

# BIBLIOGRAPHY

I am indebted to the free university lectures posted on YouTube by Vincent Racaniello of Columbia University. I watched several of them more than once and took pages and pages of notes. If I found other sources of information that didn't quite line up with his info, I opted for deferring to Prof. Racaniello since he is world-class virologist.

The following is a list of resources I used besides Prof. Racaniello's course. I tried to copy and paste web addresses as I went to them, but I didn't always remember in time. However, this list represents at least 75 percent of the websites I used.

## General info

<https://www.sciencedirect.com/topics/medicine-and-dentistry/virus-particle>

## Beneficial viruses

<https://www.sciencedaily.com/releases/2015/04/150430170750.htm>

## Virus Abundance

<https://www.the-scientist.com/features/an-ocean-of-viruses-39112>

## Virus size and shape

<http://book.bionumbers.org/how-big-are-viruses/>

## Adenovirus

[https://en.wikipedia.org/wiki/Coxsackievirus\\_and\\_adenovirus\\_receptor](https://en.wikipedia.org/wiki/Coxsackievirus_and_adenovirus_receptor)

## Influenza

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3108042/>

<https://www.virology.ws/2009/05/04/influenza-virus-attachment-to-cells/>

<https://www.virology.ws/2014/01/08/cutting-through-mucus-with-the-influenza-virus-neuraminidase/>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1170379/>

<https://en.wikipedia.org/wiki/ATPase>

[https://en.wikipedia.org/wiki/NS1\\_influenza\\_protein](https://en.wikipedia.org/wiki/NS1_influenza_protein)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6029254/>

## Coronavirus

<https://medicalxpress.com/news/2016-03-scientists-clues-neutralizing-coronaviruses-mers.html>

<https://www.sciencedirect.com/topics/neuroscience/coronavirus>

Site found for possible coronavirus drugs (this protein allows covid RNA to disguise itself as human RNA)

<https://medicalxpress.com/news/2020-03-drug-covid-.html>

<https://www.statnews.com/2020/04/10/coronavirus-ace-2-receptor/>

## Rabies

<https://medicalxpress.com/news/2017-10-reveals-rabies-frenzied-behavior.html>

<https://www.virology.ws/2009/04/01/negri-bodies-and-rabies/>

<https://www.sciencedirect.com/topics/immunology-and-microbiology/tlr3>

## Measles

<https://en.wikipedia.org/wiki/Measles>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5035964/>

## Polio

[https://en.wikipedia.org/wiki/Polio\\_vaccine#History](https://en.wikipedia.org/wiki/Polio_vaccine#History)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1500891/> (attachment and entry)

[https://www.youtube.com/watch?v=k3p\\_H\\_-G6Nc](https://www.youtube.com/watch?v=k3p_H_-G6Nc) (Columbia Virology 2012)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6348402/> (vaccine reduces colon cancer)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC521805/> (IRES and Sabin)

### Pox viruses

<https://en.wikipedia.org/wiki/Vaccinia>

<https://www.ncbi.nlm.nih.gov/books/NBK230917/> (smallpox)

[https://proteopedia.org/wiki/index.php/Smallpox\\_%28Variola\\_Virus%29\\_-\\_Topoisomerase\\_1B](https://proteopedia.org/wiki/index.php/Smallpox_%28Variola_Virus%29_-_Topoisomerase_1B)

### Herpes

<https://en.wikipedia.org/wiki/Herpesviridae>

<https://www.youtube.com/watch?v=fH1zS7hIW54>

<https://en.wikipedia.org/wiki/Chickenpox>

<https://www.frontiersin.org/articles/10.3389/fmicb.2018.02406/full>

<https://www.ncbi.nlm.nih.gov/books/NBK8157/>

<https://www.youtube.com/watch?v=foo0ioyG0ig> (Shomus Biology)

<http://protein.bio.msu.ru/biokhimiya/contents/v79/full/79130457.html>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3267084/>

<https://dev.biologists.org/content/131/24/6009> (heparan sulfate receptor)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2194497/>

### Hep B

<https://www.cdc.gov/hepatitis/hbv/index.htm>

### Influenza

[https://en.wikipedia.org/wiki/Viral\\_neuraminidase](https://en.wikipedia.org/wiki/Viral_neuraminidase)

[https://en.wikipedia.org/wiki/Hemagglutinin\\_\(influenza\)](https://en.wikipedia.org/wiki/Hemagglutinin_(influenza))

[https://en.wikipedia.org/wiki/Sialic\\_acid](https://en.wikipedia.org/wiki/Sialic_acid)

<https://www.ncbi.nlm.nih.gov/books/NBK1920/>

[https://en.wikipedia.org/wiki/Neuraminidase\\_inhibitor](https://en.wikipedia.org/wiki/Neuraminidase_inhibitor)

### Ebola

<https://globalbiodefense.com/2018/02/14/ebola-virus-infects-reproductive-organs-non-human-primates/>

### HIV

<https://irp.nih.gov/our-research/research-in-action/spell-checking-dna>

### Giant viruses, mimiviruses

<https://www.sciencedirect.com/science/article/pii/S0042682214005157>

<https://en.wikipedia.org/wiki/Mimivirus>

<https://alchetron.com/Mamavirus>

<https://jvi.asm.org/content/93/5/e01942-18> (Pandora)

### Virophages

[https://en.wikipedia.org/wiki/Sputnik\\_virophage](https://en.wikipedia.org/wiki/Sputnik_virophage)

### Open air treatment in 1918

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4504358/>

### Tissue culture

[https://en.wikipedia.org/wiki/Tissue\\_culture](https://en.wikipedia.org/wiki/Tissue_culture)

[https://en.wikipedia.org/wiki/Cell\\_culture](https://en.wikipedia.org/wiki/Cell_culture)

### History of virology

[https://en.wikipedia.org/wiki/History\\_of\\_virology](https://en.wikipedia.org/wiki/History_of_virology)

[https://en.wikipedia.org/wiki/X-ray\\_crystallography#Development\\_from\\_1912\\_to\\_1920](https://en.wikipedia.org/wiki/X-ray_crystallography#Development_from_1912_to_1920)

[https://en.wikipedia.org/wiki/Whole\\_genome\\_sequencing#Early\\_techniques](https://en.wikipedia.org/wiki/Whole_genome_sequencing#Early_techniques)

[https://en.wikipedia.org/wiki/Polymerase\\_chain\\_reaction](https://en.wikipedia.org/wiki/Polymerase_chain_reaction)

[https://en.wikipedia.org/wiki/Taq\\_polymerase](https://en.wikipedia.org/wiki/Taq_polymerase)

[https://en.wikipedia.org/wiki/Antiviral\\_drug](https://en.wikipedia.org/wiki/Antiviral_drug)

[https://en.wikipedia.org/wiki/Severe\\_acute\\_respiratory\\_syndrome](https://en.wikipedia.org/wiki/Severe_acute_respiratory_syndrome)

<https://www.britannica.com/biography/Louis-Pasteur/Vaccine-development>

<https://www.the-scientist.com/foundations/the-rabies-vaccine-backstory-33441>

<https://rybicki.blog/virus-discovery-timeline/>

[https://timelines.issarice.com/wiki/Timeline\\_of\\_virology](https://timelines.issarice.com/wiki/Timeline_of_virology)

### Bacteriophages and E. coli

<https://www.youtube.com/watch?v=xvC8xME5Zrg>  
<https://en.wikipedia.org/wiki/Bacteriophage>  
[https://en.wikipedia.org/wiki/Félix\\_d'Herelle](https://en.wikipedia.org/wiki/Félix_d'Herelle)  
<https://www.youtube.com/watch?v=8FqITsU22s>  
<https://www.pnas.org/content/113/10/2654>  
[https://en.wikipedia.org/wiki/Bacterial\\_outer\\_membrane](https://en.wikipedia.org/wiki/Bacterial_outer_membrane)  
[https://en.wikipedia.org/wiki/Inclusion\\_bodies](https://en.wikipedia.org/wiki/Inclusion_bodies)  
[https://www.cell.com/cell/pdf/S0092-8674\(16\)30865-0.pdf](https://www.cell.com/cell/pdf/S0092-8674(16)30865-0.pdf)  
[https://en.wikipedia.org/wiki/Viral\\_plaque](https://en.wikipedia.org/wiki/Viral_plaque)  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6469166/> (isolation of phages in cultures)  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5221746/> d'Herelle biography)

### Replication/Translation

PolyA tails: <https://en.wikipedia.org/wiki/Polyadenylation>  
<https://viralzone.expasy.org/1096>  
[https://en.wikipedia.org/wiki/Open\\_reading\\_frame](https://en.wikipedia.org/wiki/Open_reading_frame)  
[https://www.youtube.com/watch?v=8\\_bOhZd6ieM](https://www.youtube.com/watch?v=8_bOhZd6ieM) (Britt Glaunsinger)  
[https://viralzone.expasy.org/905?outline=all\\_by\\_species](https://viralzone.expasy.org/905?outline=all_by_species)  
[https://en.wikipedia.org/wiki/Exosome\\_complex](https://en.wikipedia.org/wiki/Exosome_complex)  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4711277/> (viral polymerases)  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4429625/> (viral entry to nucleus)  
<https://viralzone.expasy.org/867> (IRES and DLP)  
<https://en.wikipedia.org/wiki/VPg>  
<https://pdfs.semanticscholar.org/6a90/363ce01f29923bfa845cc23265aa8f4a6d9f.pdf> (binding factors recog. DNA)

### ERVs

<https://creation.com/erv-and-line-functions>

### Anti-virals

<https://pubmed.ncbi.nlm.nih.gov/6359082/>  
<https://en.wikipedia.org/wiki/Aciclovir>  
<https://aac.asm.org/content/55/1/264>  
[https://en.wikipedia.org/wiki/Nucleoside\\_analogue](https://en.wikipedia.org/wiki/Nucleoside_analogue)

### Vaccines

<https://www.cdc.gov/vaccines/pubs/pinkbook/downloads/prinvac.pdf>  
<https://askabiologist.asu.edu/memory-b-cell>  
[https://en.wikipedia.org/wiki/Immunologic\\_adjuvant](https://en.wikipedia.org/wiki/Immunologic_adjuvant)

### Virus evasion strategies

<https://www.virology.ws/2009/06/12/viral-evasion-innate-host-defenses/>

### Immune response

<https://en.wikipedia.org/wiki/MDA5>  
[https://viralzone.expasy.org/603?outline=all\\_by\\_protein](https://viralzone.expasy.org/603?outline=all_by_protein)  
<https://en.wikipedia.org/wiki/RIG-I>  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2593046/> (TLRs)

### Animation of virus entry through hemagglutinin receptors

<http://cbm.msoc.edu/includes/swf/HAAAnimation.swf>