

DISTINGUISHED LECTURER SERIES

T H E I N S T I T U T E F O R S Y S T E M S R E S E A R C H



Wednesday, March 9, 5:00 p.m.

Decoding the Human Genome by Multi-Species Sequence Comparisons

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The comparison of sequences generated from different extant species has emerged as a powerful strategy for identifying functionally important regions of the human genome. As a complement to ongoing efforts to sequence entire genomes, the NISC Comparative Sequencing Program is pursuing multi-species genome explorations by sequencing and analyzing the same orthologous regions in many different vertebrates. To date, we have generated over 500 Mb of comparative sequence data from more than 50 different species. Comparative analyses of these data are revealing important insights about the patterns of sequence conservation among species. In particular, we are developing approaches for utilizing multi-species sequence comparisons to identify highly conserved non-coding sequences, which likely correspond to regulatory and other functionally important elements. In addition, we are examining the relative 'informativeness' of different species' sequences for identifying such highly conserved regions, which should help guide decisions about future sequencing efforts. Our studies should advance the utility of comparative sequence analyses, and make important contributions towards unraveling the functional and evolutionary complexities of the human genome.

Biography

Eric Green received his M.D. and Ph.D. in 1987 from Washington University in St. Louis, after which he pursued residency training in clinical pathology and postdoctoral training in genomics at the same institution. In 1992, he was appointed assistant professor of pathology and genetics at Washington University. In 1994, he moved to the Intramural Program of the National Human Genome Research Institute (NHGRI) at the National Institutes of Health. In addition to his role as Chief of the Genome Technology Branch and Director of the NIH Intramural Sequencing Center, Dr. Green was appointed to the position of Scientific Director and Director of the Division of Intramural Research at NHGRI in 2002.

Date and time

Lecture

March 9, 5:00 p.m.
1115 Computer Science
Instructional Center (CSIC)

Roundtable discussion

March 9, 2:00 p.m.
2168 A.V. Williams Building

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