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Mesentery in Global Research Output: A Scientometric Analysis

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Abstract

The present study has analyzed nearly the growth of research publications during the study period from 2013 to 2022 with a sample of 3630 articles published in the field of Mesenterywith the maximum number of research papers, 1198 (12.56%), was published in the year 2021, The research publications with the highest number of citations are those with 30807 (22.04). In author Coffey, J.C. from the United States holds the highest number of the publications, contribute 49 (23.56%), the majority of the articles were published in Medicine (7495 or 59.51%) research publications, a maximum of 7932 (83.14%) research publications are contributed by the distribution of document type. The time series analysis application is anticipated in Mesentery Research papers to be about equal to 1224 in 2025 and approximately equal to 1359 in 2030. At that point, a thorough investigation proved that there is a growing tendency in the papers on Mesentery Research publications.The institutions according to the analysis, the Harvard Medical Schoolpublished the most articles, with 115 (16.11%) research publications, the International Journal of Surgery Case Reportswith 227(21.50%). The United States contributed the most articles, amounting to more than 2363(31.57%) of the total publication, 36346(31.72%) research publications, The highly cited paper in Mesentery with the highest citations in of Clair D.G.; Beach J.M. et.al. (2016) Mesenteric ischemia, New England Journal of Medicine, 374(10): 959-968, with 333 citations and document type of review.

Keywords: Scientometrics, Mesentery, Time series analysis, related citation index, highly cited paper

INTRODUCTION

Mesentery is broad, as this newly recognized organ plays an important role in various bodysystems and functions. The mesentery is a double layer of peritoneum that attaches theintestines to the back wall of the abdominal cavity. It is a relatively thin and delicate structurethat contains blood vessels, lymphatics, and nerves that supply the intestines. In the past, themesentery was considered to be a collection of separate structures rather than a single organ. However, recent research has shown that the mesentery is a continuous and

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distinct structurethat meets the definition of an organ, which is a self-contained and functionally distinct partof the body that performs a specific task.

In 2016, the mesentery was officially reclassified as an organ by the International Union ofAnatomy, making it the newest recognized organ in the human body. This reclassificationwas based on a growing body of research that revealed the mesentery's important functions inthe body beyond just holding the intestines in place. According to Frank H. Netter (2018)"The mesentery is the supporting tissue of the small intestine that attaches it to the posteriorabdominal wall. The mesentery is composed of blood vessels, nerves, and lymphatic vesselsand nodes that supply the intestine. Overall, the recognition of the mesentery as an organhighlights the importance of ongoing research and understanding of the human body and itscomplex systems

Scientometric analysis

The quantitative analysis of scientific publications and their citationpatterns. It can provide insights into the trends and impact of research in a particular field, aswell as identify gaps and potential areas for future research. In the case of the mesentery,scientometric analysis can help researchers understand the current state of research on thisnewly recognized organ and identify areas where further research is needed. Scientometricanalysis can help researchers identify potential areas for collaboration and prioritize researchefforts in the field of mesentery research. It can also help identify the most impactful andhighly cited research in the field, which can inform the development of new research directions and goals. Ultimately, scientometric analysis can help advance the understandingof the mesentery and its role in the human body, leading to improved patient outcomes andbetter medical interventions.

Alan Prichard (1969) created the term bibliometric to describe the use of mathematical and statistical approaches to books and other media, the process of written communication, and the character and course of a discipline. Van Raan (1997) Quantitative studies of science and technology, according to scientometric research. "Scientometrics is defined as the quantitative evaluation and inter-comparison of scientific activity, productivity, and progress," writes Beck (1978). Bookstein (1976) described scientometrics as "the science of measuring science." Scientometrics is also regarded as a bibliometric assessment for assessing scientific development, societal significance, and the influence of science and technology applications." Ingwerson and Christensen (1997) defined the phrase as "a recent extension of traditional bibliometric analysis, also to cover non-scholarly communities in which information is produced, communicated, and used."Ranganathan (1948) 4 coined the term librametry to denote the measurement of various library activities and services using mathematical and statistical techniques.

REVIEW OF THE LITERATURE

Usha S. et. al (2023) conducted the research on the yellow fungus that was published inworks that were indexed by Web of Science between 1916 and 2021. For this study, thescientometric method a quantitative examination of publishing trends was used. The resultsshowed a gradual increase in research, with a noticeable spike starting in 1991. A total of 2704 papers with an average of 22.36 percent of citations each were published in 1056journals. The majority of the jointly published papers came from the United States, America,China, and other wealthy nations; some developing nations also made contributions. Thedistribution of authors showed that scholars were working together in an interdisciplinarymanner.

Imran Hussain (2023) the topic of the current study is global developments in the epilepsydisease. This study's objective is to describe the scientific output of original and reviewarticles published in journals devoted to epilepsy disease from 2012 to 2021, taking intoaccount qualitative and quantitative data from various nations. Throughout the researchperiod, the Web of Science (WoS) online database was completely downloaded. There were18092 records produced overall from 2418 journals. According to the findings, 2021 wasdeemed to be the most productive year with 2546 (14.07%) publications. With 315 articlespublished, Striano P has the most among the authors. It may be inferred from the study thatthis report may serve as a baseline study for future research on the scientometrics of paperson epilepsy disease that are published in the Web of Science

Saed H. Zyoud (2016)10 used 19,581 documents from the Scopus database spanning the years 1872 to 2015 to analyze his study on dengue research in Arab nations. The United States of America provided the most to dengue research articles with 4,709 (24.05%), India gave 1,942 (9.92%), Brazil supplied 1530 (7.81%), and Thailand contributed 1,260 (6.43%). Only 226 (1.16%) of the scientific

articles on dengue have come from the Arab region. An average of eighteen citations per publication out of a total of 3, 52,710 citations were received. With 102 (45.1%) publications, the Kingdom of Saudi Arabia was the Arab nation with the highest publication rate.

Jeyshankar R and Chithiraivel S (2019)[11] analyzed the Eosinophilia research output in India during the year 1998 to 2017 with 267 publications from the web of science online database. The study examined the different types of parameters like authorship pattern, growth of publications, time series analysis, degree of collaboration, and most productivity journals. The overall growth rate was increasing trend, multi-authored papers were the majority of contributions to Eosinophilia research in India.

Ravichandran and Vivekanandhan (2021)[16] examine the Scientometric analysis of wastewater management research publications during 2010-2019 from the Scopus database. The study identified that a maximum of 2842 (14.31%) research publications with 19857 citations contributed in 2019. Ngo, H.H contributed a maximum of 101 (0.51%) research publications, maximum of 19355 articles were contributed by joint authors, and the average degree of collaboration was 0.97. Maximum of 2102 (10.58%) research publications are contributed in Bio resource technology, ministry of education, china with 863 (22.32%) research publication and China has contributed the maximum of 5919 (29.80%) research publications

Sivasamy K &. Vivekanandhan S (2020)[12] the present study examines the leprosy research publications that are contributed from the Scopus database during the study period of 2009-2018 with a total number of 6266 publications. During the study period maximum of 675 (10.77%) research publications are contributed in the year 2015. The relative growth rate is identified decreasing trend and the doubling time is an increasing trend from 2009 to 2018. A maximum of 99 (1.58%) research publications are contributed by Sarno, E.N. with top-ranking authors, the average degree of collaboration is 0.83, and 4218 (67.32%) of research publications are articles. India is the most contributing top-ranking country with 1522 (24.29%) leprosy research publications.

Ranganathan and Sumathi (2022) studied on the Scientometric analysis of"Geochemistry's" publication. The data is gathered from the Web of Science Databases forthe years 1989 to 2020.The Web of Science database revealed a total of 2603 papers.According to the survey, there will be 400 research papers published in 2020, up from just 383 in 2019 and 1 in 1989. During that time, India published 2864 publications, but over thelast ten years, publication activity has substantially expanded. The publications was distributed to 1346 different institutions. Nonetheless, 1% or more of the total production came from 28 universities. Also, this analysis found the most prolific authors, the degree of collaboration, the areas of research concentration, and coverage growth rates, relative growthrates, doubling times.

OBJECTIVES

- To examine the growth of research year-wise Mesentery research
- To identify the RGB research publications in Mesentery.
- To distinguish the leading prolific authors in Mesentery research
- To study the document type and time series research publications
- To assess the Institution wise research concentration on Mesentery research output
- To identify journal wise distribution of publications on Mesentery research output.
- To identify the country wise contribution in the field of Mesentery
- To study the Keyword and funding agency research publications
- To studyhighly cited paper for Mesentery research.

Scope and Coverage of this Study

We have performed this study for the coverage period of 10 years (2013 to 2022). We have focused on the scholarly literature directly related to the term 'Mesentery' which is indexed in the Scopus database.

RESEARCH METHODOLOGY

The Mesentery Research publications are identified using the Scopus multidisciplinary online database from 2013 to 2022 using the following search keyword: (TITLE-ABS-KEY ("Mesentery") AND PUBYEAR > 2012 AND PUBYEAR < 2023) the data was collected for this study is 17.08.2023. The collected data were analyzed using a Micro Soft excel worksheet.

DATA ANALYSIS AND INTERPRETATIONS

Growth of Literature on Mesentery Research Publications

Table 1 Growth of Literature on Mesentery Research Publications

Year	Publications	%	Cum	%	Citations	%	CPP	RCI
2013	903	9.47	903	1.81	1156	0.83	1.28	0.09
2014	897	9.40	1800	3.61	30807	22.04	34.34	2.34
2015	858	8.99	2658	5.34	9013	6.45	10.50	0.72
2016	832	8.72	3490	7.01	8814	6.31	10.59	0.72
2017	879	9.21	4369	8.77	11427	8.18	13.00	0.89
2018	884	9.27	5253	10.54	10539	7.54	11.92	0.81
2019	922	9.66	6175	12.40	14628	10.47	15.87	1.08
2020	1040	10.90	7215	14.48	15167	10.85	14.58	1.00
2021	1198	12.56	8413	16.89	16193	11.59	13.52	0.92
2022	1127	11.81	9540	19.15	22018	15.75	19.54	1.33
Total	9540	100.00	49816	100.00	139762	100.00		

In *Table 1* the specific table reveals a significantly elevated frequency of Mesenterypublications in the present era compared to the initial years of the study. Mesentery Research papers exhibit a discernible an increasing trend, The maximum number of research papers, 1198 (12.56%), was published in the year 2021, followed by 1127(11.81%) in2022, and the third-highest year for publications was 2020with a total of 1040(10.90%) research papers in Mesenteryduring the study period.

The research publications with the highest number of citations are those with 30807(22.04), boasting a CPP of 34.34 and an RCI of 2.34. Following closely are publications with 22018 citations (15.75%), a CPP of 19.54 and an RCI of 1.33. Subsequently, there are 15167 (10.85%) research publications, a CPP of 14.58 and RCI of 1.00.On the other end of spectrum, the publications with the lowest and at 1156 (0.83%), with a CPP of1.28, an RCI of 0.09.

Relative growth rate (RGR) and doubling time (Dt)

The relative growth of publications was analyzed by using the two parameters namely relative growth rate and doubling time originated by **Mahapatra (1985)** RGR is a measure to study the increases in the number of articles over a period of time. It is calculated as

$$R(a) = \frac{(W2 - W1)}{(T2 - T1)}$$

Whereas

R (a) = RGR = the mean relative growth rate over the specific period of interval

W_1 = the logarithm of the beginning number of publications/pages

W_2= the logarithm of the ending number of publications/pages after a specific period of interval

$T_2 - T_1$ = the unit difference between the beginning time and the ending time.

Doubling Time

The time it takes for the number of records that are actually published within a given timeframe to double is known as the "doubling time." The difference has a value of 0.693 when the doubling time is computed using the natural logarithm number and the relative growth rate. Therefore, using the following formula, one may get the relevant doubling time:

$$Dt = \frac{0.693}{R(a)}$$

RGR and doubling time in Mesentery Research Publications

Table 2: RGR and Doubling Time in Mesentery Research Publications

Year	Publications	Cumulative	W1	W2	RGR	Dt
2013	903	463		6.14		
2014	897	1800	6.14	7.50	1.36	0.51
2015	858	2658	7.50	7.89	0.39	1.79
2016	832	3490	7.89	8.16	0.27	2.56
2017	879	4369	8.16	8.38	0.22	3.10
2018	884	5253	8.38	8.57	0.18	3.78
2019	922	6175	8.57	8.73	0.16	4.30
2020	1040	7215	8.73	8.88	0.16	4.47
2021	1198	8413	8.88	9.04	0.15	4.53
2022	1127	9540	9.04	9.16	0.13	5.54
Total	9540					

Table 2 clearly illustrates the mean RGR and doubling time of Mesenterypublications throughout the study period. For the specified study period, it is evident that the RGR of articles has sturdily decreased starting from 0.13 in 2022 and reaching 1.36 in 2014. Simultaneously, the time required for an article to double in publications has progressively increased, going from 0.51 in 2014 to 5.54 in 2022. In summary, the discussion above indicate gradual decline in the RGR of article while, conversely, the double time of articles has seen a gradually increased.

Author-wise Mesentery Research Publications

Table 3: Author-wise Contributions Mesentery Research Publications

Authors	Country	Publications	%	Citations	%	H- Index	CPP	RCI
Coffey, J.C.	United States	49	23.56	1235	38.41	18	25.20	1.63
Ehrenpreis, E.D.	China	23	11.06	82	2.55	3	3.57	0.23
Murfee, W.L.	Japan	20	9.62	309	9.61	10	15.45	1.00
Zawieja, D.C.	United Kingdom	18	8.65	433	13.47	14	24.06	1.56
Zhao, Z.G.	India	18	8.65	79	2.46	6	4.39	0.28
Garssen, J.	Germany	17	8.17	473	14.71	12	27.82	1.80
Niu, C.Y.	Italy	17	8.17	74	2.30	6	4.35	0.28
Calvin Coffey, J.	France	16	7.69	59	1.84	4	3.69	0.24
Ignjatovic, D.	Spain	16	7.69	225	7.00	7	14.06	0.91
Castell, M.	Brazil	14	6.73	246	7.65	8	17.57	1.14
Total		208	100.00	3215	100.00			

Table 3 presents the top ten most productive authors in Mesentery Research from 2013 to 2022. Coffey, J.C. from the United States holds the highest number of the publications, contribute 49(23.56%), followed by Ehrenpreis, E.D. from Chinawith 23 (11.06%) and Murfee, W.L. from Japan with 20 (9.62%). On the other end of the spectrum Castell, M. from Brazilhas the fewest research publications, amounting to 14 (6.73%).

The most citations are contribute to 1235 (38.41%) research publications, the featuring an H-index of 18, a CPP of 25.20, and an RCI of 1.63. Following closely, there are 473 (14.71%) research publications with an H-index of12, a CPP of 27.82, and an RCI of

1.80.Garssen, J. and Calvin Coffey, J. the Francehave the lowest number of citations, totaling 59(1.84%) research publications, accompanied by an H-index of 4, a CPP of3.69, and an RCI of 0.24.

Subject-wise contributions Mesentery Research Publications

Table 4: Subject-wise contributions Mesentery Research Publications

Subject area	No. of articles	%
Medicine	7495	59.51
Biochemistry, Genetics and Molecular Biology	1698	13.48
Immunology and Microbiology	1261	10.01
Veterinary	563	4.47
Pharmacology, Toxicology and Pharmaceutics	481	3.82
Agricultural and Biological Sciences	415	3.29
Multidisciplinary	223	1.77
Nursing	175	1.39
Health Professions	144	1.14
Neuroscience	140	1.11
Total	12595	100.00

Table 4 lists the top ten subjects of Mesentery research during the time period under consideration. According to the analysis, the majority of the articles on Mesenteryfor the study period were published in Medicine (7495 or 59.51%) research publications, Biochemistry, Genetics and Molecular Biology(1698 or 13.48%) research publications, and Immunology and Microbiology (1261 or 10.01%). Neurosciencehas the fewest journal publications 140(1.11%) research publications. A total of 12595 (100%) research publications were published during the ten-year study period.

Document Types of Mesentery Research Publications

Table 5: Document Types of Mesentery Research Publications

Document type	No. of articles	%	Cumulative	%
Article	7932	83.14	7932	7.18
Review	650	6.81	8582	7.77
Letter	317	3.32	8899	8.05
Note	264	2.77	9163	8.29
Book Chapter	184	1.93	9347	8.46
Editorial	70	0.73	9417	8.52
Conference Paper	69	0.72	9486	8.58
Short Survey	47	0.49	9533	8.63
Book	2	0.02	9535	8.63
Erratum	2	0.02	9537	8.63
Retracted	2	0.02	9539	8.63
Undefined	1	0.01	9540	8.63
total	9540	100.00	110510	100.00

Table 5 shows that, document types during the ten-year study period on Mesentery Research publications. From *Table 5* it is identified that a maximum of 7932 (83.14%) research publications are contributed by Table 5, presents the distribution of document type in Mesentery Research publications over ten -year study period. According to table 5, the analysis reveals that the majority of research publications. Totalling 7932 (83.14%), consist of articles, followed by 650 (6.81%) research are review research publications. This study confirms that articles and reviews together contribute more than 89.95% of the research publications, while the remaining (317 or 3.32%) are categorized letters, (264 or 2.77%) Note, (184 or 1.93%), Book Chapter, (70 or 0.73%) editorials, (69 or 0.72%) conference paper, (47 or 0.49%) short surveys, (2 or 0.02%) book, (2 or 0.02%) Erratum, (2 or 0.02) Retracted, (1 or 0.01%) Undefined.

Time Series Analysis

Time series analysis reveals estimated growth values identified based on previous data. A straight line equation is adapted to measure future values based on past data. The time series analysis has been employed following the approach outline by **Jayeshankar** and **Ramesh Babu (2013)**[12] and **Ravichandran and Vivekanandhan (20210).**[13]

Time Series Analysis Mesentery Research Publications

Table 6: Time Series Analysis Mesentery Research Publications

Year	Count (Y)	X	X2	XY
2013	903	-5	25	-4515
2014	897	-4	16	-3588
2015	858	-3	9	-2574
2016	832	-2	4	-1664
2017	879	-1	1	-879
2018	884	1	1	884
2019	922	2	4	1844
2020	1040	3	9	3120
2021	1198	4	16	4792
2022	1127	5	25	5635
Total	9540		110	3055

Table 6 shows that the time series analysis formula has been predicted for the Mesentery Research publications for the years 2025 and 2030

The straight Line Equation is

$Y = a + bx$

Here,

$\sum Y = 9540, \sum X^2 = 110, \sum XY = 3055$

$a = \sum Y/N = 9540/10 = 954$

$b = \sum XY/\sum X^2 = 3055/110 = 27.77 = 27$

Estimated publications in the year 2025 are when X=2025-2015=10

$Y = a + bx$

$= 954 + (27*10) = 954 + 270 = 1224$

The Estimated literature in 2030 is when X=2030-2015=15

$Y = a + bx$

$= 954 + (27*15) = 954 + 405 = 1359$

The projected growth based on a statistical time series analysis application is anticipated in Mesentery Research papers to be about equal to 1224 in 2025 and approximately equal to 1359 in 2030. At that point, a thorough investigation proved that there is a growing tendency in the papers on Mesentery Research.

Institutions-wise Contributions Mesentery Research Publications

Table 7: Institutions-wise Contributions Mesentery Research Publications

Lnstitutions	Publications	%	Citations	%	H-Index	CPP	RCI
Harvard Medical School	115	16.11	4509	23.69	35	39.21	1.47
Inserm	81	11.34	2902	15.25	28	35.83	1.34
Universidade de São Paulo	72	10.08	1145	6.02	16	15.90	0.60
Cleveland Clinic Foundation	69	9.66	2295	12.06	23	33.26	1.25
Ministry of Education China	67	9.38	1258	6.61	18	18.78	0.70
Huazhong University of Science and Technology	65	9.10	473	2.49	12	7.28	0.27
Tongji Medical College	63	8.82	717	3.77	14	11.38	0.43
National Institutes of Health NIH	62	8.68	1907	10.02	25	30.76	1.15
Mayo Clinic	60	8.40	1913	10.05	21	31.88	1.20
Massachusetts General Hospital	60	8.40	1915	10.06	18	31.92	1.20
Total	714	100.00	19034	100.00			

Table 7 lists the top ten Mesentery Research institutions during the study period. According to the analysis, the Harvard Medical Schoolpublished the most articles on Mesentery research, with 115 (16.11%), followed by the Inserm with 81 (11.34%), and the Universidade de São Paulowith 72 (10.08%). Mayo Clinicand Massachusetts General Hospitalhas the fewest journal publications totaling60(8.40%).

The institutions with the most citations is associated with 4509 (23.69%) research publications, featuring and the H-index of 35, a CPP of 39.21, and an RCI is 1.47. The second institution has an H-index of 28, a CPP of 35.83, and an RCI of 1.34, with 2902 (15.25%) research publications. Huazhong University of Science and Technologyhas the fewest citations, with 473 (2.49%) research publications.an H-index of 12, a CPP of7.28, and an RCI of0.27.

Journals wise Contributions Mesentery Research Publications

Table 8: Journals wise Contributions Mesentery Research Publications

Journal	No. of articles	%	Citations	%	H-Index	CPP	RCI
International Journal Of Surgery Case Reports	227	21.50	857	8.66	12	3.78	0.40
Plos One	144	13.64	3539	35.75	33	24.58	2.62
Frontiers In Immunology	127	12.03	2917	29.47	31	22.97	2.45
BMJ Case Reports	114	10.80	288	2.91	8	2.53	0.27
Zhonghua Wei Chang WaiKeZaZhi Chinese Journal Of Gastrointestinal Surgery	98	9.28	128	1.29	5	1.31	0.14
Journal Of Pediatric Surgery Case Reports	97	9.19	1098	11.09	16	11.32	1.21
Colorectal Disease	72	6.82	155	1.57	6	2.15	0.23
Abdominal Radiology	61	5.78	63	0.64	4	1.03	0.11
Medicine United States	61	5.78	441	4.45	11	7.23	0.77
Surgical Endoscopy	55	5.21	413	4.17	10	7.51	0.80
Total	1056	100.00	9899	100.00			

Table 8 lists the top ten journals for Mesentery Research during the study period. According to the analysis, the majority of the articles on Mesentery research for the study period were published in the International Journal of Surgery Case Reports with 227 (21.50%), Plos One 144 (13.03%), and Frontiers In Immunology 124 (12.03%). Surgical Endoscopy 55 (5.21%) have the fewest journal publications.

3539 (35.75%) research publications have received the most citations, and the H-index is 33, the CPP is 24.58, and the RCI is 2.62. The H-index is 31, the CPP is 22.97, and the RCI is 2.45, with 2917 (29.47%) research publications following. The lowest number of citations is 63 (0.64%), the H-index is 4, the CPP is 1.04, and the RCI is 0.11.

Country-wise Contributions Mesentery Research Publications

Table 9: Country-wise Contributions Mesentery Research Publications

Country	No.of articles	%	Citations	%	H- Index	CPP	RCI
United States	2363	31.57	36346	31.72	82	15.38	1.00
China	1351	18.05	17749	15.49	61	13.14	0.86
Japan	961	12.84	9579	8.36	45	9.97	0.65
United Kingdom	543	7.25	13648	11.91	54	25.13	1.64
India	473	6.32	2344	2.05	21	4.96	0.32
Germany	441	5.89	11713	10.22	52	26.56	1.73
Italy	416	5.56	6278	5.48	39	15.09	0.99
France	329	4.40	7425	6.48	46	22.57	1.47
Spain	312	4.17	6208	5.42	40	19.90	1.30
Brazil	296	3.95	3299	2.88	26	11.15	0.73
Total	7485	100.00	114589	100.00			

Table 9 depicts the geographical distribution of the top 10 countries of publications 7485 publications, the United States contributed the most articles, amounting to more than 2363 (31.57%) of the total publication, followed by China 1351 (18.05%) and Japan 961 (12.84%), these three countries contributed more than 62.46% of the world publications in the field of Mesentery Research. Furthermore, United Kingdom 543 (7.25%), India 473 (6.32%), Germany 441 (5.89%), Italy 416 (5.56%), France 329 (4.40%), Spain 312 (4.17%), and Brazil 296 (3.29%) are observed.

36346(31.72%) research publications have received the most citations, the H-index is 82, the CPP is 15.38, and the RCI is 1.00. The H-index is 61, the CPP is 13.14, and the RCI is 0.86, followed by 13648(11.91%) research publications. The research publications with the fewest citations have 2344(2.05%), the H-index is 21, the CPP is 4.96, and the RCI is 0.32.

Top Most Productive Keywords in Mesentery Research Publications

Table 10: Top 10 Most Productive Keywords in Mesentery Research publications

Keyword	No. of articles	%
Article	6697	15.95
Human	6033	14.36
Male	4507	10.73
Humans	4329	10.31
Female	4069	9.69
Nonhuman	3518	8.38
Mesentery	3312	7.89
Priority Journal	3281	7.81
Controlled Study	3130	7.45
Mesentery Lymph Node	3122	7.43
Total	41998	100.00

Table 10 shows the contribution of the most prolific keyword in the field of Mesentery research. It is observed that Mesentery research has contributed the greatest number ofArticle with 6697 (15.95%), followed by Human with 6033 (14.36%), and Malewith 4507 (10.73%). Mesentery Lymph Node

had the fewest research publications 3122 (7.43%). During the ten-year study period, 41998 (100%) research publications were published

Funding Agencies of Mesentery Research publications

Table 11: Funding Agencies of Mesentery Research publications

Funding agency	No. of articles	%
National Institutes of Health	512	22.64
National Natural Science Foundation of China	440	19.46
National Institute of Allergy and Infectious Diseases	237	10.48
Japan Society for the Promotion of Science	218	9.64
National Cancer Institute	193	8.54
National Institute of Diabetes and Digestive and Kidney Diseases	190	8.40
National Heart, Lung, and Blood Institute	170	7.52
National Institute of General Medical Sciences	111	4.91
Conselho Nacional de Desenvolvimento Científico e Tecnológico	101	4.47
Deutsche Forschungsgemeinschaft	89	3.94
Total	2261	100.00

Table 11 illustrates the contribution of the most prolific funding agencies of MesenteryIt is observed that National Institutes of Health, has contributed the highest number Mesentery Research publications with 512 (22.64%) research publications. followed by the National Natural Science Foundation of Chinawith 440 (19.46%) research publications, and the National Institute of Allergy and Infectious Diseases with 237(10.48%) research publications. The Deutsche Forschungsgemeinschafthas the s fewest research publications totaling 89(3.94%). Over the ten-year study period, a total of 2261(100%) research publications were published.

Highly Cited Paper Mesentery Research Publications

Table 12: Highly Cited Paper Mesentery Research Publications

Titles	Citations	Document Type
Clair D.G.; Beach J.M. et.al. (2016) Mesenteric ischemia, New England Journal of Medicine, 374(10): 959-968.	333	Review
Wang L.; Tang L.; et.al. (2020) A purified membrane protein from Akkermansia muciniphila or the pasteurised bacterium blunts colitis associated tumourigenesis by modulation of CD8 + T cells in mice, Gut, 69(11): 1998-1997.	293	Article
Perez-Lopez A.; Behnsen J.; et.al.(2016) Mucosal immunity to pathogenic intestinal bacteria, Nature Reviews Immunology, 16(3):135-148.	229	Review
Pelly V.S.; Kannan Y.; et.al. (2023) IL-4-producing ILC2s are required for the differentiation of TH2 cells following Heligmosomoidespolygyrus infection, Mucosal Immunology, 9(6):1407-1417.	161	Article
Meng J.; Yu H.; et.al. (2013) Morphine Induces Bacterial Translocation in Mice by Compromising Intestinal Barrier Function in a TLR-Dependent Manner, PLoS ONE 8(1) Art.No. e54040.	155	Article
Schreiber H.A.; et.al. (2013) Intestinal monocytes and macrophages are required for T cell polarization in response to Citrobacterrodentium, Journal of Experimental Medicine, 210(10): 2025-2039.	144	Article
Nouri M.; Bredberg A.; et.al. (2014) Intestinal barrier dysfunction develops at the onset of experimental autoimmune encephalomyelitis, and can be induced by adoptive transfer of auto-reactive T cells, PLoS ONE, 9(9) Art.No e1063335.	140	Article
deKivit S.; Tobin M.C.; et.al. (2014) Regulation of intestinal immune responses through TLR activation: Implications for pro- and prebiotics, Frontiers in Immunology, 5 FEB, ARTICLE 60.	139	Short survey

Titles	Citations	Document Type
Ahluwalia B.; Magnusson M.K.; Öhman L. (2017) Mucosal immune system of the gastrointestinal tract: maintaining balance between the good and the bad, Scandinavian Journal of Gastroenterology, 52(11): 1185-1193.	138	Review
Stier M.T.; Zhang J.; et.al. (2018) IL-33 promotes the egress of group 2 innate lymphoid cells from the bone marrow, Journal of Experimental Medicine, 215(1): 263-281.	134	Article

In Table 12 the highly cited paper in Mesentery researchwith the highest citations 333 of Clair D.G.; Beach J.M. *et.al.* (2016) Mesenteric ischemia, New England Journal of Medicine, 374 (10): 959-968. Followed by a highly cited paper is citations 293 of Wang L.; Tang L.; *et.al.* (2020) a purified membrane protein from Akkermansia muciniphila or the pasteurised bacterium blunts colitis associated tumour genesis by modulation of CD8 + T cells in mice, Gut, 69(11): 1998-1997. The third highly cited paper is citations 229 of Perez-Lopez A.; Behnsen J.; *et.al.* (2016) Mucosal immunity to pathogenic intestinal bacteria, Nature Reviews Immunology, 16(3):135-148. In the document type total article 6, review 03, and Short survey 01.

MAJOR FINDINGS

- It has been shown that the frequency of Mesentery publications is extremely high in the present era compared to initial years of the study. Mesentery research papers exhibit an increasing trend, with the maximum number of research papers, 1198 (12.56%), was published in the year 2021, The research publications with the highest number of citations are those with 30807 (22.04%), boasting a CPP of 34.34 and an RCI of 2.34.
- During the RGR of articles has sturdily decreased starting from 0.13 in 2022 and reaching 1.36 in 2014. Simultaneously, the time required for an article to double in publications has progressively increased, going from 0.51 in 2014 to 5.54 in 2022.
- During the study, author Coffey, J.C. from the United States holds the highest number of the publications, contribute 49 (23.56%), The most citations are contribute to 1235 (38.41%) research publications, the featuring an H-index of 18, a CPP of 25.20, and an RCI of1.63.
- The majority of the articles on Mesenteryfor the study period were published in Medicine (7495 or 59.51%) research publications, a maximum of 7932 (83.14%) research publications are contributed by *Table 5*, presents the distribution of document type in Mesentery research publications over ten -year study period
- During time series analysis application is anticipated in Mesentery research papers to be about equal to 1224 in 2025 and approximately equal to 1359 in 2030. At that point, a thorough investigation proved that there is a growing tendency in the papers on Mesentery research.
- Mesentery research institutions during the study period. According to the analysis, the Harvard Medical School published the most articles on Mesentery research, with 115 (16.11%), The institutions with the most citations is associated with 4509 (23.69%) research publications, featuring and the H-index of 35, a CPP of 39.21, and an RCI is 1.47.
- During the majority of the articles on Mesentery researchfor the study period were published in the International Journal of Surgery Case Reports with 227 (21.50%), 3539 (35.75%) research publications have received the most citations, and the H-index is 33, the CPP is 24.58, and the RCI is 2.62
- During the United States contributed the most articles, amounting to more than 2363 (31.57%) of the total publication, 36346 (31.72%) research publications have received the most citations, the H-index is 82, the CPP is 15.38,
- Regarding the keyword greatest number of Mesentery research publications was contributed by Articles with 6697 (15.95%), and the funding National Institutes of Health, has contributed the highest number Mesentery research publications with 512 (22.64%) research publications.
- The highly cited paper in Mesentery with the highest citations in of Clair D.G.; Beach J.M. *et.al.* (2016) Mesenteric ischemia, New England Journal of Medicine, 374(10): 959-

968, with 333 citations and document type of review.

CONCLUSION

The present study is a scientometric analysis in the field of global research productivity on Mesentery over the Scopus Database for the period of 2013-2022. The study used various scientometric tools like year wise distribution, Document wise distribution, country wise distribution, Time series analysis with highly cited papers, etc. The study makes its relevance clear by highlighting the key publications fields of research, most prolific authors and productive journals, etc. in the mesentery research. This study will assist the field of library and information science in selecting the appropriate journals for medical research on the mesentery, as well as researchers who are primarily interested in this field and wish to publish their work in it. This scientometic study can contribute to the advancement of knowledge about mesentery research in the field of medical science by offering important insights into the research landscape and trends in the field. It can also guide future research collaborations and directions.

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