel (14.6%), ammoniated mercury (13%), mercury (10.3%), gold (7.7%), benzoic acid (4.3%), palladium (4.2%) and cobalt (4.1%). 2-hydroxyethyl methacrylate (2.8%) provoked most of the reactions caused by (meth)acrylates. Menthol, peppermint oil, ammonium tetrachloroplatinate and amalgam alloying metals provoked no (neither allergic nor irritant) patch test reactions.

Conclusion: Patch testings with allergens in the dental screening series, including (meth)acrylates and mercury need to be performed to detect contact allergy from dental products.

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P-41

THE IMPORTANCE OF UNDERSTANDING EXPOSURE IN RISK ASSESSMENT

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The development of ingredients and products for the consumer market requires, as part of the pre-marketing safety assessment, a thorough evaluation of their potential to induce contact allergy and/or elicit clinically relevant Allergic Contact Dermatitis (ACD). An essential element of the skin sensitisation risk assessment process is the evaluation and understanding of the relationship between skin sensitisation hazard (the inherent potential of an ingredient to cause allergic skin sensitisation) and actual skin sensitisation risk where the latter relates to the induction of contact allergy and/or elicitation of ACD under exposure conditions typical of all intended and foreseeable uses of the product by consumers.

Many of the chemicals in common use today possess, to some degree, the potential to cause contact allergy. However the fact that a chemical is a contact allergen does not mean that it cannot be formulated into a consumer product at safe levels. For example, it is well known that ingredients, such as certain preservatives, which have known contact allergy potential can be formulated into consumer products at levels that are safe and do not result in an unacceptable incidence of skin reactions so long as the in use exposures are below the recognised thresholds for induction and elicitation of sensitisation. It is equally well known that these same ingredients can trigger significant ACD when formulated into products inappropriately, e.g. at too high a level. This is based on the knowledge that all allergens demonstrate dose-response and threshold characteristics and that exposure is a key parameter to take into account. The dose response for induction of skin allergy and elicitation of ACD can be directly influenced by a number of factors including, for example, the vehicle system/product matrix in which the allergen is presented to the skin, the frequency and duration of exposure, underlying skin irritation and whether the ingredient/product is occluded (e.g. deodorant application versus shampoo use).

It has been known for over a decade that an understanding of the concentration (dose/unit area) of allergen applied to skin, rather than the absolute amount (volume) applied is more important to the understanding of skin sensitisation risk. It is only relatively recently, however, that such exposure scenarios have been used to understand whether consumer exposure in use to an allergen is acceptable relative to an established "safety" or "uncertainty" factor. Such a safety/uncertainty factor is calculated taking into account the differences that might exist (e.g. matrix/vehicle effects, occlusion versus non-occlusion, frequency and duration of exposure) between the potential exposure for the consumer versus those used to establish known safe benchmarks such as the No Effect Level (NOEL) determined from pre-clinical studies and confirmed in such human studies as the Human Repeat Insult Patch Test (HRIPT). This poster details the principles of exposure-based risk assessment for consumer products using MCI/MI as a case study.

P-42

DOES IMIQUIMOD NORMALISE HAIRGROWTH IN ALOPECIA AREATA?

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Imiquimod is a synthetic molecule with potent immune modifying activities. The induction of among others, interferon-g (IFN-g) and interleukin-12 (IL-12), favour an immune TH1 reaction and an immune deviation away from a TH2 response, which may dominate in alopecia. Some anecdotal reports have indicated beneficial effects in alopecia.

Background: We report 5 cases of alopecia areata which all had regrowth of hair after treatment with imiquimod 5% cream (AldaraTM). Three women, age 41 to 52 years, one girl, 11 years, and one man 52 years, with a recurrent alopecia areata. None had family history of alopecia, but the girl suffered atopic eczema (AE) since the age of one, and the man had periods of AE. Except for the man, none had previously had any abnormal hairloss. The hairless areas varied from 2 cm in diameter to 16*3.5 cm. Two patients had two spots involved. Two of the women and the man indicated stress as a possible provoking factor, while the others had no obvious reason. The duration of the present hairloss varied between 2.5 month and one year.

Procedures: The patients applied the cream locally once daily or each second day. Most patients were seen after 6 weeks and then followed up for different time periods. Except for the girl, photos were taken before treatment and at each follow up visit. In the girl treatment was initiated with clobetasol propionat solution for a total of 4 weeks during a two month period with no effect on hairgrowth.

Follow-up: In the girl, after 6 weeks of treatment with imiquimod 5% cream 2/3 of the area was regrown. Except for one woman all had regrowth after 6 weeks. The patients were followed for different periods ranging from 18 weeks to 9 months. In all patients regrowth was observed. The treatment was well tolerated without any serious reaction. The man experienced light ulceration and erythema on a once daily application, which disappeared when the dose was reduced to each second day.

Conclusion: In 5 patients with alopecia areata, partly or total regrowth of hair were observed after local application of imiquimod 5% cream. As spontaneous regrowth may occur in these patients, this can not be excluded. However, in our opinion it is highly unlikely that, by chance, all should start regrowing spontaneously at the time of treatment. Further controlled studies are warranted.

P-43

SUCCESSFUL TREATMENT FOR MULTIPLE SUPERFICIAL BASAL CELL CARCINOMA USING IMIQUIMOD 5% CREAM-A CASE REPORT

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Imiquimod stimulates interferon-a and other cytokines and is shown to have a broad anti-tumor effect in animal studies. A double blind pilot study has shown total / partly clearance of BCC in man.

Background: We report an otherwise healthy 72 year-old Caucasian man who had had multiple superficial basal cell carcinomas (BCC) since 1965. His sister and uncle also have multiple superficial BCC, but he had no known immune defect or immunosuppressive treatment. He has had approximately 2-3 various surgical procedures each year, mostly ordinary excisions and he subsequently developed a syringes- and operation-phobia. Since the patient refused any surgical procedures, he was referred from the Department of Plastic Surgery at Karolinska Hospital, where they had done three excisions and taken one punch biopsy. One excision showed residual of BCC in the left eyebrow. The punch biopsy lateral to the left eyebrow showed multifocal growth of superficial BCC. He also had several lesions on the trunk. When we first saw him in December 1999 he had a total of 29 clinically visible superficial BCC, the majority on the trunk. The earlier pathological findings were matching. A non-invasive treatment was desirable and possible with imiquimod 5% cream (Aldara[®]).

Procedure: To start with, the patients 29 lesions were treated three times a week by a nurse. After four applications he reacted with itch, redness and even shallow ulcerations. The treatment was paused for one week. After 8 weeks most of the lesions were significantly reduced and some still ulcerated. He was treated for a total of 16 weeks.

Follow-up: We saw him again after four weeks. All treated areas were slightly erythematous. He accepted four punch biopsies of which one revealed rests of BCC. Clinical follow-up at 4, 6 and 8 months showed no signs of recurrences of the treated lesions.

Conclusions: A man with a history of multiple BCC was successfully treated with local imiquimod, which seems to be a good alternative treatment modality.

P-44

Photodynamic therapy (PDT) with Metvix[®] cream versus topical treatment with Efudix[®] cream in patients with multiple actinic keratosis on sun-damaged skin.

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This clinical trial compares response and sideeffects of traditional topical 5-FU-treatment (Efudix[®] cream) and photodynamic therapy with a new fotosensitizer containing 5-aminolevulinic acid (Metvix[®] cream 160 mg/g) on multiple and thick actinic keratosis (AK) on sun-damaged skin.

Methods: 12 patients (10 male; 2 female; mean age 72 (59 - 82 yrs)) with multiple and symmetrical distributed AK-lesions, including 6 reference-lesions > 4mm were - in a defined bodyarea - treated with Efudix® on the right half of the body, and Metvix®-PDT on the left half of the body in the same patient.

Metvix® cream was applied 3 hours before irradiation with blue light 420 nm 5 J/cm². Efudix® cream was applied b.i.d . for 3 weeks. The response of the treated lesions was evaluated after 3 months when all lesions on the left body side wher retreated with Metvix®-PDT now using red light 570-670 nm 75 J/cm².

Results: 12 patients with a total of 546 AK-lesions (mean 46), mainly located in sunexposed sites of the head were included in this explorative trial. 11 patients where included in the effect analysis, as one patient dropped out. Evaluation was performed after 6 and 12 months.

Metvix® PDT was tolerated well with mild transcient local sideeffects as erythema and oedema short time after treatment. In the Efudix®-treated sites the expected sideefekts (erythema, oedema, erosions) were seen. PDT-treatment was therefore preferred subjectively , but most of the patients favoured the treatment with the best clinical outcome.

Conclusion: In this study 5-FU was significantly more effective than Metvix®-PDT in clearing/ reducing AK. Metvix®-PDT was without major side effects compaired to the wellknown side effects of 5-FU. Metvix®-PDT was only effective in rather thin AK, indicating that thick AK lesions need to be manipulated with curretage before PDT to enhance penetration of Metvix® cream.

P-45

MISOPROSTOL IMPROVES SYMPTOMS IN PATIENTS WITH ERYTHROMELALGIA

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Erythromelalgia (EM) is a condition defined by red, hot and painful extremities. Warmth induce and intensifies the discomfort while cold provides relief. We have previously postulated microvascular arteriovenous shunting as a pathogenetic mechanism. According to this hypothesis there is maldistribution of skin perfusion, with increased thermoregulatory flow and a relative deficit of nutritive perfusion with tissue hypoxia. Vasodilatation may enhance nutritional blood flow, improve tissue oxygenation and remission of symptoms have been reported after infusions with vasodilators (alprostadil/prostacycline/sodium nitroprusside). No single medication or treatment has been universally helpful and treatment reports in the literature are limited to single or few cases, not placebo controlled.

The objective of the present study was to determine whether misoprostol, an oral, synthetic prostaglandin E1 analogue and vasodilator, leads to clinical improvement in patients with EM in a non-randomised, placebo compared study. 21 patients aged 44,7+12,5 years (mean+SD) were treated with placebo for six weeks followed by misoprostol for the next six weeks.

Pain and cooling score, ability to induce pain after central body heating and global self-assessment of EM suffering was significantly reduced after the intervention. The symptoms deteriorated in most patients after discontinuation of the study medication.

In conclusion, we have performed the first placebo controlled clinical trial in patients with EM. Misoprostol significantly reduces EM symptoms. The long term effect seems to be limited. A redistribution of microvascular perfusion is a possible mechanism for the beneficial effect.

P-46

IMPROVED QUALITY OF LIFE AND DISEASE SEVERITY IN NORWEGIAN PATIENTS WITH PSORIASIS AFTER CLIMATOTHERAPY AT THE CANARY ISLAND

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Little attention has been paid to the effect of different treatment regimes or treatment settings on quality of life in patients suffering from psoriasis. The aim of the present study was to explore the effect of climatotherapy on quality of life and disease severity in Norwegian patients with psoriasis. Supervised climatotherapy at the Norwegian Health Center consists of a 3-week health care programme including sun exposure, sea bathing, psychosocial and physical stimulation in a relaxing atmosphere, and education with emphasis on improving the coping abilities in relation to the disease, its treatment and its consequences. Over a two year period (1994-1996), patients were invited to complete the Dermatology Life Quality Index (DLQI) on arrival and at the end of the treatment period. Psoriasis severity (PASI / PSI) was also assessed by the dermatologist pre and post treatment. The sample consists of 229 patients from the season 1994/1995 and 230 patients from the season 1995/1996. Descriptive analyses were performed to assess the characteristics of the sample. Paired t tests were performed to assess the differences in the mean pre - and post treatment values for quality of life and psoriasis severity. In the sample from 1994/1995, 59.8% was men and in the sample from 1995/1996, 59.1% was men. With regard to age, the mean age of the sample from 1994/1995 was 47.7 (13.4) 23-82 (range), and for the sample from 1995 / 1996, the mean age was 49.8 (13.4) 22-86 (range). Results from the paired t tests showed a significantly decrease on a 0.01 level in impairment of quality of life and psoriasis severity in both seasons. In the absence of a permanent cure for psoriasis, the goal is to minimise the extent and severity of the condition to the point where it no longer substantially disrupts the patient's quality of life.

P-47

A NEED FOR PREGNANCY CARRIER TEST FOR JUNCTIONAL EPIDERMOLYSIS BULLOSA HERLITZ IN SWEDEN?

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Over 2% of the population in Västerbotten and Norrbotten and about 1% of the total Swedish population are heterozygous carriers for this disastrous disease with an average life span of 7 months and with profound disturbances and tragedies in 2-4 Swedish families annually (1,2). Herlitz disease is caused by nonsense mutations in either of the 3 genes LAMC2, LAMB3 and LAMA3 coding for the 3 polypeptides laminin g2, b3, a3. These polypeptides participate in the heterotrimeric laminin-5 molecule essential for the anchorage of the hemidesmosomal anchoring fibrils traversing lamina rara into the lamina densa of the dermoepidermal junction (3,4). Strong association to dinucleotide markers on chromosome 1q32 have pinpointed one predominant haplotype involved in almost all Swedish JEB-H families. Six families spread over Northern Scandinavia are compound for this and another uniform haplotype, suggesting 2 prehistoric mutations. The common haplotype appears to carry the LAMB3 mutation R635X, first discovered in 1994 (5) and later found in 45% of all JEB-H alleles examined in Caucasians (6). From the 8 new Herlitz cases born 1999-2000 in Northern Sweden, the proportion of R635X to the other prehistoric mutation is 14:2. If in Sweden, with 90.000 annual births, all pregnant woman was offered and chose to have a blood sample examined for these two mutations, 900 pregnant women will be shown to be mutation carriers. Of their husbands 9 will be carriers, hence 9 couples will annually be offered chorion villus sample (CVS) and 1-3 fetuses shown to develop Herlitz disease, preventable by interruption of pregnancy. These figures assume an overall carrier frequency of 1%, which may be an underestimate. Relative to the health expenses of keeping Herlitz babies alive at an optimal life quality until death, a pregnancy screening may be beneficial also in terms of health economy.

P-48

GENERALIZED BASALOID FOLLICULAR HAMARTOMA TREATED WITH X-RAY - A CASE REPORT

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A 16-year-old woman noted a thinning of scalp hair and eyebrows and during the same period a papular skin lesion appeared in the face. The skin lesion slowly progressed and she was first seen at the Department of Dermatology in February 1989. The histopathological picture of the facial papules was consistent with generalized basaloid follicular hamartoma (1). The skin lesions progressed during the following years and during this period isotretinoin and CO₂-laser treatment were used without effect. A plastic surgeon was consulted but surgery was declined. In 1998 the hamartoma had progressed severely. We could not find any re-

port of treatment in the literature and because the progress was so severe in our patient, treatment with Caelyx®, a liposomal anthracycline, of an absolute dose of 50 mg i.v. x 1/week and then Interferon Alfa-native® 3.0 MIU s.c. x 3/week for a period of 24 weeks was started. The treatment did not have any effect on the skin lesion.

In December 1998, a treatment with superficial x-ray therapy was started using 70 kV energy in fractionation of 3.0 Gy per day up to the tumor dose of 45.0 Gy. During the last 3 years 4 different areas in the face have been treated. The effect of the x-ray treatment has been very good which is clearly seen both clinically and in skin biopsies from different facial areas.

P-49

PILI TORTI ET CANALICULI AND AGENESIS OF TEETH. REPORT OF A NEW "PURE" HAIR-TEETH ECTODERMAL DYSPLASIA

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Ectodermal dysplasias comprise a heterogeneous group of inherited developmental disorders affecting tissue and organs of ectodermal origin. Their classification is based on malformations in hair, teeth, nails, and sweat glands as the major criteria. Ectodermal dysplasias are thus divided into 11 subgroups based on a minimum of two ectodermal signs with or without other developmental defects. A four generation norwegian family with structural hair shaft abnormalities and agensis of teeth is presented. The index person had suffered from stiff and rough hair since childhood. His paternal relatives also showed stiff and rough hair. Hair samples from him and his relatives were fixed onto probes with double-sided scotch tape, coated with 30 nm layer of gold/palladium alloy in a Polaron E 5100 Sputter Coater (Polaron Equipment Ltd., Watford, U.K.), and the specimens were then examined and photographed in a Philips SEM 515 microscope (Philips, Eindhoven, The Netherlands). The scanning electron microscopical investigation of hairs showed pili torti et canaliculi. Odontological investigations revealed agensis of certain teeth, primarily the upper and/or lower incisors. No associated defects of nails, disturbances of sweat gland function, nor other defects of ectodermal or other origin were found. The dental abnormalities became obvious with the eruption of the permanent teeth. The ectodermal dysplasia seems to be inherited autosomal dominantly, and has not been described previously.

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PHOTOTOXICITY TO DIURETICS AND ANTIDIABETICS IN THE CULTURED KERATINOCYTE CELL LINE HaCaT. EVALUATION BY CLONOGENIC ASSAY AND SINGLE CELL GEL ELECTROPHORESIS (COMET ASSAY)

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The oral antidiabetics tolbutamide, glibenclamide, and glipizide, and the diuretics bendroflumethiazide, butizide, furosemide, hydrochlorothiazide, and trichlormethiazide were investigated for their potential to cause phototoxicity in the HaCaT cell line. The cells were incubated with different concentrations of the drugs and then exposed to UVA1 irradiation. Cell survival was evaluated in a clonogenic assay and phototoxic DNA damage was investigated by the single cell gel electrophoresis (comet assay). The effects of the antioxidants L-ascorbic acid, and α -tocopherol on oxidative DNA damage were also assessed. Bendroflumethiazide, furosemide, hydrochlorothiazide, trichlormethiazide, or tolbutamide induced dose-dependent phototoxicity in the clonogenic assay. Cells incubated with bendroflumethiazide, tolbutamide, and glibenclamide, and irradiated with UVA1 demonstrated an increased oxidative DNA damage revealed as alkali-labile sites in the comet assay. Pretreatment with L-ascorbic acid, or α -tocopherol, suppressed the UVA-induced DNA damage in cells incubated with 1 mM of bendroflumethiazide, furosemide, glibenclamide, glipizide, tolbutamide, and trichloromethiazide, further implying the involvement of reactive oxygen species in the phototoxic DNA damage. These results indicate a link between phototoxic and photocarcinogenic potential of the sulfonamide-derived oral antidiabetic and diuretic drugs, as it has previously been recognized for psoralen, chlorpromazine, and fluoroquinolones. Excessive exposure to UV light may be deleterious for patients treated with oral antidiabetic and diuretic drugs.

P-51

CLINICAL FINDINGS AND ENVIRONMENTAL FACTORS RELATED TO UROD GENE AND HFE GENE MUTATIONS IN DANISH PATIENTS WITH PORPHYRIA CUTANEA TARDA.

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The manifestation of porphyria cutanea tarda (PCT) is based on genetical and environmental factors. The cytoplasmic enzyme activity of uroporphyrinogen decarboxylase (UROD), which catalyzes the fifth step in the haem synthesis, is decreased by 60–90% in patients with active skin lesions. Demonstration of mutations in the UROD gene, located at chromosome 1p34, discriminates familial PCT (fPCT) from sporadic cases (sPCT). Furthermore, mutations in the haemochromatosis gene (HFE) may be implicated in the aetiology of PCT.

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The aim of the present study was to classify a series of Danish patients according to UROD and HFE mutations and by clinical investigation to identify environmental risk factors of importance for the clinical expression in predisposed patients. The study includes 53 Danish PCT patients with clinically overt disease in 36 and clinical remission in 17 patients at the time of inclusion. 25% of our patients had fPCT as seven different, probably disease related mutations were identified in 13 patients. 15% were homozygotic for the HFE C282Y mutation and 6% (3 patients) met current clinical and biochemical criteria for expressed haemochromatosis. No statistically significant difference was found between sPCT and fPCT regarding age of onset, clinical severity, sex, liver function tests and iron storage parameters. However, daily alcohol intake and use of oestrogens were reported more frequently in the sPCT group compared to the fPCT group. The present study shows that genetic, biochemical and clinical data should be taken into account when diagnosing PCT. Mutations in UROD as well as HFE can predispose to PCT. Examination for mutations in UROD and HFE genes help to establish the diagnosis and in cases with HFE mutations more intensive phlebotomy may be necessary to prevent liver disease.

P-52

DERMATOVENEROLOGICAL SERVICE IN ESTONIA

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Changes are expected in Estonian health policy over the next few years. At present the situation in dermatovenerology in Estonia is the following.

There are 83 dermatovenerologists (aged up to 67) active in the field as well as 11 postgraduate students/residents. Altogether, this makes 6 specialists per 100,000 inhabitants (data as of first of January, 2000), which is twice as high as the figure for the Nordic countries.

Most of the dermatovenerologists are concentrated in Tallinn and Tartu (35 and 17, respectively). With the exception of the Hiiumaa county, there is at least one dermatologist in every county (Figure). In 1999 Estonia had 841 reported cases of syphilis (with 7 of the patients under age 5), 1103 cases of gonorrhoea, 3413 cases of chlamydiosis, and 3508 cases of trichomonosis. There are four specialized dermatovenerological hospitals, situated in Tartu, Tallinn, Pärnu, and Narva, with a total of 160 beds plus 46 beds in day-departments. In 1999, 3316 patients were hospitalized and 1026 received treatment in the day-departments. All four hospitals also have outpatient departments. A visit to a dermatovenerologist does not require a reference from the family doctor. The changes expected will involve a radical decrease in the number of beds with a corresponding increase in outpatient treatment.

The training center for medical students in Estonia is the University of Tartu, whose Clinic of Dermovenerology (50 beds) makes up the base for training future dermatovenerologists. Residency takes place in the same clinic as well as in Tallinn Dermatological Hospital (70 beds) and lasts for three years.

We suggest a close collaboration between the Nordic countries and Estonia in the area of postgraduate training of dermatovenerologists.

P-53

GONORRHEA IN A NEW MILLENNIUM.

+Thune, Turid* (NORWAY); Rustad, Lisbeth (NORWAY)
*Haukeland University Hospital

During the last two decades *Neisseria gonorrhoeae* has become a rare cause of sexually transmitted disease in Norway (1). We have looked at all the gonococcal infections registered at the STD clinic, department of Dermatology and Venereology, Haukeland University Hospital, Bergen, Norway, from Jan. 1st 1997 until Dec. 31st 2000. 45 infections caused by *N. gonorrhoeae* were verified by cultivation. The aim of the study was to look at the gonococcal susceptibility to antibiotics. During the study we also made some other interesting observations:

- Most of the patients were males.
- More than 50% caught the infection abroad.
- Most of the males caught the infection from a casual partner.
- Less than 10% had a co-infection with chlamydia trachomatis.
- Resistance to the commonly used antibiotics was high.

Because of the high resistance against penicillin, antibiotics in the quinolone group have been recommended as the drug of choice against infections caused by *N. gonorrhoeae* (2). Quinolone resistance is increasing. About 35% of the gonococci cultured were either resistant or showed reduced sensitivity to fluorinated quinolone. When the infection was imported from the southeastern part of Asia the percentage was nearly 60. This is coherent with the gonococcal susceptibility to antibiotics found in this area (3). The knowledge of the increasing resistance against quinolone should be taken into account in the treatment uncomplicated gonorrhea.

P-54

MICROSCOPIC VIEW OF METHYLENE BLUE (MB) STAINED URETHRAL SMEAR OF THE MALE ATTENDING STD OUTPATIENT CLINIC AND ITS RELATION TO C. TRACHOMATIS INFECTION

+Vagoras, Andrius* (LITHUANIA); Sumila, A. (LITHUANIA); Lapinskaite, G. (LITHUANIA); Marciukaitiene, I. (LITHUANIA)
*University Hospital

Objectives: Study aimed to evaluate empiric difference of microscopic view of MB stained urethral smear and to look for a possible relation of these differences to *C. trachomatis* infection.

Methods: Urethral smears of 215 men attending outpatient clinics of venereal diseases were taken using 1 µl bacteriological plastic loop. Direct microscopy of the methylene blue stained smear was performed at "bed-side". Finding of >4 of polymorphonuclears (PMNL) in more than 5 "eye" field on high power magnification, was considered as diagnosis of urethritis. Depending on distribution pattern of PMNL's in the smear urethritis was categorized: 1-PMNL's are detected only in the stands of mucous; 2-PMNL's only between the epithelial cells (EC); 3-PMNL's are detected both in mucous and in between the EC; 4-PMNL's and EC are within a large amount of mucous. First voided urine of every patient was tested by in-house PCR (Uppsala University) for presence of *C. Trachomatis*.

Results: Prevalence of chlamydial infection 11.2%. Urethritis was diagnosed in all cases (n=24) of *C. trachomatis* infection and was prevalent in 57% (123 of 215). Distribution of *C. trachomatis* urethritis cases depending on morphological view category presented in the table.

Number of category	1.	2.	3.	4.
Number of total				
cases CT infection	1	12	5	6
Total number of urethritis	31	26	19	47

Conclusion: It could be that not all differences in morphological view of smear depend on the stage of urethritis, sample taking etc. This study find OR=0.1 (CI; 0.005–0.750) and p=0.0295 for category 1; OR=6 (CI; 2–18) and p=0.0003 for category 2. Bigger size of study population and determining of other possible urethral pathogens could uncover statistical significant relations, which could be explained by specificity of urethritis caused by different infection agent or non-infectious origin.

P-55

INFECTIOUS SKIN DISEASES IN RECENTLY RETURNED TRAVELLERS

+Gasior-Chrzan, Barbara* (NORWAY); Falk, Edvard S. (NORWAY)
*University of Tromsø

For many infections acquired during travel, skin lesions may be the only visible clinical findings and often present a diagnostic dilemma. Some skin diseases may develop weeks or months after the patient has returned from a trip. The approach to the recently returned traveller must start with detailed travel and dermatological histories and complete physical examination. Not all skin lesions that appear during and after travel to exotic locations are caused by unusual infections. This presentation focuses on the usual manifestation of infections in immunocompetent hosts. Six cases will be presented and discussed.

P-56

LONG-TERM EFFECTIVENESS OF TERBINAFINE vs. ITRACONAZOLE IN ONYCHOMYCOSIS: A 5-year blinded prospective follow-up study

+Sigurgeirsson, Bárður* (ICELAND); Olafsson, Jón H. (ICELAND); Steinsson, Jón (ICELAND); Paul, Carle (ICELAND); Billstein, Stephan (ICELAND); Evans, E. Glyn V. (ICELAND)

*University Hospital

Objective: To examine long-term cure and relapse rates, after treatment with continuous terbinafine and intermittent itraconazole in onychomycosis.

Design: Long-term prospective follow-up study.

Setting: Three centers in Iceland.

Subjects: 151 patients aged 18 to 75 years with a clinical and mycological diagnosis of dermatophyte toenail onychomycosis.

Interventions: In a double-blind, double-dummy study, patients were randomized to receive either terbinafine (250 mg/day) for 12 or 16 weeks or itraconazole (400 mg/day)

for 1 week in every 4 weeks for 12 weeks or 16 weeks (first intervention). Patients who did not achieve clinical cure at month 18, or experienced relapse/re-infection were offered an additional treatment with terbinafine (second intervention).

Main outcome measures: The primary efficacy criterion was mycological cure, defined as negative results on microscopy and culture at the end of follow-up without requiring second intervention treatment. Secondary efficacy criteria included clinical cure without second intervention treatment, and mycological and clinical relapse rates.

Results: Median duration of follow-up was 54 months. At end of study mycological cure without second intervention treatment was found in 34/74 (46%) of terbinafine-treated subjects and 10/77 (13%) of itraconazole-treated subjects ($p < 0.001$). Mycological and clinical relapse rates were significantly higher in itraconazole vs. terbinafine-treated patients (53% vs. 23% and 40% vs. 17%, respectively). Of the 72 patients who received subsequent terbinafine treatment, 82% achieved mycological cure, and 92% clinical cure.

Conclusion: Continuous terbinafine provided superior long-term mycological and clinical efficacy and lower rates of mycological and clinical relapse, when compared to intermittent itraconazole, in the treatment of onychomycosis.

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STADGAR FÖR NORDISK DERMATOLOGISK FÖRENING

antagna vid föreningens första möte i Köpenhamn 1910, ändrade i Köpenhamn 1935, i Stockholm 1946, i Århus 1977 och senast vid föreningens 26:e möte i Reykjavik den 14 juni 1993

- §1 Föreningens syfte är att befrämja samarbete i vetenskap, undervisning och praktisk läkekonst mellan dermatovenereologer i de 5 nordiska länderna (Danmark, Finland, Island, Norge och Sverige).
- §2 Som nya medlemmar kan antas personer i de 5 länderna vilka är verksamma inom dermatologi och venereologi. För inträde fordras, att den som söker om medlemskap föreslås av dermatologisk förening av samma nation; beslut om inval fattas på allmänt möte vid varje kongress med enkel röstövertvikt.
- §3 Till hedersledamot kan föreningens allmänna möte kalla den som gjort osedvanligt stora insatser för föreningen eller för nordisk dermatologi och/eller venereologi. För kallelse krävs 2/3 majoritet. Förslag till hedersledamot skall inges skriftligen till generalsekreteraren minst tre månader före allmänna mötet. Förslagen skall godkännas av föreningens styrelser för att kunna presenteras för allmänna mötet.
- §4 Årsavgiften bestämmes vid varje kongress. Medlem som uppnått 65 levnadsår är befriad från avgift.
- §5 Föreningen håller ett möte i regel vart tredje år i ett av de nordiska länderna. Tid och plats för nästa möte bestämmes på varje möte.
- §6 Vid mötet hålls ett sammanträde för föreningsangelägenheter varvid följande ärenden skall förekomma:
1. Kassa förvaltarens berättelse.
 2. Revisorernas berättelse jämte frågan om ansvarsfrihet.
 3. Årsavgift för kommande 3-årsperiod.
 4. Val av styrelse samt 2 revisorer för kommande 3-årsperiod.
 5. Val av forskningskommitté
 6. Tid och plats för nästa möte fastställs.
 7. Antagning av nya medlemmar.
 8. Övriga ärenden
- §7 Styrelsen består av: generalsekreteraren samt 9 styrelsemedlemmar och 9 suppleanter (1 från Island och 2 från vart och ett av de övriga länderna). Som extraordinarie medlem ingår den vid mötet verksamme presidenten såvitt han ej i förväg är medlem i styrelsen. Styrelsen väljer inom sig ordförande och dessutom generalsekreterare, som samtidigt är föreningens kassaförvaltare. Generalsekreteraren väljes på obestämd tid, men bör ej fungera i mer än 12 år. De övrigas funktion sträcker sig från slutet av ett möte till slutet av nästa. Styrelsemedlemmarna kan återväljas för ytterligare två 3-årsperioder. De nationella föreningarna anmodas att senast 3 månader före mötet inkomma med förslag till sitt lands styrelsemedlemmar.
- §8 Det dermatologiska sällskapet i det land där mötet skall äga rum, lägger tillrätta kongressens vetenskapliga och övriga program och ombesörjer tryckningen av förhandlingarna i samråd med styrelsen. Varje föredragshållare och diskussionsdeltagare skall sända in ett referat till sekreteraren vid anmälan till kongressen. Föredraget hålles på danska, norska, svenska eller engelska.
- §9 För en förändring av dessa stadgar krävs 2/3 majoritet. Dylika ändringsförslag skall vara insända senast 3 månader före ett mötes avhållande.

Möten i Nordisk Dermatologisk Förening 1910–2001

		President	Sekreterare
1. Köpenhamn	1910	C Rasch	
2. Stockholm	1913	E Sederholm	K Marcus
3. Oslo	1916	C Boeck	K Grön
4. Köpenhamn	1919	C Rasch	A Kissmeyer
5. Stockholm	1922	A Afzelius	J Strandberg
6. Helsingfors	1924	J J Karvonen	B Grönroos
7. Oslo	1928	E Bruusgaard	K Grön
8. Stockholm	1932	A. Moberg	J Strandberg
9. Köpenhamn	1935	H Boas	S Emanuel
10. Helsingfors	1938	A Cedercreutz	T E Olin
11. Stockholm	1946	S Hellerström	M Tottie
12. Oslo	1949	N Danbolt	R Björnstad
13. Köpenhamn	1953	H Haxthausen	P-H Nexmand
14. Helsingfors	1956	T Putkonen	V Pirilä
15. Oslo	1959	N Danbolt	M H Foss
16. Göteborg	1962	G Seeberg	B Magnusson
17. Köpenhamn	1965	G Asboe-Hansen	H Schmidt
18. Åbo	1968	C E Sonck	E Lundell
19. Oslo	1971	N Danbolt	K Wereide
20. Stockholm	1974	N Thyresson	Ö Hägermark
21. Århus	1977	H Zachariae	J V Christiansen
22. Helsingfors	1980	K K Mustakallio	L Förström
23. Oslo	1983	G Rajka	L R Braathen
24. Uppsala	1986	L Juhlin	S Öhman
25. Köpenhamn	1989	N Hjorth	J Roed-Petersen
			G Lange Vejlsgaard
26. Reykjavik	1993	J H Olafsson	B Sigurgeirsson
27. Åbo	1995	V Havu	I Helander
28. Bergen	1998	S Helland	J Langeland
29. Göteborg	2001	O Larkö	H Mobacken, E Voog

NORDISK DERMATOLOGISK FÖRENING

Protokoll fört vid generalförsamling fredagen den 5 juni 1998 i Bergen

Inför generalförsamlingen hade ett föreberedande möte med NDF:s styrelse hållits 4 juni 1998.

Närvarande: Anders Vahlquist, Gun-Britt Löwhagen, Jaakko Karvonen, Nils-Jörgen Mörk, Svein Helland, T Egelrud, Kristian Thestrup-Pedersen, Klaus E. Andersen, Lasse Kanerva, Jon Olafsson

1. *Val av ordförande för dagens möte* Till ordförande och protokolljusterare valdes kongresspresident Svein Helland.
2. *Kassaförvaltarens berättelse* Generalsekreteraren redogjorde för föreningens ekonomi, bilaga 1. Vid utgången av 1997 var utgående saldo SEK 545 260,47, d v s ökningen av tillgångarna som började 1989 har fortsatt. Föreningens kostnader i samband med det nordiska initiativet att söka arrangörsskap för världskongressen 2002 var SEK 43 828. Till årets kongress har SEK 108 345 utbetalats till de nationella föreningarna som resestipendier till yngre dermato-venereologer.
3. *Revisorernas berättelse jämte frågan om ansvarsfrihet* Revisionsberättelse, bilaga 2. Mötet beviljade ansvarsfrihet för åren 1995-1997 för styrelsen och generalsekreteraren.
4. *Årsavgift för kommande 3-årsperiod.* Beslutades om oförändrad medlemsavgift SEK 30 per år.
5. *Val av styrelse och revisorer för kommande årsperiod* I enlighet med förslag från de nationella föreningarna valdes följande 3-styrelseledamöter:
Danmark:
Ordinarie: Else Svejgaard och Klaus E. Andersen.
Suppleanter: Finn-Schultz-Larsen och Knud Kragballe.
Finland:
Ordinarie: Jaako Karvonen och Lasse Kanerva.
Suppleanter: Annamari Ranki och Kristina Turjanmaa
Island:
Ordinarie: Bardur Sigurgeirsson.
Suppleant: Jon Hjaltalin Olafsson.
Norge:
Ordinarie: Nils-Jörgen Mörk och Ole B. Christensen.
Suppleanter: Svein Helland och Elisabeth Sjöland.
Sverige:
Ordinarie: Gun-Britt Löwhagen och Ove Bäck.
Suppleanter: Inger Rosdahl och Mona Ståhle-Bäckdal.
Revisorer:
Tapio Rantanen och Kristian Thestrup-Pedersen.
6. *Antagning av nya medlemmar* Till nya medlemmar antogs samtliga personer som invalts i de nationella föreningarna sedan föregående möte 1995 i Åbo.
7. *Fastställande av tid och plats för nästa möte* Beslutades att hålla nästa möte i Göteborg, preliminärt 14-17 juni år 2001.

8. Föreningens framtida verksamhet

Till arrangörerna utgår ett garantibelopp SEK 110 000. Av eventuellt ekonomiskt överskott går hälften till föreningen.

Vad gäller språk vid nästa möte beslutades att engelska skall användas för all information och övrig korrespondens inför kongressen samt för föredragssammanfattningar (abstracts) och allt bildmaterial som används i samband med föredrag och posterutställningar. Vidare beslutades att under mötet skall hela tiden minst en parallellsession hållas på engelska samt att starkt rekommendera att en så stor andel som möjligt av övriga inslag sker på engelska.

Det beslutades att föreningen bör ha ett kapital inkluderande utestående garantibelopp om c:a SEK 300 000. Intäkterna under åren 1998–2001 beräknades till c:a SEK 200 000. Överskjutande kapital skall under 1998–2001 användas enligt följande, under förutsättning att intäkterna blir de förväntade:

- I. Resestipendier för yngre dermatovenereologer till nästa kongress SEK 100 000. Stipendierna skall fördelas mellan länderna i förhållande till medlemsantalet.
- II. IFD Training Center i Moshi (se pkt 9) SEK 75 000 (USD 10 000).
- III. Utbytesstipendier för att göra det möjligt för nordiska dermatovenereologer att under 2–3 dagar studera förhållanden vid klinik inom specialiteten i annat nordiskt land. Ett stipendium à SEK 10 000 per land och år 1998–2001 utbetalas till respektive nationella förening som efter ansökan med bifogad inbjudan från mottagande klinik utser stipendiater. Stipendiater skall författa en reserapport som publiceras i Nordic Forum for Dermato-Venereology.
- IV. Bidrag till en nordisk forskarutbildningskurs under den kommande treårsperioden om SEK 50 000.
- V. Abonnemang på Acta Dermato-Venereologica till kollegor i Baltikum till en kostnad av SEK 10 000 per år i tre år. Generalsekreteraren förhandlar med förlaget och utreder optimala betingelser för fördelning.
- VI. Ett garantibelopp om SEK 20 000 till Nordic Forum for Dermato-Venereology avsätts.
- VII. Generalsekreteraren får ett expenserkonto (se pkt 10) om maximalt SEK 20 000 per år. Medlen skall bland annat användas till besök vid de nationella föreningarnas årsmöten.

9. Ekonomiskt stöd till IFD Training Center Moshi, Tanzania

Föredragande: K. Thestrup-Pedersen . Se beslut 8 (II). Summan delas ut i av generalsekreteraren i samband med ILDS-möte i Florens, mars 1999.

10. Expenserkonto för generalsekreteraren

Se beslut 8 (VII).

11. Övriga ärenden

Beslutades att vid innevarande kongress utdela 2 st posterpris à SEK 5000. Till priskommittén utsågs Thor Langeland (smk), Gerd Michaelsson, Klaus E. Andersen, Lasse Kanerva och Jon Olafsson.

Torbjörn Egelrud
Generalsekreterare

Svein Helland
President

EKONOMISK REDOGÖRELSE FÖR 1998, 1999 OCH 2000

Debet

1998	SEK
Ingående saldo	545260,47
Medlemsavgifter	45730
Räntor	17479,61
Garantisumma	120278,92
Överskott, Bergen	99930
Övriga inbetalningar	40250
	868929

Kredit

1998	SEK
Diverse utgifter	177420,52
Utgående saldo	691508,48
	868929

Debet

1999	SEK
Ingående saldo	691508,48
Medlemsavgifter	19993,64
Räntor	12776,36
Övriga inbetalningar	81900
	806178,48

Kredit

1999	SEK
Diverse utgifter	177345
Utgående saldo	628833,48
	806178,48

Debet

2000	SEK
Ingående saldo	628833,48
Medlemsavgifter	31460
Räntor	14850,59
Övriga inbetalningar	1000
	676144,07

Kredit

2000	SEK
Diverse utgifter	68704
Utgående saldo	607440,07
	676144,07

Necrologies

Gerda Frentz var født 25. juli 1942. Hun blev medicinsk kandidat i 1970 og speciallæge i dermato-venerologi 1979. Hun blev dr. med. i 1987 på en afhandling "Flowcytometric DNA-analysis of normal, premalignant and malignant epidermal tissues".

I 1994 modtog hun som den første praktiserende dermatolog et 5-årigt forskningsprofessorat under Statens Sundhedsvidenskabelige Forskningsråd. Hun blev ansat ved Københavns Kommunehospital Institut for Sygdomsforebyggelse for at gennemføre et projekt omhandlende "non-melanoma hudcancer i Danmark".

Hendes speciallægeuddannelse foregik ved københavnske hudafdelinger med den største del af tiden ved Finsen Institut. Fra 1989 var hun praktiserende speciallæge i Panoptikonbygningen i København. Gerda Frentz var uhyre aktiv indenfor det organisatoriske arbejde. Her skal blot nævnes hendes indsats som formand for Dansk Dermatologisk Selskab, indenfor bestyrelsen for Danske Dermatologers Organisation og indenfor bestyrelsen for EADV. Hun modtog i 1990 Schering-Plough Prisen.

Gerda Frentz var uhyre vellidt, hun var et ærligt, hårdt arbejdende menneske. Det var tragisk, at det ikke lykkedes for hende at få afsluttet sit store og vanskelige forskningsprojekt. Hun døde 9. november 1998.

Gadborg, Ejnar var født 16/6-1918. Han blev medicinsk kandidat i 1945 og modtog specialistanerkendelse i dermato-venerologi i 1957. Han blev dr. med. i 1956 på afhandlingen "Om metalallergi". Hans speciallægeuddannelse fandt sted på Finsen Institut, på Rigshospitalet og på Københavns Kommunehospital. Fra 1957 til 1987 var han praktiserende speciallæge i Randers. Han var formand for Danske Dermatologers Organisation fra 1970 til 1979. Fra 1971 til 1977 var han Lektor ved Århus Universitet. Han afgik ved døden 8. juli 1996.

Sven Ancher Kvorning var født 14. september 1916. Han blev medicinsk kandidat 1941 og speciallæge i dermato-venerologi 1953. I 1950 blev han dr. med. på en afhandling "Investigations into the pharmacology of skin fats and ointments". Han modtog sin dermato-venerologiske uddan-

nelse på alle de daværende københavnske hudafdelinger. Fra 1962 og indtil 1982 var han overlæge og chef for Københavns Kommunehospitalers dermato-venerologiske afdeling og fra 1967 til 1971 professor i hud- og kønssygdomme ved Københavns Universitet. Foruden sin interesse for begge dele af specialet havde han gennem årene bevaret interessen for farmakologi. Han har været formand for Dansk Dermatologisk Selskab foruden for de Københavnske Dermatovenerologers organisation. Sven Ancher Kvorning afgik ved døden 29. juli 1998.

Lennart Hellbe gennemgik läkarutbildning på KI Stockholm, kom till Örebro i mitten av 60-talet, fick en BÖL-tjänst 1:a augusti 1970 och en ÖL-tjänst 13:e oktober 1975. Samtidigt med ÖL-tjänsten blev han förordnad som klinikchef, vilket uppdrag han behöll tills han gick i pension 31:a januari 1986 strax före sin 60-årsdag. Började då en ny karriär som aktiv politiker inom Miljöpartiet, vilken han sedan fortsatte med fram till sin död 98-06-30.

Ludvigsen, Knud blev født 24. marts 1912. Han blev speciallæge i 1948 efter uddannelse på Marselisborg Hospital, Rigshospitalet og Finsen Institut. Han havde speciallægepraksis i Randers fra 1948 til 1988. Han havde været medlem af bestyrelsen for Dermato-Venerologernes Provinsorganisation og formand for Lægekredsforeningen i Randers. Knud Ludvigsen afgik ved døden i 2000.

Pedersen, Daniel var født 18. juli 1912. Han blev medicinsk kandidat i 1941 og modtog specialistanerkendelse i dermato-venerologi i 1949. Hans specialistuddannelse fandt sted på Rudolph Berghs Hospital og Marselisborg Hospital. Fra 1946 til 1948 var han fungerende kredslæge i Århus (Marselisborg). Han havde speciallægepraksis i Vejle i perioden fra 1949 til 1985. Daniel Pedersen afgik ved døden i 2000.

Veikko Pirilä, the father of the Finn Chamber, died suddenly in his own courtyard on 2 November 1998, at the age of 83. All who are interested in contact dermatitis knew

him personally or by name. His father Paavo Pirilä was Professor of Dermatology and Venereology at Helsinki University. Veikko followed in his father's footsteps and became specialist in dermatology and venereology in 1947. At that time, he was already interested in contact dermatitis and studied patch testing in Copenhagen. After returning home in 1947, he became Chief Doctor of the Department of Occupational Dermatology at the Finnish Institute of Occupational Health in Helsinki for 25 years. He also became professor of Dermatology and Venereology at Helsinki University in 1958.

Veikko Pirilä had already begun to develop his patch test chamber in the 1960s. The present form of the Finn Chamber was introduced in 1975. Veikko continued to develop the Finn Chamber test system and the manufacturing process in small steps until his death.

The Nordic Contact Dermatitis Research Group was founded in the 1960s, and Veikko Pirilä was one of its founders. The group expanded to the International Contact Dermatitis Research Group, in which Veikko was active until 1983. Veikko Pirilä remained active in the Finnish and Nordic Dermatological societies, as well as in the Finnish Society of Allergy and Clinical Immunology.

Reiter, Henry blev født 2. januar 1920. Han var kandidat fra 1946 og blev speciallæge i dermato-venerologi i 1957. Uddannelsen som speciallæge foregik på Rigshospitalet og Rudolph Berghs Hospital. Fra 1957 til 1985 drev han en stor speciallægepraksis i Hjørring. Henry Reiter døde i 2000.

Speiermann, Jørgen var født 9. juni 1932. Han fik medicinsk embedseksamen 1969 og blev speciallæge i dermato-venerologi i 1977. Speciallægeuddannelsen modtog han på Regionssjukhuset i Örebro og på Sahlgrenska Sjukhuset i Göteborg. Han havde speciallægepraksis i Greve Strand fra 1977 til 1997. Jørgen Speiermann døde 12. juni 1998.

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*denotes new members since last meeting

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