



## Hiroshi KURITA, Ph.D.

Associate Professor

Program: Environmental Science and Technology

Area: Earth Science

Undergraduate: Dept. of Geology

### Professional Expertise

- Sedimentary geology
- Palynology (Mesozoic – Cenozoic dinoflagellate cysts, Neogene pollen)
- Basin analysis
- Petroleum geology
- Microscopic organic facies analysis

### Research Fields of Interest

- Analysis of Cenozoic basin development and sedimentation in northern Japan
- Biostratigraphy of Mesozoic – Cenozoic dinoflagellate cysts (organic-walled microfossils)
- Depositional environments and sedimentation of organic particles in geologic records



A shallow marine, deltaic sandstone body of Early Pleistocene, analogous to some subsurface hydrocarbon reservoirs (ABOVE). This is also true for highly porous, Miocene perlitic rhyolite in the backarc setting (TOP RIGHT). Conglomerates of debris-flow origin manifest the very beginning of the Miocene rift system (MIDDLE RIGHT). Long-term activity of a fault, now between basement granite (BOTTOM RIGHT, at center) and Miocene deposits (at right) affected the basin development. All from the Niigata area.

## Education

2000: Ph.D. in Geology, Graduate School of Science, Hokkaido University, Japan

1982: B.S. in Geology, Faculty of Science, Tohoku University, Japan

## Professional Societies and Activities

1. Geological Society of Japan
2. American Association of Petroleum Geologists (AAPG)
3. Society for Sedimentary Geology (SEPM)
4. American Association of Stratigraphic Palynologists (AASP)
5. Japanese Association of Petroleum Technology (JAPT)
6. Sedimentological Society of Japan (SSJ)
7. Palaeontological Society of Japan

## Awards

1. Best Lectures Award by Niigata University, 2008
2. Significant Scientific Achievement awarded by Palaeontological Society of Japan, 2007
3. Distinguished Papers awarded by JAPT, 1998



Organic-walled microfossils of dinoflagellate cysts, unicellular algae, have been a significant primary producer in the aquatic realm since Triassic. This group is very informative for age determination and paleoenvironmental investigation. Their size ranges from 20 up to 150 micrometers. Examples from Cretaceous – Tertiary.

## Major Publications

### Papers

- [1] Kurita, H. , “Paleogene dinoflagellate cyst biostratigraphy of northern Japan”, *Micropaleontology*, vol. 50, supplement no. 2, 3-50, 2004
- [2] Kurita, H. and Obuse, A., “Middle Miocene -uppermost lower Pliocene dinoflagellate cyst biostratigraphy, ODP Leg 186 Hole 1151A, off Sanriku Coast of northern Japan, northwestern Pacific” In Suyehiro, K., Sacks, I.S., Acton, G.D. and Oda, M. (eds.), *Proc. ODP, Sci. Results*, vol. 186, Available online from [http://www-odp.tamu.edu/publications/186\\_SR/105/105.htm](http://www-odp.tamu.edu/publications/186_SR/105/105.htm), 2003
- [3] Kurita, H. and Matsuoka, K., “Dinoflagellates”, In Ikeya, N., Hirano, H. and Ogasawara, K., eds., “*The database of Japanese fossil type specimens described during the 20th Century*”, Special Papers, no. 39, Palaeontological Society of Japan, 11-16, 2001
- [4] Kurita, H. and McIntyre, D. J., “Paleocene dinoflagellates from the Turtle Mountain Formation, southwestern Manitoba, Canada”, *Palynology*, no. 19, 119-136, 1995
- [5] Kurita, H. and Matsuoka, K., “*Trinovantedinium boreale* Bujak-dominated dinoflagellate assemblages from Eocene - Oligocene stratified water in northern Japan”, *Review of Palaeobotany and Palynology*, vol. 84, 129-153, 1994
- [6] Kurita, H. and McIntyre, D. J., “Dinoflagellate assemblages and depositional environments of the Campanian Bearpaw Formation, Alberta”, *Geological Survey of Canada Bulletin*, no.479, 67-83, 1994
- [7] Yagishita, K., Obuse, A. and Kurita, H., “Lithology and palynology of Neogene sediments on the narrow edge of the Kitakami Massif (basement rocks), northeast Japan: Significant change for depositional environments as a result of plate tectonics”, *The Island Arc*, vol. 12, 268-280, 2003
- [8] Hara, H., Kurihara, T., Kuroda, J., Adachi, Y., Kurita, H., Wakita, K., Hisada, K., Charusiri, P., Charontitiratan, T. and Chaodumrong, P., “Geological and geochemical aspects of a Devonian siliceous sequence in northern Thailand: Implications for the opening of the Paleo-Tethys”, *Palaeogeography Palaeoclimatology Palaeoecology*, vol. 297, 452-464, 2010