

Bioinformatics Seminar Series

Hosted by ICR-KUBIC and NPO Bioinformatics Japan

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10:00-11:30 at CB207

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The viral eukaryogenesis hypothesis in the Tree of Life

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The structure of the Tree of Life, representing the evolution of the three cellular domains, is a debated question, particularly regarding the position of Eukaryotes. In the two-domain (2D) scenario, Eukaryotes emerged from within Archaea as sister clade to the Asgard superphylum; in the three-domain (3D) scenario, Eukaryotes and Archaea share a common ancestor. However, these scenarios often elude the roles that viruses could have played in the evolution of cellular domains. For the last 20 years, new concepts and results have notably provided an increasing support to the viral eukaryogenesis hypothesis, which attributes potential critical roles to giant viruses in the emergence and early evolution of modern eukaryotes.”