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КАФЕДРА ПАТОЛОГИЧЕСКОЙ АНАТОМИИ  
С СЕКЦИОННЫМ КУРСОМ  
СТУДЕНЧЕСКОЕ НАУЧНОЕ ОБЩЕСТВО

ВВЕДЕНИЕ.  
НАУЧНЫЙ ПОИСК.  
НАУКОМЕТРИЧЕСКИЕ БАЗЫ ДАННЫХ

random][plasmid



Disorders and diseases arise from DNA mutations. The genome of a cell or organism is the complete set of DNA molecules, including the nuclear DNA and the mitochondrial DNA. DNA is a double-stranded molecule, with each strand containing a sequence of nucleotides. The sequence of nucleotides on a strand is determined by the sequence of nucleotides on the complementary strand. The sequence of nucleotides on a strand is determined by the sequence of nucleotides on the complementary strand. The sequence of nucleotides on a strand is determined by the sequence of nucleotides on the complementary strand.

The first published report of a DNA double helix structure was by Watson and Crick in 1953. This model of DNA structure was based on the experimental data of Rosalind Franklin and Maurice Wilkins, as well as the theoretical work of James Watson and Francis Crick.

The DNA double helix structure is the basis of the central dogma of molecular biology, which states that genetic information flows from DNA to RNA to protein. The DNA double helix structure is the basis of the central dogma of molecular biology, which states that genetic information flows from DNA to RNA to protein.

Within cells, DNA is organized into long structures called chromosomes. These chromosomes are duplicated before cells divide in a process called replication. Eukaryotic organisms (animals, plants, fungi, and protists) store most of their DNA inside the cell nucleus and some of their DNA in organelles such as mitochondria or chloroplasts. In contrast, bacteria and archaea store their DNA only in the cytoplasm. Within the chromosomes, chromatin proteins such as histones compact and organize DNA. These compact structures guide the interactions between DNA and other proteins, helping to control which parts of the DNA are transcribed.

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Человек должен верить,  
что непонятное можно  
понять; иначе он не стал  
бы размышлять о нем...



Deoxyribonucleic acid (DNA) is a nucleic acid that occurs in the genetic material of all known living organisms. It is the main carrier of genetic information. DNA is often compared to a set of instructions needed to construct other molecules, such as proteins, and RNA codes for the synthesis of these molecules. The DNA segments that carry the genetic information are called genes, but other DNA sequences have structural purposes, or are involved in regulating the use of the genetic information.

Chemically, DNA consists of two long polymers of simple units called nucleotides. These two strands run in opposite directions to one another and are therefore anti-parallel. Each nucleotide sugar is one of four types of molecules called bases, which encode the sequence of these four bases, the basis for the genetic code. Each specific sequence of bases along the amino acids within proteins. The information is copied into RNA in a process called transcription.

Within cells, DNA is organized into highly structured units called chromosomes. These chromosomes are duplicated before cells divide in a process called cell replication. Eukaryotic organisms (animals, plants, fungi, and protists) store most of their DNA inside the cell nucleus and some of their DNA in organelles, such as mitochondria or chloroplasts. In contrast, most prokaryotes (bacteria and archaea) store their DNA only in the cytoplasm. Within the chromosomes, chromatin proteins such as histones compact and organize DNA. These compact structures guide the interactions between DNA and other proteins, helping to control which parts of the DNA are transcribed.

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# ПРИСТУПАЯ К ПРОВЕДЕНИЮ НАУЧНОГО ИССЛЕДОВАНИЯ



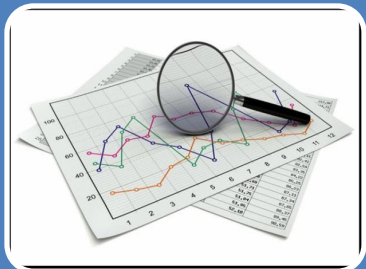
## Выбор научного направления и темы исследования

- Анализ имеющихся данных литературы
- Формулировка гипотезы
- Определение предмета, объекта исследования, цели и задач
- Определение материала и методов исследования
- Планирование этапов научной работы [эксперимента]



## Проведение научного исследования

- Организация условий проведения исследования
- Осуществление запланированных подходов к изучению в соответствии с поставленной целью и задачами исследования



## Анализ и интерпретация данных, оформление работы [опубликование]

- Обобщение и систематизация полученных данных, статистическая обработка
- Представление результатов в общепринятом и доступном

виде

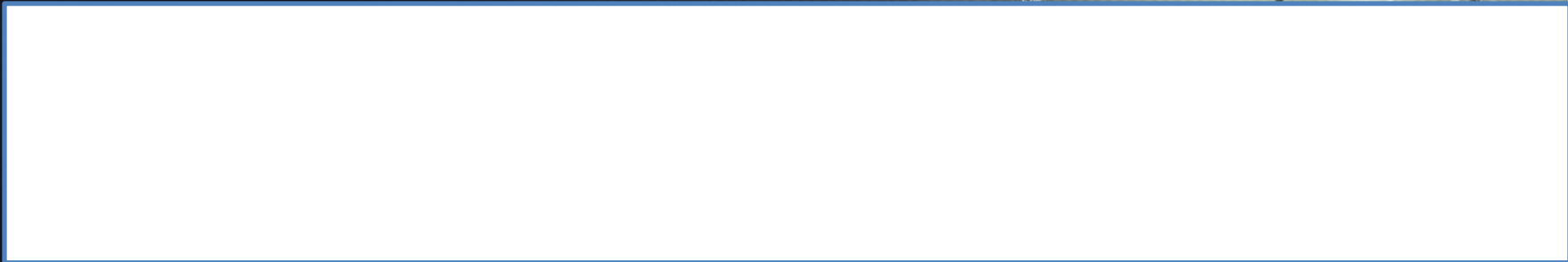
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**Количество научных рецензируемых журналов > 35000 (2014 год)**



**Количество статей ежегодно > 1 500 000 (2014 год)**

**+ монографии, диссертации, патенты и т.д.**



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1 <a href="#">Nature Reviews Molecular Cell Biology</a>	journal	32.928 Q1	324	170	539	8084	7978	202	37.10	47.55	
2 <a href="#">Annual Review of Immunology</a>	journal	32.720 Q1	254	26	74	5684	2937	74	35.72	218.62	
3 <a href="#">Nature Reviews Genetics</a>	journal	32.615 Q1	267	157	676	6584	8171	212	36.13	41.94	
4 <a href="#">CA - A Cancer Journal for Clinicians</a>	journal	32.242 Q1	117	43	139	3741	8650	117	80.54	87.00	
5 <a href="#">Cell</a>	journal	28.188 Q1	616	651	1794	25257	40673	1626	23.40	38.80	
6 <a href="#">Annual Review of Astronomy and Astrophysics</a>	journal	27.065 Q1	138	16	41	3575	1373	40	35.04	223.44	
7 <a href="#">Nature Reviews Immunology</a>	journal	26.850 Q1	292	163	551	7895	7353	195	39.23	48.44	

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ВСЕГО НАЙДЕНО ПУБЛИКАЦИЙ: 2493 из 23405113

№	Публикация	Цит.
<input type="checkbox"/>	<b>1 К ВОПРОСУ О ТИМУСЕ, СВЯЗАННОЙ С НИМ ТЕРМИНОЛОГИИ И СОСТОЯНИИ ЗДОРОВЬЯ ДЕТЕЙ С БОЛЬШИМ ТИМУСОМ</b> <i>Кузьменко Л.Г., Смылова З.В., Киселева Н.М., Быстрова О.В., Агарвал Р.К.</i> Журнал научных статей Здоровье и образование в XXI веке. 2015. Т. 17. № 4. С. 97-107.	0
<input type="checkbox"/>	<b>2 ВЛИЯНИЕ ЛОКАЛЬНОГО ОБЛУЧЕНИЯ ОБЛАСТЕЙ ТИМУСА, ГИПОТАЛАМУСА/ГИПОФИЗА И ГОНАД МЫШЕЙ НА КЛЕТОЧНОСТЬ АУТОЛОГИЧНОГО И ТРАНСПЛАНТИРОВАННОГО ТИМУСА</b> <i>Савина Н.П., Ярилин А.А.</i> Радиационная биология. Радиоэкология. 1995. Т. 35. № 4. С. 486-493.	11
<input type="checkbox"/>	<b>3 ВЛИЯНИЕ ГИПОКСИИ НА ПРОЦЕСС ВАСКУЛОГЕНЕЗА В ТИМУСАХ У ДЕТЕЙ ПЕРВОГО ГОДА ЖИЗНИ</b> <i>Лопинова Н.П., Четвертных В.А., Хромцова Г.А., Даракчан Г.А.</i> Современные проблемы науки и образования. 2015. № 5. С. 222.	0
<input type="checkbox"/>	<b>4 ВАРИАБЕЛЬНОСТЬ ФОРМЫ ТИМУСА В ПЛОДНОМ И РАННЕМ НЕОНАТАЛЬНОМ ПЕРИОДАХ ОНТОГЕНЕЗА ЧЕЛОВЕКА</b> <i>Хиара Т.В., Галичанская О.Н.</i> Медицинский журнал Западного Казахстана. 2013. № 4. С. 13-17.	0
<input type="checkbox"/>	<b>5 ТРОПНОСТЬ АКАНТАМЕБЫ ШТАММА СДНТ К ТИМУСУ МЫШИ И ЕЕ ИММУНОМОДУЛИРУЮЩЕЕ ДЕЙСТВИЕ IN VIVO</b> <i>Комогорова В.В., Латышев С.В., Литвина М.М., Шевелев С.В., Ярилин А.А.</i> Иммунология. 2008. Т. 29. № 6. С. 324-329.	2
<input type="checkbox"/>	<b>6 ВЛИЯНИЕ Р-КАРОТИНА НА ИММУННЫЙ СТАТУС ДЕТЕЙ С УДАЛЕННЫМ ТИМУСОМ</b> <i>Фроленко А.П., Смолягин А.И.</i> Вопросы современной педиатрии. 2011. Т. 10. № 5. С. 98-101.	2
<input type="checkbox"/>	<b>7 ЗАЩИТА МЕЖТРАХЕАЛЬНОГО И ЛАРИНГОТРАХЕАЛЬНОГО АНАСТОМОЗОВ ТИМУСОМ НА СОСУДИСТОЙ НОЖКЕ</b> <i>Татур А.А., Леонюк С.И., Гончаров А.А.</i> Военная медицина. 2007. № 3 (4). С. 49-52.	0
<input type="checkbox"/>	<b>8 АНИМАЛИСТИЧЕСКАЯ СКУЛЬПТУРА ИМПЕРАТОРСКОГО ФАРФОРОВОГО ЗАВОДА: А. ТИМУС</b> <i>Хмельницкая Е.С.</i> В мире научных открытий. 2013. № 9.2 (45). С. 388-400.	0
<input type="checkbox"/>	<b>9 ПАРАТИРЕОИДЭКТОМИЯ ЭКТОПИРОВАННОЙ В ТИМУС ПАРАЩИТОВИДНОЙ ЖЕЛЕЗЫ У БОЛЬНОГО, СТРАДАЮЩЕГО ВТОРИЧНЫМ ГИПЕРПАРИТЕОЗОМ</b> <i>Щеголев А.А., Ларин А.А., Колуп О.Б., Осипович Б.А.</i> Земский врач. 2013. № 4. С. 59-62.	0
<input type="checkbox"/>	<b>10 ВИЛОЧКОВАЯ ЖЕЛЕЗА /ТИМУС/ В ОНТОГЕНЕЗЕ УТОК И ЕЕ РЕАКЦИИ НА НЕКОТОРЫЕ ВОЗДЕЙСТВИЯ</b> <i>Пилипенко М.Е.</i> автореферат диссертации на соискание ученой степени доктора ветеринарных наук / Харьковский зооветеринарный институт. Харьков, 1975	5

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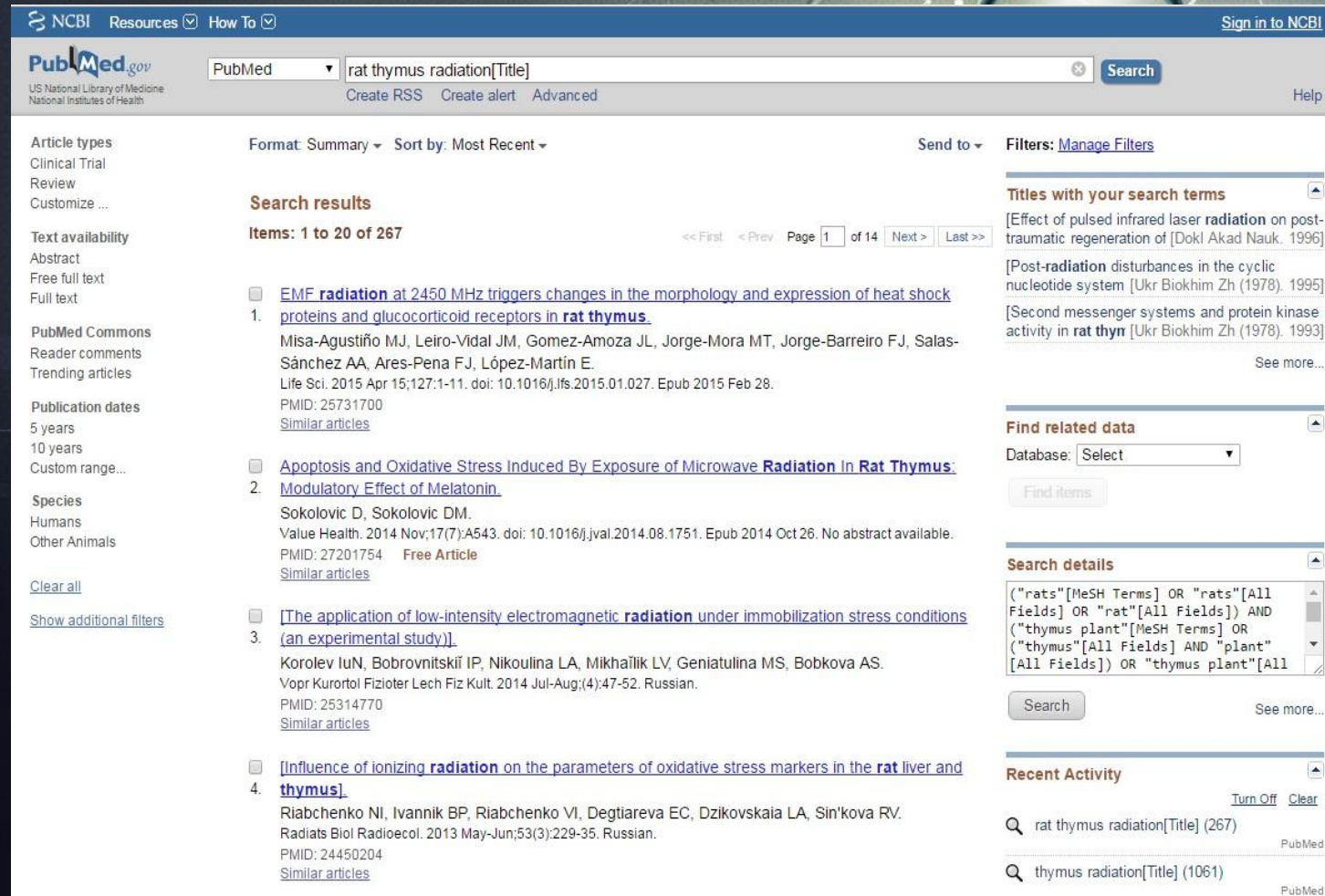
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Статьи	<a href="#">[PDF] Перспективы развития ревматологии в XXI веке</a> ЕЛ Насонов - РМЖ, 2001 - gosbook.ru	<a href="#">[PDF] gosbook.ru</a>
Моя Библиотека	... Основной механизм - хроническое <b>аутоиммунное воспаление</b> ■ Характерный симптом – боль в суставах ... Высокая летальность • <b>Воспаление</b> •Коморбидность Page 6. Майкл Джексон, волчанка и <b>аутоиммунные</b> болезни Кетлин Тернер и ревматоидный артрит ...	
За все время	Цитируется: 31   Похожие статьи   Все версии статьи (6)   Цитировать   Сохранить   Ещё	
С 2016	<a href="#">[HTML] Миокардиты</a> НР Палеев, ФН Палеев, НП Санина - Альманах клинической ..., 2004 - cyberleninka.ru	<a href="#">[HTML] cyberleninka.ru</a>
С 2015	... а также возникающие при аллергических и <b>аутоиммунных</b> заболеваниях. ... основными признаками этого заболевания инфекционное начало, <b>воспаление</b> миокарда, острые ...	
С 2012	системы мышечной клетки, а также вызывает <b>аутоиммунное</b> поражение различных ...	
Выбрать даты	Цитируется: 42   Похожие статьи   Цитировать   Сохранить   Ещё	
По релевантности	<a href="#">[HTML] Цитокиновая сеть как мишень системной энзимотерапии</a> ГЮ Кнорринг - ЖурналЦитокины и <b>воспаление</b> , 2016 - cytokines.ru	<a href="#">[HTML] cytokines.ru</a>
По дате	... снижать активность иммуновоспалительного процесса при <b>аутоиммунных</b> и иных ... у человека, включая процессы воспалительной, <b>аутоиммунной</b> и онкологической ... являются решающими факторами для развития хронического или <b>аутоиммунного воспаления</b> . ...	
<input checked="" type="checkbox"/> включая патенты	Цитируется: 24   Похожие статьи   Все версии статьи (5)   Цитировать   Сохранить   Ещё	
<input type="checkbox"/> показать цитаты	<a href="#">[HTML] Механизмы воспалительной реакции и воздействие на них с помощью протеолитических энзимов</a> М Лысикова, М Вальд, З Масиновски - ... Цитокины и <b>воспаление</b> , 2016 - cytokines.ru	<a href="#">[HTML] cytokines.ru</a>
<input checked="" type="checkbox"/> Создать оповещение	... хроническое <b>воспаление</b> или даже начинающееся <b>аутоиммунное</b> заболевание вызывают ... <b>Воспаление</b> относится к филогенетически старейшим типам защитной ... физический (излучение, травма), иммунологический ( <b>аутоиммунные</b> заболевания), химический или ...	
	Цитируется: 61   Похожие статьи   Все версии статьи (4)   Цитировать   Сохранить   Ещё	
	<a href="#">[HTML] Метаболический синдром у больных системной красной волчанкой</a> ТВ Попкова, ДС Новикова, ЕВ Герасимова... - Научно- ..., 2008 - cyberleninka.ru	<a href="#">[HTML] cyberleninka.ru</a>
	... Предполагается, что <b>аутоиммунное воспаление</b> играет ведущую роль в формировании МС у ... концентрации ХС ЛВП на фоне высокой активности <b>аутоиммунного</b> процесса связано со ... основная роль в развитии МС и ССЗ принадлежит <b>аутоиммунному воспалению</b> . ...	
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The screenshot displays the PubMed search interface. At the top, the NCBI logo and navigation links are visible. The search bar contains the query 'rat thymus radiation[Title]'. Below the search bar, there are options for 'Create RSS', 'Create alert', and 'Advanced'. The main content area shows search results for 'rat thymus radiation', with 267 items found. The results are listed in a table format, including the title, authors, journal, and PMID. The first result is 'EMF radiation at 2450 MHz triggers changes in the morphology and expression of heat shock proteins and glucocorticoid receptors in rat thymus' by Misa-Agustiño MJ et al. The second result is 'Apoptosis and Oxidative Stress Induced By Exposure of Microwave Radiation In Rat Thymus: Modulatory Effect of Melatonin' by Sokolovic D, Sokolovic DM. The third result is '[The application of low-intensity electromagnetic radiation under immobilization stress conditions (an experimental study)]' by Korolev IuN et al. The fourth result is '[Influence of ionizing radiation on the parameters of oxidative stress markers in the rat liver and thymus]' by Riabchenko NI et al. On the right side, there are sections for 'Titles with your search terms', 'Find related data', 'Search details', and 'Recent Activity'.

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**Search results**

Items: 1 to 20 of 267 << First < Prev Page 1 of 14 Next > Last >>

1. [EMF radiation at 2450 MHz triggers changes in the morphology and expression of heat shock proteins and glucocorticoid receptors in rat thymus.](#)  
Misa-Agustiño MJ, Leiro-Vidal JM, Gomez-Amoza JL, Jorge-Mora MT, Jorge-Barreiro FJ, Salas-Sánchez AA, Ares-Pena FJ, López-Martín E.  
Life Sci. 2015 Apr 15;127:1-11. doi: 10.1016/j.lfs.2015.01.027. Epub 2015 Feb 28.  
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2. [Apoptosis and Oxidative Stress Induced By Exposure of Microwave Radiation In Rat Thymus: Modulatory Effect of Melatonin.](#)  
Sokolovic D, Sokolovic DM.  
Value Health. 2014 Nov;17(7):A543. doi: 10.1016/j.jval.2014.08.1751. Epub 2014 Oct 26. No abstract available.  
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3. [\[The application of low-intensity electromagnetic radiation under immobilization stress conditions \(an experimental study\)\].](#)  
Korolev IuN, Bobrovnikskii IP, Nikoulina LA, Mikhaïlik LV, Geniatulina MS, Bobkova AS.  
Vopr Kurortol Fizioter Lech Fiz Kult. 2014 Jul-Aug;(4):47-52. Russian.  
PMID: 25314770 [Similar articles](#)

4. [\[Influence of ionizing radiation on the parameters of oxidative stress markers in the rat liver and thymus\].](#)  
Riabchenko NI, Ivannik BP, Riabchenko VI, Degtiareva EC, Dzikovskaia LA, Sin'kova RV.  
Radiats Biol Radioecol. 2013 May-Jun;53(3):229-35. Russian.  
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[Effect of pulsed infrared laser radiation on post-traumatic regeneration of [Dokl Akad Nauk. 1996]

[Post-radiation disturbances in the cyclic nucleotide system [Ukr Biokhim Zh (1978). 1995]

[Second messenger systems and protein kinase activity in rat thym [Ukr Biokhim Zh (1978). 1993]

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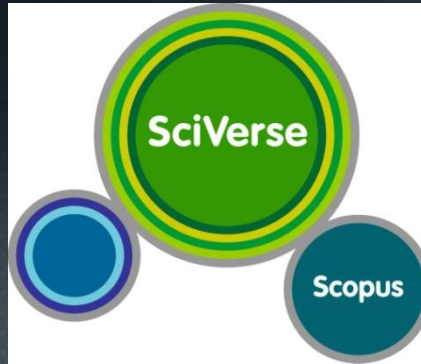
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- Elimination of self-reactive T cells in the thymus: a timeline for negative selection.**  
*Ivan Liliyanov Dzhagalov, Katherine Grace Chen, Paul Herzmark, Ellen A Robey*  
PLoS Biology. 2013;11(5):e1001566 DOI 10.1371/journal.pbio.1001566  
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Beni-Suef University Journal of Basic and Applied Sciences. 2014;3(2):87-92 DOI 10.1016/j.bjbas.2014.05.001  
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Memórias do Instituto Oswaldo Cruz. 1991;86:91-97 DOI 10.1590/S0074-02761991000700013  
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Records of Natural Products. 2016;10(4):503-507  
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- Gap junction modulation by extracellular signaling molecules: the thymus model**  
*Alves L.A., Nihei O.K., Fonseca P.C., Campos-de-Carvalho A.C., Savino W.*  
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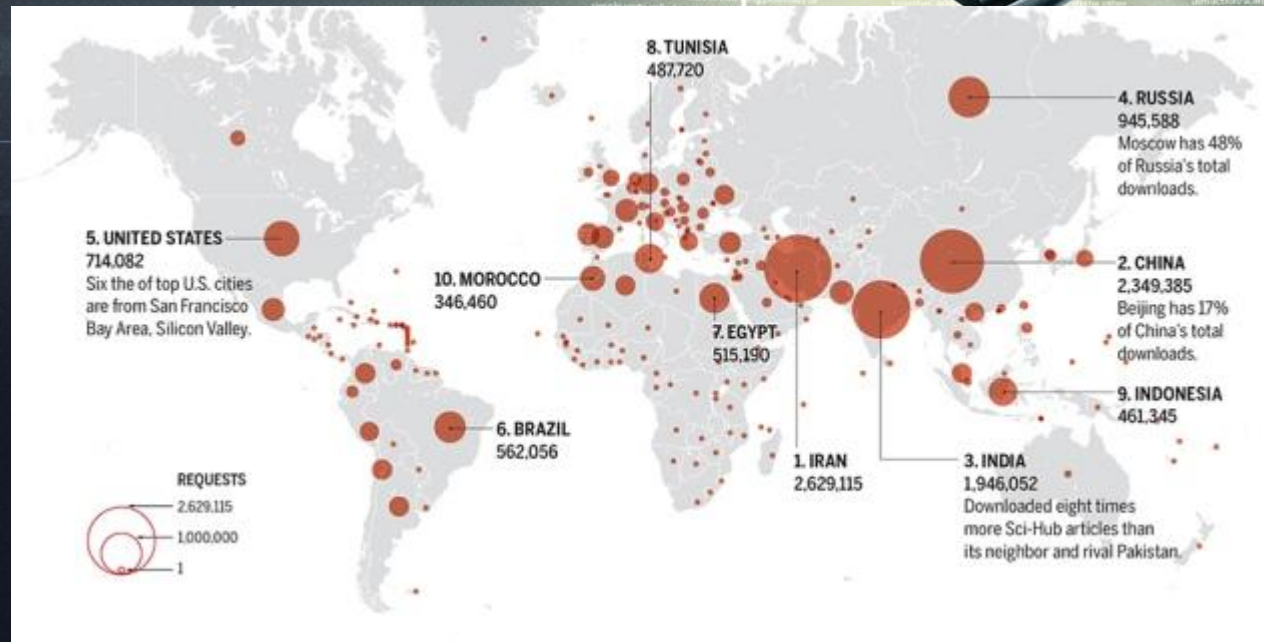
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Deoxyribonucleic acid (DNA) is a nucleic acid that contains the genetic instructions used in the development and functioning of all known living organisms and many viruses. DNA is a long molecule that carries the information DNA is first transcribed to a messenger RNA to be used in the synthesis of proteins, and RNA codes for the synthesis of proteins that carry out the genetic instructions for various purposes, or are translated in producing the use of the genetic information.

Chemically, DNA consists of two long polymers of simple units called nucleotides. These units are made of sugars and phosphate groups joined by ester bonds. These two strands run in opposite directions to each other and are therefore anti-parallel. Attached to each sugar is one of four types of molecules called bases, which encode the information. This information is read using the genetic code, which specifies the sequence of the amino acids within proteins. The bases are joined by copying stretches of DNA into the related molecule RNA, in a process called transcription.

Within cells, DNA is organized into highly structured units called chromosomes. These chromosomes are duplicated before cells divide, in a process called cell replication. Eukaryotic organisms (animals, plants, fungi, and protists) store most of their DNA inside their cell nuclei and some of their DNA in organelles, such as mitochondria or chloroplasts. In contrast, most prokaryotes (bacteria and archaea) store their DNA only in the cytoplasm. Within the chromosomes, chromatin proteins such as histones compact and organize DNA. These compact structures guide the interactions between DNA and other proteins, helping control which parts of the DNA are transcribed.

The first published report of DNA was in 1869 by Swiss chemist Miescher. The structure of DNA was first described in 1953 by James Watson and Francis Crick, building on the work of Erwin Schrödinger and Rosalind Franklin. The structure of DNA is a double helix, with the two strands running in opposite directions to each other and being held together by hydrogen bonds between the bases. The bases are joined by copying stretches of DNA into the related molecule RNA, in a process called transcription.

DNA works in many ways. It is used to store information, to pass on information from one generation to the next, and to control the activities of the cell. It is also used to produce proteins, which are the building blocks of the body.

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Deoxyribonucleic acid (DNA) is a nucleic acid that contains the genetic instructions used in the development and functioning of all known living organisms and many viruses. DNA is often compared to a set of blueprints or a recipe, or a code, which provides the instructions needed to construct other molecules of the cell, such as proteins, and RNA molecules. The DNA segments that carry the genetic information are called genes, but other DNA sequences have structural purposes, or are involved in regulating the use of the genetic information.

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DNA exists in many forms, including A-DNA, B-DNA, and Z-DNA, and is often associated with other molecules, such as proteins, to form functional structures. The structure of DNA is determined by the chemical composition of the bases and the way they are bonded to each other, as well as the overall structure of the molecule.

The first published report of DNA was in 1869, by Friedrich Miescher, who discovered a substance he called "nuclein" in the nuclei of white blood cells. This substance was later identified as DNA. The structure of DNA was first described by James Watson and Francis Crick in 1953, based on the work of Rosalind Franklin and Maurice Wilkins. The discovery of the structure of DNA was a major breakthrough in the understanding of genetics and the basis of life.

Although the B-DNA structure is the most common, other forms of DNA exist, such as A-DNA and Z-DNA. A-DNA is a compact, wide, and shallow structure, while Z-DNA is a narrow, zig-zag structure. These different forms of DNA are found in different parts of the cell and are involved in different biological processes.

Compacted by histone proteins, DNA is organized into a hierarchical structure. The DNA double helix is first wrapped around histone cores to form nucleosomes. These nucleosomes are then further compacted into higher-order structures, such as chromatin fibers and chromosomes. This organization allows for the efficient storage and regulation of genetic information.