Restriction-enzyme cutting site 限制性酶切位点	A specific nucleotide sequence of DNA at which a particular restriction enzyme cuts the DNA. Some sites occur frequently in DNA (e.g., every several hundred base pairs); others much less frequently (rare-cutter; e.g., every 10,000 base pairs). 一个特定的限制性酶识别并切除一段特殊的核苷酸序列，这样的剪切位点有的在 DNA 中很常见（例如：每隔数百个碱基对），有的则比较少见（稀有剪切位点，例如：每隔 10000 个碱基对）
Restriction map 限制性（酶切）图	A physical map which shows the order and distances between cleavage sites of site-specific restriction endonucleases. 一张用来显示分裂位点和特殊的限制性内切位点之间的具体和为止的图
Restriction site 限制性（酶切）位点	The location on a DNA or protein chain at which a specific restriction enzyme will act. 在 DNA 或蛋白质上的可以让某个特殊的限制性酶操作的位点
Reticulate evolution 网状进化	Process by which genetically distinct lineages/species recombine and a new species, which is reproductively isolated from the parent species, arises. This speciation event is called hybrid speciation. Considering reticulate evolution events when constructing a phylogenetic tree might mean that a strictly hierarchical tree structure might not be appropriate to reflect evolutionary relationships of this particular study group. 这是一种在遗传上不同谱系或不同物种之间重组或新物种在从父代分离出来的过程中发生的过程。这种物种的形成方式称为混合成种。考虑到网状进化，这意味着在研究系统发育树的时候一个严格的分层的树结构可能不一定能够准确地反映某个特定的研究群体中的进化关系。
Retrotransposons 逆转座子	Short sequences of DNA that make new copies of themselves via reverse transcription of an RNA intermediate. 通过 RNA 中间产物的逆转录可以复制自身的短 DNA 序列
Retrovirus 逆转录病毒	A virus that carries its genetic material as RNA, rather than DNA. Retroviruses use reverse transcriptase to insert their genetic material into the chromosomes of infected cells. 一种携带 RNA 而不是 DNA 作为遗传物质的病毒。逆转录病毒使用逆转录酶让自己的遗传物质插入到宿主的基因组中。
Reverse Genetics 反向遗传学	The use of protein information to elucidate the genetic sequence encoding that protein. Used to describe the process of gene isolation starting with a panel of afflicted patients (see positional cloning). 通过蛋白质的信息来反向推断出基因序列是如何编码蛋白质的，用来描述的基因从患者身上开始孤立的进程（见位置上的活动）
reverse strand 反向螺旋	In a display of a double-stranded DNA sequence, which may be as long as an entire chromosome, the strand that is read from 5' to 3' from left to right is called the forward or plus strand. The strand that is read from 5' to 3' from right to left is called the reverse or minus stand. 在 DNA 双螺旋结构序列的显示中，在整个染色体长度上，从 5‘端到 3’端（左至右）的称为正向链，从 3‘端到 5’端（右至左）称为负向链

Reverse transcriptase 逆转录酶	A DNA polymerase that can synthesise a complementary DNA (cDNA) strand using RNA as a template - a so-called RNA-dependent DNA polymerase. 一种可以使用 RNA 作为模板反向合成 cDNA 的 DNA 聚合酶，所以又被称为 RNA 依赖的 DNA 聚合酶
Reverse transcriptase-PCR (RT-PCR) 逆转录 PCR	Procedure in which PCR amplification is carried out on DNA that is first generated by the conversion of mRNA to cDNA using reverse transcriptase. 首先经反转录酶作用从 mRNA 合成 cDNA，再以 cDNA 为模板扩增 PCR 的过程
RH Mapping 辐射杂种细胞作图?	A Statistical method used to determine the distance between DNA markers, as well as their order on the chromosome. The technique depends on using X-rays to break the chromosome. 一种用来确定 DNA 标记之间距离和位置的统计学方法，这项技术依赖于用 X 射线破坏基染色体
Ribbon diagram 连续剖面图	A ribbon diagram is a graphical representation of the three-dimensional structure of macromolecules. Ribbon diagrams have become a standard way of representing such three-dimensional structures. 宏观连续剖面图就是宏观分子三维结构的的图像表示，并且它已经成为了一种展示三维结构的标准方式了。
Ribonucleic acid (RNA) 核糖核酸	Nucleotide made from a ribose, a base [adenine (A), guanine (G), cytosine (C), and uracil (U)], and a phosphate group. RNA is generally found in the cell nucleus or cytoplasm. 由核糖、碱基（腺嘌呤 A 鸟嘌呤 G 胞嘧啶 C 尿嘧啶 U）以及磷酸基团形成的核酸，RNA 普遍地存在于细胞核和细胞质。
Ribose 核糖	A five carbon sugar (b-d-ribose) which is used in the construction of RNA. 一种用来合成 RNA 的戊糖
Ribosome 核糖体	Cellular components made of ribosomal RNA and proteins which are the site of protein synthesis (translation). 细胞的一个组成部分，由核糖体 RNA 和蛋白质组成，是细胞合成（转录）蛋白质的场所
Risk communication 风险沟通	In genetics, a process in which a genetic counselor or other medical professional interprets genetic test results and advises patients of the consequences for them and their offspring. 在遗传学中，遗传咨询师或其他医护人员向患者解释遗传测试的结果并向他们及他们的后代提出建议的行为。
RNA polymerase 核糖核酸聚合酶	An enzyme that synthesizes a strand of RNA by adding successive ribonucleotides in the order dictated by a template strand of DNA. 通过将与 DNA 链配对的核糖核酸的碱基依次连接起来从而合成 RNA 链的酶
RNA splicing RNA 剪切	The process by which introns are removed and exons are spliced together from an RNA transcript to produce an mRNA molecule. 通过一个 RNA 分子的转化使得 DNA 的内含子被移除，外显子被拼

	接在一起从而形成信使 RNA 分子的过程
rRNA 转运 RNA	Ribosomal RNA, RNA molecules that are components of the ribosome. rRNA forms the structural scaffold for assembly of the ribosome, and plays a critical role in catalyzing peptide bond formation. 转运 RNA，他是核糖体的一个组成部分。转运 RNA 为组成核糖体进行了序列结构的构架并且在肽键的形成过程中起了非常重要的作用
Rooted Tree 有根树	A phylogenetic tree that is organized according to the evolution of the species represented in the tree. 一种以根据物种表现的进化而组织的系统树
S	S is the single-letter amino acid code for Serine. S 是丝氨酸的单字母代号
satellite DNA/simple sequence DNA 卫星 DNA/简单序列 DNA	Highly repetitious DNA sequence; generally based on a short sequence (7-20 nucleotides) repeated up to a million times in the haploid genome. Usually found in heterochromatic regions, often associated with the centromere. 高度重复的 DNA 序列，一般由单倍体基因组一组短序列（7-20 碱基）重复上百万次形成。这种高度重复的 DNA 序列经常在异染色质区域被发现，一般认为和着丝粒相关
Scaffold 构架构建	A series of contigus that are in the correct order, but are not connected in one continuous length. 将一系列的重叠组按正确的顺序连接起来但并不会直接顺次相连。