

March 19, 2025

Dr. João P. B. Viola
Secretary General,
International Union of Immunological Societies

Endorsement (Prof. Kazuyo Moro)

Dear Dr. Viola,

Japanese Society for Immunology (JSI) fully supports Dr. Kazuyo Moro for the council member of the International Union of Immunological Societies (IUIS).

Dr. Moro is a professor in the Graduate School of Medicine, Osaka University, since 2019. She is famous for her discovery of group 2 innate lymphoid cells (ILC2) and subsequent studies on uncovering the regulatory mechanisms of ILC2 and its role in various diseases.

In addition to the tremendous scientific achievement, Dr. Moro has greatly contributed to immunology communities by serving as a member of the International Exchange Committee of the JSI and a council member of the Federation of Immunological Societies of Asia-Oceania (FIMSA). Dr. Moro is a highly energetic female immunologist and is interested in international exchange projects for young scientists.

Thus, on behalf of JSI, we strongly believe that Dr. Moro's scientific background together with her vision for international science and immunology will contribute to the further harmonization and strategic development of IUIS, and therefore without any hesitation we enthusiastically support her candidacy for Councilor, IUIS.



Kiyoshi Takeda
President,
Japanese Society for Immunology

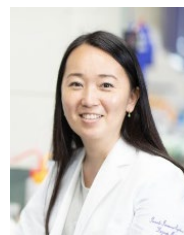
Professor,
Immunology Frontier Research Center, Osaka University

PERSONAL INFORMATION

Name: Kazuyo Moro

Nationality: Japan

Current Position:



- Distinguished Professor

Laboratory for Innate Immune Systems, Department of Microbiology and Immunology,
Graduate school of Medicine, Osaka University

Address: 2-2, Yamadaoka, Suita-shi, Osaka, 565-0871, Japan

E-mail: moro@ilc.med.osaka-u.ac.jp

Phone: +81-6-6879-3820

- Team Leader

Laboratory for Innate Immune Systems, RIKEN Center for Integrative Medical Sciences

Address: 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa, 230-0045, Japan

E-mail: kazuyo.moro@riken.jp

Phone: +81-45-503-9275

- Concurrent Professor

Laboratory for Innate Immune Systems, Immunology Frontier Research Center (IFReC),
Osaka University

- Concurrent Professor

Laboratory for Innate Immune Systems, Graduate School of Frontier Biosciences (FBS),
Osaka University

EDUCATION

2003 D.D.S. Nihon University School of Dentistry

2010 Ph.D. Keio University School of Medicine

MAIN RESEARCH FIELD

Innate Immunology (Group 2 Innately lymphoid cell, Allergy, Parasite infection, Fibrosis)

RESEACH FELLOWSHIPS

2007-2008 Postdoctoral fellow; The 21st Century COE, Keio University School of Medicine

2008-2011 Postdoctoral fellow; Global COE, Keio University School of Medicine

2011-2016 Investigator; PRESTO, JST

2012-2013 Senior research scientist; Laboratory for Immune Cell System, RCAI, RIKEN

2013-2015 Senior research scientist; Laboratory for Immune Cell System, IMS, RIKEN

2013-2016 Visiting associate Professor; Division of Immunobiology, Department of Medical Life

- Science, Graduate School of Medical Life Science, Yokohama City University
- 2015- Team leader; Laboratory for Innate Immune System, IMS, RIKEN (present)
- 2016-2019 Visiting professor; Division of Immunobiology, Department of Medical Life Science, Graduate School of Medical Life Science, Yokohama City University
- 2019- Distinguished professor; Laboratory for Innate Immune System, Graduate School of Medicine, Osaka University (present)
- 2019- Concurrent professor; Laboratory for Innate Immune System, IReC, Osaka University (present)
- 2019- Concurrent professor; Laboratory for Innate Immune System, Graduate School of Frontier Biosciences, Osaka University (present)

HONORS AND AWARDS

- 2011 27th Inoue Research Award for Young Scientists
- 2016 11th Japanese Society of Immunology (JSI) Young Investigator Award
- 2017 13th Japan Society for the Promotion of Science (JSPS) Prize
- 2017 13th Japan Academy Medal
- 2018 8th Nagase Award
- 2021 70th Sato Award
- 2021 4th Simazu Encouragement Prize

PUBLICATIONS

1. M. Yamashita, C. Ogawa, B. Zhang, T. Kobayashi, A. Nomura, C. Barker, *et al.* Cell-type specific, inducible and acute degradation of targeted protein in mice by two degran systems. **Nat Commun** 15, 10129 (2024)
2. M. Yamagishi, K. Miyata, T. Kamatani, H. Kabata, R. Baba, Y. Tanaka, *et al.* Quantitative live-cell imaging of secretion activity reveals dynamic immune responses. **iScience** 27, 109840 (2024)
3. S. Tabata, K. Matsuda, S. Soeda, K. Nagai, Y. Izumi, M. Takahashi, *et al.* NFκB dynamics-dependent epigenetic changes modulate inflammatory gene expression and induce cellular senescence. **Febs j** 291, 4951-4968 (2024)
4. Y. Tanaka, M. Yamagishi, Y. Motomura, T. Kamatani, Y. Oguchi, N. Suzuki, *et al.* Time-dependent cell-state selection identifies transiently expressed genes regulating ILC2 activation. **Commun Biol** 6, 915 (2023)
5. N. Otaki, Y. Motomura, T. Terooatea, S. Thomas Kelly, M. Mochizuki, N. Takeno, *et al.* Activation of ILC2s through constitutive IFNγ signaling reduction leads to spontaneous pulmonary fibrosis. **Nat Commun** 14, 8120 (2023)

6. Nomura, T. Kobayashi, W. Seo, M. Ohno-Oishi, K. Kakugawa, S. Muroi, *et al.* Identification of a novel enhancer essential for Satb1 expression in T(H)2 cells and activated ILC2s. **Life Sci Alliance** 6, (2023)
7. M. Irie, H. Kabata, K. Sasahara, M. Kurihara, Y. Shirasaki, T. Kamatani, *et al.* Annexin A1 is a cell-intrinsic metalloregulator of zinc in human ILC2s. **Cell Rep** 42, 112610 (2023)
8. T. Kobayashi and K. Moro. Tissue-Specific Diversity of Group 2 Innate Lymphoid Cells in the Skin. **Front Immunol** 13, 885642 (2022)
9. T. Kobayashi and K. Moro. A hairy situation for ILC2s. **Immunity** 55, 1756-1758 (2022)
10. H. Kabata, Y. Motomura, T. Kiniwa, T. Kobayashi and K. Moro. ILCs and Allergy. **Adv Exp Med Biol** 1365, 75-95 (2022)
11. R. Baba, H. Kabata, Y. Shirasaki, T. Kamatani, M. Yamagishi, M. Irie, *et al.* Upregulation of IL-4 receptor signaling pathway in circulating ILC2s from asthma patients. **J Allergy Clin Immunol Glob** 1, 299-304 (2022)
12. T. Sudo, Y. Motomura, D. Okuzaki, T. Hasegawa, T. Yokota, J. Kikuta, *et al.* Group 2 innate lymphoid cells support hematopoietic recovery under stress conditions. **J Exp Med** 218, (2021)
13. Y. Nakatsuka, A. Yaku, T. Handa, A. Vandenbon, Y. Hikichi, Y. Motomura, *et al.* Profibrotic function of pulmonary group 2 innate lymphoid cells is controlled by regnase-1. **Eur Respir J** 57, (2021)
14. Y. Momiuchi, Y. Motomura, E. Suga, H. Mizuno, J. Kikuta, A. Morimoto, *et al.* Group 2 innate lymphoid cells in bone marrow regulate osteoclastogenesis in a reciprocal manner via RANKL, GM-CSF and IL-13. **Int Immunol** 33, 573-585 (2021)
15. J. Miyata, Y. Yokokura, K. Moro, H. Arai, K. Fukunaga and M. Arita. 12/15-Lipoxygenase Regulates IL-33-Induced Eosinophilic Airway Inflammation in Mice. **Front Immunol** 12, 687192 (2021)
16. T. Kobayashi, Y. Motomura and K. Moro. The discovery of group 2 innate lymphoid cells has changed the concept of type 2 immune diseases. **Int Immunol** 33, 705-709 (2021)
17. T. Kiniwa and K. Moro. Localization and site-specific cell-cell interactions of group 2 innate lymphoid cells. **Int Immunol** 33, 251-259 (2021)
18. Y. Hikichi, Y. Motomura, O. Takeuchi and K. Moro. Posttranscriptional regulation of ILC2 homeostatic function via tristetraprolin. **J Exp Med** 218, (2021)
19. M. Wagner, K. N. Ealey, H. Tetsu, T. Kiniwa, Y. Motomura, K. Moro, *et al.* Tumor-Derived Lactic Acid Contributes to the Paucity of Intratumoral ILC2s. **Cell Rep** 30, 2743-2757.e5 (2020)
20. N. Satoh-Takayama, T. Kato, Y. Motomura, T. Kageyama, N. Taguchi-Atarashi, R. Kinoshita-Daitoku, *et al.* Bacteria-Induced Group 2 Innate Lymphoid Cells in the Stomach Provide

- Immune Protection through Induction of IgA. *Immunity* 52, 635-649.e4 (2020)
21. R. Nakamura, A. Yoshizawa, T. Moriyasu, S. Deloer, M. Senba, M. Kikuchi, *et al.* Group 2 Innate Lymphoid Cells Exacerbate Amebic Liver Abscess in Mice. *iScience* 23, 101544 (2020)
 22. Y. Miyajima, K. N. Ealey, Y. Motomura, M. Mochizuki, N. Takeno, M. Yanagita, *et al.* Effects of BMP7 produced by group 2 innate lymphoid cells on adipogenesis. *Int Immunol* 32, 407-419 (2020)
 23. T. Kobayashi, R. R. Ricardo-Gonzalez and K. Moro. Skin-Resident Innate Lymphoid Cells - Cutaneous Innate Guardians and Regulators. *Trends Immunol* 41, 100-112 (2020)
 24. X. Jiang, A. Kumar, Y. Motomura, T. Liu, Y. Zhou, K. Moro, *et al.* A Series of Compounds Bearing a Dipyrrodo-Pyrimidine Scaffold Acting as Novel Human and Insect Pest Chitinase Inhibitors. *J Med Chem* 63, 987-1001 (2020)
 25. H. Hosokawa, M. Romero-Wolf, Q. Yang, Y. Motomura, D. Levanon, Y. Groner, *et al.* Cell type-specific actions of Bcl11b in early T-lineage and group 2 innate lymphoid cells. *J Exp Med* 217, (2020)
 26. T. Sasaki, K. Moro, T. Kubota, N. Kubota, T. Kato, H. Ohno, *et al.* Innate Lymphoid Cells in the Induction of Obesity. *Cell Rep* 28, 202-217.e7 (2019)
 27. Y. Motomura, T. Kobayashi and K. Moro. The Neuropeptide CGRP Induces Bipolar Syndrome in Group 2 Innate Lymphoid Cells. *Immunity* 51, 598-600 (2019)
 28. C. Miyamoto, S. Kojo, M. Yamashita, K. Moro, G. Lacaud, K. Shiroguchi, *et al.* Runx/Cbfb complexes protect group 2 innate lymphoid cells from exhausted-like hyporesponsiveness during allergic airway inflammation. *Nat Commun* 10, 447 (2019)
 29. T. Kobayashi, B. Voisin, D. Y. Kim, E. A. Kennedy, J. H. Jo, H. Y. Shih, *et al.* Homeostatic Control of Sebaceous Glands by Innate Lymphoid Cells Regulates Commensal Bacteria Equilibrium. *Cell* 176, 982-997.e16 (2019)
 30. H. Nagashima, Y. Okuyama, T. Fujita, T. Takeda, Y. Motomura, K. Moro, *et al.* GPCR cosignal in ILC2s controls allergic lung inflammation. *J Allergy Clin Immunol* 141, 1939-1943.e8 (2018)
 31. S. Koga, K. Hozumi, K. I. Hirano, M. Yazawa, T. Teruoate, A. Minoda, *et al.* Peripheral PDGFR α (+)gp38(+) mesenchymal cells support the differentiation of fetal liver-derived ILC2. *J Exp Med* 215, 1609-1626 (2018)
 32. H. Kabata, K. Moro and S. Koyasu. The group 2 innate lymphoid cell (ILC2) regulatory network and its underlying mechanisms. *Immunol Rev* 286, 37-52 (2018)
 33. M. Wagner, K. Moro and S. Koyasu. Plastic Heterogeneity of Innate Lymphoid Cells in Cancer. *Trends Cancer* 3, 326-335 (2017)
 34. S. Noguchi, T. Arakawa, S. Fukuda, M. Furuno, A. Hasegawa, F. Hori, *et al.* FANTOM5 CAGE

- profiles of human and mouse samples. **Sci Data** 4, 170112 (2017)
35. S. Kojo, H. Tanaka, T. A. Endo, S. Muroi, Y. Liu, W. Seo, *et al.* Priming of lineage-specifying genes by Bcl11b is required for lineage choice in post-selection thymocytes. **Nat Commun** 8, 702 (2017)
 36. T. Kamatani, K. Fukunaga, K. Miyata, Y. Shirasaki, J. Tanaka, R. Baba, *et al.* Construction of a system using a deep learning algorithm to count cell numbers in nanoliter wells for viable single-cell experiments. **Sci Rep** 7, 16831 (2017)
 37. K. N. Ealey, K. Moro and S. Koyasu. Are ILC2s Jekyll and Hyde in airway inflammation? **Immunol Rev** 278, 207-218 (2017)
 38. K. Moro, H. Kabata, M. Tanabe, S. Koga, N. Takeno, M. Mochizuki, *et al.* Interferon and IL-27 antagonize the function of group 2 innate lymphoid cells and type 2 innate immune responses. **Nat Immunol** 17, 76-86 (2016)
 39. H. Morita, K. Moro and S. Koyasu. Innate lymphoid cells in allergic and nonallergic inflammation. **J Allergy Clin Immunol** 138, 1253-1264 (2016)
 40. Vasanthakumar, K. Moro, A. Xin, Y. Liao, R. Gloury, S. Kawamoto, *et al.* The transcriptional regulators IRF4, BATF and IL-33 orchestrate development and maintenance of adipose tissue-resident regulatory T cells. **Nat Immunol** 16, 276-85 (2015)
 41. K. Moro and S. Koyasu. Innate lymphoid cells, possible interaction with microbiota. **Semin Immunopathol** 37, 27-37 (2015)
 42. H. Morita, K. Arae, H. Unno, K. Miyauchi, S. Toyama, A. Nambu, *et al.* An Interleukin-33-Mast Cell-Interleukin-2 Axis Suppresses Papain-Induced Allergic Inflammation by Promoting Regulatory T Cell Numbers. **Immunity** 43, 175-86 (2015)
 43. Y. Motomura, H. Morita, K. Moro, S. Nakae, D. Artis, T. A. Endo, *et al.* Basophil-derived interleukin-4 controls the function of natural helper cells, a member of ILC2s, in lung inflammation. **Immunity** 40, 758-71 (2014)
 - A. R. Forrest, H. Kawaji, M. Rehli, J. K. Baillie, M. J. de Hoon, V. Haberle, *et al.* A promoter-level mammalian expression atlas. **Nature** 507, 462-70 (2014)
 44. H. Kabata, K. Moro, K. Fukunaga, Y. Suzuki, J. Miyata, K. Masaki, *et al.* Thymic stromal lymphopoietin induces corticosteroid resistance in natural helper cells during airway inflammation. **Nat Commun** 4, 2675 (2013)
 45. J. Furusawa, K. Moro, Y. Motomura, K. Okamoto, J. Zhu, H. Takayanagi, *et al.* Critical role of p38 and GATA3 in natural helper cell function. **J Immunol** 191, 1818-26 (2013)
 46. K. Nagao, T. Kobayashi, K. Moro, M. Ohyama, T. Adachi, D. Y. Kitashima, *et al.* Stress-induced production of chemokines by hair follicles regulates the trafficking of dendritic cells in skin. **Nat Immunol** 13, 744-52 (2012)
 47. S. Koyasu and K. Moro. Natural "helper" cells in the lung: good or bad help? **Immunity** 36,

317-9 (2012)

48. S. Koyasu and K. Moro. Role of innate lymphocytes in infection and inflammation. **Front Immunol** 3, 101 (2012)
49. S. Koyasu and K. Moro. Innate Th2-type immune responses and the natural helper cell, a newly identified lymphocyte population. **Curr Opin Allergy Clin Immunol** 11, 109-14 (2011)
50. S. Koyasu and K. Moro. Type 2 innate immune responses and the natural helper cell. **Immunology** 132, 475-81 (2011)
51. K. Moro, T. Yamada, M. Tanabe, T. Takeuchi, T. Ikawa, H. Kawamoto, *et al.* Innate production of T(H)2 cytokines by adipose tissue-associated c-Kit(+)Sca-1(+) lymphoid cells. **Nature** 463, 540-4 (2010)
52. S. Koyasu, K. Moro, M. Tanabe and T. Takeuchi. Natural helper cells: a new player in the innate immune response against helminth infection. **Adv Immunol** 108, 21-44 (2010)
53. S. Nagai, H. Mimuro, T. Yamada, Y. Baba, K. Moro, T. Nochi, *et al.* Role of Peyer's patches in the induction of Helicobacter pylori-induced gastritis. **Proc Natl Acad Sci U S A** 104, 8971-6 (2007)
54. S. Nonaka, T. Naito, H. Chen, M. Yamamoto, K. Moro, H. Kiyono, *et al.* Intestinal gamma delta T cells develop in mice lacking thymus, all lymph nodes, Peyer's patches, and isolated lymphoid follicles. **J Immunol** 174, 1906-12 (2005)

INVITED LECTURES AT INTERNATIONAL CONFERENCES

1. Moro K, Mechanisms of colitis prevention following cecal resection, Cytokine2024, 10/22/2024, Korea
2. Moro K, The Role of Group 2 Innate Lymphoid Cells in the Lung and Gut, PORT for Health Oncology, 9/19/2024, Pohland
3. Moro K, 5th International Conference on Innate Lymphoid cells (ILC5), The Role of Group 2 Innate Lymphoid Cells in Ulcerative Colitis, 2024/6/16, UK
4. Moro K, The role of group 2 innate lymphoid cells in chronic disease, IUIS 2023, 11/20/2023, South Africa
5. Moro K, The Role of Group 2 Innate Lymphoid Cells in the Lung and Gut, International School on Advanced Immunology, 9/20/2023, Germany
6. Moro K, 19th World Congress of Basic and Clinical Pharmacology 2023 (WCP2023), The role of group 2 innate lymphoid cells in ulcerative colitis, 2023/7/6, UK
7. Moro K, Annual Meeting of the Society for Leukocyte Biology, Constitutive ILC2 Activation Causes Spontaneous Pulmonary Fibrosis, 2022/10/29, USA

8. Moro K, 4th International Conference on Innate Lymphoid Cells, ILC2s and pulmonary fibrosis, 2022/9/22, USA
9. Moro K, DGfI-JSI joint Japanese-German Workshop, The role of group 2 innate lymphoid cells in the lung and gut, 2022/9/12, Germany
10. Moro K, 2022Advanced Immunology Course (FIMSA), The role of group 2 innate lymphoid cells in pulmonary diseases, 2022/8/19, Hong Kong (Online)
11. Moro K, Food, Microbiota and Immunity 2020, The Role of Type 2 innate lymphoid cells in mucosal tissues, 2022/6/6, Prague, Czech
12. Moro K, Grobal Immunetalks, The discovery of group 2 innate lymphoid cells, 2021/3/31, (Online)
13. Moro K, 25th Congress of the Asian Pacific Society of Respirology, Single-cell analysis and the innate lymphoid cells, 11/21/2021, (Online)
14. Moro K, British Society for Immunology Congress 2021, Fibroblast-derived IL-33 causes pulmonary fibrosis via activation of ILC2s, 2021/11/30, Scotland (Hybrid), UK
15. Moro K, the Human Cell Atlas-Asia 2021 meeting, Single cell RNA sequence analysis in ILC2s-related diseases, 2021/11/16, (Hybrid), Singapore
16. Moro K, Immunity, Inflammation and Disease Seminar 2021, Group 2 and 3 innate lymphoid cells drive spontaneous pulmonary fibrosis, 2021/6/16, Boston (Hybrid), USA
17. Moro K, The 27th International Symposium on Molecular Cell Biology of Macrophages, Group 2 and 3 innate lymphoid cells drive spontaneous pulmonary fibrosis, 2021/6/15, (Online)
18. Moro K, 4th International Conference on Innate Lymphoid Cells, 2020/10/16-18(postponement), San Francisco, USA
19. Moro K, XXVII World Allergy Congress, Role of group 2 innate lymphoid cells in allergic disorders, 2020/9/17, (Online)
20. Moro K, Pharmacology 2019, The role of ILC2 in idiopathic pulmonary fibrosis, 2019/12/15, Edinburgh, UK
21. Moro K, The 2nd CIRNO Symposium, The role of group 2 innate lymphoid cells in idiopathic interstitial pneumonias, 2019/11/2, Suwon, Korea
22. Moro K, The Korean Association of Immunologists International Meeting 2019, The role of group 2 innate lymphoid cells in Idiopathic interstitial pneumonia, 2019/10/31, Seoul, Korea
23. Moro K, The 17th International Congress of Immunology, ILC2 induce innate IgE secretion by B1 cells via IL-4 and regulate allergic susceptibility, 2019/10/21, Beijing, China
24. Moro K, 2019 NHRI/IBMS International Conference on Inflammation & Disease, IL-4

- Production of Group 2 Innate Lymphoid Cells, 2019/10/3, Taipei, Taiwan,
25. Moro K, 5th the Chinese Biological Investigators Society Workshop, Role of group 2 innate lymphoid cells in idiopathic interstitial pneumonias, 2019/9/7, Changsha, China
 26. Moro K, 5th Science China Life Sciences Workshop, ILC2 produce IL-4 and regulate susceptibility to allergic inflammation via IgE production by B1 cells, 2019/9/5, Shanghai, China
 27. Moro K, FASEB Science Research Conference, ILC2 produce IL-4 and regulate susceptibility to allergic inflammation via IgE production by B1 cells, 2019/7/9, Scottsdale, USA
 28. Moro K, The 26th International Symposium on Molecular Cell Biology of Macrophages, Role of group 2 innate lymphoid cells in idiopathic interstitial pneumonias, 2019/6/7, Tokyo, Japan
 29. Moro K, The 11th International Singapore Symposium of Immunology, ILC2 induce innate IgE secretion by B1 cells via IL-4 and regulate allergic susceptibility, 2019/5/31, Havelock, Singapore
 30. Moro K, EMBO Workshop on Single Cell Biology, Single cell RNA sequence analysis of idiopathic pulmonary fibrosis., 2019/5/20, Tokyo, Japan
 31. Moro K, VIB Conference series; Type 2 immunity in homeostasis-and-disease, IL-4 Production of Group 2 Innate Lymphoid Cells, 2019/2/22, Bruges, Belgium
 32. Moro K, The 3rd International ILC meeting 2018, Role of Group 2 innate lymphoid cells in idiopathic interstitial pneumonias, 2018/11/29, Tokyo, Japan
 33. Moro K, FIMSA2018, Mechanism of antigen-independent allergic inflammation induced by group 2 innate lymphoid cells, 2018/11/11, Bangkok, Thailand
 34. Moro K, XXIV World Congress of Asthma, Group 2 innate lymphoid cells and asthma, 2018/10/5, Tokyo, Japan
 35. Moro K, Cold Spring Harbor Asia Conference, The role of ILC2 in pathology of type 2 inflammatory diseases, 2018/9/13, Suzhou, China
 36. Moro K, 5th European Congress of Immunology, ILC2 and type 2 immune diseases, 2018/9/4, Amsterdam, Holland
 37. Moro K, 18th World Congress of Basic and Clinical Pharmacology, Group 2 innate lymphoid cell and allergic disorders, 2018/7/6, Kyoto, Japan
 38. Moro K, CIML Symposium for Immunology 2018, ILC2 in fat-associated lymphoid clusters (FALC), 2018/3/22, Marseille, France
 39. Moro K, Cytokines 2017, Current topics in the innate immune system, 2017/11/1, Kanazawa, Japan
 40. Moro K, The American Association of Immunologists Annual meeting, Discovery of group

- 2 innate lymphoid cells, 2017/5/13, Washington D.C., USA
41. Moro K, Advances in Targeted Therapies Meeting, Group 2 innate lymphoid cell and allergic inflammation, 2017/3/29, Mandelieu, France
 42. Moro K, FASEB IgE and Allergy, 50 Years & Onward, Suppression mechanism of Group 2 innate lymphoid cells, 2016/7/26, West Palm Beach, USA