We would like to introduce the current published papers and research in our department. Most of the work was carried out under the supervision of Professor Ichiro Katayama who arrived in 2004. The contents listed below are limited to the Department of Dermatology, Osaka University Graduate School of Medicine.

The paper and citation numbers are posted concomitantly as a reference. For the details of each study, please refer to the accomplishments of each doctor.

**What is the task of a dermatologist?**

- Treat skin disorders
- Find and treat underlying skin diseases
- Maintain the health and beauty of the skin
- Resolve pathogeneses and intractable skin diseases and develop new diagnostic and treatment methods
- Engage in educational and social contribution activities for the understanding and prevention of skin diseases

This slide is used in the lecture for medical students. Figure 1 was drawn by Emeritus professor Dr. Shigeharu Sano and is considered a motif of "Angiophakomatosis in the mirror" in my dogmatic interpretation (Fig. 1).
The diseases managed by dermatologists include a wide variety of common and serious or refractory diseases (Fig. 2).
A. Molecular skin research involved in the maintenance of skin homeostasis
The skin is maintained by sophisticated homeostatic mechanisms whose collapse can cause various skin disorders such as allergic skin diseases and skin carcinomas. In our laboratory, Drs. Hiroyuki Murota, Mika Terao, Saki Matsui, Saori Itoi and Arisa Kato are engaged in related subjects (Fig. 3).
1. Skin research for homeostasis of epidermal cells
   a) Regulatory factors and the autonomic function of skin component cells

Control of the production of glucocorticoid local 11βHSD1 by KC.

This is the 1st report that 11bHSD1 regulates keratinocyte proliferation and
differentiation through the control of local glucocorticoid production. An analysis of
murine 11βHSD1 KO is now ongoing (Fig. 4).
Autocrine induction of substance P mRNA and peptide in cultured normal human keratinocytes.

Bae S, Matsunaga Y, Tanaka Y, Katayama I.


We first reported that epidermal keratinocytes are able to produce substance P. This study was conducted to evaluate the following current research on itching. (Fig. 5)
Epidermal keratinocytes have been reported to produce not only neuropeptides such as substance P, but also cortisol and catecholamines. In addition, TRPVs 1, 3 and 4, which are ion channels for temperature sensors, are expressed in the skin. These studies indicate that the skin can autonomously act as a brain and may lead to an exact understanding of the pathogenesis of atopic dermatitis.

**Substance P induced preprotachykinin-a mRNA, neutral endopeptidase mRNA and substance P in cultured normal fibroblasts.**

**Bae SJ, Matsunaga Y, Takenaka M, Tanaka Y, Hamazaki Y, Shimizu K, Katayama I.**


We reported the induction mechanism of the autocrine factor substance P in both keratinocytes and skin fibroblasts. Another group reported the presence of a similar mechanism in mast cells. We think that substance P may be involved in scratching due to the occurrence of itching in atopic dermatitis patients and subsequent chronic skin changes. Dr. Murota is going to analyze the effects of the nerve growth factor Artemin on itching.
Sweating function study
A decreased sweating function and its inverse correlation to the level of anxiety were found in atopic dermatitis patients. The decreased sweating function is restored by improvements in skin condition.

Abnormal Axon Reflex-Mediated Sweating Correlates with High State of Anxiety in Atopic Dermatitis.

This report is definitely useful to instruct patients.

Impaired sweating function in adult atopic dermatitis: results of the quantitative sudomotor axon reflex test.

Sweating associated with the axon reflex is improved by proper treatment with topical steroids (Fig. 6).

Fig. 6

Mechanism of sweating
Acetylcholine released from nerve endings causes sweating through the actions of muscarinic receptors on sweat glands and cholinergic nerves (Fig. 7).
What is the cause of decreased sweating in atopic dermatitis patients? (Fig. 8)
Molecular mechanism of the UV response in the skin

We found that the photosensitivity associated with Sjogren's syndrome is different from that associated with SLE.

Photoprovocation test and immunohistochemical analysis of inducible nitric oxide synthase expression in patients with Sjögren's syndrome associated with photosensitivity.
Tsukazaki N, Watanabe M, Shimizu K, Hamasaki Y, Katayama I.

Analysis of 70 KD heat shock protein (HSP70) expression in the lesional skin of lupus erythematosus (LE) and LE related diseases.
Ghoreishi M, Katayama I, Yokozeki H, Nishioka K.

B. Research on skin allergies and autoimmune diseases

Atopic dermatitis, severe drug-induced eruptions and occupational skin diseases are
important with respect to the close association between medical departments and society. Therefore, providing early development of a resolution of complex pathogeneses and treatments is essential. Drs. Hiroyuki Murota, Shun Kitaba (moved to Kinki Central Hospital), Yukinobu Nakagawa (while studying in the United States), Akiko Kijima, Saki Matsui and Aya Takahashi are working on the pathological analysis and epidemiology of atopic dermatitis. Drs. Hiroaki Azukizawa, Takaaki Hanahusa, Mayuko Nakano are working on developing a new diagnostic tool for use in drug allergies and the analysis of pathology. Drs. Yukako Murakami and Mayuko Nakano are engaged in work on contact dermatitis. Drs. Mamori Tani, Akinori Yokomi, Toshifumi Yamaoka and Saori Itoi are taking over clinics and research on psoriasis, which had been the specialty of emeritus professor Kunihiko Yoshikawa and Professor Shigetoshi Sano at Kochi University.

2. Comprehensive study of atopic dermatitis
b) The immune function and skin barriers in atopic dermatitis

Effects of a 3-hydroxy-3-methylglutaryl coenzyme A reductase inhibitor and low-density lipoprotein on proliferation and migration of keratinocytes.
Abd El-Latif MI, Murota H, Terao M, Katayama I.

Overexpression of the suppressor of cytokine signalling 3 (SOCS3) in severe atopic dermatitis.
Horiuchi Y, Bae SJ, Katayama I.

Pro-inflammatory cytokine IL-1alpha potential for tissue repair in chemically and mechanically induced injury in cultured human keratinocytes.
Horiuchi Y, Bae S, Katayama I.

This paper firstly reported that IL-1α plays an important role in maintaining the barrier function of the skin.

Tumour necrosis factor-alpha but not interferon-gamma is the main inducer of inducible protein-10 in skin fibroblasts from patients with atopic dermatitis.
Villagomez MT, Bae SJ, Ogawa I, Takenaka M, Katayama I.

Fibroblasts from atopic dermatitis patients maintain high reactivity and affinity to
TNF-α and abundantly produce eotaxin. This study is important with respect to
revealing one of the mechanisms underlying chronic atopic dermatitis.

Glucocorticoids augment the chemically induced production and gene expression of
interleukin-1alpha through NF-kappaB and AP-1 activation in murine epidermal cells.

Glucocorticoids have two properties, proinflammation and anti-inflammation,
depending on the local concentration. This study is closely related to Dr. Terao’s data
showing that glucocorticoids derived from keratinocyte regulate the danger signals of
inflammasome.

RANTES expression in psoriatic skin, and regulation of RANTES and IL-8 production in
cultured epidermal keratinocytes by active vitamin D− 3 (tacalcitol)
Fukuoka, Ogino, Sato, Ohta, Komoriya, Nishioka, Katayama

c) A study of itching: The correlation to temperature sensors and nerve regeneration

Artemin causes hypersensitivity to warm sensation, mimicking warmth-provoked pruritus in
atopic dermatitis.

Dr. Murota and colleagues revealed why itching occurs in warm conditions. Substance
P-induced artemin, a neural factor that is able to trigger itching, accumulates in the skin
of patients with atopic dermatitis.

Stress response, tachykinin, and cutaneous inflammation.
Katayama I, Bae SJ, Hamasaki Y, Igawa K, Miyazaki Y, Yokozeki H, Nishioka K.
Review of the stress response and allergic diseases in the skin

Crosstalk of neuroendocrine and immune factors between the central and peripheral nervous systems (Fig. 9)

Fig. 9

![Diagram of crosstalk between neuroendocrine and immune factors](image)

**Nerve growth factor (NGF) and epidermal nerve fibers in atopic dermatitis model NC/Nga mice.**
Horiuchi Y, Bae S, Katayama I.

**Olopatadine hydrochloride improves dermatitis score and inhibits scratch behavior in NC/Nga mice**
Hiroyuki Murota, Mostafa Abd El-latif, Tadafumi Tamura, Toru Amano, Ichiro Katayama
Int Arch Allergy Immunol 2010;153:121-132

d) An analysis of the IgE antibody-mediated immune response
Topical glucocorticoid augments IgE-mediated passive cutaneous anaphylaxis in Balb/C mice and mast cell deficient WBB6F1 v/v mice.
Katayama I, Igawa K, Minatohara K, Nishioka K.

IL-4 inhibits the migration of human Langerhans cells through the downregulation of TNF receptor II expression.
Takayama K, Yokozeki H, Ghoreishi M, Satoh T, Katayama I, Umeda T, Nishioka K.

Topical vitamin D3 downregulates IgE-mediated murine biphasic cutaneous reactions.
Katayama I, Minatohara K, Yokozeki H, Nishioka K.

Induction of Eczematous Skin Reaction in Experimentally induced hyperplastic Skin of Balb/C Mice by Monoclonal Anti-DNP IgE Antibody: Possible Implications for Skin Lesion Formation in Atopic Dermatitis.
Katayama I, Tanei R, Yokozeki H, Nishioka K, Dohi Y

The report that skin eczema can be induced by increased levels of IgE antibodies connects with the current study.

e) Epidemiology of allergic diseases

Towards global consensus on outcome measures for atopic eczema research: results of the HOME II meeting.
It is the session report of the working group in which Professor Williams aims to establish an international consensus to evaluate atopic dermatitis properly. Many expert doctors around the world gather to discuss this issue once or twice a year. Although there are different types of history, climate, social environment and lifestyle around the world, the skin phenotype of disseminated skin eczema appears to be quite similar. Why? When an international consensus is established, there may be an answer to this question.

Showering reduces atopic dermatitis in elementary school students
Hiroyuki Murota, Aya Takahashi, Megumi Nishioka, Saki Matsui, Mika Terao, Shun Kitaba, Ichiro Katayama
Eur J of Dermato. Volume 20,410-1,

Japanese guideline for atopic dermatitis.
Allergol Int. 2011;60(2):205-20.

Guidelines for management of atopic dermatitis.

Japanese cedar pollen as an exacerbation factor in atopic dermatitis; results of atopy patch testing and histological examination.
Yokozeki H, Takayama K, Katayama I, Nishioka K.

This report is a review of cedar pollen-induced dermatitis in Japan published in 1990.

Cataract and retinal detachment in patients with severe atopic dermatitis who were withdrawn from the use of topical corticosteroid.
Evaluation of non-steroidal ointment therapy for adult type atopic dermatitis: inquiry analysis on clinical effect.

**Katayama I**, Taniguchi H, Matsunaga T, Yokozeki H, Nishioka K.

This paper summarizes the results of a survey of treatment, except for topical steroids, for atopic dermatitis.

f) Research and development of new therapeutic agents for atopic dermatitis

*In vivo transfection of a cis element ‘decoy’ against signal transducers and activators of transcription 6 (STAT6)-binding site ameliorates IgE-mediated late-phase reaction in an atopic dermatitis mouse model.*


3. Studies of the immune response to drugs and chemicals in the skin

g) The pathogenesis of contact dermatitis and its regulation

*Signal transducer and activator of transcription 6 is essential in the induction of contact hypersensitivity.*


A clinical trial of atopic dermatitis using a STAT6 decoy is now ongoing at the dermatology department of Tokyo Medical and Dental University. A clinical trial of allergic rhinitis using a STAT3 targeting agent is now ongoing at the dermatology department of Kochi Medical School. These institutions closely collaborate with our department in many areas (Fig. 10).
h) Study of the pathogenesis of urticaria

Effects of non-sedative antihistamines on productivity of patients with pruritic skin diseases.
Murota H, Kitaba S, Tani M, Wataya-Kaneda M, Katayama I.

Our initial report showing that itching in skin diseases markedly interferes with labor productivity and learning efficiency led to the current study by the Ministry of Health, Labour and Welfare.

i) Development of a diagnostic method for drug allergies

The predominant drug-specific T-cell population may switch from cytotoxic T cells to regulatory T cells during the course of anticonvulsant-induced hypersensitivity.
Hanafusa T, Azukizawa H, Matsumura S, Katayama I.
There is no efficient technique to perform kinetic analyses of lymphocytes related to drug allergies. Drs. Azukizawa and Hanafusa newly developed a FACS analysis method incorporating BrdU and CFSE fluorescent dye. Many researchers have taken notice of this method (Fig. 11, 12).

Fig. 11

フローサイトメトリーによるDLSTの原理

Hanafusa T et al. JDS 2011

BrdU is a non-radioactive thymidine analogue and 3H-thymidine and BrdU are incorporated into DNA during the synthesis phase of the cell cycle. CFSE is partitioned equally during cell division, resulting in the sequential halving of cellular fluorescent intensity with each successive generation.
4. Development of an animal model related to autoimmune diseases

j) Establishment of an animal model related to thymomas and chronic GVHD

**Steady state migratory RelB+ langerin+ dermal dendritic cells mediate peripheral induction of antigen - specific CD4+ CD25+ Foxp3+ regulatory T cells**


**Diminished regulatory T cells in cutaneous lesions of thymoma-associated multi-organ autoimmunity: a newly described paraneoplastic autoimmune disorder with fatal clinical course.**


5. Development of a new pathological theory and therapeutic agents for vitiligo vulgaris

k) Immune modulation affecting the melanin production

**Positive link between STAT3 activation and Th17 Cell infiltration to the lesional skin in vitiligo vulgaris.**

This is the 1st report showing that STAT3 is activated in the epidermal keratinocytes of vitiligo lesions. This finding may closely connect to the mechanism showing that combination therapy with vitamin D3 and UV is effective for vitiligo vulgaris.

**Dysregulation of melanocyte function by Th17-related cytokines: significance of Th17 cell infiltration in autoimmune vitiligo vulgaris.**
Pigment Cell Melanoma Res. 2012 Mar;25(2):219-30 (Fig. 13, 14)

Fig. 13
l) Development of new therapeutic and epidemiological studies of vitiligo vulgaris
(Fig. 15)

Revised classification/nomenclature of vitiligo and related issues: the Vitiligo Global Issues
Consensus Conference.
Ezzedine K, Lim HW, Suzuki T, Katayama I, Hamzavi I, Lan CC, Goh BK, Anbar T, Silva de
Castro C, Lee AY, Parsad D, van Geel N, Le Poole IC, Oiso N, Benzekri L, Spritz R,
Gauthier Y, Hann SK, Picardo M, Taieb A; on behalf of the Vitiligo Global Issue Consensus
Conference panelists.

Seven cases of vitiligo complicated by atopic dermatitis: suggestive new spectrum of
autoimmune vitiligo.
Tanemura A, Yajima T, Nakano M, Nishioka M, Itoi S, Kotobuki Y, Higashiyama M,
Katayama I.
Open trial of topical tacalcitol \([1\alpha 24(OH)2D3]\) and solar irradiation for vitiligo vulgaris: upregulation of c-Kit mRNA by cultured melanocytes.
Katayama I, Ashida M, Maeda A, Eishi K, Murota H, Bae SJ.

This is a report showing that topical vitamin D3 is effective for vitiligo vulgaris.

Fig. 15

C. Study of collagen diseases and vascular and connective tissue-related skin disorders

This is an important research theme that has been continuously addressed by Professor Emeritus Shigeharu Sano, and the following current doctors: Drs. Hiroyuki Murota, Ken Igawa, Mika Terao, Yorihisa Kotobuki, Shun Kitaba, Toshifumi Yamaoka, Linri Yung, Saki Matsui, Saori Itoi and Arisa Kato.

6. Study of systemic scleroderma
m) Development of sequential therapeutic agents for scleroderma, Raynaud’s phenomenon and intractable skin ulcers (Fig. 16)

Fig. 16

Periostin Facilitates Skin Sclerosis via PI3K/Akt Dependent Mechanism in a Mouse Model of Scleroderma
Lingli Yang, Satoshi Serada, Minoru Fujimoto, Mika Terao, Yorihsa Kotobuki, Shun Kitaba, Saki Matsui, Akira Kudo, Tetsuji Naka, Hiroyuki Murota, Ichiro Katayama
PLoS ONE, 2012 - July | Volume 7 | Issue 7 | e41994

Blockade of interleukin-6 receptor alleviates disease in mouse model of scleroderma.

Anti-IL6 receptor antibodies are able to improve sclerodermas other than rheumatoid arthritis. This paper evaluates the pathogenesis. The following clinical trial is now
ongoing (Fig. 17).

Fig. 17

The skin of patients with systemic sclerosis softened during the treatment with anti-IL-6 receptor antibody tocilizumab
Yoshihito Shima, Yusuke Kuwahara, Hiroyuki Murota, Shun Kitaba, Mari Kawai, Toru Hirano, Junsuke Arimitsu, Masashi Narazaki, Keisuke Hagihara, Atsushi Ogata, Ichiro Katayama, Ichiro Kawase, Tadamitsu Kishimoto, and Toshio Tanaka
Rheumatology 2010 49: 2408-12

Tumor necrosis factor-alpha processing inhibitor-1 inhibits skin fibrosis in bleomycin-induced murine model of scleroderma.

Terao M, Murota H, Kitaba S, Katayama I.

Hepatocyte growth factor both prevents and ameliorates the symptoms of dermal sclerosis in a mouse model of scleroderma.

Wu MH, Yokozeki H, Takagawa S, Yamamoto T, Satoh T, Kaneda Y, Katayama I, Nishioka K.


Disruption of tumor necrosis factor receptor p55 impairs collagen turnover in experimentally induced sclerodermic skin fibroblasts.
Murota H, Hamasaki Y, Nakashima T, Yamamoto K, Katayama I, Matsuyama T.

Animal model of sclerotic skin. I: Local injections of bleomycin induce sclerotic skin mimicking scleroderma.
Yamamoto T, Takagawa S, Katayama I, Yamazaki K, Hamazaki Y, Shinkai H, Nishioka K.

An animal model of scleroderma that we developed is now widely used worldwide.

7. The crosstalk of the connective tissue matrix

n) Regulatory mechanisms of collagen synthesis

Periostin, a matricellular protein, accelerates cutaneous wound repair by activating dermal fibroblasts.

Emedastine difumarate inhibits histamine-induced collagen synthesis in dermal fibroblasts.
Murota H, Bae S, Hamasaki Y, Maruyama R, Katayama I.
Substance P augments fibrogenic cytokine-induced fibroblast proliferation: possible involvement of neuropeptide in tissue fibrosis.

Katayama I, Nishioka K.

o) Study of the molecular mechanisms of wound healing

Upregulation of N-acetylglucosaminyltransferase-V by heparin-binding GF-like growth factor induces keratinocyte proliferation and epidermal hyperplasia.


Enhanced epithelial-mesenchymal transition-like phenotype in N-acetylglucosaminyltransferase V transgenic mouse skin promotes wound healing.


Novel research showing that a glycosyltransferase, GnT-V, modulates wound healing through the EMT

8. Study of the mechanisms underlying erythema formation resembling annular erythema in Sjögren's syndrome

o) A clinical evaluation of annular erythema

Annular erythema associated with Sjögren's syndrome: review of the literature on the management and clinical analysis of skin lesions.

Katayama I, Kotobuki Y, Kiyohara E, Murota H.
Mod Rheumatol. 2010 Apr;20(2):123-9

A review of annular erythema in Sjögren's syndrome until 2008

Clinical and immunological analysis of annular erythema associated with Sjögren syndrome.

Katayama I, Yamamoto T, Otoyama K, Matsunaga T, Nishioka K.
A review of the etiology of annular erythema in Sjögren's syndrome (Fig. 18)

Fig. 18


Katayama I, Teramoto N, Arai H, Nishioka K, Nishiyama S.

A review of the differences between SCLE (subacute cutaneous lupus erythematosus) and annular erythema in Sjögren's syndrome

Annular erythema: a possible association with primary Sjögren's syndrome.
The 1st report of annular erythema in Sjögren's syndrome. This report triggered argumentation whether annular erythema is substantially different between Sjögren's syndrome and SLE among researchers in Europe and the United States.

9. Circulatory failure, skin ulcers and anti-phospholipid antibody syndrome

p) Ulcers and circulatory failure

New aspect of anti-inflammatory action of lipo-prostaglandinE1 in the management of collagen diseases-related skin ulcer.
Murota H, Kotobuki Y, Umegaki N, Tani M, Katayama I.
Rheumatol Int. 2008 Sep;28(11):1127-35.

Heat-inductible turbidity precipitates in plasma samples of livedo reticularis with summer ulceration: hypothesis for abnormal coagulation in summer.
Murota H, Muroi E, Hamasaki Y, Shimizu K, Masuzawa M, Katayama I.

q) Anti-phospholipid antibody syndrome

Anticardiolipin antibody in Henoch-Schönlein purpura and related vascular disorders.
Katayama I, Masuzawa M, Nishioka K, Nishiyama S.

Clinical manifestations in anticardiolipin antibody-positive patients with progressive systemic sclerosis.
Katayama I, Otoyama K, Kondo S, Nishioka K, Nishiyama S.

D. Study of skin malignancies

Malignant tumors are a disease of the skin boundary region. Effective treatment other than resection of the tumor is observed to be less frequent.
The incidences of malignant melanoma, angiosarcoma and Paget's disease occurring outside of the breast have increased due to the transition to an aging society. Drs.
Atsushi Tanemura, Akinori Yokomi, Yorihisa Kotobuki, Eiji Kiyohara (while studying), Mizuho Yamada and Megumi Nishioka et al. are currently developing new therapeutic HVJ envelope vectors, such as WT-1 peptide therapy, and conducting basic research on their effects. While only a few departments of Dermatology are engaged in malignant lymphoma, Dr Tani tightly conducts clinics and clinical research for malignant lymphoma collaborating with Hematology department.

Recently, several clinical trials of cutaneous lymphoma have been initiated and we also present the following: take advantage of the rich case, I have been working hard to deliver new treatments to patients.

Please join the person who is not limited to skin surgery with an interest in oncology.


r) Malignant melanoma

Vaccination with WT-1 (Wilms' Tumor gene-1) peptide and BCG-CWS in melanoma.

The first report of immunotherapy with WT-1 peptides in the field of dermatology.

The combination of chemotherapy with HVJ-E containing Rad51 siRNA elicited diverse anti-tumor effects and synergistically suppressed melanoma (Fig. 19).
Kiyohara E, Tamai K, Katayama I, Kaneda Y.
**CpG island methylator phenotype predicts progression of malignant melanoma.**


s) Angiosarcomas, breast Paget's disease and cutaneous lymphoma

**Nodal lymphangiogenesis and metastasis: Role of tumor-induced lymphatic vessel activation in extramammary Paget's disease.**


**Cutaneous angiosarcoma with thrombocytopenia.**

11. A new therapeutic method for treating tuberous sclerosis

Tuberous sclerosis is a congenital disorder caused by mutations in the tumor suppressor genes known as Hamartin and Tuberin and associated with many kinds of skin eruption and also lung, kidney, central nerve disorders. From 2012, Drs. Kaneda and Tanaka start to prepare for a novel clinical trial by using topical agent of M-TOR inhibitor, rapamycin supported by the Ministry of Health, Labour and Welfare. Please join if you are interested.

1) New therapies using M-TOR inhibitors

A topical combination of rapamycin and tacrolimus for the treatment of angiofibroma due to tuberous sclerosis complex (TSC): a pilot study of nine Japanese patients with TSC of different disease severity.

The first report of a new treatment for angiofibromas using M-TOR inhibitors

A novel application of topical rapamycin formulation, an inhibitor of mTOR, for patients with hypomelanotic macules in tuberous sclerosis complex.

The first report of a new treatment for hypopigmented macules using M-TOR inhibitors (Fig. 20).
E. A new diagnosis and treatment for congenital skin disease genes

There are many genetic disorders with no effective treatment in dermatology. Drs. Mari Wataya-Kaneda and Mari Tanaka, gene diagnosis and counseling Dr. Noriko Arase et al. Endowed Professor Tamai Katsuhito, regeneration-inducing medicine, Assistant Professor Mamoru Tani, Dr. Tomoko Umegaki (while studying in the United States), gene therapy. Stem cell research for the purpose of regenerative medicine has been energetically investigated by Assistant Professor Ken Igawa and Dr. Jun Harada.

12. An analysis of genetic skin diseases

u) The phenotypic analysis and diagnosis of hereditary skin diseases

*Repigmentation of leukoderma in a piebald patient associated with a novel c-KIT gene mutation, G592E, of the tyrosine kinase domain.*

Cutaneous symptoms in a patient with cardiofaciocutaneous syndrome and increased ERK phosphorylation in skin fibroblasts.

Eosinophil infiltration in three patients with generalized atrophic benign epidermolysis bullosa from a Japanese family: molecular genetic and immunohistochemical studies.
Nomura M, Hamasaki Y, Katayama I, Abe K, Niikawa N, Yoshiura K.

13. Development of novel therapies for hereditary skin disorders

v) Development of a novel gene therapy for epidermolysis bullosa

PDGFRalpha-positive cells in bone marrow are mobilized by high mobility group box 1 (HMGB1) to regenerate injured epithelia.

F. Others, development of other novel therapies, case reports

14. Novel therapies and diagnostic tools

Clinical effect of tocoretinate on lichen and macular amyloidosis.
Terao M, Nishida K, Murota H, Katayama I.

Venous insufficiency in patients with necrobiosis lipoidica
Takeshi NAKAJIMA, Atsushi TANEMURA, Shigeki INU', Ichiro KATAYAMA

Intractable wounds caused by calcific uremic arteriolopathy treated with bisphosphonates
Silicone gel sheets relieve pain and pruritus with clinical improvement of keloid: possible target of mast cells.

Anti-oxidative therapy with oral dapsone improved HCV antibody positive annular elastolytic giant cell granuloma.
Igawa K, Maruyama R, Katayama I, Nishioka K

Topical vitamin D3 (tacalcitol) for steroid - resistant prurigo
Katayama I, Miyazaki Y, Nishioka K.

Oral minocycline improved keratosis follicularis squamosa (Dohi) and related disorder: bacterial factors are possibly involved in aberrant keratinization.
Katayama I, Yokozeki H, Nishioka K.,

15. Case reports

Systemic allergic contact dermatitis to palladium inlay manifesting as annular erythema.
Hanafusa T, Yoshioka E, Azukizawa H, Itoi S, Tani M, Kira M, Katayama I.
Eur J Dermatol. 2012 Jul 4

Eosinophilic pyoderma gangrenosum with pulmonary and oral lesions preceded by eosinophilic pneumonia: Unrecognized syndromic manifestations?
Nishioka M, Tani M, Murota H, Katayama I.
Peculiar distribution of tumorous xanthomas in an adult case of Erdheim-Chester disease complicated by atopic dermatitis.

Four cases of atopic dermatitis complicated by Sjögren's syndrome: link between dry skin and autoimmune anhidrosis.

Cedar pollen aggravates atopic dermatitis in childhood monozygotic twin patients with allergic rhino conjunctivitis.

A case of juvenile dermatomyositis manifesting inflammatory epidermal nevus-like skin lesions: unrecognized cutaneous manifestation of blaschkitis?

Pilomatrix carcinoma arising from pilomatricoma after 10-year senescent period: Immunohistochemical analysis

Epithelioid sarcoma on the foot masquerading as an intractable wound for > 18 years
Y. Nishimura, Y. Yamaguchi, Y. Tomita, K. Hamada, A. Maeda, A. Morita, I. Katayama
Clinical Exp Dermatoll 35:263–268, 2010

A case of toxic epidermal necrolysis-like dermatitis evolving from contact dermatitis of the hands associated with exposure to dendrimers.
And others…
進化する大阪大学皮膚科-2012-