

03

유전체 분석기초 I

권기상 교수

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유전정보의 흐름 II

1. RNA와 전사
2. 번역
3. 더 알아보기



■ 05. 유전정보의 흐름 II

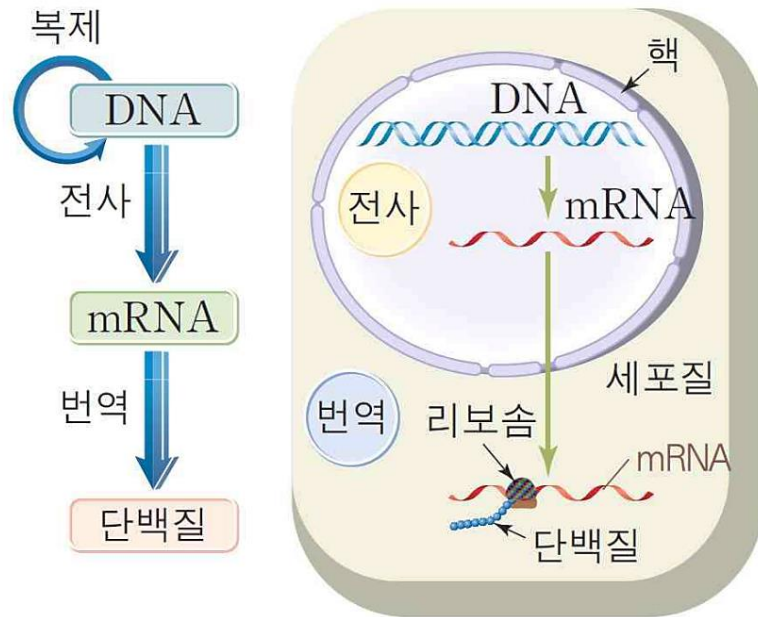
1 RNA와 전사

- ◆ 하나의 나선이 길게 꼬여 있는 구조를 지니며 DNA의 일부가 전사되어 만들어짐
- ◆ 단백질을 합성하는 과정에 작용
- ◆ 일부 바이러스는 DNA 대신 RNA를 유전물질 저장
- ◆ 염기로 DNA와 달리 티민 대신 우라실
- ◆ 리보자임(ribozyme) RNA 효소

■ 05. 유전정보의 흐름 II

1 RNA와 전사

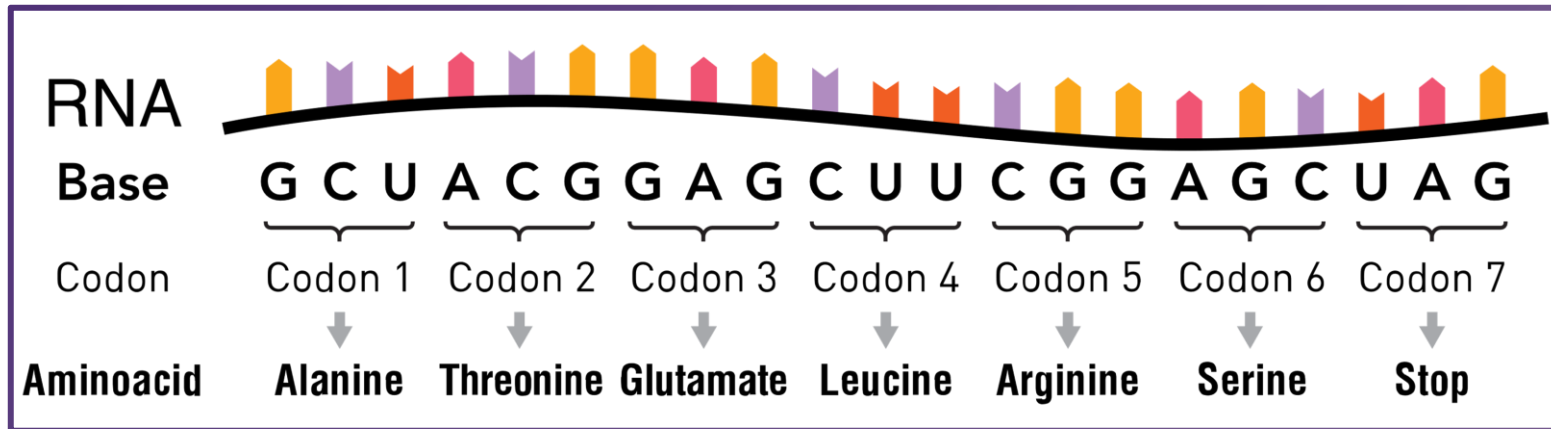
- ◆ DNA → RNA
- ◆ 요구도에 따라 일어남
- ◆ 핵안에서 일어나며, 핵공 통해 세포질로 이동
- ◆ mRNA, rRNA, tRNA



05. 유전정보의 흐름 II

2번역

- ◆ 생체내에서 기능
 - 아미노산, 폴리펩티드, 단백질
 - Post-translational modification



05. 유전정보의 흐름 II

2번역

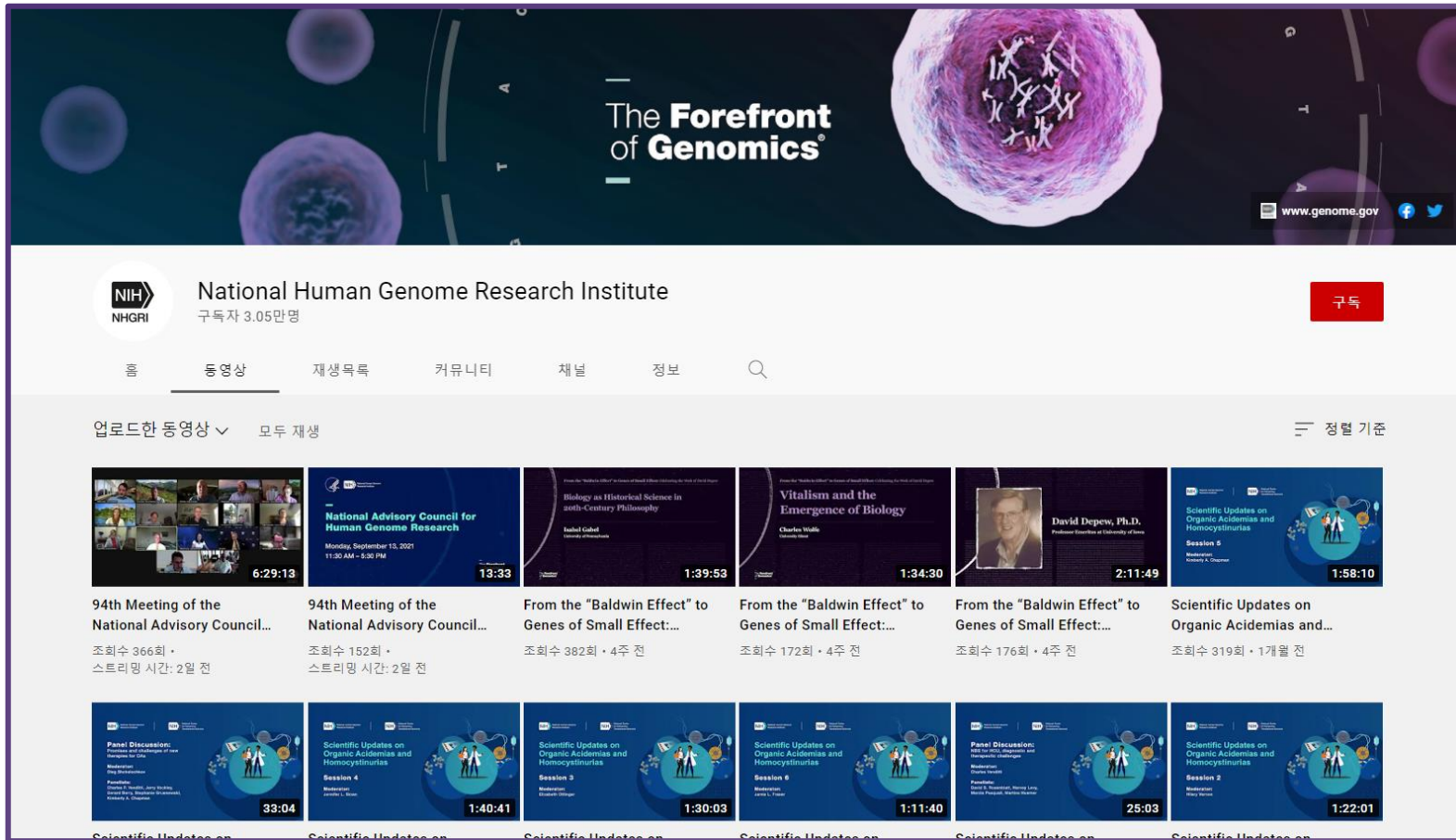
DNA →			Amino Acid					
1	2	3	1letter	3letter	Full Name			
G	G	G →	G	Gly	Glycine			
		T						
		C						
		A						
	T	G →	V	Val	Valine			
		T						
		C						
		A						
	A	G →	E	Glu	Glutamic Acid			
		A						
		C →	D	Asp	Aspartic Acid			
		T						
C	G →	A	Ala	Alanine				
	T							
	C							
	A							
T	G	G →	W	Trp	Tryptophan			
		C →				C	Cys	Cysteine
		T						
		A						
	A	G →	STOP					
		A						
		C →	Y	Tyr	Tyrosine			
		T						
	T	G →	L	Leu	Leucine			
		A						
		C →				F	Phe	Phenylalanine
		T						
C	G →	S	Ser	Serine				
	T							
	C							
	A							

DNA →			Amino Acid		
1	2	3	1letter	3letter	Full Name
A	G	T	M	Met	Methionine
		C			
		A			
	T	T	I	Ile	Isoleucine
		A			
		C			
	A	G	K	Lys	Lysine
		A			
		C			
C	C	T	N	Asn	Asparagine
		A			
		G			
	G	A	T	Thr	Threonine
		C			
		T			
	T	G	R	Arg	Arginine
		A			
		C			
G	T	G	L	Leu	Leucine
		C			
		A			
	A	G	Q	Gln	Glutamine
		A			
		C			
	C	T	H	His	Histidine
		A			
		G			
T	C	T	P	Pro	Proline
		C			
		A			

05. 유전정보의 흐름 II

3 더 알아보기

 <https://www.youtube.com/user/GenomeTV/videos>



The Forefront of Genomics

NHGI National Human Genome Research Institute
구독자 3.05만명

홈 동영상 재생목록 커뮤니티 채널 정보 🔍

업로드한 동영상 ▾ 모두 재생 ≡ 정렬 기준

Thumbnail	Title	Duration	Views	Time Ago
	94th Meeting of the National Advisory Council...	6:29:13	366회	2일 전
	94th Meeting of the National Advisory Council...	13:33	152회	2일 전
<td>From the "Baldwin Effect" to Genes of Small Effect:...</td> <td>1:39:53</td> <td>382회</td> <td>4주 전</td>	From the "Baldwin Effect" to Genes of Small Effect:...	1:39:53	382회	4주 전
<td>From the "Baldwin Effect" to Genes of Small Effect:...</td> <td>1:34:30</td> <td>172회</td> <td>4주 전</td>	From the "Baldwin Effect" to Genes of Small Effect:...	1:34:30	172회	4주 전
<td>From the "Baldwin Effect" to Genes of Small Effect:...</td> <td>2:11:49</td> <td>176회</td> <td>4주 전</td>	From the "Baldwin Effect" to Genes of Small Effect:...	2:11:49	176회	4주 전
	Scientific Updates on Organic Acidemias and Homocystinurias	1:58:10	319회	1개월 전
	Panel Discussion: Frontiers and Challenges of Gene Therapy	33:04		
	Scientific Updates on Organic Acidemias and Homocystinurias	1:40:41		
	Scientific Updates on Organic Acidemias and Homocystinurias	1:30:03		
	Scientific Updates on Organic Acidemias and Homocystinurias	1:11:40		
	Panel Discussion: Frontiers and Challenges of Gene Therapy	25:03		
	Scientific Updates on Organic Acidemias and Homocystinurias	1:22:01		

■ 05. 유전정보의 흐름 II

3 더 알아보기

- ◆ 사이트 내 검색에서 [How to Sequence a Genome] 입력 다음의 과정
 - 1 Preparing DNA for Sequencing:
<https://www.youtube.com/watch?v=girLJue7F9g>
 - 2 Sequencing Reactions:
https://www.youtube.com/watch?v=yiKl_rh95sl
 - 3 Products of Sequencing Reactions:
<https://www.youtube.com/watch?v=tUiatQsAB6s>
 - 4 Separating the Sequencing Products:
<https://www.youtube.com/watch?v=pxfG4Lrl41l>
 - 5 Reading the Sequencing Products:
<https://www.youtube.com/watch?v=BEdjlrptQkY>
 - 6 Assembling the Results: <https://www.youtube.com/watch?v=69LDlrjKzpQ>
 - 7 Working Draft Sequence: <https://www.youtube.com/watch?v=99XeEYaMUyc>