differences in the comorbid rheumatic disorders according to the age or gender suggest patient specific approaches. Careful considerations for rheumatic disorders are needed for proper management of comorbidity.
Keyword: Vitiligo, Rheumatic disorder, Epidemiology, Nationwide population based study

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Depigmenting effect of resveratrol is not dependent on SIRT1 activation
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Background: Resveratrol exhibits not only anti-melanogenic property by inhibiting microphthalmia-associated transcription factor (MITF), but also have anti-aging property by activating sirtuin-1 (SIRT1).
Objectives: The relationship between resveratrol-induced SIRT1/FOXO3a activation and depigmenting effect of resveratrol was investigated in the study.
Methods: Cultured normal human melanocytes were treated by resveratrol and western blotting was done.
Results: Resveratrol suppressed melanogenesis by the downregulation of MITF and tyrosinase via ERK pathway. Though the level of both SIRT1 and forkhead box O (FOXO) 3a were increased in the upstream pathway, FOXO3a activation appeared earlier than that of SIRT1 in the chronological analysis. While the effect of resveratrol on the levels of MITF and tyrosinase was cancelled when pre-treated with LY294002 (FOXO3a inhibitor), pre-treatment with EX527 or sirtinol (SIRT1 inhibitor) did not affect the levels of MITF and tyrosinase.
Conclusion: Therefore, resveratrol inhibits melanogenesis through the activation of FOXO3a but not by the activation of SIRT1. Although SIRT1 activation by resveratrol is a well-known mechanism of antiaging effects, SIRT1 is not involved in depigmenting effects of resveratrol. Acknowledgments: This study was supported by a grant from the Korean Health Technology R & D Project, Ministry of Health & Welfare, Korea (Grant number: HN14C0094).
Keyword: Melanogenesis, Resveratrol, MITF

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Vitiligo and overt thyroid diseases: a nationwide population-based study in Korea
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Background: Although associations between vitiligo and thyroid diseases have been well established, such associations often do not reflect the actual status of overt thyroid disease.
Objectives: We investigated associations between vitiligo and overt thyroid diseases that were under medical treatment using the Korea National Health Insurance (NHI) Claims database. Additionally, we analyzed the association between vitiligo and thyroid cancer.
Methods: We defined patients with vitiligo as those whose records showed at least four physician contacts between 2009 and 2013 in which vitiligo was the principal diagnosis. A control group without vitiligo was established by matching subjects in terms of age and sex with the of the vitiligo group. The outcomes of interest were concurrent Graves’ disease and Hashimoto’s thyroiditis (the patients were taking relevant thyroid medications), and thyroid cancer.
Results: Patients with vitiligo were at significantly increased risks of Graves’ disease, Hashimoto’s thyroiditis, and thyroid cancer, compared to controls without vitiligo. The associations were consistently higher in males and younger patients.
Conclusion: We used the NHI Claims database to confirm that the risks of overt autoimmune thyroid diseases were significantly higher in patients with vitiligo. An association between thyroid cancer and vitiligo was also apparent.
Keyword: Autoimmune thyroiditis, Graves’ disease, Hashimoto’s thyroiditis, Thyroid cancer, Vitiligo

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Study of serial (staged) excision of congenital melanocytic nevus
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