



## 基于Histcite的

# WOS文献的分析与筛选



二维码有效期截至 2022-11-23

主讲人：李海华

时间：2022年11月3日 (星期四晚7:00-8:30)

线下地点：华南农业大学图书馆信息楼三楼读者培  
训室

线上地点：雨课堂直播/回放(课堂邀请码：

KIF9RD)，也可直接微信扫码进课堂



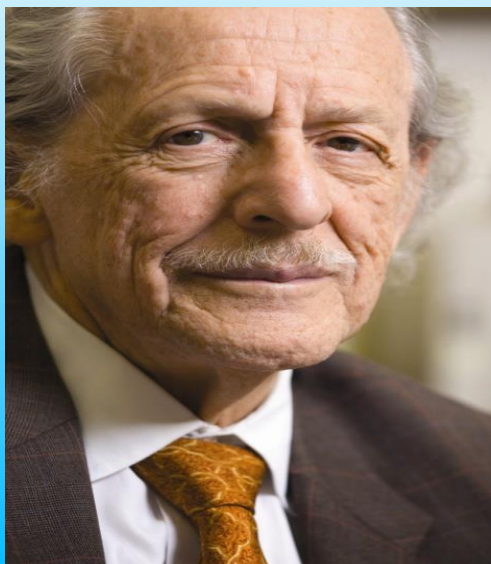
# PART 01

## 引文索引与Web of science



## 一、引文索引

Dr. Garfield 1955年在《Science》发表的论文提出将引文索引作为一种新的文献检索与分类工具：将一篇文献作为检索起点从而跟踪一个Idea的发展过程及学科之间的交叉渗透的关系。



Dr. Eugene Garfield  
Founder & Chairman Emeritus  
ISI, Thomson Scientific

美国著名的情报学家和科学计量学家，SCI及ISI（美国科学信息研究所）的创始人

# Citation Indexes for Science

A New Dimension in Documentation  
through Association of Ideas

Eugene Garfield

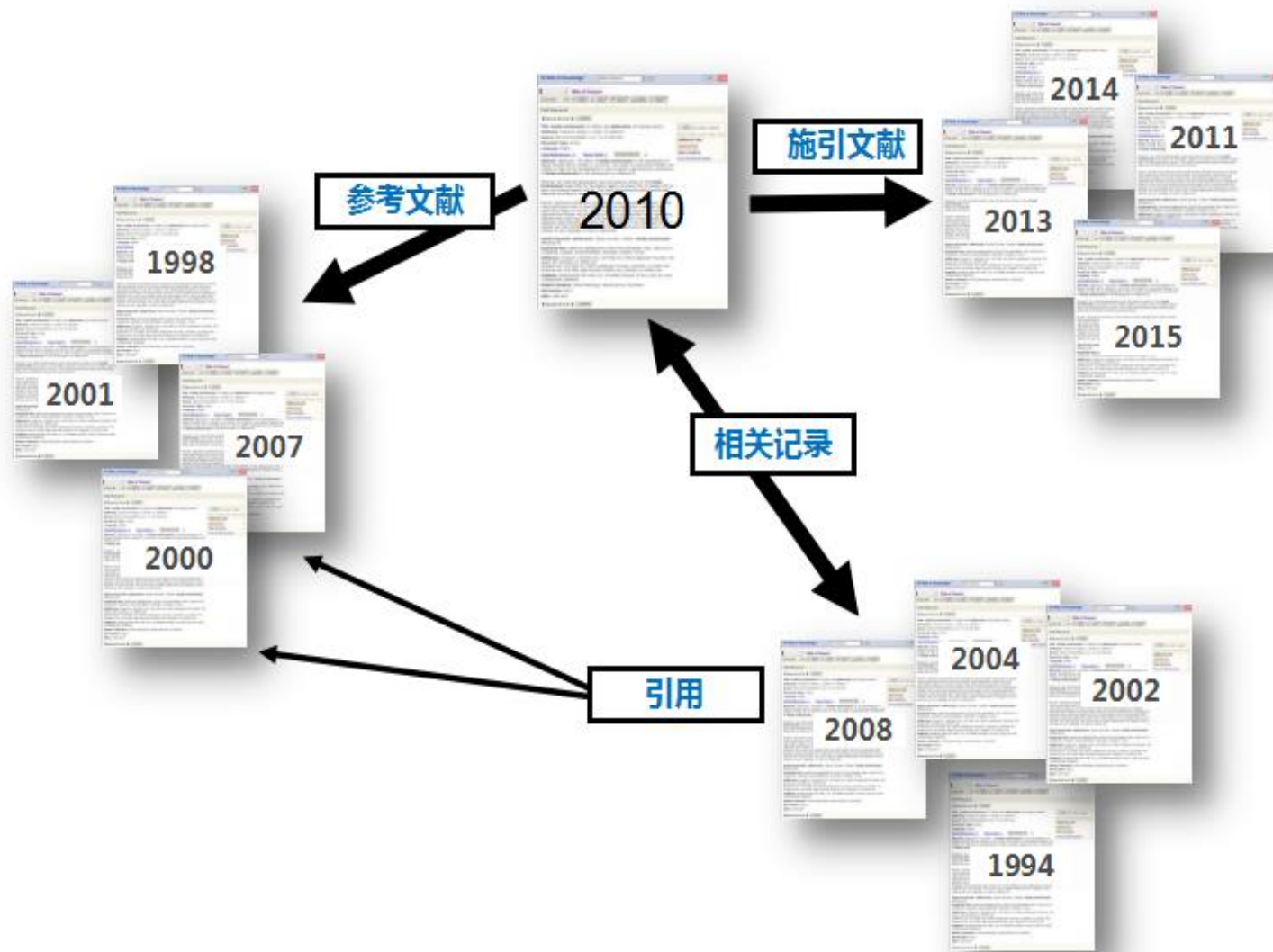
“The uncritical citation of disputed data by a writer, whether it be deliberate or not, is a serious matter. Of course, knowingly propagandizing unsubstantiated claims is particularly abhorrent, but just as many naive students may be swayed by unfounded assertions presented by a writer who is unaware of the criticisms. Buried in scholarly journals, critical notes are increasingly likely to be overlooked with the passage of time, while the studies to which they pertain, having been reported more widely, are discovered

approach to subject control of the literature of science. By virtue of its different construction, it tends to bring together material that would never be collated by the usual subject indexing. It is best described as an association-of-ideas index, and it gives the reader as much leeway as he requires. Suggestiveness through association-of-ideas is offered by conventional subject indexes but only within the limits of a particular subject heading.

If one considers the book as the macro unit of thought and the periodical article as the micro



## 二、引文索





引文索引系统打破了传统的学科分类界限，既能揭示某一学科的继承与发展关系，又能反映学科之间的交叉渗透的关系。



### 三、 Web of science核心合集

Web of Science™ 核心合集 是获取全球学术信息的重要数据库,由以下几个重要部分组成:

- Science Citation Index-Expanded™ ( SCI-E, 科学引文索引 ) 1900年-
- Social Sciences Citation Index™ ( SSCI, 社会科学引文索引 ) 1900年-
- Arts & Humanities Citation Index® ( A&HCI, 艺术与人文引文索引 ) 1975年-
- Conference Proceedings Citation Index™ ( CPCI, 会议论文引文索引 ) 1990年-
- Book Citation Index<sup>SM</sup> ( BkCI, 图书引文索引 ) 截止至2017年收录了60,000多种图书, 共1,277,000多条记录, 同时每年增加10,000种新书 2005年-
- Current Chemical Reactions® 收录了1985年以来的最新化学反应 1985年-
- Index Chemicus® 收录了1993年以来的化学物质的事实型数据 1993年-
- Emerging Sources Citation Index ( ESCI ) 展示重要的新兴研究成果 2015年-

Web of Science™ 核心合集数据库收录了18,000多种世界权威的、高影响力的学术期刊,内容涵盖自然科学、工程技术、生物医学、社会科学、艺术与人

文等领域,最早回溯至1900年。Web of Science™ 核心合集收录了论文中所引用的参考文献、并按照被引作者、出处和出版年代编制成独特的引文索引。



Clarivate

简体中文 产品

Web of Science™

检索

标记结果列表

历史

跟踪服务

登录

注册

## 探索跨学科内容

来自最值得您信赖的全球引文数据库

选择数据库: Web of Science 核心合集 引文索引: All

文献 作者 被引参考文献 化学结构

所有字段

示例: liver d

+ 添加行

+ 添加日期范围

高级检索

全选

Science Citation Index Expanded (SCI-EXPANDED)--2002-至今

Social Sciences Citation Index (SSCI)--2018-至今

Current Chemical Reactions (CCR-EXPANDED)--1985-至今

Index Chemicus (IC)--1993-至今

清除

检索





# PART 02

Histcite的简介

1



2 数据下载 From WOS 核心合集



导入数据 To Histcite 3



4 作图分析 Make Graph





# 一、Histcite简介

Histcite = history of cite, 意味引文历史, 或者叫引文图谱分析软件。该软件是SCI的发明人加菲尔德开发, 能够用图示的方式展示某一领域不同文献之间的关系。

优点: 操作界面简洁, 操作步骤简单, 软件参数设置简单, 容易掌握, 上手快。

缺点: 只适用于Windows系统, 只支持WOS核心合集里面的数据。

## Histcite有以下5个功能:

- 01 | 快速绘出一个领域的发展脉络
- 02 | 快速锁定该领域的重要文献
- 03 | 快速锁定该领域的重要科学家, 机构
- 04 | 洞察该领域的最新进展
- 05 | 找出无指定关键词的重要文献



# Histcite中的几个重要参数：

**GCS**: Global citation score总引用次数，WOS上看到的引用次数，表示某篇文章被整个WOS数据库中的文献所引用的次数，有些引用这篇参考文献的文章可能和你的研究方向毫无关系，但GCS还是会把这个数据记录下来。



**LCS:** Local citation score 本地引用次数，某篇文献在当前数据集中被引用的次数。因为你导入Histcite的文章都是和你检索词有关的，可以认为这些文章是你的研究方向相关，因此如果某篇文献LCS值很高，意味着它肯定是你研究领域的重要文献。因此，LCS比GCS更重要，LCS高的极有可能是你领域内的开创性文章。



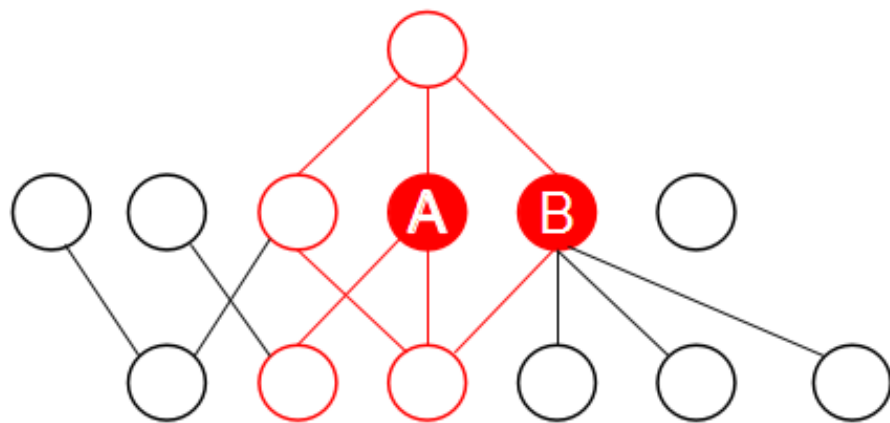
**CR:** Cited references 某篇文献在整个WOS数据库中的参考文献数，这个值越高，说明这篇文章很可能是综述文章，可根据该值的排序，快速定位综述。



**LCR**: Local Cited references 本地参考文献数，指某篇文章引用的所有参考文献中，有多少篇在当前数据集中。根据LCR值的排序，可以迅速定位近期关注该领域的重要文献。LCR高的极有可能是你领域内的综述文章。如果某篇文章的LCR为10，则表示有10篇该文章的参考文献在当前本地数据集中。



# GCS&LCS



GCS: A文章发表之后被引用2次  
B文章发表之后被引用4次



A、B文章的LCS值分别是 ( ) 、 ( ) 。

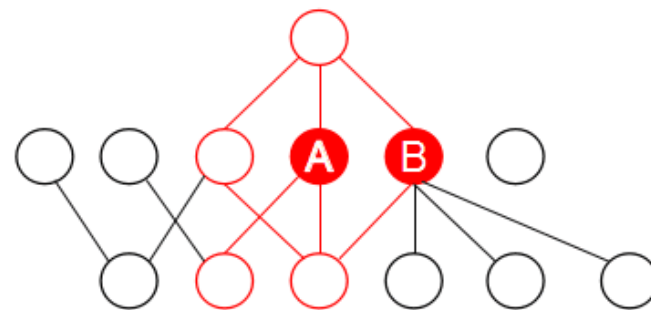
A 3

B 4

C 2

D 1

### GCS&LCS



GCS: A文章发表之后被引用2次  
B文章发表之后被引用4次

提交



## Histcite如何判断文章的重要性：

**不是看大家的意见，而是看这个领域同行专家的意见。**

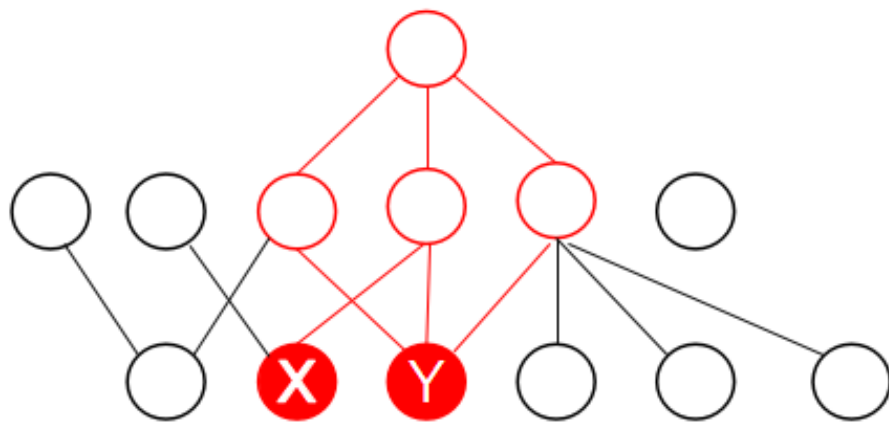


# Histcite又如何判断最新发表文章的重要性：

**主要看这篇新文章所引用的参考文献。**



# CR&LCR

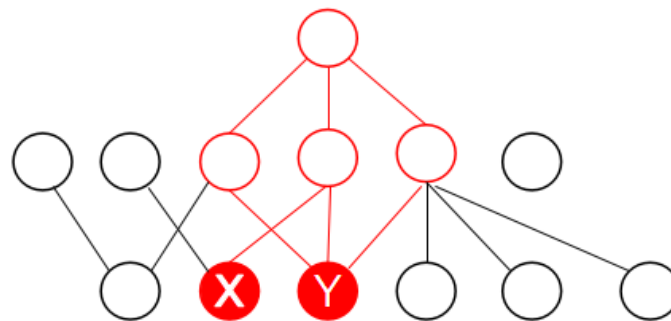


CR: X文章引用了2篇参考文献  
Y文章引用了3篇参考文献

X、Y文章的LCR值分别是 ( ) 、 ( ) 。

- A 1
- B 2
- C 3
- D 4

### CR&LCR



CR: X文章引用了2篇参考文献  
Y文章引用了3篇参考文献

提交



LCS可以快速定位一个领域内的经典文献，LCR可快速找出最新文献中哪些是和自己研究方向最相关的文献。



## 二、数据下载 From WOS 核心合集



# 第一步：在SCI数据库中进行搜索

Clarivate 简体中文 产品

Web of Science™ 检索 标记结果列表 历史 跟踪服务 登录 注册

探索跨学科内容  
来自最值得您信赖的全球引文数据库

选择数据库 Web of Science 核心合集 引文索引 Science Citation Index Expanded (SCI-EXPANDED) - 2002-至今

文献 作者 被引参考文献 化学结构

主题 cold-pcr

+ 添加行 + 添加日期范围 高级检索

清除 检索





# 第二步：导出检索数据

The screenshot displays the Clarivate Web of Science interface. The search results page shows 184 records from the Science Citation Index Expanded (SCI-Expanded) for the query 'cold-pcr'. A dialog box titled '将记录导出为纯文本文件' (Export records as plain text file) is open, allowing the user to select the number of records to export (1 to 184) and the content to include (Full record and references).

**Web of Science™ 检索 标记结果列表 历史 跟踪服务**

184 条来自 Science Citation Index Expanded (SCI-Expanded)的结果:

Q cold-pcr (主题)

分析检索结果 引文报告 创建跟踪服务

复制检索式链接

出版物 您可能也想要...

精炼检索结果

在结果中检索...

快速过滤

- 高被引论文 1
- 综述论文 12
- 开放获取 78

出版年

- 2021 4
- 2020 7
- 2019 12
- 2018 12
- 2017 9

全部查看

文献类型

- 论文 118
- 会议摘要 45
- 综述论文 12

将记录导出为纯文本文件

记录选项

- 页面上的所有记录
- 记录: 1 至 184

一次不能超过 500 条记录

记录内容:

- 全记录与引用的参考文献

导出 取消

CR Sequencing for Early 7 被引频次

26 参考文献

tion is hampered by the emergence of <20%. We developed a modified con- on of HBV mir ... 显示更多

相关记录

level resistance mutations in

2 参考文献

相关记录

3 The clinical potential of Enhanced-ice-COLD-PCR 13 被引频次

Test... Mar 3 2016 | EXPERT REVIEW OF MOLECULAR DIAGNOSTICS 16 (3) , pp.265-268

Enhanced-ice-COLD-PCR (E-ice-COLD-PCR) is a novel assay format that allows for the efficient enrichment and sensitive

25 参考文献



HistCite Pro下载地址:

<https://pan.baidu.com/s/1hsIwJzQ>



# HistCite Pro 使用方法:

下载 HistCite Pro 的压缩包并解压（建议解压到 C 盘或者 D 盘的根目录下，保证路径中不含中文），就可以直接用，不需要安装。对于从 WOS 上导出的 txt 数据文件，不用做任何修改，只要把全部的 txt 放到 TXT 文件夹里面，然后双击 main.exe 并输入数字 1 即可一键完成加载。

文件

主页

共享

查看



HistCite Pro 2.1

搜索"HistCite Pro 2.1"



家庭组

这台电脑

坚果云

视频

图片

文档

下载

音乐

桌面

本地磁盘 (C:)

科研学习 (D:)

存储娱乐 (E:)

网络



core



TXT



main.exe



readme.txt

savedress\_for  
\_test.txt



### Untitled Collection

Grand Totals: LCS 589, GCS 3494, CR 5228

Collection span: 2002 - 2021

#### List of All Records

Records: 183, Authors: 945, Journals: 92, Cited References: 3357, Words: 682

[Yearly output](#) | [Document Type](#) | [Language](#) | [Institution](#) | [Institution with Subdivision](#) | [Country](#)

< << < > >> >

#	Date / Author / Journal	LCS	GCS	LCR	CR
1	144 Mauger F, How-Kit A, Tost J <b>COLD-PCR Technologies in the Area of Personalized Medicine: Methodology and Applications</b> MOLECULAR DIAGNOSIS & THERAPY. 2017 JUN; 21 (3): 269-283	7	16	33	81
2	59 Castellanos-Rizaldos E, Liu PF, Milbury CA, Guha M, Brisci A, et al. <b>Temperature-Tolerant COLD-PCR Reduces Temperature Stringency and Enables Robust Mutation Enrichment</b> CLINICAL CHEMISTRY. 2012 JUL; 58 (7): 1130-1138	0	25	17	30
3	69 Castellanos-Rizaldos E, Milbury CA, Makrigiorgos GM <b>Enrichment of Mutations in Multiple DNA Sequences Using COLD-PCR in Emulsion</b> PLOS ONE. 2012 DEC 6; 7 (12): Art. No. e51362	0	6	14	33
4	175 Mortazavipour MM, Shahbazi S, Mahdian R <b>Detection of Paternal IVS-II-1 (G&gt;A) (HBB: c.315+1G&gt;A) Mutation in Cell-Free Fetal DNA Using COLD-PCR assay</b> HEMOGLOBIN. 2020 MAY 3; 44 (3): 168-173	0	0	12	27
5	122 Castellanos-Rizaldos E, Richardson K, Lin R, Wu G, Makrigiorgos MG <b>Single-Tube, Highly Parallel Mutation Enrichment in Cancer Gene Panels by Use of Temperature-Tolerant COLD-PCR</b> CLINICAL CHEMISTRY. 2015 JAN; 61 (1): 267-277	0	7	11	38
6	34 Milbury CA, Li J, Liu PF, Makrigiorgos GM <b>COLD-PCR: improving the sensitivity of molecular diagnostics assays</b> EXPERT REVIEW OF MOLECULAR DIAGNOSTICS. 2011 MAR; 11 (2): 159-169	18	33	10	43
7	35 Milbury CA, Chen CC, Mamon H, Liu PF, Santagata S, et al. <b>Multiplex Amplification Coupled with COLD-PCR and High Resolution Melting Enables Identification of Low-Abundance Mutations in Cancer Samples with Low DNA Content</b> JOURNAL OF MOLECULAR DIAGNOSTICS. 2011 MAR; 13 (2): 220-232	12	25	10	62
8	53 Milbury CA, Correll M, Quackenbush J, Rubio R, Makrigiorgos GM <b>COLD-PCR Enrichment of Rare Cancer Mutations prior to Targeted Amplicon Resequencing</b> CLINICAL CHEMISTRY. 2012 MAR; 58 (3): 580-589	23	47	10	45
9	124 Castellanos-Rizaldos E, Paweletz C, Song C, Oxnard GR, Mamon H, et al. <b>Enhanced Ratio of Signals Enables Digital Mutation Scanning for Rare Allele Detection</b> JOURNAL OF MOLECULAR DIAGNOSTICS. 2015 MAY; 17 (3): 284-292	0	23	10	37
10	33 Milbury CA, Li J, Makrigiorgos GM <b>Ice-COLD-PCR enables rapid amplification and robust enrichment for low-abundance unknown DNA mutations</b> NUCLEIC ACIDS RESEARCH. 2011 JAN; 39 (1): Art. No. e2	0	79	9	24



## 2、重要作者

File Analyses View Tools Help

### Untitled Collection

#### All-Author List (945)

Records: 183 Authors: 945 Journals: 92, Cited References: 3357  
Yearly output | Document Type | Language | Institution | Institution

|< << < > >> >|

#	Author	Recs	TLCS	TGCS
1	Makrigiorgos GM	30	330	1057
2	Richardson K	14	6	53
3	Wu G	13	0	11
4	Li J	12	269	741
5	Milbury CA	12	157	475
6	Castellanos-Rizaldos E	11	2	121
7	Eastlake P	11	6	46
8	Ferrari M	10	38	133
9	Tost J	10	53	257
10	Cremonesi L	9	37	122
11	Legendre B	9	0	3
12	Galbiati S	8	38	108
13	How-Kit A	8	19	210
14	Mamon H	8	101	411
15	Cubrich C	7	6	46
16	Brischi A	6	26	96
17	Lin R	6	0	8
18	Luthra R	6	38	114
19	Mancini I	6	43	147
20	Damin F	5	17	58
21	Daunay A	5	23	80
22	Guerrero JM	5	2	35
23	Liu PF	5	45	116
24	Macher HC	5	2	35

File Analyses View Tools Help

### Untitled Collection

#### All-Author List (945)

Records: 183, Authors: 945, Journals: 92, Cited References: 3357, Words: 682  
Yearly output | Document Type | Language | Institution | Institution with Subdivision | Country

|< << < > >> >|

#	Author	Recs	TLCS	TGCS
1	Makrigiorgos GM	30	330	1057
2	Li J	12	269	741
3	Milbury CA	12	157	475
4	Wang LL	5	112	326
5	Mamon H	8	101	411
6	Berbeco R	2	89	280
7	Kulke MH	2	89	321
8	Tost J	10	53	257
9	Liu PF	5	45	116
10	Mancini I	6	43	147
11	Pinzani P	5	40	132
12	Orlando C	3	39	103
13	Pratesi N	2	39	90
14	Santucci C	2	39	90
15	Simi L	4	39	128
16	Ferrari M	10	38	133
17	Galbiati S	8	38	108
18	Luthra R	6	38	114
19	Cremonesi L	9	37	122
20	Sestini R	3	32	65
21	Li C	1	30	44
22	Cianchi F	1	28	52
23	Valanzano R	1	28	52



# 3、核心期

Untitled Collection		Untitled Collection			
Journal List (92)		Journal List (92)			
Records: 183, Authors: 945, Journals: 92, Cited References: 3357, Words: 682		Records: 183, Authors: 945, Journals: 92, Cited References: 3357, Words: 682			
Yearly output   Document Type		Yearly output   Document Type   Language   Institution   Institution with Subdivision   Country			
#	Journal	Recs	TLCS	TGCS	
1	JOURNAL OF MOLECULAR DIAGNOSTICS	15	153	519	
2	CLINICAL CHEMISTRY	1	89	280	
3	CANCER RESEARCH	7	75	173	
4	PLOS ONE	16	45	157	
5	HUMAN MUTATION	5	39	160	
6	JOURNAL OF CLINICAL MICROBIOLOGY	1	35	53	

File Analyses View Tools Help HistCite<sup>®</sup> List Totals: LCS 89, GCS 280, CR 27

Untitled Collection

List of 1 Records for Journal **NATURE MEDICINE**

Records: 183, Authors: 945, Journals: 92, Cited References: 3357, Words: 682

Yearly output | Document Type | Language | Institution | Institution with Subdivision | Country

#	Date / Author / Journal	LCS	GCS	LCR	CR
	2008				
1	4 Li J, Wang LL, Mamon H, Kulke MH, Berbeco R, et al. Replacing PCR with COLD-PCR enriches variant DNA sequences and redefines the sensitivity of genetic testing <i>NATURE MEDICINE</i> . 2008 MAY; 14 (5): 579-584	89	280	0	27

14	NUCLEIC ACIDS RESEARCH	1	6	43
15	ANALYTICAL AND BIOCHEMISTRY	2	5	17
16	APPLIED IMMUNOHISTOCHEMISTRY & MOLECULAR MORPHOLOGY	1	5	84
17	DIAGNOSTIC MOLECULAR PATHOLOGY	2	3	36
18	EUROPEAN RESPIRATORY JOURNAL	3	3	8
19	HUMAN PATHOLOGY	1	3	9
20	INTERNATIONAL JOURNAL OF CANCER	2	3	368
21	JOURNAL OF CLINICAL MICROBIOLOGY	1	3	6
22	JOURNAL OF HEPATOLOGY	2	2	3
23	JOURNAL OF THORACIC RADIOLOGY	1	2	5
24	LAB ON A CHIP	2	2	53
25	INTERNATIONAL JOURNAL OF CANCER	1	2	105



## 4、参考文献分析

排在前面的就是被特定领域学者反复引用的重要文献。后面带有十号的表示本地数据集中没有包含，这些往往就是被遗漏的重要文献。

File Analyses View Tools Help

**Untitled Collection**

Cited Reference List (3357) including 66 records, 32 on this page ( [Hide 32 records](#) )

Records: 183, Authors: 945, Journals: 92, Cited References: 3357, Words: 682  
Yearly output | Document Type | Language | Institution | Institution with Subdivision | Country

#

|< << < > >> >|

#	Author / Year / Journal	WoS	Recs
1	Li J, 2008, NAT MED, V14, P579, DOI 10.1038/nm1708	WoS	89
2	Milbury CA, 2011, NUCLEIC ACIDS RES, V39, DOI 10.1093/nar/gkq899	+ WoS	39
3	Li J, 2009, BIOCHEM SOC T, V37, P427, DOI 10.1042/BST0370427	WoS	35
4	Milbury CA, 2009, CLIN CHEM, V55, P2130, DOI 10.1373/clinchem.2009.131029	WoS	31
5	Li J, 2009, HUM MUTAT, V30, P1583, DOI 10.1002/humu.21112	WoS	30
6	Mancini I, 2010, J MOL DIAGN, V12, P705, DOI 10.2353/jmoldx.2010.100018	WoS	28
7	Milbury CA, 2009, CLIN CHEM, V55, P632, DOI 10.1373/clinchem.2008.113035	WoS	28
8	Zuo Z, 2009, MODERN PATHOL, V22, P1023, DOI 10.1038/modpathol.2009.59	WoS	26
9	Li J, 2009, CLIN CHEM, V55, P748, DOI 10.1373/clinchem.2008.113381	WoS	23
10	Milbury CA, 2012, CLIN CHEM, V58, P580, DOI 10.1373/clinchem.2011.176198	WoS	23
11	Galbiati S, 2011, CLIN CHEM, V57, P136, DOI 10.1373/clinchem.2010.155671	WoS	18
12	Kit AH, 2013, HUM MUTAT, V34, P1568, DOI 10.1002/humu.22427	WoS	18
13	Milbury CA, 2011, EXPERT REV MOL DIAGN, V11, P159, DOI [10.1586/erm.10.115, 10.1586/ERM.10.115	WoS	18
14	Castellanos-Rizaldos E, 2012, CLIN CHEM, V58, P1130, DOI 10.1373/clinchem.2012.183095	+ WoS	17
15	Diehl F, 2008, NAT MED, V14, P985, DOI 10.1038/nm.1789	+ WoS	16
16	Ogino S, 2005, J MOL DIAGN, V7, P413, DOI 10.1016/S1525-1578(10)60571-5	+ WoS	16
17	Vogelstein B, 1999, P NATL ACAD SCI USA, V96, P9236, DOI 10.1073/pnas.96.16.9236	+ WoS	16
18	Kristensen LS, 2010, HUM MUTAT, V31, P1366, DOI 10.1002/humu.21358	WoS	15
19	Lo YMD, 1997, LANCET, V350, P485, DOI 10.1016/S0140-6736(97)02174-0	+ WoS	15
20	Song C, 2011, DIAGN MOL PATHOL, V20, P81, DOI 10.1097/PDM.0b013e3181fde92f	WoS	15
21	Pritchard CC, 2010, BMC CLIN PATHOL, V10, DOI 10.1186/1472-6890-10-6	+ WoS	14
22	Amado RG, 2008, J CLIN ONCOL, V26, P1626, DOI 10.1200/JCO.2007.14.7116	+ WoS	13
23	Delaney D, 2009, MODERN PATHOL, V22, P718, DOI 10.1038/modpathol.2009.32	WoS	12





## 5、关键词分析

辨析研究热点，拓展检索范围，调整检索策略，了解交叉学科，激发研究新思路。

#	Word
1	PCR
2	COLD
3	DETECTION
4	MUTATIONS
5	MUTATION
6	KRAS
7	CANCER
8	DNA
9	ANALYSIS
10	USING
11	TEMPERATU
12	ENRICHMEI
13	SENSITIVE
14	CELL
15	HIGH
16	ICE
17	PATIENTS
18	COLORECT/
19	DENATURA
20	LOWER
21	SEQUENCI
22	MELTING
23	SAMPLES
24	LOW

#	Word	Recs	TLCS	TCS
1	PCR	113	531	1741
2	COLD	99	470	1399
3	MUTATIONS	77	282	1691
4	DETECTION	81	236	1347
5	MUTATION	48	160	935
6	KRAS	43	144	954
7	GENETIC	7	142	399
8	CANCER	42	137	698
9	SENSITIVITY	13	128	378
10	TESTING	10	127	450
11	DNA	38	122	889
12	HIGH	21	113	337
13	MELTING	18	109	276
14	RESOLUTION	14	109	277
15	ANALYSIS	27	91	390
16	ENRICHES	2	89	280
17	REDEFINES	2	89	280
18	REPLACING	2	89	280
19	SEQUENCES	4	89	287
20	VARIANT	2	89	280
21	ENRICHMENT	22	87	433
22	LOW	17	86	374
23	BASED	11	85	669
24	IDENTIFICATION	13	78	176



## 6、年份分

File Analyses Vi File Analyses View Tools Help

### Untitled Coll Untitled Collection

Publication Year Publication Year List (15: 2002 - 2021) Histogram

Records: 183, Auth  
Yearly output Doc

Records: 183, Authors: 945, Journals: 92, Cited References: 3357, Words: 682  
Yearly output | Document Type | Language | Institution | Institution with Subdivision | Country

#	Publication
1	2002
2	2008
3	2009
4	2010
5	2011
6	2012
7	2013
8	2014
9	2015
10	2016
11	2017
12	2018
13	2019
14	2020
15	2021

#	Publication Year	Recs	TLCS	TGCS
1	2009	14	200	514
2	2008	3	89	280
3	2011	17	80	775
4	2012	24	60	343
5	2010	10	51	116
6	2013	19	30	442
7	2016	10	25	168
8	2014	32	24	302
9	2017	9	17	162
10	2015	9	5	132
11	2018	12	4	116
12	2019	12	4	77
13	2002	2	0	48
14	2020	7	0	19
15	2021	3	0	0



## 7、文献类型分析

File Analyses View Tools Help

**Untitled Collection**

**Document Type List (6)**

Records: 183, Authors: 945, Journals: 92, Cited References: 3357, Words: 682  
[Yearly output](#) | [Document Type](#) | [Language](#) | [Institution](#) | [Institution with Subdivision](#) | [Country](#)

#	Document Type	Recs	TLCS	TGCS
1	Article	114	479	2913
2	Meeting Abstract	45	4	13
3	Review	12	57	395
4	Letter	6	29	99
5	Article; Proceedings Paper	3	1	13
6	Editorial Material	3	19	61



## 8、文献所用的语言类型分析

File Analyses View Tools Help

### Untitled Collection

#### Document Language List (1)

Records: 183, Authors: 945, Journals: 92, Cited References: 3357, Words: 682

[Yearly output](#) | [Document Type](#) | [Language](#) | [Institution](#) | [Institution with Subdivision](#) | [Country](#)

#	Language	Recs	TLCS	TGCS
1	English	183	589	3494



File Analyses View Tools Help

Untitled Collection

Institution List (301)

Records: 183, Authors: 945, Journals: 92, Cited References: 3357, Words: 61  
 Yearly output | Document Type | Language | Institution | Institution with Sub

|< << < > >> >|

#	Institution	Recs	TLC
1	Harvard Univ	24	31
2	Transgenomic Inc	14	
3	Univ Texas MD Anderson Canc Ctr	13	4
4	Dana Farber Canc Inst	9	6
5	Univ Vita Salute San Raffaele	9	3
6	CEA	8	4
7	Ist Sci San Raffaele	8	2
8	Univ Florence	8	4
9	INSERM	7	1
10	CNR	6	1
11	Fdn Jean Dausset CEPH	6	3
12	Diagnost & Ric San Raffaele SpA	5	2
13	Univ Paris 05	5	2
14	Univ Seville	5	
15	Hop St Louis	4	
16	Aarhus Univ Hosp	3	1
17	Brigham & Womens Hosp	3	1
18	Fujian Med Univ	3	
19	Harvard Med Sch	3	
20	Sun Yat Sen Univ	3	
21	Univ Calif San Diego	3	
22	Univ Paris 06	3	1
23	Univ Paris Diderot	3	

File Analysis

Untitled

Institution

Records: 183  
 Yearly output

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#	Institution
1	Harv
2	Dan
3	Univ
4	CEA
5	Univ
6	Univ
7	Fdn
8	Ist S
9	Univ
10	Diag
11	Polit
12	Aarh
13	Brigl
14	Inst
15	CNR
16	Peki
17	Univ
18	Grp
19	INSE
20	Univ
21	Beth
22	Roy
23	UCL
24	UCL

File Analyses View Tools Help

Untitled Collection

Institution with Subdivision List (437)

Records: 183, Authors: 945, Journals: 92, Cited References: 3357, Words: 682

Yearly output | Document Type | Language | Institution | Institution with Subdivision | Country

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#	Institution with Subdivision	Recs	TLCS	TGCS
1	Harvard Univ, Sch Med	22	277	923
2	Transgenomic Inc	13	6	54
3	Univ Vita Salute San Raffaele	9	38	133
4	Dana Farber Canc Inst	8	30	74
5	Harvard Univ, Brigham & Womens Hosp	7	52	125
6	Univ Texas MD Anderson Canc Ctr	7	1	37
7	CNR, Ist Chim Riconoscimento Mol	5	17	58
8	Diagnost & Ric San Raffaele SpA	5	25	98
9	CEA, Inst Genom	4	26	67
10	Fdn Jean Dausset CEPH, Lab Funct Genom	4	23	125
11	Ist Sci San Raffaele, Ctr Translat Genom & Bioinformat	4	3	47
12	Aarhus Univ Hosp, Dept Pathol	3	19	56
13	CEA, Ctr Natl Genotypage	3	20	47
14	Fujian Med Univ, Affiliated Hosp 1	3	3	11
15	Ist Sci San Raffaele, Genom Unit Diag Human Pathol	3	25	58
16	Sun Yat Sen Univ, Affiliated Hosp 3	3	2	10
17	Univ Florence, Dept Clin Physiopathol	3	39	103
18	Univ Paris 05	3	5	111
19	Univ Seville, Univ Hosp Virgen del Rocio Seville	3	1	13
20	CEA Inst Genom, Ctr Natl Genotypage	2	7	137
21	Chinese Acad Sci, Beijing Inst Genom	2	2	10
22	Grp Hosp Pitie Salpetriere, AP HP	2	13	118
23	Harvard Med Sch, Brigham & Womens Hosp	2	0	41



# 10、国家列表

File Analyses View Tools Help

## Untitled Collection

### Country List (28)

Records: 183, Authors: 945, Journals: 92, Cited References: 3357, Words: 682

[Yearly output](#) | [Document Type](#) | [Language](#) | [Institution](#) | [Institution with Subdivision](#) | [Country](#)

#	Country	Recs	TLCS	TGCS
1	USA	74	382	1854
2	Italy	25	95	346
3	Peoples R China	24	34	177
4	France	19	66	801
5	Spain	14	6	241
6	UK	10	21	276
7	Japan	6	4	61
8	Germany	4	4	357
9	Netherlands	4	3	190
10	Canada	3	1	76
11	Czech Republic	3	0	106
12	Denmark	3	19	56
13	Iran	3	1	1
14	Singapore	3	4	29
15	India	2	0	27
16	Taiwan	2	0	23
17	Albania	1	0	5
18	Australia	1	0	17
19	Cyprus	1	0	3
20	Iraq	1	0	1
21	Nigeria	1	0	1
22	Norway	1	0	6
23	Poland	1	0	3



# 其他参数

											HistCite™		
File Analyses <b>View</b> Tools Help											Grand Totals: LCS 589, LCSx 414, GCS 3494, OCS n/a, CR 5228, NA 1366		
Untitled C											Means: LCS 3.22, LCSx 2.26, GCS 19.09, OCS n/a, CR 28.57, NA 7.46		
List of All R											Collection span: 2002 - 2021 (20 years)		
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Yearly output   Document Type   Language   Institution   Institution with Subdivision   Country													
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#	Date / Author / Journal	LCS	LCS/t	LCSx	GCS	GCS/t	OCS	NA	LCR	CR	LCSb	LCSe	LCS(e/b)
1	144 Mauger F, How-Kit A, Tost J <b>COLD-PCR Technologies in the Area of Personalized Medicine: Methodology and Applications</b> MOLECULAR DIAGNOSIS & THERAPY. 2017 JUN; 21 (3): 269-283	7	1.40	6	16	3.20		3	33	81			
2	59 Castellanos-Rizaldos E, Liu PF, Milbury CA, Guha M, Brisci A, et al. <b>Temperature-Tolerant COLD-PCR Reduces Temperature Stringency and Enables Robust Mutation Enrichment</b> CLINICAL CHEMISTRY. 2012 JUL; 58 (7): 1130-1138	0	0.00	0	25	2.50		9	17	30	0	0	0
3	69 Castellanos-Rizaldos E, Milbury CA, Makrigiorgos GM <b>Enrichment of Mutations in Multiple DNA Sequences Using COLD-PCR in Emulsion</b> PLOS ONE. 2012 DEC 6; 7 (12): Art. No. e51362	0	0.00	0	6	0.60		3	14	33	0	0	0
4	175 Mortazavipour MM, Shahbazi S, Mahdian R <b>Detection of Paternal IVS-II-1 (G&gt;A) (HBB: c.315+1G&gt;A) Mutation in Cell-Free Fetal DNA Using COLD-PCR assay</b> HEMOGLOBIN. 2020 MAY 3; 44 (3): 168-173	0	0.00	0	0	0.00		3	12	27			
5	122 Castellanos-Rizaldos E, Richardson K, Lin R, Wu G, Makrigiorgos MG <b>Single-Tube, Highly Parallel Mutation Enrichment in Cancer Gene Panels by Use of Temperature-Tolerant COLD-PCR</b> CLINICAL CHEMISTRY. 2015 JAN; 61 (1): 267-277	0	0.00	0	7	1.00		5	11	38	0	0	0
6	34 Milbury CA, Li J, Liu PF, Makrigiorgos GM <b>COLD-PCR: improving the sensitivity of molecular diagnostics assays</b> EXPERT REVIEW OF MOLECULAR DIAGNOSTICS. 2011 MAR; 11 (2): 159-169	18	1.64	14	33	3.00		4	10	43	6	3	0.50
7	35 Milbury CA, Chen CC, Mamon H, Liu PF, Santagata S, et al. <b>Multiplex Amplification Coupled with COLD-PCR and High Resolution Melting Enables Identification of Low-Abundance Mutations in Cancer Samples with Low DNA Content</b> JOURNAL OF MOLECULAR DIAGNOSTICS. 2011 MAR; 13 (2): 220-232	12	1.09	7	25	2.27		6	10	62	6	1	0.17
8	53 Milbury CA, Correll M, Quackenbush J, Rubio R, Makrigiorgos GM <b>COLD-PCR Enrichment of Rare Cancer Mutations prior to Targeted Amplicon Resequencing</b> CLINICAL CHEMISTRY. 2012 MAR; 58 (3): 580-589	23	2.30	15	47	4.70		5	10	45	11	3	0.27
9	124 Castellanos-Rizaldos E, Paweletz C, Song C, Oxnard GR, Mamon H, et al. <b>Enhanced Ratio of Signals Enables Digital Mutation Scanning for Rare Allele Detection</b> JOURNAL OF MOLECULAR DIAGNOSTICS. 2015 MAY; 17 (3): 284-292	0	0.00	0	23	3.29		7	10	37	0	0	0
10	33 Milbury CA, Li J, Makrigiorgos GM <b>Ice-COLD-PCR enables rapid amplification and robust enrichment for low-abundance unknown DNA mutations</b> NUCLEIC ACIDS RESEARCH. 2011 JAN; 39 (1): Art. No. e2	0	0.00	0	79	7.18		3	9	24	0	0	0



LCS/t: 表示平均每年被引用多少次, LCS/t值越高, 说明该文章每年都被大量引用, 生命力强。

LCS<sub>x</sub>: 带x的表示去掉自引, LCS<sub>x</sub>值越高, 说明该文章被同行认可度越高。

NA: 作者数, 这篇文章有多少个作者。

LCS<sub>b</sub>: b表示begin;

LCS<sub>e</sub>: e表示end;

LCS (e/b) : LCS<sub>e</sub>和LCS<sub>b</sub>两个数的比值。LCS<sub>b</sub>表示文章发表头3年被引用的次数, LCS<sub>e</sub>表示文章最近3年被引用的次数, LCS (e/b) 越高表示该文章最近几年受关注程度越高。





## 四、引文编年图的绘制

File Analyses View **Tools** Help

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List of All Records

Records: 183, Authors: Yearly output | Document

References: 3357, Words: 682

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Mark & Tag Alt+M

Edit

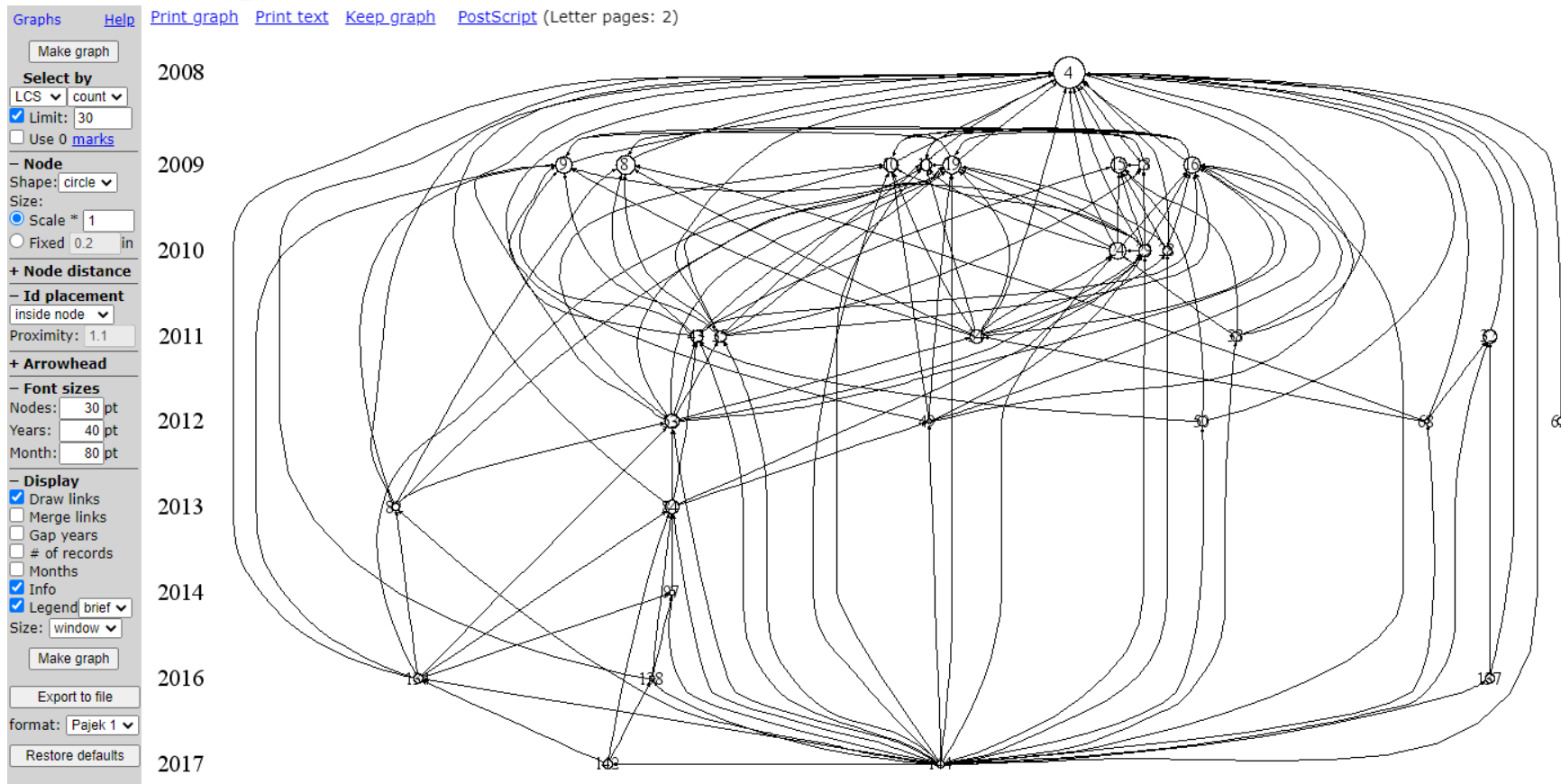
Analyses index

Settings... Alt+S

Log...

Date / Author / Journal

1	144	Mauger F, <b>COLD-PCR Technologies in the Area of Personalized Medicine: Methodology and Applications</b> MOLECULAR DIAGNOSIS & THERAPY. 2017 JUN; 21 (3): 269-283
2	59	Castellanos-Rizaldos E, Liu PF, Milbury CA, Guha M, Brisci A, et al. <b>Temperature-Tolerant COLD-PCR Reduces Temperature Stringency and Enables Robust Mutation Enrichment</b> CLINICAL CHEMISTRY. 2012 JUL; 58 (7): 1130-1138
3	69	Castellanos-Rizaldos E, Milbury CA, Makrigiorgos GM <b>Enrichment of Mutations in Multiple DNA Sequences Using COLD-PCR in Emulsion</b> PLOS ONE. 2012 DEC 6; 7 (12): Art. No. e51362
4	175	Mortazavipour MM, Shahbazi S, Mahdian R <b>Detection of Paternal IVS-II-1 (G&gt;A) (HBB: c.315+1G&gt;A) Mutation in Cell-Free Fetal DNA Using COLD-PCR assay</b> HEMOGLOBIN. 2020 MAY 3; 44 (3): 168-173
5	122	Castellanos-Rizaldos E, Richardson K, Lin R, Wu G, Makrigiorgos MG <b>Single-Tube, Highly Parallel Mutation Enrichment in Cancer Gene Panels by Use of Temperature-Tolerant COLD-PCR</b> CLINICAL CHEMISTRY. 2015 JAN; 61 (1): 267-277
6	34	Milbury CA, Li J, Liu PF, Makrigiorgos GM <b>COLD-PCR: improving the sensitivity of molecular diagnostics assays</b> EXPERT REVIEW OF MOLECULAR DIAGNOSTICS. 2011 MAR; 11 (2): 159-169
7	35	Milbury CA, Chen CC, Mamon H, Liu PF, Santagata S, et al. <b>Multiplex Amplification Coupled with COLD-PCR and High Resolution Melting Enables Identification of Low-Abundance Mutations in Cancer Samples with Low DNA Content</b> JOURNAL OF MOLECULAR DIAGNOSTICS. 2011 MAR; 13 (2): 220-232
8	53	Milbury CA, Correll M, Quackenbush J, Rubio R, Makrigiorgos GM <b>COLD-PCR Enrichment of Rare Cancer Mutations prior to Targeted Amplicon Resequencing</b> CLINICAL CHEMISTRY. 2012 MAR; 58 (3): 580-589
9	124	Castellanos-Rizaldos E, Paweletz C, Song C, Oxnard GR, Mamon H, et al. <b>Enhanced Ratio of Signals Enables Digital Mutation Scanning for Rare Allele Detection</b> JOURNAL OF MOLECULAR DIAGNOSTICS. 2015 MAY; 17 (3): 284-292
10	33	Milbury CA, Li J, Makrigiorgos GM <b>Ice-COLD-PCR enables rapid amplification and robust enrichment for low-abundance unknown DNA mutations</b> NUCLEIC ACIDS RESEARCH. 2011 JAN; 39 (1): Art. No. e2



图上有30个圆圈，每个圆圈表示一篇文献，中间的数字是这篇文献在数据集中的序号。圆圈越大表示被引次数越多，关注度越高。



File Analyses View Tools Help

File Analyses View Tools Help

### Untitled Collection

HistCite™ 1494, CR 5228  
Grand Totals: LCS 589, GCS 3494, CR 5228 - 2002 - 2021  
Collection span: 2002 - 2021

#### List of All Records

Records: 183, Authors: 945, Journals: 92, Cited References: 3357, Words: 68, Marks: 5  
[Yearly output](#) | [Document Type](#) | [Language](#) | [Institution](#) | [Institution with Subdivision](#) | [Country](#)

#### Marking and Tagging Tool

Set Criteria:

- Select all records from current list
- Select all marked records
- Select records with
  - #  Range  -
- Select records checked on this page

[Clear checks](#) [Invert checks](#)

Set Scope:

- Selected records only
- Records citing selected records
- Records cited by selected records

Take Action:

OR

Tag:

Description:

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#	Date / Author / Journal	LCS	GCS	LCR	CR	CS	LCR	CR
1	<input checked="" type="checkbox"/> 4 Li J, Wang LL, Mamon H, Kulke MH, Berbeco R, et al. <b>Replacing PCR with COLD-PCR enriches variant DNA sequences and redefines the sensitivity of genetic testing</b> NATURE MEDICINE. 2008 MAY; 14 (5): 579-584	89	280	0	27	80	0	27
2	<input checked="" type="checkbox"/> 8 Li J, Makrigiorgos GM <b>COLD-PCR: a new platform for highly improved mutation detection in cancer and genetic testing</b> BIOCHEMICAL SOCIETY TRANSACTIONS. 2009 APR; 37: 427-432	35	53	1	15	53	1	15
3	<input checked="" type="checkbox"/> 19 Milbury CA, Li J, Makrigiorgos GM <b>COLD-PCR-Enhanced High-Resolution Melting Enables Rapid and Selective Identification of Low-Level Unknown Mutations</b> CLINICAL CHEMISTRY. 2009 DEC; 55 (12): 2130-2143	31	60	4	33	60	4	33
4	<input checked="" type="checkbox"/> 16 Li J, Milbury CA, Li C, Makrigiorgos GM <b>Two-Round Coamplification at Lower Denaturation Temperature-PCR (COLD-PCR)-Based Sanger Sequencing Identifies a Novel Spectrum of Low-Level Mutations in Lung Adenocarcinoma</b> HUMAN MUTATION. 2009 NOV; 30 (11): 1583-1590	30	44	5	41	44	5	41
5	<input checked="" type="checkbox"/> 9 Milbury CA, Li J, Makrigiorgos GM <b>PCR-Based Methods for the Enrichment of Minority Alleles and Mutations</b> CLINICAL CHEMISTRY. 2009 APR; 55 (4): 632-640	28	130	1	41	30	1	41
6	<input type="checkbox"/> 24 Mancini I, Santucci C, Sestini R, Simi L, Pratesi N, et al. <b>The Use of COLD-PCR and High-Resolution Melting Analysis Improves the Limit of Detection of KRAS and BRAF Mutations in Colorectal Cancer</b> JOURNAL OF MOLECULAR DIAGNOSTICS. 2010 SEP; 12 (5): 705-711	28	52	5	40	52	5	40
7	<input type="checkbox"/> 15 Zuo Z, Chen SS, Chandra PK, Galbinca JM, Soape M, et al. <b>Application of COLD-PCR for improved detection of KRAS mutations in clinical samples</b> MODERN PATHOLOGY. 2009 AUG; 22 (8): 1023-1031	26	90	1	26	90	1	26
8	<input type="checkbox"/> 10 Li J, Wang LL, Janne PA, Makrigiorgos GM <b>Coamplification at Lower Denaturation Temperature-PCR Increases Mutation-Detection Selectivity of TaqMan-Based Real-Time PCR</b> CLINICAL CHEMISTRY. 2009 APR; 55 (4): 748-756 <b>Coamplification at Lower Denaturation Temperature-PCR Increases Mutation-Detection Selectivity of TaqMan-Based Real-Time PCR</b> EXPERT REVIEW OF MOLECULAR DIAGNOSTICS. 2011 MAR; 11 (2): 159-169	23	46	1	35	46	1	35



## 2. 文献导出

File Analyses View Tools Help HistCite™  
List Totals: LCS 213, GCS 567, CR 157

**Action**  
List (5)  
Records: 945, Journals: 92, Cited References: 3357, Words: 682, Marks: 5  
[Document Type](#) | [Language](#) | [Institution](#) | [Institution with Subdivision](#) | [Country](#)

Export → **Records...**

Properties...  
Print... Ctrl+P  
Quit Alt+Q

AS CSV...  
HTML presentation  
Save current bibliography to a separate file (HistCite format)

Set Scope:  
 Selected records only  
 Records citing selected records  
 Records cited by selected records

Take Action:  
Mark Unmark Delete  
OR  
Tag:   
Description:   
Tag Untag Remove All Tags

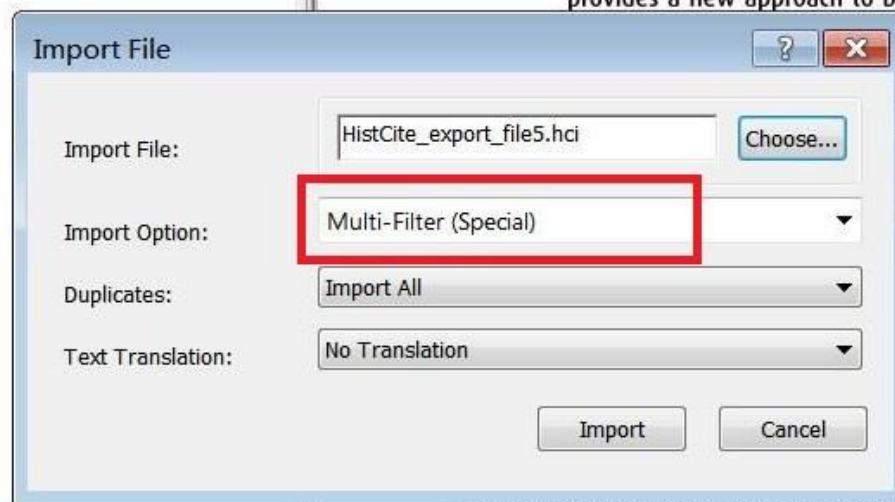
Select records with  -   
 Select records checked on this page  
[Clear checks](#) [Invert checks](#)

#	Date / Author / Journal	LCS	GCS	LCR	CR
2008					
1	<input checked="" type="checkbox"/> 4 Li J, Wang LL, Mamon H, Kulke MH, Berbeco R, et al. <b>Replacing PCR with COLD-PCR enriches variant DNA sequences and redefines the sensitivity of genetic testing</b> NATURE MEDICINE. 2008 MAY; 14 (5): 579-584	89	280	0	27
2009					
2	<input checked="" type="checkbox"/> 8 Li J, Makrigiorgos GM <b>COLD-PCR: a new platform for highly improved mutation detection in cancer and genetic testing</b> BIOCHEMICAL SOCIETY TRANSACTIONS. 2009 APR; 37: 427-432	35	53	1	15
3	<input checked="" type="checkbox"/> 9 Milbury CA, Li J, Makrigiorgos GM <b>PCR-Based Methods for the Enrichment of Minority Alleles and Mutations</b> CLINICAL CHEMISTRY. 2009 APR; 55 (4): 632-640	28	130	1	41
4	<input checked="" type="checkbox"/> 16 Li J, Milbury CA, Li C, Makrigiorgos GM <b>Two-Round Coamplification at Lower Denaturation Temperature-PCR (COLD-PCR)-Based Sanger Sequencing Identifies a Novel Spectrum of Low-Level Mutations in Lung Adenocarcinoma</b> HUMAN MUTATION. 2009 NOV; 30 (11): 1583-1590	30	44	5	41
5	<input checked="" type="checkbox"/> 19 Milbury CA, Li J, Makrigiorgos GM <b>COLD-PCR-Enhanced High-Resolution Melting Enables Rapid and Selective Identification of Low-Level Unknown Mutations</b> CLINICAL CHEMISTRY. 2009 DEC; 55 (12): 2130-2143	31	60	4	33



### 3. 导入Endnote

打开Endnote，新建数据库，选择导入文件，导入选项选择“Multi-Filter(Special)” 滤器，点击导入，这样被我们选中的文献就已经导入到Endnote中了。





EndNote X9 - [My EndNote Library]

File Edit References Groups Tools Window Help

Annotated Quick Search Show Search Panel

- My Library
- All References (5)
- Imported References (5)
- Configure Sync...
- Recently Added (5)
- Unfiled (5)
- Trash (0)
- My Groups
- Find Full Text
  - Searching... (2)
  - Found PDF (2)
  - Found URL (1)

Author	Year	Title	Rating	Journal	Last Updated	Reference Type
Li, J.; Makrigiorg...	2009	COLD-PCR: a new platform for highly improved...	.....	Biochemical So...	2021/11/2	Journal Article
Li, J.; Milbury, C. ...	2009	Two-Round Coamplification at Lower Denatura...		Human Mutation	2021/11/2	Journal Article
Li, J.; Wang, L. L.; ...	2008	Replacing PCR with COLD-PCR enriches variant...		Nature Medicine	2021/11/2	Journal Article
Milbury, C. A.; Li, ...	2009	COLD-PCR-Enhanced High-Resolution Melting ...		Clinical Chemistry	2021/11/2	Journal Article
Milbury, C. A.; Li, ...	2009	PCR-Based Methods for the Enrichment of Min...		Clinical Chemistry	2021/11/2	Journal Article

Reference Preview Li-2009-COLD-PCR\_a new pl

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### COLD-PCR: a new platform for highly improved mutation detection in cancer and genetic testing

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**Abstract**

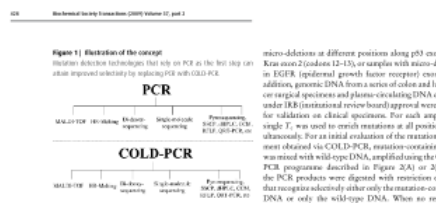
PCR is widely employed as the initial DNA amplification step for genetic testing and cancer biomarker detection. However, a key limitation of PCR-based methods, including real-time PCR, is the inability to selectively amplify low levels of variant alleles in a wild-type allele background. As a result, downstream assays are limited in their ability to identify subtle genetic changes that can have a profound impact on clinical decision-making and outcome or that can serve as cancer biomarkers. We developed COLD-PCR (co-amplification at lower denaturation temperature-PCR) [Li, Wang, Muzum, Kulkarni, Ierobico and Makrigiorgos (2009) Nat. Med. 14, 579-586], a novel form of PCR that amplifies minority alleles selectively from mixtures of wild-type and mutation-containing sequences irrespective of the mutation type or position on the sequence. Consequently, COLD-PCR amplification from genomic DNA yields PCR products containing high prevalence variant alleles that can be detected. Since PCR constitutes a ubiquitous initial step for almost all genetic analysis, COLD-PCR provides a general platform to improve the sensitivity of essentially all mutation detection technologies including Sanger sequencing, pyrosequencing, single molecule sequencing, mutation scanning, mutation genotyping and methylation assays. COLD-PCR combined with real-time PCR provides a new approach to boost the capabilities of existing real-time mutation detection methods; we replaced regular PCR with COLD-PCR before sequencing or real-time mutation detection assays to improve mutation detection sensitivity by up to 100-fold and identified novel p53/MYC/NF1 (epidermal growth factor receptor) mutations in heterogeneous cancer samples that were missed by all existing methods. For clinically relevant micro-deletions, COLD-PCR enabled exclusive amplification and isolation of the mutations. COLD-PCR is expected to have diverse applications in the fields of biomarker identification and tracing, genomic instability, infectious diseases, DNA methylation testing and prenatal identification of fetal alleles in maternal blood.

**Introduction**

PCR plays a key role in molecular diagnosis and in the detection of mutations. A commonly encountered situation is when variant DNA sequences exist in the presence of a large majority of wild-type alleles, such as when DNA is obtained from heterogeneous cancer biopsies. As a commonly applied, PCR does not contain an inherent selectivity towards variant (mutant) alleles, thus both variant and non-variant alleles are amplified with approximately equal efficiency. The bottleneck of identifying and sequencing the mutations in a PCR product falls on downstream assays. Despite being suitable for screening genotypes or producing variant mutations, sequencing of unknown low-prevalence mutations using these otherwise powerful technologies is still problematic. The significance of identifying these mutations, however, is critical in several fields of medicine, including cancer, prenatal diagnosis and infectious diseases [1-3]. We recently developed COLD-PCR (co-amplification at lower denaturation temperature-PCR), a new form of PCR that preferentially enriches "minority alleles" from mixtures of wild-type and mutation-containing sequences, irrespective of where an unknown mutation lies. Consequently, COLD-PCR amplification from genomic DNA yields PCR products containing high percentages of variant alleles, thus preventing their detection. Since PCR constitutes a common initial step in almost all genetic analysis, COLD-PCR provides a general platform to improve the sensitivity of essentially all DNA-variant detection technologies, including Sanger sequencing, pyrosequencing, real-time PCR, mutation scanning, mutation genotyping and methylation assays (Figure 1).

**Principle of COLD-PCR**

The principle of COLD-PCR is described in Figure 2. A single nucleotide mismatch anywhere along a double-stranded DNA sequence generates a small but predictable change in the "melting" temperature of DNA ( $T_m$ ) for that sequence [4,5]. Depending on the sequence context and



**Figure 1** Illustration of the concept. Mutation detection technologies that rely on PCR as the first step can cause improved selectivity by replacing PCR with COLD-PCR.

micro-deletions at different positions along p53 exon 8 and Kras exon2 (codons 12-15), or samples with micro-deletions in EGFR (epidermal growth factor receptor) exon 19. In addition, genomic DNA from a mixture of colon and lung cancer surgical specimens and plasma-circulating DNA collected under IBC (instantiated review board) approval were utilized for validation on clinical specimens. For each specimen, a single T<sub>m</sub> was used to enrich mutations at all positions simultaneously. For an initial evaluation of the mutation enrichment obtained via COLD-PCR, mutation-containing DNA was mixed with wild-type DNA, amplifying the COLD-PCR programme described in Figure 2(A) or 2(B), and the PCR products were digested with restriction enzymes that recognize selectively either only the mutation-containing DNA or only the wild-type DNA. When no restriction



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年份	作者	标题
2009	Li, Jin; Makrigiorgos, G Mike	COLD-PCR: a new platform for highly improved mutation detection in cancer and genetic testing
2009	Milbury, Coren A; Li, Jin; Makrigiorgos, G Mike	COLD-PCR-Enhanced High-Resolution Melting Enables Rapid and Selective Identification of Low-Level Unknown Mutations
2009	Milbury, Coren A; Li, Jin; Makrigiorgos, G Mike	PCR-Based Methods for the Enrichment of Minority Alleles and Mutations
2008	Li, Jin; Wang, Lilin; Mamon, Harvey; Kulke, Matthew H; Berbeco, Ross; Makrigiorgos, G Mike	Replacing PCR with COLD-PCR enriches variant DNA sequences and redefines the sensitivity of genetic testing
2009	Li, Jin; Milbury, Coren A; Li, Cheng; Makrigiorgos, G Mike	Two-Round Coamplification at Lower Denaturation Temperature-PCR (COLD-PCR)-Based Sanger Sequencing Identification

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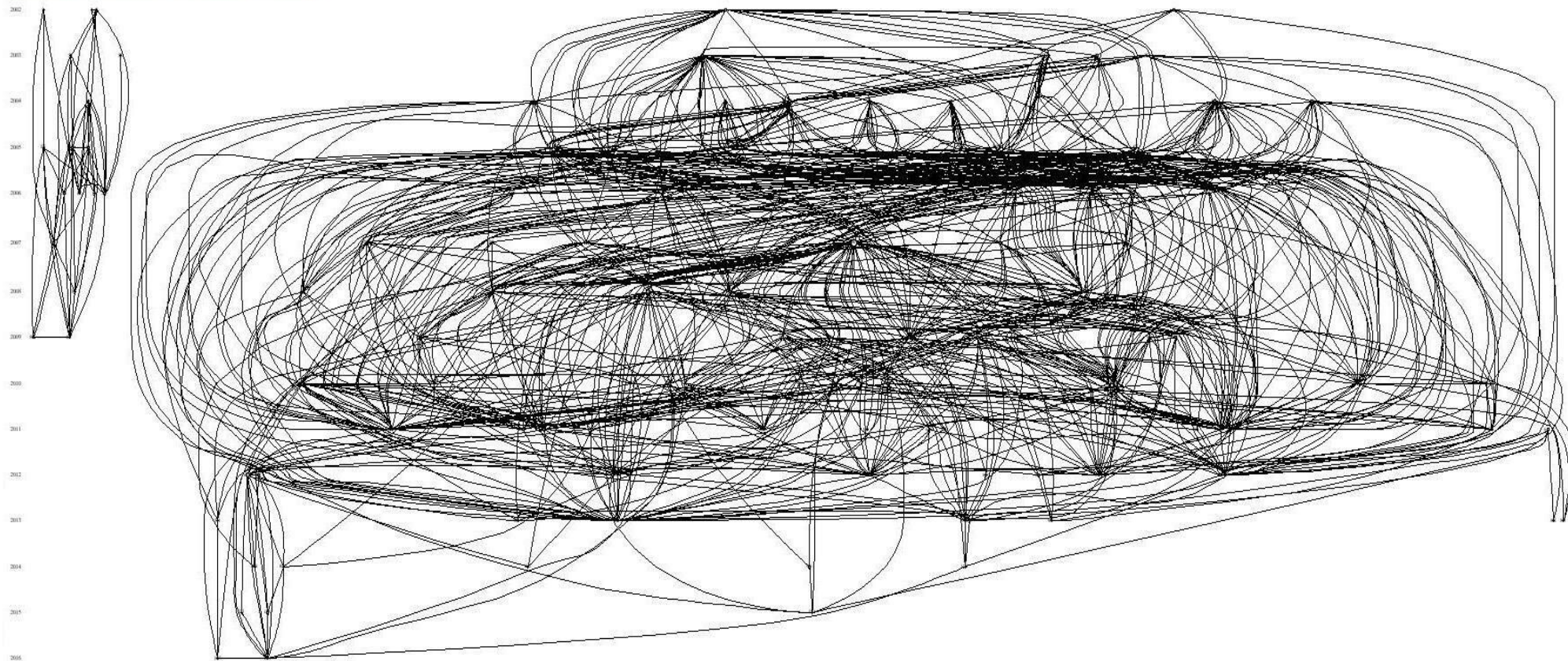
# PART 03

## Histcite作图分析结果示例





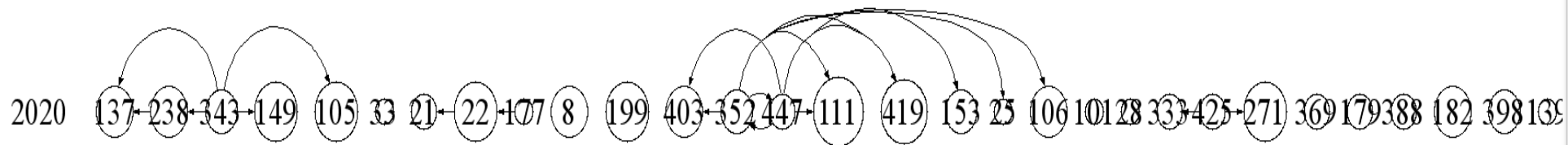
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5.	5 Villarreal-Alba EG, 2004, EUR FOOD RES TECHNOL, V218, P164	0	15
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- 4 Pordesimo LO, 2004, APPL ENG AGRIC, V20, P35
- 5 Villarreal-Alba EG, 2004, EUR FOOD RES TECHNOL,
- 6 Fiori M, 2004, J PHYTOPATHOL, V152, P28
- 7 Breithaupt DE, 2004, FOOD CHEM, V86, P449
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2	20 Guzman I, Hamby S, Romero J, Bosland PW, O'Connell MA Variability of carotenoid biosynthesis in orange colored Capsicum spp. PLANT SCIENCE. 2010 JUL-AUG; 179 (1-2): 49-59	0	76	0	0
3	41 Gomez-Garcia MD, Ochoa-Alejo N Biochemistry and Molecular Biology of Carotenoid Biosynthesis in Chili Peppers (Capsicum spp.) INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES. 2013 SEP; 14 (9): 19025-19053	0	61	0	0
4	40 Puente-Diaz L, Ah-Hen K, Vega-Galvez A, Lemus-Mondaca R, Di Scala K Combined Infrared-Convective Drying of Murta (Ugni molinae Turcz) Berries: Kinetic Modeling and Quality Assessment DRYING TECHNOLOGY. 2013 FEB 17; 31 (3): 329-338	0	60	0	0
5	72 Garcia CC, Barfuss MHJ, Sehr EM, Barboza GE, Samuel R, et al. Phylogenetic relationships, diversification and expansion of chili peppers (Capsicum, Solanaceae) ANNALS OF BOTANY. 2016 JUL; 118 (1): 35-51	0	48	0	0
6	48 Cervantes-Paz B, Yahia EM, Ornelas-Paz JD, Victoria-Campos CI, Ibarra-Junquera V, et al. Antioxidant activity and content of chlorophylls and carotenoids in raw and heat-processed Jalapeno peppers at intermediate stages of ripening FOOD CHEMISTRY. 2014 MAR 1; 146: 188-196	0	45	0	0
7	36 Williamson PO, Robichaud J, Francis IL Comparison of Chinese and Australian consumers' liking responses for red wines AUSTRALIAN JOURNAL OF GRAPE AND WINE RESEARCH. 2012; 18 (3): 256-267	0	38	0	0
8	70 Barth R, Hemming J, van Henten EJ Design of an eye-in-hand sensing and servo control framework for harvesting robotics in dense vegetation BIOSYSTEMS ENGINEERING. 2016 JUN; 146: 71-84	0	34	0	0
9	31 Silva-Rojas HV, Avila-Quezada GD Phylogenetic and morphological identification of Colletotrichum boninense: a novel causal agent of anthracnose in avocado PLANT PATHOLOGY. 2011 OCT; 60 (5): 899-908	0	31	0	0
10	56 Naumoska K, Vovk I Analysis of triterpenoids and phytosterols in vegetables by thin-layer chromatography coupled to tandem mass spectrometry JOURNAL OF CHROMATOGRAPHY A. 2015 FEB 13; 1381: 229-238	0	31	0	0

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