

Long Noncoding Rnas

[#long noncoding RNAs](#) [#lncRNA function](#) [#non-coding RNA gene regulation](#) [#RNA epigenetics](#) [#molecular biology lncRNAs](#)

Explore the fascinating world of Long Noncoding RNAs (lncRNAs), a diverse class of RNA molecules over 200 nucleotides long that do not code for proteins. These critical non-coding RNA gene regulation elements play pivotal roles in various cellular processes, from gene expression and chromatin remodeling to RNA epigenetics and disease mechanisms, fundamentally shaping our understanding of molecular biology.

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Long Noncoding Rnas

Long Non-coding RNA Sequencing - Novogene

Visualize the Fascinating Roles of lncRNA - Visualize the Fascinating Roles of lncRNA by Bio-Rad Laboratories 45,339 views 5 years ago 2 minutes, 30 seconds - Long noncoding RNA, (lncRNA) is a rapidly expanding research area. See how lncRNAs exert a variety of regulatory functions in ...

Long Noncoding RNA (lncRNA) - Long Noncoding RNA (lncRNA) by Easy Peasy 7,631 views 1 year ago 3 minutes, 2 seconds - This Video Explains **Long noncoding RNA**, (lncRNA). Reference: <https://www.mdpi.com/1422-0067/18/12/2659/htm> Thank You For ...

Discover lncRNA: Understanding the Long Noncoding Transcriptome - Discover lncRNA: Understanding the Long Noncoding Transcriptome by Bio-Rad Laboratories 33,229 views 6 years ago 4 minutes, 4 seconds - Learn about the exciting new field of **long noncoding RNA**, (lncRNA) and how this newly discovered class of RNA compares to ...

What is lncRNA?

What are long non coding RNA?

7. Noncoding RNAs long noncoding RNAs introduction - 7. Noncoding RNAs long noncoding RNAs introduction by Durga 20,641 views 6 years ago 10 minutes, 33 seconds

Howard Chang (Stanford, HHMI) 2: lncRNA Function at the RNA Level: Xist - Howard Chang (Stanford, HHMI) 2: lncRNA Function at the RNA Level: Xist by Science Communication Lab 21,046 views 4 years ago 24 minutes - In his Part 2, Chang introduces **long noncoding RNAs**, or lncRNAs. As their name suggests, lncRNAs are not translated into ...

ncRNAs - all types of non-coding RNA (lncRNA, tRNA, rRNA, snRNA, snoRNA, siRNA, miRNA, piRNA) - ncRNAs - all types of non-coding RNA (lncRNA, tRNA, rRNA, snRNA, snoRNA, siRNA, miRNA, piRNA) by Henrik's Lab 60,461 views 2 years ago 5 minutes, 43 seconds - Long non-coding RNAs, (lncRNA) have been linked to disease, micro RNAs (miRNA) and short interfering RNAs (siRNA) can ...

Non-coding RNA (ncRNA) | Biomolecules | MCAT | Khan Academy - Non-coding RNA (ncRNA) | Biomolecules | MCAT | Khan Academy by khanacademymedicine 125,271 views 10 years ago 4 minutes, 40 seconds - Created by Tracy Kim Kovach. Watch the next lesson: ...

Intro

MicroRNAs

Ribosomal RNAs

SnoRNA

SnRNA

Transcription and mRNA processing | Biomolecules | MCAT | Khan Academy - Transcription and mRNA processing | Biomolecules | MCAT | Khan Academy by Khan Academy 1,588,194 views 7 years ago 10 minutes, 24 seconds - Introduction to transcription including the role of **RNA**, polymerase, promoters, terminators, introns and exons. Watch the next ...

Intro

RNA polymerase

Template strand

RNA polymerase complex

mRNA processing

What is Junk DNA, and Why Do We Have So Much? - What is Junk DNA, and Why Do We

Have So Much? by SciShow 301,221 views 5 years ago 10 minutes, 56 seconds - Have you ever wondered about junk DNA? Each person's human genome is 3.2 billion base pairs **long**, and contains around ...

R-CNN: Clearly EXPLAINED! - R-CNN: Clearly EXPLAINED! by Soroush Mehraban 15,136 views 1 year ago 18 minutes - In this video, we understand how R-CNN works and become familiar with the basics of object detection. Paper link: ...

Our Goal

Designing the model

Object Localization

Earliest Approach

R-CNN

Non-max Suppression

Mean Average Precision

How To Install Uncensored Mixtral Locally For FREE! (EASY) - How To Install Uncensored Mixtral Locally For FREE! (EASY) by WorldofAI 56,541 views 3 months ago 12 minutes, 11 seconds - In this video, I will give you the ultimate guide on How To Install Uncensored Mixtral locally! Mixtral 8x7B, a high-quality sparse ...

Non-coding regions in the genome - Robert Tjian (Berkeley/HHMI) - Non-coding regions in the genome - Robert Tjian (Berkeley/HHMI) by iBiology Techniques 17,185 views 10 years ago 2 minutes, 47 seconds - The significance of **non-coding**, versus coding regions in the human genome.

Transcription

Gene Coding Regions

Regulatory Sequences

Introduction to non-coding RNA-seq analysis contents - Introduction to non-coding RNA-seq analysis contents by Novogene Global 1,434 views 2 years ago 1 hour, 1 minute - Novogene provides comprehensive sequencing and bioinformatic analysis to target different types of **non-coding RNA**, including ...

setting up C++ LSP (clangd) in neovim - native lsp - setting up C++ LSP (clangd) in neovim - native lsp by Pritom 48,124 views 2 years ago 9 minutes, 30 seconds - I recently started delving into C++ programming, specifically SDL2. Therefore, I set up clangd in nvim-lsp and it works really well.

Breast Cancer Prediction Using Python and Machine Learning (Machine Learning Projects) - Breast Cancer Prediction Using Python and Machine Learning (Machine Learning Projects) by Code For Life 36,747 views 3 years ago 1 hour, 7 minutes - Machine Learning Cancer Prediction Python Project Artificial Intelligence shindo In this Video, We made a project that predicts ...

David Bartel (Whitehead Institute/MIT/HHMI) Part 1: MicroRNAs: Introduction to MicroRNAs - David Bartel (Whitehead Institute/MIT/HHMI) Part 1: MicroRNAs: Introduction to MicroRNAs by Science Communication Lab 211,745 views 9 years ago 42 minutes - Lecture Overview: MicroRNAs are ~22 nucleotide **RNAs**, processed from **RNA**, hairpin structures. MicroRNAs are much too short to ...

Intro

Gene regulation makes cells different from each other

Small temporal RNAs

miRNA biogenesis in animals

miRNA families

Many miRNAs are conserved

In plants, targets have extensive complementarity

Conserved miRNA targets in plants

MicroRNA target recognition in animals

Many biological targets

An added layer of gene control

mRNA destabilization through deadenylation

MicroRNAs are needed for proper development

Gene Silencing by microRNAs - Gene Silencing by microRNAs by Katharina Petsche 1,218,463 views 8 years ago 4 minutes, 54 seconds - MicroRNAs are a class of small, non-coding RNA molecules that regulate gene expression by inactivating messengerRNAs (mRNA ...

GENE SILENCING

microRNA BIOGENESIS & FUNCTION

Music Mutations by Small Collin

Mentor Albert Bieder

Ling-Ling Chen, "Biogenesis of Long Noncoding RNAs with New Formats" - Ling-Ling Chen, "Biogenesis of Long Noncoding RNAs with New Formats" by Yale University 3,489 views 7 years ago 36 minutes - Presentation by Dr. Ling-Ling Chen at the Sidney Altman Symposium held on March 24, 2016 at the Greenberg Center, Yale ...

8. Long noncoding RNAs Xist and HOTAIR - 8. Long noncoding RNAs Xist and HOTAIR by Durga 11,801 views 6 years ago 7 minutes, 46 seconds

Characterizing the Function of the Long Noncoding RNA Ifng-as1 - Characterizing the Function of the Long Noncoding RNA Ifng-as1 by National Institute of General Medical Sciences 362 views 3 years ago 2 minutes, 50 seconds - postdoc #ResearchTraining #NIGMSPRAT Danielle Chisolm, Ph.D., discusses investigating the function of the **long noncoding**, ...

Non coding RNA targeting therapies - Non coding RNA targeting therapies by European Society of Cardiology 3,915 views 4 years ago 48 minutes - Presented by R Boon (Frankfurt, DE) at ESC Basic Science Summer School 2019.

Introduction

Micro RNA

Quiz

Long non-coding RNA - Long non-coding RNA by CaseMed Minute 19,227 views 8 years ago 9 minutes, 31 seconds - Genetics professor, Ahmad Khalil, is here to explain the role of **long non-coding RNAs**, in the realm of cancer and epigenetics.

Intro

Modern view of the Human Transcriptome

We discovered human lincRNAs using histone modifications of active genes

Cellular Localization of human lincRNAs

Numerous lincRNAs associate with epigenetic-modifying complexes

Cancer Epigenetics Cancer is a genetic and an epigenetic disease

Mammalian DNA Methyltransferases

DACOR1 affects the growth of colon cancer cells

Proposed model for DACOR1 in colon cancer

LncRNAs in Cancer: What, where, and how? - LncRNAs in Cancer: What, where, and how? by Yale Cancer Center 3,438 views 3 years ago 25 minutes - Yale Cancer Center Grand Rounds | April 28, 2020 Nadya Dimitrova, PhD.

Non coding RNA types, features and function. miRNA, siRNA, lncRNA, piRNA, snRNA, snoRNA, rRNA, tRNA. - Non coding RNA types, features and function. miRNA, siRNA, lncRNA, piRNA, snRNA, snoRNA, rRNA, tRNA. by XploreBio 10,380 views 2 years ago 6 minutes, 51 seconds - This video will tell you about the significance of our **non-coding**, genome. You will learn about various types of **non-coding RNAs**, ...

Spark Award '21 - A long non-coding RNA as a potent and specific cell death effector of cancer cells - Spark Award '21 - A long non-coding RNA as a potent and specific cell death effector of cancer cells by ETH Zürich 513 views 2 years ago 2 minutes, 17 seconds - The Spark Award 2021 stands for the most promising invention, which ETH Zürich filed for a patent in 2020. The presented ...

Genome regulation by long noncoding RNAs - Genome regulation by long noncoding RNAs by NIH VideoCast 15,620 views 7 years ago 1 hour, 3 minutes - Genome regulation by **long noncoding RNAs**, Air date: Wednesday, June 1, 2016, 3:00:00 PM Category: WALs - Wednesday ...

Intro

Decoding RNA function

LncRNA controls epigenetic activation of immunity and infection

Ribosnitch: Mutations that switch RNA structure

RNA helicases as transcription factors

X chromosome Inactivation

Assay of Transposase Accessible Chromatin
Individuality and variation of T-cell regulome
X inactivation: Allele-specific ATAC-seq
Structure of the inactive X chromosome
Boundary required for megadomain separation and influences XCI escape
Model of X inactivation and escape
Xist A-repeat needed for gene silencing
Psoralen reversibly crosslinks base pairs
Psoralen Analysis of RNA Interaction & Structure
XIST RNA global structure
Drosophila Dosage Compensation
RNA structures mediate lncRNA functions
D3 RNA finger rescues male lethality
Discovery of missing roX RNAs
Clustered tandem stem loops mediate roX function
DNA encoding a RNA splice signal moonlights as roX binding sites
Rapid evolution underlie conserved lncRNA-genome interactions
Acknowledgement
Long non-coding RNAs in Development & Disease Progression - Long non-coding RNAs in Development & Disease Progression by arraystarinc 11,470 views 11 years ago 33 minutes - Long noncoding RNAs, (lncRNAs) are eukaryotic RNA molecules greater than 200 nucleotides in length that have no ...
Wake Up & Smell the Chromatin
Outline for Today
Transcription of the Human genome
Non-coding RNAs & the "Central Dogma"
What are lncRNAs?
What do lncRNAs do?
How are lncRNAs expressed?
Xist: Regulator of X-inactivation
lncRNAs & promotion of cancer progression
BACE1-AS: A major player in Alzheimer's
Applications for lncRNA analysis
Challenges for studying lncRNAs
Three types of Arraystar lncRNA microarrays
How do we profile lncRNAs?
Why should you choose Arraystar?
Regulation of lncRNA expression
Profiling mechanisms of lncRNA expression
lncRNA Promoter Microarray
Arraystar lncRNA arrays in disease profiling
Summary
Thank You!
Enzymes (Updated) - Enzymes (Updated) by Amoeba Sisters 4,732,738 views 7 years ago 5 minutes, 47 seconds - COMMUNITY: We take pride in our AWESOME community, and we welcome feedback and discussion. However, please ...
Proteins - Proteins by Osmosis from Elsevier 1,210,214 views 5 years ago 8 minutes, 16 seconds - What are proteins? Proteins are an essential part of the human diet. They are found in a variety of foods like eggs, dairy, seafood, ...
Amino Acids
Non-Essential Amino Acids
Essential Amino Acids
Proteolysis
Daily Protein Requirements
Protein Recommendations
Optimal Amount of Protein
Profiling Long Intergenic Non-Coding RNA Interactions In The Cancer Genome - Samir Amin - Profiling Long Intergenic Non-Coding RNA Interactions In The Cancer Genome - Samir Amin by National Human Genome Research Institute 2,137 views 9 years ago 14 minutes, 8 sec-

onds - May 12, 2014 - The Cancer Genome Atlas 3rd Annual Scientific Symposium More:
<http://www.genome.gov/27557040>.

Intro

Primary Focus

lncRNA interactions can facilitate oncogene driven downstream gene regulation.

How does lncRNA interact?

Experimental evidence indicating potential functional role of lincRNAs in cancer

Motif discovery analysis of variably expressed lincRNA (n=189) indicates potential role of lincRNAs in transcription regulation and cancer growth signaling pathways

Alu elements are preferentially enriched in lincRNA exonic regions

Summary

Daniel Caffrey - Evolution of Alu elements in long non coding RNA and mRNA - Daniel Caffrey

- Evolution of Alu elements in long non coding RNA and mRNA by Labroots 3,026 views 10

years ago 43 minutes - Watch on LabRoots at: <http://labroots.com/user/webinars/details/id/50> **Long non-coding RNAs**, (lncRNA) are a novel class of RNA ...

Intro

Outline

What are lncRNA?

One way to classify: Genome location

Divergently transcribed lncRNA/mRNA pairs are co- regulated

Natural Antisense transcripts/ pseudogenes

lncRNA levels are low

lncRNAs often appear to be species- specific

Molecular mechanisms

Alu functions - a growing list of exaptations

Age of Alu subfamilies (activity)

lncRNAs with Alu element form STAU-1 binding site leading to STAU1-mediated mRNA

lncRNAs with SINEB2 can regulate protein levels

Transposable Elements Are Major Contributors to the Origin, Diversification, and Regulation of Vertebrate Long Noncoding RNAs

Other well characterized lncRNAs with repeats

Dataset to investigate the evolution of Alu elements in lncRNA and mRNA

Difference in Lengths between mRNA, their untranslated regions (UTRs), and lncRNA

lncRNA are shorter than mRNA and a greater proportion of lncRNA sequences are repetitive

Exception: Depletion of Alus in mRNA occurs across all chromosomes (except Chr 19)

Hints from literature: Chr 19 is enriched with alu elements and duplicated protein-coding genes

Alu-containing mRNA encoded by chromosome 19 have their most closely related paralog on the same chromosome

Alu elements are enriched among repeat- containing mRNA

There is a stronger preference for reverse-oriented Alus in lncRNA than mRNA and these lack polyA signals

Comparing locations of Alus between RNAs molecules of different length

Reverse-oriented Alu elements are nearer the center of lncRNA than forward-oriented Alu elements

Depletion of forward-oriented Alus in internal exons of lncRNA. Negative selection?

Reverse-oriented monomers are less likely to have a polyadenylation signal

Shorter Alus usually correspond to left and right arms

Dimeric Alus primarily belong to the Alu subfamily

Summary & next steps

Acknowledgements

Long Non-Coding RNA Part 01: finding the lncRNA #AlnC - Long Non-Coding RNA Part 01: finding the lncRNA #AlnC by Genome Wide Study 425 views 10 months ago 9 minutes, 27 seconds - In this video we will to the blast analysis to find out the lncRNAs. **Long non-coding RNAs**, (lncRNAs) have been shown to play ...

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