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Article

GFsa Index for Adjustment of the Researchers' Productivity/Ranking, Considering the Two Most Relevant Variables Neglected: Total Number of Citations and "Scientific Age" – A Proof of Concept with the Assessment of 1020 Highly-Cited Researchers in Dentistry

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Abstract: Background: Research articles are essential for describing new ideas, techniques, and procedures and consolidating concepts. It creates an opportunity to expose studies and publicly assimilate published knowledge. Therefore, one of them is the most used and accepted index to verify the author's scientific impact is the H-index or Hirsch index. It provides a robust single metric that combines quality and quantity. Therefore, it presents disadvantages, (1) researchers with shorter scientific careers may have fewer articles and citations than those with longer scientific life; (2) it allows scientists to receive citations even if no new papers are published; (3) it is only useful for comparing the better scientists in a field; (4) this indicator can never decrease; (5) it is only weakly sensitive to the number of citations received; (6) the major and minor (or no) contributor in the research gained equal h-index. Then, the H-index ignores the total of citations and the time of a researcher's experience ("scientific age" [sa]). **Objective:** Thus, the goal of this study was to present a new index system (GFsa index ©) based on the two variables completely forgotten (total of citations and "scientific age"), introducing a new terminology "scientific age", to evaluate the best-ranked researchers in Dentistry. **Methods:** The AD Scientific Index was used, and all researchers included in this study were cited in the AD Scientific Index (2024) in the Dentistry field and had the Google Scholar page accessible for a consultation to manually obtain the total of citations and calculate the "scientific age". The information was retrieved by two authors (G.V.O.F. and J.C.H.F.), who assessed the data twice to avoid errors or mistakes. For inclusion: a minimum H-index value of 30; for exclusion: (i) the author did not have a Google Scholar page; (ii) duplicated author; or (iii) presented any suspicious activities about manipulation of articles. Then, a dataset of all researchers who were reported in Dentistry was prepared (name, H-index, i10 index, and publications). The formula developed and applied was $GFsa = (\text{total number of citations}) / (\text{"scientific age"})^2$. The Pearson correlation statistically evaluated the data obtained; the confidence interval was 95%. **Results:** A total of 9,093 researchers in Dentistry were recorded, of whom 1,020 were included. Then, we collected all 1,020 researchers' Google Scholar data (publications, citations, and indexes), and each researcher's total citations and "scientific age" were registered and calculated. The mean "scientific age" registered was 34.18 ± 13.34 (standard error of mean = 0.4181). With this information and data collected, GFsa index © was calculated, presenting a minimum value of 0.2186 and a maximum of 154.8 (mean = 10.33 ± 11.82 ; standard error of mean = 0.3706). Then, the data was organized and sorted following the ranking obtained in the GFsa index ©. The Pearson correlation showed that the H-index had a weakly positive association with the researcher's "scientific age"; this fact means that the H-index will increase according to the "scientific age" increase. Otherwise, a moderately negative correlation between GFsa and "scientific age" was demonstrated, whereby a higher GFsa

© had a lower “Scientific age”. This assessment shows that the variables introduced were fairly used. Moreover, a positive correlation was observed between both indexes (H-index and GFsa). **Conclusion:** It is possible to conclude that the new variable reported (“Scientific age”) and using the total citations brought a fairer and more feasible evaluation among the researchers. Thus, we are launching the new GFsa index © and the new information named “Scientific age” for the first time in the literature. The future perspective of the GFsa © application will be (1) the evaluation of the 9,093 researchers in Dentistry (total initially registered), including more authors/researchers in the Dentistry field, (2) expanding the exposition of this new index for other areas of the knowledge, and (3) provide free access of all data through the website (<http://gfindex.us.to>).

Keywords: Dentistry; Research; Index; Citation; Ranking

1. Introduction

Research articles are essential for describing new ideas, techniques, and procedures and consolidating concepts. It creates an opportunity to expose studies and publicly assimilate published knowledge [1]. The depth and extension of recognition, acceptance, and utilization of methods transmitted by these articles will result in the author's metrics. Currently, author metrics are available at Scopus (Elsevier), Web of Science, Google Scholar Citations, ImpactStory, ResearchGate, Academia.edu, and Plum Analytics [2]. Five main metrics are used to evaluate quality: h-index, i10-index, g-index, Eigenfactor, and Article Influence Score, but others also exist [3,4]. Therefore, one of them is the most used and accepted to verify the author's scientific impact: the h-index or Hirsch index. It provides a robust single metric that combines quality and quantity.

1.1. H-Index: The Most Important Currently Index

Hirsch (2005) [5] proposed a number (H-index) as a simple and useful way to characterize the cumulative scholarly impact of a researcher's scientific output. It measures the productivity and impact of an author's published study [2]. It is defined as the highest number of publications of a scientist that received h or more citations each, while the other publications have not more than h citations each [6]; e.g., a researcher with an h-index of 10 had published 10 papers, each of which has been cited by others at least 10 times. Therefore, comparing individuals within different disciplines may not be optimal, even though they can be closely related [7–9]. Then, it is considered discipline-size dependent. Thereby, the pattern of citations and publications differs across various medical and health sciences disciplines.

Due to the importance of this index, it was suggested that researchers with values over 18 could be promoted to full professors, and it can be used as part of the data required by some tenure/promotion committees [10]. An H-index between 3 and 5 can be set as a standard for assistant professors; 8 to 12 for associate professors; and 15 to 20 is a good standard for appointment to full professors. In many disciplines, a general rule is followed for an acceptable H-index matching the number of years the author has worked in that discipline. Also, a good H-index can be considered 20; 40 is outstanding; and 60 is exceptional; therefore, high numbers are reached after many years of research life [5]. H-index has several advantages: (1) it is a reliable and robust indicator of scholarly achievement [11]; (2) it applies to researchers individually or in a group; (3) it is a mathematically simple index; (4) it combines two types of activity (in the original setting this is citation impact and publications); (5) any document can be included; (6) publications that are hardly ever cited do not influence the h-index - the h-index discourages publishing unimportant work; (7) single peaks (top publications) have hardly any influence on the h-index; (8) h-index is closely correlated to total publication output [5]; and (9) it can be easily obtained from databases such as Google Scholar, ISI Web of Knowledge, and Scopus. It is important to highlight some critical factors when using Google Scholar as source: (1) in many cases, it indexes the names of only the first and last authors; (2) it uses initials rather than first names, so searches may yield articles from a variety of authors who share

first initials and last names, and (3) it does not totally capture articles in languages other than English (LOTE articles), leading to mistakes or underestimation of the H-index. Therefore, in spite of these questions, the comparison of h-indices obtained by using Google Scholar and Scopus were highly correlated [10].

As disadvantages, (1) the H-index puts, in its original setting [5], newcomers at a disadvantage since both publication output and observed citation rates will be relatively low (it is based on long-term observations) - researchers with shorter scientific careers may have fewer articles and citations than with longer scientific life; (2) it allows scientists to rest on their results (H-index obtained), since the number of citations received may increase even if no new papers are published - influence of researcher "scientific age or academic age"; (3) it is only useful for comparing the better scientists in a field (it does not discriminate among average scientists); (4) this indicator can never decrease; (5) it is only weakly sensitive to the number of citations received; (6) the major and minor (or no) contributor in the research gained equal h-index; there is the influence of self-citation of an author by quoting earlier research publication [12]. Then, some relevant criticisms were raised for the H-index because it may provide incorrect information about a scientist's output [13], such as (1) overall citations, neglecting single contributions; (2) does not consider the context of the citations - in respected journals (with high impact factor [IF]) or otherwise; (3) does not account for the length of the author's byline, and that it is directly related to an author's number of publications [14]; (4) scientists with outstanding and highly cited articles but few in quantity, cannot achieve a high H-index. Then, it is difficult to propose a competitive or acceptable H-index for the recruitment/promotion of faculties or for funding and grants purposes.

Furthermore, the H-index is also affected by the accuracy of the citation database used for its calculation, which different databases may present different H-indexes because each database covers different journals and years of indexation [15]. In addition, there was an incorrect correlation between the H-index and the researcher's rank position; some authors [10] suggested that the H-index increases according to academic rank increases; the article reported that the persons with the highest H-indices were the Chairs of the department. This may occur because the H-index is also related to the time spent in a discipline (the longer the time, the more citations one's papers will get). On the other hand, it is extremely incorrect to affirm, mainly because this index never used the variable time to ponder the researchers' impact.

1.2. Time: One of the Most Important Variable

Time is one of the most important variables in human life and society. Time anchors our references: past, present, and future, categories used for life events (births, meetings, and work deadlines) and everything. Moreover, Zeno's paradoxes affirm that "time is not a reality, but a concept or a measure" [16], whereas Albert Einstein fundamentally changed the way of thinking about time. In his theory, time is real and relative; it is a dimension just as the three spatial ones, and they are all intertwined into a four-dimensional 'spacetime', forming the universe. Moreover, Kelly and Jennions [17] argued that it is distasteful to reduce a researcher's lifetime work to a mere numerical value, as Einstein rightly pointed out: "Not everything that counts is countable, and not everything that is countable counts" [18].

Thus, within the time concept of a measure, many existent indexes, including the H-index, neglected this important variable. Otherwise, some indices considered the variable TIME to formulate the researcher's impact: the Age-weighted citation rate (AWCR, AWCRpA [AWCR per Author]), AW-index (age-weighted) [19]. The AWCR measures the number of citations to an entire body of work, adjusted for the age of each individual paper, where the number of citations to a given paper is divided by the age of that paper. The AWCRpA is similar to the plain AWCR but is normalized to the number of authors for each paper. The AW-index is adjusted for the age of each individual paper (the older the researcher is, the higher your h-index will be) and was defined as the square root of the AWCR to allow comparison with the h-index. The AR-index [19] is the square root of the sum of all age-weighted citation counts over all papers that contribute to the h-index.

1.3. Objective

Currently, there is not a single perfect bibliometric index that accurately describes a researcher's impact. Although the H-index is the most used, combining two or more metrics was suggested [20]. However, due to the lack of total citations and “scientific age” consideration, the aim of this study was to present a new index system (GFsa index) based on the two variables completely forgotten (total of citations and “scientific age”), considering both as the fairest way to rank the scientists in Dentistry. This proof of concept was developed, and the best-ranked researchers in Dentistry were included.

2. Materials and Methods

2.1. H-Index Explanation

The h-index measures the number of publications (productivity) as well as how often they were cited. It is determined based on the calculation (h-index = n of publications with a citation number greater than or equal to h). For example, if 10 publications are cited 10 times or more, the researcher will receive an h-index of 10. Therefore, this index, which is currently the most relevant, has two problems based on the lack of consideration of the variable time and forgetting the total of citations that a researcher can receive.

2.2. “Scientific Age” or Researcher’s Lifetime: The Concept

This is the hardest parameter to define and acquire; maybe, for this reason, no other index has tried to use it. The definition is the time spent by a researcher since the beginning. Therefore, finding this first researcher’s moment is not simple; moreover, there is no registry to prove when the researcher “was born”. Then, the most practical and feasible data to help in this concept was the first time the author appeared in the literature, which was considered the “researcher’s birthday”.

It could be considered many landmarks in the author’s life, such as (1) when the researcher started their first investigation (first contact with science); or (2) when they started their master’s or Ph.D. Therefore, in order to standardize and permit feasible and simple access to the “researcher’s birthday”, it was considered the “YEAR” of the first publication publicly found, which means the year of the first article that the authors publicly appeared in, easily sought and found in Google Scholar.

It was calculated following the formula: (i) current year; less (ii) the year of the first publication found in the Google Scholar (in case of questions, PubMed/MedLine, PubMed Central, and Scopus databases were consulted). Then, “scientific age” (sa) = (Current year) – (Year of the first publication).

2.3. Databases Used and Researchers’ Inclusion

The recently published AD Scientific Index was used as consultation (<https://www.adscientificindex.com/?subject=Medical+and+Health+Sciences+%2F+Dentistry>) (data obtained on March 18th, 2024). All researchers included in this study were cited in the AD Scientific Index (2024) in the Dentistry field and had the respective Google Scholar page accessible and consulted (scholar.google.com) to obtain the desired information, which was performed by two authors (G.V.O.F. and J.C.H.F.). The data were assessed twice to avoid error or mistake.

There was a limitation/cutline for the inclusion of a minimum H-index value of 30 (March 29th, 2024). The author was excluded whether: (i) did not have a Google Scholar page; (ii) duplicated author; or (iii) presented any suspicious activities about manipulation of articles. We collect all researchers' Google Scholar publications, including citation data. We filter out the first publication in order to obtain the year.

2.4. Total Citations

It has been observed that the H-index or i10 index count only some citations according to their parameters. This fact brings disadvantages as observed, e.g., a researcher with around 10,000 citations

received an H-index of 33, and another research with 3,700 citations also received an H-index of 33. Analyzing and observing this question deeply, we judged that it was not fair. Then, we also introduce the use of total citations in order to correctly qualify the professional.

2.5. Data Collection for the Highly Cited Researchers in Dentistry

We construct a dataset of all researchers who were reported in Dentistry. The name, H-index, i10 index, and publications were retrieved. Then, we selected as previously established the highly cited researchers via Google Scholar. The retrieved researchers were sorted by the H-index. Each author included had the Google Scholar consulted.

2.6. GFsa © Formula

Whereas the H-index can be considered deficient in correctly evaluating the researcher, the GF index considers the researcher's real impact, evaluating the researcher's "scientific age" and taking into consideration the total citations received. It brings better weighting and comparison between all professionals, independent of age. It permits the elimination of the disadvantages of old researchers and new ones.

Within this context, considering the "scientific age" as the most important parameter, the formula used to obtain the GFsa © was:

GFsa = total of citations

("scientific age")²

2.7. Statistical Analysis

The data obtained was statistically evaluated. The Pearson correlation coefficient was measured, quantifying the strength and direction of the linear relationship between two quantitative variables (Index and "Scientific age"). The confidence interval was 95%. The range of the coefficient r takes values between -1 and 1. A positive r indicates a positive correlation, which means when one variable increases, the other tends to increase as well; whereas a negative r indicates a negative correlation: when one variable increases, the other tends to decrease. An r value of 0 implies no linear relationship between the variables. The strength of the correlation followed: (1) strongly positive: r > 0.5; (2) moderately positive: 0.3 < r ≤ 0.5; (3) weakly positive: 0 < r ≤ 0.3; (4) weakly negative: -0.3 ≤ r < 0; (5) moderately negative: -0.5 ≤ r < -0.3; and (6) strongly negative: r < -0.5.

3. Results

After manually evaluating the AD Scientific Index, we recorded a total of 9,093 researchers in Dentistry, of whom 1,020 were included, respecting the H-index of at least 30. All of them had Google Scholar also manually analyzed. Then, we collected all 1,020 researchers' Google Scholar data (publications, citations, and indexes). Specifically, each researcher's total citations and "scientific age" were registered and calculated (all data will be available at <http://gfindex.us.to>).

The minimum H-index registered was 30 (as previously established), and the maximum was 134 (mean = 46.22 ± 16.94; standard error of mean = 0.5311). The mean "scientific age" registered was 34.18 ± 13.34 (standard error of mean = 0.4181), with a minimum of 7 and a maximum of 103. With this information and data collected, GFsa index was calculated, presenting a minimum value of 0.2186 and a maximum of 154.8 (mean = 10.33 ± 11.82; standard error of mean = 0.3706) (Supplementary Table S1). Then, the data was organized and sorted following the ranking obtained in the GFsa index (Table 1).

Table 1. Comparison of the result and researchers’ ranking between H-index and GFsa index (sorted by GFsa ranking). Green = position arrived; Red = position decreased; Yellow = kept the same position.

Researchers	H-index	H-index ranking	GFsa index	GFsa index ranking	What's happened (ranking)?
Georgios Kotsakis	38	583	154.828402	1	582
Qian Wang	123	4	109.997622	2	2
Marta Revilla León	38	583	102.387755	3	580
Alberto Monje	57	178	78.5763889	4	174
Ratilal Lalloo	57	178	72.8310658	5	173
Yu-Kang Tu	65	118	65.2928	6	112
Maha El Tantawi	43	432	63.3767313	7	425
Van Meerbeek Bart	134	1	60.5198962	8	-7
Andy Wai Kan Yeung	37	618	60.0082645	9	609
Richard J Miron	59	161	57.0488889	10	151
Songtao Shi	112	10	56.0138776	11	-1
Takeshi Noda	65	118	55.3671875	12	106
Giuseppe Troiano	41	488	54.7933884	13	475
José F. Siqueira Jr.	117	7	54.0249703	14	-7
Bogna Stawarczyk	67	101	52.7301038	15	86
Jürgen Groll	69	89	51.5575	16	73
Mutlu Özcan	96	23	49.0919067	17	6
Yu Leo Lei	37	618	47.5804989	18	600
Mohammad Atai	39	555	47.4545455	19	536
Solmaz Maleki Dizaj	45	389	46.8106509	20	369
Nawshad Muhammad	53	236	46.2653061	21	215
Biao Ren	43	432	43.8977778	22	410
Frank Witte	43	432	43.705104	23	409
Yin Xiao	86	40	42.5701531	24	16
Andrew I Su	68	97	42.3264	25	72
Isabela N Rôças	91	33	42.112	26	7
İrena Sailer	61	142	41.7777778	27	115
Muhammad Sohail Zafar	56	196	41.7093426	28	168
Gabriel Kalil Rocha Pereira	36	669	40.93	29	640
Gaetano Isola	54	227	40.5039063	30	197
Wenjie Zhang	44	409	40.2307692	31	378
Spyridon N Papageorgiou	49	314	40.0828402	32	282
Shariq Najeeb	32	868	39.9305556	33	835
Donald Nixdorf	33	809	39.6280992	34	775
Pekka Vallittu	106	16	39.1337891	35	-19
Anton Sculean	102	19	39.0489074	36	-17
Hom Lay Wang	132	2	37.9315883	37	-35
David Herrera	74	70	37.7115385	38	32
Buser Daniel	127	3	36.9540816	39	-36

ML Mei	41	488	36.2959184	40	448
Guo-Hao (Alex) Lin	36	669	35.8016529	41	628
Hee Moon Kyung	39	555	34.1377778	42	513
Fernando Suárez López Del Amo	43	432	33.5277778	43	389
Zohaib Khurshid	53	236	32.1440443	44	192
Ronald Jung	81	53	32.0612245	45	8
Lussi Adrian	109	12	31.5533241	46	-34
Thomas Dietrich	69	89	31.2549428	47	42
Felipe Gonçalves Belladonna	40	519	31.2083333	48	471
Lobat Tayebi	66	110	31.0272109	49	61
William Giannobile	104	18	30.9247405	50	-32
Hsun Liang Chan	46	366	29.7688889	51	315
Rafael R Moraes	54	227	29.3573407	52	175
Cecilia Goracci	72	80	29.3008	53	27
Anibal Diogenes	49	314	28.8060942	54	260
Prasanna Neelakantan	44	409	28.5674741	55	354
Lippo Lassila	83	46	28.192602	56	-10
Stefan Priebe	111	11	27.931875	57	-46
Joo Cheol Park	39	555	27.0887574	58	497
Panos N Papapanou	85	42	26.6820988	59	-17
Elena Figuero Ruiz	48	332	26.6326531	60	272
Mona Nasser	41	488	26.631579	61	427
Marco Ciciu	61	142	26.3900227	62	80
Patrick Schmidlin	66	110	26.3667297	63	47
Martin Schimmel Mas	46	366	26.2802768	64	302
Daniela Prócida Raggio	46	366	26.1018519	65	301
Ammar Hassanzadeh Keshteli	46	366	26.058642	66	300
Caio Ferraz	67	101	26.0177515	67	34
Marco Versiani	58	165	25.9525	68	97
Gargi Sarode	32	868	25.8816568	69	799
Cristiano Tomasi	43	432	25.7324263	70	362
Elena M Varoni	37	618	25.6297578	71	547
Chen Yeng	37	618	25.4765625	72	546
Bruno Chrcanovic	62	134	25.4489796	73	61
Antonio Scarano	72	80	25.3288889	74	6
Panos Papaspyridakos	38	583	25.3125	75	508
Hercilio Martelli Júnior	44	409	25.0484429	76	333
Nagihan Bostanci	48	332	24.8919753	77	255
Helen Victoria Worthington	114	9	24.7348771	78	-69
Gustavo De-Deus	71	84	24.576	79	5
Valentim Barao	51	276	24.2993827	80	196
Praveen Arany	38	583	24.2382272	81	502

Junji Tagami	100	22	24.2016657	82	-60
Magda Feres	68	97	24.0534979	83	14
Rafael Sarkis-Onofre	30	973	23.9349112	84	889
Robert H Dworkin	105	17	23.9064	85	-68
Iain L Chapple	74	70	23.8653061	86	-16
Sachin Chakradhar Sarode	35	707	23.4755556	87	620
Steven Offenbacher	119	5	23.4431487	88	-83
Mahmoud Torabinejad	95	25	23.3331758	89	-64
Kimon Divaris	50	293	23.2797784	90	203
Cláudio Mendes Pannuti	44	409	23.2768166	91	318
Jan Cosyn	52	253	23.1972789	92	161
Yiu Yan Mike Leung	31	917	23.0902778	93	824
Flaviana Bombarda De Andrade	34	755	22.5138889	94	661
Ignacio Sanz Martin	31	917	22.2083333	95	822
Nasim Chiniforush	39	555	22	96	459
Hakan Arslan	52	253	21.9833795	97	156
Eduardo Fernández Godoy	38	583	21.8979592	98	485
Lars Sennerby	109	12	21.74625	100	-88
Paulo Henrique Braz Silva	30	973	21.6977778	101	872
Alireza Moshaverinia	40	519	21.5195313	102	417
Ove A Peters	70	85	21.4609782	103	-18
Ricardo Gariba Silva	39	555	21.4567474	104	451
Il Keun Kwon	64	126	21.4008876	105	21
Taha Özyürek	31	917	21.25	106	811
Marcelo Giannini	73	75	21.2066327	107	-32
Richard Geddie Watt	73	75	21.144169	108	-33
Maria Cassia Ferreira De Aguiar	37	618	20.8577778	109	509
Tuula Salo	102	19	20.8378685	110	-91
Atsuo Amano	69	89	20.6530471	111	-22
Gustavo Avila Ortiz	45	389	20.5827664	112	277
Indraneel Bhattacharyya	38	583	20.5429688	113	470
Russell S Taichman	72	80	20.5406574	114	-34
Geert Jmg Van Der Heijden	75	66	20.4816327	115	-49
Giampietro Farronato	37	618	20.2890625	116	502
G Lavigne	96	23	20.2647234	117	-94
Jukka P Matinlinna	55	211	19.9571006	118	93
Masoud Parirokh	41	488	19.8854167	119	369
Kenneth M Hargreaves	92	30	19.5358025	120	-90
Sinhoreti MA	74	70	19.2841797	121	-51
Georgios N Belibasakis	57	178	19.2204861	122	56
Sadeq Ali Al-Maweri	37	618	19.1835938	123	495
Maria Jose Hitomi Nagata	35	707	19.1530612	124	583

Kee-Joon Lee	35	707	19.0311419	125	582
Nurcan Buduneli	49	314	18.8975694	126	188
Morenike Oluwatoyin Folayan	53	236	18.7121914	127	109
Juliane Maria Guerreiro Tanomaru	56	196	18.6408318	128	68
Georgios E Romanos	84	44	18.6204082	129	-85
Gang Wu	38	583	18.5429688	130	453
Gustavo G Nascimento	43	432	18.5185185	131	301
Xiaohua Liu	41	488	18.4820416	132	356
Karan Gulati	35	707	18.3571429	133	574
Christopher D Lynch	60	151	18.21875	134	17
Yap Au	75	66	18.1914672	135	-69
Marco Antonio Bottino	49	314	18.1570248	136	178
Sašo Ivanovski	67	101	18.156956	137	-36
Cléa Adas Saliba Garbin	48	332	18.0920139	138	194
Momen A Atieh	34	755	18	139	616
Colman Mcgrath	76	61	17.8411387	140	-79
Ricardo Santiago Gomez	60	151	17.7530864	141	10
Tim Joda	39	555	17.7423823	142	413
İgnace Naert	93	29	17.7205786	143	-114
Paul H Krebsbach	83	46	17.6289262	144	-98
Yu Zhang	61	142	17.5395408	145	-3
Francisco Humberto Nociti Jr	68	97	17.526749	146	-49
Luca Fiorillo	46	366	17.432526	147	219
Irlan Almeida Freires	31	917	17.4222222	148	769
Nicola Cirillo	38	583	17.3598616	149	434
Veerasathpurush Allareddy	45	389	17.355	150	239
Phoebus Madianos	52	253	17.3377778	151	102
Hamid Jafarzadeh	36	669	17.2191358	152	517
Luca Testarelli	46	366	17.147448	153	213
Walter L Siqueira	50	293	17.0330579	154	139
Essam A Al-Moraissi	33	809	16.9940828	155	654
Thiago De Santana Santos	52	253	16.8696845	156	97
Lorenzo Lo Muzio	76	61	16.8559557	157	-96
Jonathan Broadbent	46	366	16.8185255	158	208
Bartold P Mark	92	30	16.8083951	159	-129
Mauricio Guimaraes Araujo	50	293	16.6773356	160	133
Arash Khojasteh	44	409	16.6675	161	248
Ricardo D Coletta	67	101	16.5229592	162	-61
Omar Kujan	33	809	16.5069252	163	646
Theodore Eliades	74	70	16.4573003	164	-94
Massimo Del Fabbro	82	50	16.3094136	165	-115
Alexandre Augusto Zaia	66	110	16.3090531	166	-56

Kevin Moss	49	314	16.2881944	167	147
Shaymaa Elsaka	32	868	16.2044444	168	700
Alessandra Reis	94	28	16.1592971	169	-141
Maria Leticia Ramos-Jorge	59	161	16.1472	170	-9
Marlise Inêz Klein	39	555	16.1315193	171	384
Takayuki Tsukuba	34	755	16.0566406	172	583
Roland Frankenberger	75	66	16.0361328	173	-107
Ricardo Teles	53	236	15.9961735	174	62
Yiu Cynthia Ky	68	97	15.9935721	175	-78
Atsushi Mine	41	488	15.9872	176	312
Jessica Y Lee	53	236	15.8472222	177	59
Martina Stefanini	32	868	15.8222222	178	690
Sufyan Garoushi	41	488	15.7962963	179	309
Tiziano Testori	107	14	15.7664609	180	-166
Saman Warnakulasuriya	95	25	15.7197001	181	-156
Ali Farahani	38	583	15.671875	182	401
Habib Benzian	34	755	15.6135734	183	572
Aj Feilzer	80	56	15.55	184	-128
Stephen Porter	87	39	15.5487528	185	-146
Ali Nosrat	30	973	15.52	186	787
Jorge Perdigao	81	53	15.4411357	187	-134
Akimasa Tsujimoto	38	583	15.4186851	188	395
Asgeir Sigurdsson	55	211	15.4023438	189	22
Ricardo M Carvalho	91	33	15.3524306	190	-157
Joseph Y Kan	48	332	15.2488889	191	141
Jamil Awad Shibli	61	142	15.2194787	192	-50
N Silikas	62	134	15.1640904	193	-59
Marcio Casati	61	142	15.0994898	194	-52
Woosung Sohn	42	462	15.0464	195	267
Stefano Fedele	56	196	15.0112	196	0
Jacques Nor	76	61	14.9714506	197	-136
Yan Wang	34	755	14.9443359	198	557
Thiago Saads Carvalho	36	669	14.8947368	199	470
Jae-Sung Kwon	31	917	14.8284024	200	717
Amid Ismail	76	61	14.7662106	201	-140
Lakshman Samaranayake	101	21	14.7539063	202	-181
Ye Ling	38	583	14.7475	203	380
Wasiu Lanre Adeyemo	48	332	14.6942149	204	128
Scribante Andrea	49	314	14.6394558	205	109
Alvaro Della Bona	67	101	14.6115917	206	-105
Jepsen Søren	89	37	14.272803	207	-170
Edward Ellis	91	33	14.2120181	208	-175

Jenneke Klein-Nulend	83	46	14.2025	209	-163
Shemesh H	40	519	14.1818182	210	309
Chaminda Jayampath Seneviratne	43	432	14.1775	211	221
Tarcília Aparecida Da Silva	57	178	14.1186225	212	-34
Cristiano Susin	58	165	14.078478	213	-48
Giuseppe Perinetti	52	253	14.0378072	214	39
Tae Ju Oh	37	618	14.035124	215	403
Anderson T Hara	53	236	13.976	216	20
Patricia Diaz-Moreno	41	488	13.9513889	217	271
Bastiaan P. Krom	46	366	13.8732639	218	148
Stefano Corbella	36	669	13.8641975	219	450
Lorenzo Franchi	86	40	13.7143595	220	-180
Felipe Paiva Fonseca	34	755	13.6712803	221	534
Kamran Awan	31	917	13.5822222	222	695
Fabrizio Mezzomo Collares	37	618	13.5802469	223	395
Trevor Steward	34	755	13.3554688	224	531
Venkateshbabu Nagendrababu	38	583	13.2932099	225	358
Ana Bedran Russo	46	366	13.28125	226	140
Thiago Machado Ardenghi	50	293	13.2400756	227	66
Janaina de Cássia Orlandi Sardi	33	809	13.1800554	228	581
Christoph Ramseier	42	462	13.1538462	229	233
Achille Tarsitano	33	809	13.1484375	230	579
Claudia Trindade Mattos	31	917	13.1428571	231	686
Razia Khammissa	35	707	13.1211073	232	475
Mario Pérez Sayáns	31	917	13.1132813	233	684
Duazary	31	917	12.9925	234	683
Jin Soo Ahn	32	868	12.7889273	235	633
Mine Koruyucu Yıldırım	34	755	12.7773438	236	519
Lucianne Cople Maia	55	211	12.7466667	237	-26
Laurence J Walsh	69	89	12.7376562	238	-149
Lucia Cevidanes	62	134	12.7158203	239	-105
Raphael Freitas De Souza	50	293	12.6864	240	53
Egija Zaura	46	366	12.6789536	241	125
Marco Carrozzo	58	165	12.6455078	242	-77
Chung How Kau	51	276	12.5843195	243	33
Eija Könönen	57	178	12.5665748	244	-66
Jose Bagan	73	75	12.530572	245	-170
Mariana Minatel Braga	44	409	12.510397	246	163
Fausto Medeiros Mendes	58	165	12.4877778	247	-82
Josimeri Hebling	63	132	12.4757786	248	-116
Stuart C White	53	236	12.4593426	249	-13
Ana Estela Haddad	34	755	12.4394464	250	505

Yara Teresinha Corrêa Silva Sousa	47	350	12.4322917	251	99
David Williams	51	276	12.4255983	252	24
Pablo Agustin Vargas	43	432	12.3639053	253	179
Salvatore Sauro	50	293	12.2721894	254	39
Regina Guenka Palma Dibb	47	350	12.224	255	95
Patricia Pereira	56	196	12.2015306	256	-60
Vittoria Perrotti	47	350	12.1197917	257	93
W Murray Thomson	95	25	12.1079592	258	-233
Paolo Capparè	39	555	12.0720222	259	296
Ignacio Sanz Sanchez	34	755	12.0702479	260	495
Mevlüt Çelikoğlu	40	519	12.0339506	261	258
Tais De Souza Barbosa	33	809	11.9537037	262	547
Evandro Piva	46	366	11.9392	263	103
Yong Wang	57	178	11.9366667	264	-86
Jung-Seok Lee	34	755	11.9273356	265	490
Paul M Speight	80	56	11.8899793	266	-210
Carlos Flores Mir	84	44	11.8441043	267	-223
Kaan Orhan	49	314	11.7503429	268	46
Gunnar E Carlsson	118	6	11.7342012	269	-263
Lyndon Cooper	66	110	11.7278393	270	-160
Sarah Kuehne	32	868	11.675	271	597
Martyn Cobourne	53	236	11.6594388	272	-36
Paul W Major	85	42	11.6315193	273	-231
Hee-jin Kim	55	211	11.6212279	274	-63
Ivo Krejci	73	75	11.596875	275	-200
Todd Kuiken	65	118	11.5900277	276	-158
Anne Marie Kuijpers-Jagtman	83	46	11.5122873	277	-231
Enilson A Sallum	64	126	11.5039063	278	-152
Daniela Garib	43	432	11.473251	279	153
Trombelli Leonardo	62	134	11.4691358	280	-146
Mário Tanomaru Filho	69	89	11.4514244	281	-192
Mario Alexandre Coelho Sinhoreti	57	178	11.4422477	282	-104
Frederico Canato Martinho	35	707	11.4359862	283	424
Despina Koletsi	31	917	11.4311111	284	633
Sotirios Tetradis	50	293	11.3804994	285	8
Euiseong Kim	47	350	11.359375	286	64
Toru Takeshita	34	755	11.2901235	287	468
Christos Katsaros	61	142	11.2819979	288	-146
Claudio R Leles	46	366	11.2806183	289	77
Jaime A Cury	82	50	11.2593934	290	-240
Margherita Fontana	50	293	11.2351717	291	2
Brenda Gomes	57	178	11.1992654	292	-114

Rogério M Castilho	40	519	11.1909722	293	226
Guglielmo Campus	50	293	11.1724138	294	-1
Lourenço Correr Sobrinho	57	178	11.1466667	295	-117
Justin Durham	41	488	11.0362812	296	192
Giampiero Rossi Fedele	34	755	11.0166205	297	458
Tolga Fikret Tozum	43	432	10.9895833	298	134
Loc Do	36	669	10.9886621	299	370
Nick Jakubovics	40	519	10.9135803	300	219
Carolina Castro Martins	44	409	10.8888889	301	108
Alessandro Vichi	51	276	10.8847656	302	-26
Sema Belli	50	293	10.8751715	303	-10
Aldiéris Alves Pesqueira	35	707	10.867284	304	403
Richard M Logan	48	332	10.866941	305	27
Soares DG	37	618	10.8611111	306	312
Leonardo Perez Faverani	32	868	10.7577855	307	561
Mariano Sanz	107	14	10.7378702	308	-294
Nikos Mattheos	44	409	10.6614583	309	100
Chengfei Zhang	47	350	10.5982143	310	40
Yasuhiro Kobayashi	45	389	10.5872781	311	78
Antonella Polimeni	64	126	10.5675676	312	-186
Dennis Tarnow	74	70	10.5603299	313	-243
Isaac Suzart Gomes Filho	34	755	10.5512465	314	441
Christoph Bourauel	56	196	10.5118367	315	-119
Hyeon Cheol Kim	41	488	10.5044379	316	172
Ziad Salameh	33	809	10.4487535	317	492
Nikolaos G Nikitakis	44	409	10.421875	318	91
Eliete Guerra	40	519	10.4045369	319	200
William Wade	64	126	10.3693827	320	-194
Frank Scannapieco	65	118	10.3622449	321	-203
Paul MH Dummer	82	50	10.3517429	322	-272
Shahriar Shahi	40	519	10.3175	323	196
Brent Larson	33	809	10.2731921	324	485
Daniela Rios	47	350	10.2411243	325	25
Roger Keller Celeste	44	409	10.2334184	326	83
Tze Ta Huang	90	36	10.1730915	327	-291
Paul Abbott	67	101	10.1314924	328	-227
Lars Andersson	61	142	10.1179016	329	-187
Paulo Francisco Cesar	45	389	10.1083676	330	59
Anil Kishen	62	134	10.0710204	331	-197
Marcelo Goiato	56	196	10.0390625	332	-136
Mohamed Bayome	30	973	10.0311111	333	640
Lior Shapira	54	227	10.000625	334	-107

Marzieh Alikhasi	34	755	9.93518519	335	420
Ronald Ordinola Zapata	50	293	9.90828402	336	-43
Paolo M Cattaneo	35	707	9.85255199	337	370
Heinz Theo Lübbers	36	669	9.85	338	331
Dennis Cvitkovitch	58	165	9.84256055	339	-174
Sivapathasundharam B	35	707	9.83931947	340	367
Gianrico Spagnuolo	51	276	9.81111111	341	-65
Josette Camilleri	66	110	9.76125	342	-232
Mannocci F	62	134	9.72169467	343	-209
Hyun Mo Ryoo	52	253	9.6955102	344	-91
Hyo Sang Park	45	389	9.68962351	345	44
Catherine F Poh	38	583	9.61458333	346	237
Nikolaos Pandis	63	132	9.60847334	347	-215
Ivan B Darby	35	707	9.5472	348	359
Vita Machiulskiene	35	707	9.5	349	358
Tien Min Gabriel Chu	35	707	9.46016647	350	357
Alessandro Leite Cavalcanti	38	583	9.44526627	351	232
Guilherme Janson	60	151	9.44125	352	-201
Yongchul Bae	52	253	9.41894531	353	-100
Soraya Coelho Leal	48	332	9.37217598	354	-22
Livia Azeredo A Antunes	32	868	9.36288089	355	513
Newell Johnson	92	30	9.33480749	356	-326
Débora Alves Nunes Leite Lima	31	917	9.33240997	357	560
Elif Bahar Tuna	32	868	9.32407407	358	510
Fernanda Carvalho Panzeri Pires De Souza	34	755	9.305	359	396
Luiz Felipe Valandro	69	89	9.30160619	360	-271
Kenio Costa De Lima	57	178	9.27918367	361	-183
Michael Mccullough	51	276	9.27734375	362	-86
Rafael Rodrigues Lima	38	583	9.27479339	363	220
Moharamzadeh K	31	917	9.2475	364	553
Stephen Challacombe	81	53	9.20256319	365	-312
Keith Kirkwood	44	409	9.16695502	366	43
Dag Ørstavik	70	85	9.15340254	367	-282
Andre Figueiredo Reis	33	809	9.13194444	368	441
Rodrigo A Giacaman	36	669	9.11564626	369	300
Wenche S Borgnakke	35	707	9.11183674	370	337
Anders Johansson	89	37	9.1090535	371	-334
Marcelo Bönecker	50	293	9.10644531	372	-79
Bill Kahler	36	669	9.0704	373	296
Perry Klokkevold	40	519	9.0348455	374	145
Emmanuel João Nogueira Leal da Silva	57	178	9.01697531	375	-197
Fábio Luiz Mialhe	37	618	8.99305556	376	242

Isabela Pordeus	69	89	8.97714681	377	-288
John Timothy Wright	55	211	8.95800781	378	-167
Estevam Augusto Bonfante	49	314	8.95684114	379	-65
Sankara Narayanan	55	211	8.94809689	380	-169
Hector Rios	34	755	8.9232	381	374
Paulo Vinícius Soares	31	917	8.90909091	382	535
Altair Antoninha Del Bel Cury	65	118	8.89127424	383	-265
Saeed Rahimi	39	555	8.88435374	384	171
Lj Jin	65	118	8.87150506	385	-267
Luis Felipe Schneider	33	809	8.8707483	386	423
Kim A Brogden	56	196	8.85106383	387	-191
Ashraf Fouad	58	165	8.83755102	388	-223
Jin Woo Park	42	462	8.8125	389	73
Mark S Gilthorpe	52	253	8.80882353	390	-137
Zafer Cavit Çehreli	50	293	8.79777778	391	-98
João Eduardo Gomes Filho	47	350	8.78994083	392	-42
Gülnur Emingil	44	409	8.77810651	393	16
Susan Rittling	57	178	8.74241523	394	-216
Roberto Rotundo	36	669	8.70510397	395	274
Francesco Inchingolo	46	366	8.69824219	396	-30
Lars Rasmusson	42	462	8.68686869	397	65
Yoon Jeong Choi	33	809	8.66481995	398	411
Owen Addison	34	755	8.64172336	399	356
Mario Taba Junior	54	227	8.54584775	400	-173
Eduardo Bernabé	77	59	8.54277954	401	-342
Manoel Damão Sousa Neto	77	59	8.52059756	402	-343
Miguel Peñarrocha Diago	66	110	8.50623583	403	-293
Wander José Da Silva	33	809	8.49584488	404	405
Iris Do Céu Clara Costa	35	707	8.49433107	405	302
Hamed Mortazavi	31	917	8.4675	406	511
Frauke Müller	59	161	8.44408163	407	-246
Kelun Wang	42	462	8.41863905	408	54
Mauro Farella	51	276	8.41727367	409	-133
Heitor Marques Honório	37	618	8.41420118	410	208
Antonio Luiz Barbosa Pinheiro	53	236	8.4083045	411	-175
J Mark Thomason	55	211	8.4065097	412	-201
Leonardo Dos Santos Antunes	33	809	8.4	413	396
Graziela De Luca Canto	48	332	8.38763377	414	-82
Flares Baratto Filho	33	809	8.37618147	415	394
Abdul Samad Khan	31	917	8.375	416	501
Craig S Miller	56	196	8.36375	417	-221
W Keung Leung	56	196	8.3615917	418	-222

Rafael Scaf De Molon	30	973	8.34876543	419	554
Luis E Chávez De Paz	30	973	8.3161157	420	553
Karine Laura Cortellazzi	31	917	8.28395062	421	496
Dongxia Ye	36	669	8.2675	422	247
Angus Walls	57	178	8.2642998	423	-245
André Luiz Fraga Briso	38	583	8.2624	424	159
Thimios Mitsiadis	58	165	8.25	425	-260
Kotaro Maki	41	488	8.23305589	426	62
Juliano Pessan	37	618	8.23090278	427	191
Faruk Ayhan Başçiftçi	37	618	8.19097222	428	190
Marco Ferrari	116	8	8.17591499	429	-421
In Sung Yeo	36	669	8.13799622	430	239
Fernando Oliveira Costa	52	253	8.1349481	431	-178
Andreas Filippi	49	314	8.12764004	432	-118
John D Bartlett	55	211	8.10956903	433	-222
Cecilia Pedroso Turssi	38	583	8.06804734	434	149
Prasit Pavasant	48	332	8.0541103	435	-103
Cesar Arrais	35	707	8.0415879	436	271
Stavros Kiliaridis	70	85	8.03212374	437	-352
sheila cavalca cortelli	40	519	8.0032	438	81
Dwomoa Adu	65	118	7.99555556	439	-321
Gianluca Martino Tartaglia	48	332	7.96972656	440	-108
Giulio Rasperini	50	293	7.95775941	441	-148
Marcio De Moraes	39	555	7.95266272	442	113
Christian S Stohler	52	253	7.92820248	443	-190
David C Coleman	76	61	7.90878801	444	-383
Daniela Elena Costea	34	755	7.90289256	445	310
Kristine Deleon Pennell	34	755	7.89256198	446	309
Tariq Abduljabbar	40	519	7.89179548	447	72
Rogério De Castilho Jacinto	33	809	7.8553719	448	361
Daniel Graf	39	555	7.84570313	449	106
Kyung Mi Woo	42	462	7.81688466	450	12
Mark S Wolff	40	519	7.78961601	451	68
Peter Parashos	43	432	7.77469388	452	-20
Marcelle Nascimento	31	917	7.76033058	453	464
Carlos Eduardo Da Silveira Bueno	45	389	7.74777778	454	-65
Inmaculada Tomas Carmona	45	389	7.74211248	455	-66
Olivier Huck	30	973	7.73469388	456	517
Hm Wong	41	488	7.73076923	457	31
Lewei Zhang	47	350	7.71626298	458	-108
Flávio Henrique Baggio Aguiar	40	519	7.70919067	459	60
Aline De Almeida Neves	35	707	7.69897959	460	247

Tommaso Castroflorio	38	583	7.6760355	461	122
Matthias Zehnder	60	151	7.67555556	462	-311
Fábio Renato Manzolli Leite	35	707	7.66942149	463	244
Naser Aslaminabad	30	973	7.65740741	464	509
Marcio Mateus Beloti	35	707	7.62326389	465	242
Kuo-Wei Chang	60	151	7.61061225	466	-315
Erika Benavides	30	973	7.6016	467	506
Wirley Gonçalves Assunção	42	462	7.60082305	468	-6
Saul Paiva	79	58	7.59323337	469	-411
Américo Bortolazzo Correr	34	755	7.56818182	470	285
Lars Bondemark	51	276	7.56738281	471	-195
Kannan Ranganathan	39	555	7.55648038	472	83
Belmiro Cavalcanti Do Egito Vasconcelos	41	488	7.55229592	473	15
George Eliades	66	110	7.54669839	474	-364
Rachel Badovinac Ramoni	39	555	7.53994083	475	80
Karim Fawzy El Sayed	30	973	7.5375	476	497
Mustafa Naseem	33	809	7.53061225	477	332
Argy Polychronopoulou	52	253	7.49011446	478	-225
Silmara Aparecida Milori Corona	42	462	7.47337278	479	-17
Jung Il Chae	33	809	7.46280992	480	329
Danyel Elias Da Cruz Perez	40	519	7.4408284	481	38
Carlo Maiorana	48	332	7.42367347	482	-150
Simone Grandini	43	432	7.41503906	483	-51
Alyne Simões Gonçalves	31	917	7.3933518	484	433
Alessandra Buhler Borges	37	618	7.3872	485	133
Peer Kämmerer	41	488	7.37860082	486	2
Mohamed Al Shabrawey	40	519	7.36686391	487	32
Ananda Dasanayake	42	462	7.35449219	488	-26
David L Gast	72	80	7.3392	489	-409
Paulo Henrique Dos Santos	36	669	7.33159722	490	179
Francisco C Groppo	45	389	7.31217482	491	-102
Annika Antonsson	35	707	7.312	492	215
Lars Bjørndal	42	462	7.3030303	493	-31
Anthony Damien Walmsley	61	142	7.27959548	494	-352
Athanassios Kyrgidis	41	488	7.25976563	495	-7
Ana Carolina Magalhães	57	178	7.25127831	496	-318
Delgado Ruiz Ra	33	809	7.22675737	497	312
Rafael Guerra Lund	34	755	7.19628099	498	257
Marco Salerno	41	488	7.18888889	499	-11
Yuelian Liu	33	809	7.1872	500	309
Marcia Martins Marques	52	253	7.18421053	501	-248
Tao Jiang	33	809	7.17881944	502	307

Juan J. Segura-Egea	51	276	7.17714286	503	-227
Gisele Maria Correr	35	707	7.15689981	504	203
Chaushu G	57	178	7.09934259	505	-327
Simon D Tran	46	366	7.08324662	506	-140
Vicente Castelo Branco Leitune	32	868	7.07936508	507	361
Edgard Graner	50	293	7.06795225	508	-215
Toru Yanagawa	42	462	7.05955679	509	-47
Jesus Alberto Hernandez Silva	39	555	7.03171191	510	45
Arndt Guentsch	32	868	7.03099174	511	357
Bassel Tarakji	31	917	7.01133787	512	405
Daniela Bazan Palioto	38	583	6.99408284	513	70
Gustafsson Anders	58	165	6.96055227	514	-349
Shuo Chen	48	332	6.9357195	515	-183
Shane N White	53	236	6.92330168	516	-280
José Roberto Pereira Lauris	51	276	6.89814815	517	-241
Xuebin Yang	41	488	6.89060642	518	-30
Zoe Marshman	40	519	6.85059172	519	0
Domenick Zero	70	85	6.82805269	520	-435
Gaviao M	53	236	6.82785467	521	-285
Haiter Neto F	49	314	6.80017301	522	-208
KY Anh Nguyen	31	917	6.79340278	523	394
Richard David Cannon	52	253	6.78254848	524	-271
Marcia Carneiro Valera	43	432	6.76444444	525	-93
Paulo Nelson Filho	43	432	6.74012856	526	-94
Jung Yul Cha	34	755	6.73662551	527	228
Savabi O	36	669	6.70699433	528	141
Kıvanç Kamburoğlu	36	669	6.70507545	529	140
Leonardo Ciocca	35	707	6.6875	530	177
Manabu Kanazawa	31	917	6.66540643	531	386
Lim Kwong Cheung	50	293	6.64353543	532	-239
Francesca Gori	30	973	6.62555556	533	440
Anastasios Kanatas	39	555	6.625	534	21
Paul Cooper	65	118	6.61979167	535	-417
Rui Figueiredo	40	519	6.61831153	536	-17
Conchita Martin	31	917	6.61593341	537	380
Chan Ho Park	30	973	6.59722222	538	435
Tae Geon Kwon	35	707	6.57193817	539	168
Luís Otávio Miranda Cota	35	707	6.55967078	540	167
Sérgio Vitorino Cardoso	30	973	6.535	541	432
Steven Brookes	43	432	6.49121094	542	-110
Doglas Cecchin	31	917	6.48	543	374
Khalid Almas	54	227	6.45567867	544	-317

有地榮一郎	56	196	6.44675788	545	-349
Giuseppe Alexandre Romito	34	755	6.44589774	546	209
Eduardo Piza Pellizzer	52	253	6.44390582	547	-294
A Jäger	57	178	6.44378346	548	-370
Neil Meredith	32	868	6.44259369	549	319
Raman Bedi	60	151	6.40079365	550	-399
Fernanda Salum	33	809	6.39886578	551	258
Francisco Montagner	32	868	6.3875	552	316
Frank Lippert	34	755	6.38541667	553	202
Edward Lynch	55	211	6.38375	554	-343
Carlos Rodriguez	55	211	6.3712	555	-344
Massimo De Sanctis	45	389	6.35042735	556	-167
Ki Beom Kim	33	809	6.34782609	557	252
Harald O Heymann	50	293	6.34074074	558	-265
José María Montiel-Company	37	618	6.3376	559	59
Lidiany Rodrigues	36	669	6.32780612	560	109
Pedro Bullon	53	236	6.30263158	561	-325
Paul Brunton	44	409	6.26660156	562	-153
Kathryn A Atchison	48	332	6.24722992	563	-231
Angray Kang	31	917	6.24375	564	353
Ewerton Garcia De Oliveira Mima	31	917	6.2244898	565	352
Charles Goodacre	64	126	6.21991542	566	-440
Shanon patel	56	196	6.2095971	567	-371
Renate Lux	47	350	6.20588235	568	-218
Kum Kee Yeon	50	293	6.1816609	569	-276
MS Duggal	51	276	6.16280864	570	-294
Sue Pavitt Nee Rider	45	389	6.13149244	571	-182
Javier Martín	31	917	6.12018141	572	345
Sandra Helena Penha De Oliveira	40	519	6.11755102	573	-54
Christos Boutsioukis	30	973	6.11538462	574	399
Marcelo Ferrarezi De Andrade	35	707	6.10939358	575	132
Serge Bouillaguet	44	409	6.09061225	576	-167
Mohammad Samiei	39	555	6.07317073	577	-22
Evandro Watanabe	33	809	6.06238185	578	231
Carlos Alberto Feldens	44	409	6.05877551	579	-170
Mônica Campos Serra	47	350	6.03703704	580	-230
Ana Cecília Corrêa Aranha	40	519	6.01530612	581	-62
Jean Christophe Farges	32	868	6.0059453	582	286
Young Kyung Kim	34	755	5.99852071	583	172
Marie Therese Flores	39	555	5.97902494	584	-29
Ronald W Wood	39	555	5.97485207	585	-30
Edmond Pow	34	755	5.9744898	586	169

Boaz Arzi	32	868	5.953125	587	281
Mohammad Khursheed Alam	43	432	5.938125	588	-156
Nadim Z Baba	32	868	5.912	589	279
David Penarrocha-Oltra	46	366	5.89142857	590	-224
Chris Deery	39	555	5.88521579	591	-36
Fawad Javed	64	126	5.87867814	592	-466
Claudio Marchetti	60	151	5.87061728	593	-442
Luís Eduardo Silva Soares	32	868	5.85950413	594	274
Enrico Gherlone	54	227	5.83875	595	-368
Daniel Torres-Lagares	46	366	5.82204082	596	-230
John Yoo	43	432	5.7943067	597	-165
Pia Lopez Jornet	49	314	5.79254931	598	-284
David G Gillam	40	519	5.77076125	599	-80
Guy Willems	73	75	5.76097394	600	-525
Masamichi Takami 高見正道	36	669	5.74530612	601	68
Marco Antonio Hungaro Duarte	75	66	5.7437518	602	-536
Elham S Abu Alhaija	34	755	5.72290809	603	152
Debora Barros Barbosa	32	868	5.71893491	604	264
Hakan Turkkahraman	33	809	5.69791667	605	204
Silvia Cristina Núñez	30	973	5.68861454	606	367
Keiji Moriyama	45	389	5.68132716	607	-218
José Fernando Castanha Henriques	55	211	5.67950617	608	-397
Paula Cristina Tревilatto	42	462	5.64565993	609	-147
Paulo Conti	54	227	5.633125	610	-383
Rubens Spin Neto	39	555	5.6313912	611	-56
Hae-Hyoung Lee	38	583	5.62117347	612	-29
Her Hsiung Huang	41	488	5.60666667	613	-125
Tonino Traini	38	583	5.60145682	614	-31
Livia Ma Tenuta	42	462	5.6	615	-153
Paul Lam Corstjens	52	253	5.55161078	616	-363
Masae Kuboniwa	40	519	5.53864447	617	-98
Carlos F Santos	43	432	5.52066116	618	-186
Abel García García	54	227	5.51108033	619	-392
Renata Cunha Matheus Rodrigues Garcia	36	669	5.48214286	620	49
Shohei Kasugai	52	253	5.47888162	621	-368
Patricia Moreira De Freitas	33	809	5.47569444	622	187
Jesus Torres García-Denche	33	809	5.4688	623	186
Joseph Wedekind	38	583	5.45888889	624	-41
Velasco-Ortega E	38	583	5.44238281	625	-42
Bernhard Ganss	33	809	5.44117647	626	183
Galen B Schneider	33	809	5.42333333	627	182
Roberts Thomson K	39	555	5.41308594	628	-73

Dorina Lauritano	37	618	5.40894901	629	-11
Shinoda Masamichi	37	618	5.4	630	-12
Roberto Ruggiero Braga	60	151	5.39238166	631	-480
wael sabbah	35	707	5.38293444	632	75
Abdalla Abdal hay	34	755	5.3824	633	122
Carlos Nemcovsky	47	350	5.37345679	634	-284
Jacks Jorge	34	755	5.37037037	635	120
Leticia Helena Theodoro	36	669	5.36479592	636	33
Marcelo Ferraz Mesquita	41	488	5.35691988	637	-149
Keerthilatha M Pai	32	868	5.33928571	638	230
Rodrigo Vivan	38	583	5.3293698	639	-56
Teresa A Dolan	31	917	5.31542969	640	277
Maryam Amin	31	917	5.30371901	641	276
Wanninayake Mudiyansele Tilakaratne	42	462	5.30040816	642	-180
Tarek El Bialy	35	707	5.27514793	643	64
Patricia McGettigan	34	755	5.2700831	644	111
Gisele Faria	38	583	5.23593964	645	-62
James Kit Hon Tsoi	34	755	5.1843044	646	109
Celine M Levesque	32	868	5.18002081	647	221
Joni Augusto Cirelli	46	366	5.16	648	-282
Rory M Watt	33	809	5.13717421	649	160
Cynthia Pine	46	366	5.13492064	650	-284
Reuben Kim	37	618	5.13017752	651	-33
Figen Seymen	40	519	5.12722949	652	-133
Carla Castiglia Gonzaga	34	755	5.0880102	653	102
Cristiane Duque	32	868	5.08159722	654	214
Francesca Angiero	31	917	5.05671078	655	262
Regina Puppini Rontani	46	366	5.04528853	656	-290
Elcio Marcantonio Junior	53	236	5.019375	657	-421
Richard B Price	55	211	5.018125	658	-447
Ana Paula Vieira Colombo	43	432	5.01697531	659	-227
Souichi Yanamoto	34	755	5.01234568	660	95
Mahmoud Al Omiri	37	618	5.00292969	661	-43
Leandro Silva Marques	46	366	5.00146092	662	-296
Yong Dae Kwon	32	868	4.96449704	663	205
Warwick Duncan	33	809	4.94040816	664	145
Harvey A Schenkein	56	196	4.92664931	665	-469
Roy George	31	917	4.92318244	666	251
Antonio Carrassi	51	276	4.91802469	667	-391
RP Allaker	41	488	4.88340274	668	-180
Siddik Malkoç	31	917	4.87847222	669	248
Jose Luis Gutierrez Perez	69	89	4.87694637	670	-581

Oslei Paes De Almeida	60	151	4.8638546	671	-520
Mubassar Fida	31	917	4.84548611	672	245
Lauren L Patton	50	293	4.8361678	673	-380
Maria Da Gloria Chiarello De Mattos	35	707	4.82304527	674	33
Thais Marchini Oliveira	51	276	4.80584391	675	-399
Sema Hakki	33	809	4.72189349	676	133
Luciana Shaddox	32	868	4.72048611	677	191
Erick Souza	43	432	4.71808999	678	-246
Rubens Ferreira De Albuquerque Junior	35	707	4.71467764	679	28
Sajeda Meghji	49	314	4.68707483	680	-366
Jane A Weintraub	48	332	4.68679717	681	-349
Asbjørn Jokstad	43	432	4.68213296	682	-250
Vanessa Soares Lara	36	669	4.66836735	683	-14
Yanqi Yang	30	973	4.66145833	684	289
Mauro Henrique Abreu	47	350	4.65875	685	-335
Rainer Haak	36	669	4.63971463	686	-17
Nada Farouk Ahmed Atta	41	488	4.62456747	687	-199
Pertti Pirttiniemi	43	432	4.61632653	688	-256
Mohamed Ibrahim Abu Hassan	35	707	4.61555556	689	18
Carlos Gonzalez Cabezas	39	555	4.58300781	690	-135
Yasemin Özkan	41	488	4.56657484	691	-203
Youssef Haikel	49	314	4.54875283	692	-378
Shinn Jyh Ding	49	314	4.54565376	693	-379
Carlos José Soares	66	110	4.52942925	694	-584
Rosnah Zain	48	332	4.51247166	695	-363
Thomas Gh Diekwisch	40	519	4.50612245	696	-177
Léa Assed Bezerra Da Silva	67	101	4.50502729	697	-596
Moschos A Papadopoulos	41	488	4.50231482	698	-210
Linda Wang	36	669	4.48870392	699	-30
Flávio Domingues Das Neves	30	973	4.48596939	700	273
Amaury Pozos Guillén	38	583	4.48163265	701	-118
Sérgio Scombatti De Souza	52	253	4.47593294	702	-449
Youn Hee Choi	30	973	4.4544	703	270
Lynne Bingle	34	755	4.44444444	704	51
John Brunski	45	389	4.42824808	705	-316
Ahmed Samy	32	868	4.40587695	706	162
Viviane Colares	30	973	4.39780521	707	266
Nobuhiro Hanada	49	314	4.39256198	708	-394
Toru Nikaido	58	165	4.38525614	709	-544
Junia Serra Negra	35	707	4.36222222	710	-3
Paulo Floriani Kramer	37	618	4.35380623	711	-93
Helena De Freitas Oliveira Paranhos	46	366	4.3355102	712	-346

Ender Kazazoğlu	35	707	4.32897959	713	-6
Carlos De Paula Eduardo	61	142	4.32618343	714	-572
Halil Erhan Fıratlı	41	488	4.32163265	715	-227
Kristiina Heikinheimo	37	618	4.304405	716	-98
Hs Brand	47	350	4.29	717	-367
Clay Walker	62	134	4.26905456	718	-584
Marco Cune	45	389	4.25396825	719	-330
June Nunn	51	276	4.24888889	720	-444
Brian W Darvell	55	211	4.24563902	721	-510
Liviu Feller	42	462	4.23822715	722	-260
Ana Flavia Granville Garcia	40	519	4.21767714	723	-204
Fabio Daumas Nunes	44	409	4.21121884	724	-315
Hiroshi Ogawa	34	755	4.19492503	725	30
Simone Cecilio Hallak Regalo	35	707	4.19335938	726	-19
Maria Aparecida Andrade Moreira Machado	49	314	4.18222222	727	-413
Clovis Monteiro Bramante	67	101	4.17266851	728	-627
Petros Koidis	43	432	4.16274238	729	-297
Pascal Van Lieshout	42	462	4.15673469	730	-268
Arthur Belém Novaes Júnior	62	134	4.1533801	731	-597
Fabiana Mantovani Gomes França	30	973	4.11796982	732	241
James K Hartsfield Jr	43	432	4.11	733	-301
Norman Tinanoff	53	236	4.10724852	734	-498
Timothy G Bromage	50	293	4.08109504	735	-442
Vivek Shetty	39	555	4.08108108	736	-181
Jae Gyu Jeon	30	973	4.08093279	737	236
Debora C Matthews	31	917	4.07180021	738	179
Ravindra Nanda	59	161	4.06710744	739	-578
Keson Tan	36	669	4.043125	740	-71
Baek Il Kim	31	917	4.02888889	741	176
S Jeffrey Dixon	55	211	4.01124531	742	-531
Saeed Asgary	58	165	3.96570645	743	-578
Luciana Corrêa	31	917	3.960761	744	173
Darnell Kaigler	34	755	3.95221607	745	10
Titus Schleyer, Dmd	36	669	3.94824219	746	-77
Marcio Ajudarte Lopes	54	227	3.93621399	747	-520
Branca Heloisa Oliveira	34	755	3.9220679	748	7
Bruce Pihlstrom	42	462	3.91603306	749	-287
Luciano Cintra	45	389	3.89875082	750	-361
Heng Li Huang	44	409	3.89506173	751	-342
Giuseppe Siciliani	45	389	3.891875	752	-363
Jan Eirik Ellingsen	42	462	3.89049587	753	-291
Carlos Henrique Ribeiro Camargo	34	755	3.89013841	754	1

Bahar Eren Kuru	30	973	3.87327824	755	218
Kenji Fueki	32	868	3.87158145	756	112
Martine Hennequin	43	432	3.84072022	757	-325
Nelson Rfa Silva	48	332	3.84027778	758	-426
Gerry Linden	53	236	3.83798417	759	-523
Chen Feng	37	618	3.80401235	760	-142
James C Kulild	37	618	3.78612245	761	-143
William F Vann Jr	49	314	3.77777778	762	-448
Yan-Fang Ren 任延方	37	618	3.77282688	763	-145
Rafael Francisco Lia Mondelli	40	519	3.76186998	764	-245
JE Martin	58	165	3.75754423	765	-600
Gülfem Ergün	32	868	3.73979592	766	102
Kevin O'Brien	57	178	3.7368595	767	-589
Andrea Pilloni	34	755	3.70847751	768	-13
Francisco Javier Rodríguez Lozano	34	755	3.70703125	769	-14
Rosemary Shinkai	32	868	3.69140625	770	98
Cláudia Helena Lovato Da Silva	40	519	3.69125521	771	-252
M Ajmal	51	276	3.65754438	772	-496
Rosa Helena Miranda Grande	35	707	3.6412037	773	-66
Jennifer Yvette Webster	33	809	3.63666667	774	35
Giuseppe Pizzo	32	868	3.625	775	93
Guilherme Carpena Lopes	33	809	3.60986159	776	33
Renty B Franklin	56	196	3.60768176	777	-581
Won-Yoon Chung	40	519	3.57561728	778	-259
Frank J Verstraete	42	462	3.57525283	779	-317
Liran Levin	67	101	3.56542969	780	-679
Vinicius Pedrazzi	33	809	3.56222222	781	28
Flavio Uribe	32	868	3.52444444	782	86
Susana Maria Werner Samuel	36	669	3.52148438	783	-114
Zohaib Akram	38	583	3.51953125	784	-201
José Carlos Pereira	50	293	3.50694444	785	-492
Marita Rohr Inglehart	47	350	3.50189036	786	-436
Yuichi Kitasako	35	707	3.49902344	787	-80
Brian O Connell	37	618	3.484375	788	-170
Louisa K James	30	973	3.4799169	789	184
Mike Hubbard	37	618	3.470625	790	-172
Shin Jae Lee	36	669	3.4644898	791	-122
David Normando	33	809	3.4522449	792	17
Gabriele Cervino	48	332	3.441875	793	-461
Mark Cross	52	253	3.4372428	794	-541
Cleidiel Lemos	37	618	3.43364198	795	-177
Montserrat Mercadé Bellido	35	707	3.43346939	796	-89

graham ogden	42	462	3.43186962	797	-335
Michele Cassetta	32	868	3.4140625	798	70
Young Guk Park	36	669	3.40657439	799	-130
Janete A Anselmo Franci	45	389	3.4053288	800	-411
JT Wright	55	211	3.38868343	801	-590
José López-López	51	276	3.38203018	802	-526
Rafiqul Islam	56	196	3.37093048	803	-607
Manoela Domingues Martins	48	332	3.36935764	804	-472
Halboub Esam	32	868	3.36816406	805	63
Erik Dabelsteen	52	253	3.36528926	806	-553
David Maxwell	44	409	3.36484798	807	-398
Stjepan Spalj	30	973	3.36444444	808	165
Raquel Assed Bezerra Da Silva	52	253	3.35420856	809	-556
Marcantonio Rac	34	755	3.34688581	810	-55
Karen Cherubini	36	669	3.34122449	811	-142
Нигман Хабилов	35	707	3.33818939	812	-105
Suzana Machado De Sousa	40	519	3.33372992	813	-294
Lih Jyh Fuh	36	669	3.31888889	814	-145
Gunilla Klingberg	37	618	3.30518519	815	-197
L Shannon Holliday	36	669	3.30478395	816	-147
Ruth Lipman	35	707	3.29583559	817	-110
Ricardo Guimarães Fischer	37	618	3.29501385	818	-200
Jose Antonio Poli De Figueiredo	43	432	3.28880476	819	-387
Marcela Hernández R	38	583	3.27944215	820	-237
Roberto Farina	37	618	3.27700831	821	-203
Lesley Bergmeier	35	707	3.27613412	822	-115
Luiz Renato Paranhos	34	755	3.26515705	823	-68
Mark Latta	49	314	3.2594518	824	-510
Francisco Wanderley Garcia Paula Silva	33	809	3.24408163	825	-16
Jj De Soet	46	366	3.23753086	826	-460
Manal A Awad	35	707	3.20616319	827	-120
Hong Tzong Yau	36	669	3.20524691	828	-159
David Manton	58	165	3.19739645	829	-664
Gerald McKenna	32	868	3.19375574	830	38
Ana Lucia Machado	55	211	3.16993464	831	-620
Joel M White	40	519	3.16735537	832	-313
Osama Abu Hamad	30	973	3.16210938	833	140
Luigi Checchi	36	669	3.15929705	834	-165
Paul Casamassimo	41	488	3.13660975	835	-347
Maria Do Carmo Matias Freire	30	973	3.1221304	836	137
Giulio Gavini	36	669	3.11496914	837	-168
Han Cheol Choe	37	618	3.10734072	838	-220

Milton Carlos Kuga	32	868	3.10416667	839	29
Adriano Loyola	37	618	3.10262346	840	-222
Tamar Brosh	37	618	3.1025	841	-223
Demetrios J. Halazonetis, Δημήτρης Ι. Χαλαζωνίτης	36	669	3.078238	842	-173
Guilherme Elias Pessanha Henriques	32	868	3.06139438	843	25
Eugenio Garcia	37	618	3.05305652	844	-226
Volnei Garrafa	47	350	3.05246914	845	-495
William R Abrams	60	151	3.04998564	846	-695
Hans Peter Müller	41	488	3.04975663	847	-359
Marcio Fernando De Moraes Grisi	39	555	3.04705215	848	-293
Cinzia Maspero	32	868	3.03027344	849	19
Ahmad S Al Hiyasat	30	973	3.02441406	850	123
Eino Honkala	44	409	3.01807851	851	-442
Michel Dard	53	236	3.01748971	852	-616
Leonardo Marchini	33	809	2.99755102	853	-44
Umberto Romeo	36	669	2.99707816	854	-185
Decio Dos Santos Pinto Jr	38	583	2.94875346	855	-272
Kostas Tsiklakis	32	868	2.939375	856	12
Sevil Çiftçi Gürkan	37	618	2.93628809	857	-239
Luigi Gallo	38	583	2.93359632	858	-275
Yumiko Nagao	31	917	2.90796202	859	58
Wael Att	56	196	2.90663602	860	-664
Michael Botelho	37	618	2.89473684	861	-243
Janicke L Jensen	34	755	2.8884083	862	-107
Giuseppe Corinaldesi	34	755	2.8866782	863	-108
Wilson Roberto Poi	32	868	2.87716263	864	4
Gaetane Leloup	37	618	2.84890427	865	-247
Hans Zoellner	31	917	2.84734694	866	51
Sandra R. Torres	33	809	2.84556787	867	-58
Takafumi Kato	44	409	2.83844953	868	-459
Anura Ariyawardana	30	973	2.83345508	869	104
Jostein Grytten	38	583	2.83102493	870	-287
S Aída Borges Yáñez	35	707	2.82122449	871	-164
Claudio Poggio	44	409	2.81689342	872	-463
Maria Da Luz Rosario De Sousa	45	389	2.80133278	873	-484
Anne Maguire	33	809	2.79766253	874	-65
Ayşen Yarat	33	809	2.78472222	875	-66
John T Grbic	37	618	2.77664399	876	-258
Nikos Kotsanos	31	917	2.73553719	877	40
Alexandre Luiz Souto Borges	33	809	2.73372781	878	-69
Nelly Molina Frechero	33	809	2.70890725	879	-70
Arjen Van Wijk	40	519	2.70375	880	-361

Tanaka Om	33	809	2.68005844	882	-73
Rebecca Harris	34	755	2.67180342	883	-128
Tayfun Akoz	32	868	2.6712963	884	-16
Tetsu Takahashi	57	178	2.6689149	885	-707
Fusun Ozer	32	868	2.65142857	886	-18
Eduardo Colombari	37	618	2.65135803	887	-269
Tania Mary Cestari	31	917	2.64941406	888	29
Raphael Pilo	37	618	2.64845863	889	-271
Luis Roberto Marcondes Martins	41	488	2.62665406	890	-402
Lelia Batista De Souza	37	618	2.62345041	891	-273
Özkan Miloğlu	32	868	2.5683391	892	-24
Åke Tegelberg	31	917	2.5449233	893	24
Pelin Güneri	33	809	2.52739226	894	-85
Neil Hunter	42	462	2.52513646	895	-433
Peter James Thomson	43	432	2.50865052	896	-464
Luciane Rezende Costa	33	809	2.50694444	897	-88
Cristiane Baccin Bendo	30	973	2.48302469	898	75
Eduardo Nunes	30	973	2.47368421	899	74
Giulio Alessandri Bonetti	34	755	2.44049967	900	-145
Susan Friedman	33	809	2.4272	901	-92
Cristiane Yumi Koga Ito	41	488	2.42315702	902	-414
Idelmo Rangel Garcia Junior	37	618	2.42130882	903	-285
Fernanda Garcia	31	917	2.38811728	904	13
Vivek Aggarwal	31	917	2.38365651	905	12
Ricardo Faria Ribeiro	40	519	2.37996219	906	-387
Vicente A Torres	31	917	2.379375	907	10
José Flávio Affonso Almeida	40	519	2.35281065	908	-389
Marco Colombo	38	583	2.34349031	909	-326
Roberta Tarkany Basting	40	519	2.34060651	910	-391
Sakellari Dimitra	31	917	2.32175926	911	6
Ahed Al Wahadni	31	917	2.3082542	912	5
Elismauro Francisco Mendonca	32	868	2.296875	913	-45
Yun Sook Kim	33	809	2.29235537	914	-105
Faleh Sawair	32	868	2.29155125	915	-47
Jefferson Pereira	35	707	2.28994083	916	-209
Simonides Consani	47	350	2.24553571	917	-567
Che Husna Azhari	33	809	2.23800132	918	-109
Ayman Ahmed	39	555	2.23593964	919	-364
Rafael Leonardo Xediek Consani	37	618	2.23140496	920	-302
Farzaneh Ahrari	35	707	2.21893491	921	-214
Alvaro Borges	30	973	2.21814404	922	51
Willie Van Heerden	30	973	2.20679012	923	50

Gao Xiaoli	30	973	2.20637119	924	49
Farzaneh Agha-Hosseini	31	917	2.19576333	925	-8
Ourania Nicolatou Galitis	31	917	2.18383743	926	-9
Lindsay Richards	42	462	2.1724	927	-465
Valdir Gouveia Garcia	41	488	2.16451479	928	-440
Keiichiro Nishida	44	409	2.15758695	929	-520
Arnaldo Pinzan	35	707	2.14074074	930	-223
Stefan Ruhl	32	868	2.12563915	931	-63
Philip Benson	40	519	2.11362608	932	-413
Larry Bellinger Regents	38	583	2.11226451	933	-350
Luiz Antonio Salata	31	917	2.07231556	934	-17
Maria Fidela Navarro	43	432	2.07015306	935	-503
Renata Pascotto	31	917	2.06574142	936	-19
Matheus Melo Pithon	41	488	2.01950413	937	-449
Alan Roger Santos Silva	42	462	2.01388889	938	-476
Anamika Sharma	44	409	2.00897959	939	-530
Igor Yu. Lebedenko	30	973	2.00730488	940	33
Pauline Ford	37	618	2.00147929	941	-323
Yuji Sato	37	618	1.99231065	942	-324
José Roberto Rodrigues	36	669	1.96347559	943	-274
Cláudio Antonio Talge Carvalho	33	809	1.95657347	944	-135
Marcelo Gp Cavalcanti	40	519	1.95626822	945	-426
Kazuyuki Ishihara	58	165	1.95580716	946	-781
Jonas Rodrigues	33	809	1.92861006	947	-138
Flávio Alves	32	868	1.91295294	948	-80
Joao Paulo Mendes Tribst	31	917	1.91269841	949	-32
Eloi Dezan Junior	35	707	1.88921283	950	-243
Maureen Stone	46	366	1.87704712	951	-585
Luca Lombardo	39	555	1.86909091	952	-397
Giselle Maria Marchi	33	809	1.86238117	953	-144
Yehya Mostafa	31	917	1.85667929	954	-37
Juan Pablo Loyola-Rodriguez	39	555	1.85069444	955	-400
Patricia Smith	43	432	1.79667063	956	-524
Esa Klemetti	30	973	1.77316417	957	16
Roger Zwahlen	45	389	1.75669422	958	-569
Rita Cordeiro	34	755	1.75	959	-204
Deborah Queiroz Freitas	37	618	1.73164168	960	-342
Efigênia Ferreira E Ferreira	45	389	1.68944637	961	-572
Sônia Regina Panzarini	32	868	1.68352171	962	-94
Ramon Eduardo Fuentes Fernandez	33	809	1.68346522	963	-154
Marcus Vinicius Reis Só	37	618	1.64821223	964	-346
Goran Pichler	31	917	1.64201183	965	-48

Yorimasa Ogata	39	555	1.63807398	966	-411
André Luis Faria E Silva	36	669	1.61514802	967	-298
Joao Batista Cesar Neto	33	809	1.59978367	968	-159
Alexandra Sklavounou	31	917	1.59653867	969	-52
Takashi Ono	42	462	1.59510204	970	-508
John W. Nicholson	53	236	1.55624662	971	-735
Claudia Magalhães	31	917	1.554375	972	-55
Raquel Conceição Ferreira	35	707	1.53221787	973	-266
Peter Gaengler	32	868	1.52323792	974	-106
Frank Catalanotto	38	583	1.51849112	975	-392
Silva RF	33	809	1.51603306	976	-167
Rodrigo Othavio Assuncao Souza	32	868	1.50390625	977	-109
Ríos-Santos, JV	37	618	1.47002551	978	-360
Kazuyoshi Baba	51	276	1.40805396	979	-703
Antonio Carlos Pereira	52	253	1.40359654	980	-727
Taku Fujiwara	42	462	1.38548753	981	-519
Gary R Goldstein	33	809	1.38056248	982	-173
Idomeo Bonetti Filho	30	973	1.369375	983	-10
Lucio Souza Gonçalves	31	917	1.32819659	984	-67
Ronald G Craig	35	707	1.32713499	985	-278
Koji Kamagata	40	519	1.32	986	-467
Suarez Garcia Maria Jesus	32	868	1.1492767	987	-119
Il Sung Jang	30	973	1.14340638	988	-15
José Mondelli	33	809	1.14120095	989	-180
Vivien Sakai	37	618	1.14111111	990	-372
Michael W Roberts	34	755	1.12851197	991	-236
Efthymia Kitraki	30	973	1.10841984	992	-19
Mehrdad Lotfi	38	583	1.09738581	993	-410
David Johnsen	30	973	1.08919646	994	-21
Donald A Curtis	37	618	1.08833333	995	-377
David A Nash	30	973	1.07727797	996	-23
Clemencia M Vargas	30	973	1.0625	997	-24
Chukwudi Onyeaso	30	973	1.02191465	998	-25
Eduardo Passos Rocha	34	755	1.00045914	999	-244
Alma Rosa Rojas Garcia	34	755	0.9693287	1000	-245
Lucas Garcia	34	755	0.96522993	1001	-246
Tomohiro Yamada	33	809	0.94147987	1002	-193
Shinichi Abe	34	755	0.92534722	1003	-248
Javier Enrique Botero Torres	30	973	0.9217128	1004	-31
Paul Anderson	36	669	0.87841797	1005	-336
Eric Everett	35	707	0.86958154	1006	-299
Manoel Santana Filho	33	809	0.85058594	1007	-198

Jorge Esquiche León	31	917	0.84310019	1008	-91
Dhoom Singh Mehta	35	707	0.83774539	1009	-302
WP Holbrook	41	488	0.79421433	1010	-522
Wei Shao Lin	30	973	0.73797366	1011	-38
Qian Wang	30	973	0.71474913	1012	-39
Éricka Janine Dantas Da Silveira	30	973	0.70588235	1013	-40
Allyson Nogueira Moreira	32	868	0.70361578	1014	-146
Marcelo Suzuki	42	462	0.69799227	1015	-553
Alessandro Antonio Costa Pereira	34	755	0.67471591	1016	-261
Carlos Rocha Gomes Torres	43	432	0.67310774	1017	-585
Yasumasa KATO	33	809	0.64812612	1018	-209
Aline Evangelista De Souza Gabriel	30	973	0.60640138	1019	-46
Evanthia Lalla	52	253	0.21863566	1020	-767

Then, the interpretation was clear when observing the Pearson correlation coefficient obtained for the variables analyzed (Figure 1). The H-index had a weakly positive association with the researcher’s “scientific age”; this fact means that H-index will increase according to the “scientific age” increases. Otherwise, a moderately negative correlation between GFsa and “scientific age” was demonstrated, in which a higher GFsa had a lower “Scientific age”. This assessment shows that the variable introduced was fairly used. Moreover, a positive correlation was observed between both indexes (H-index and GFsa).

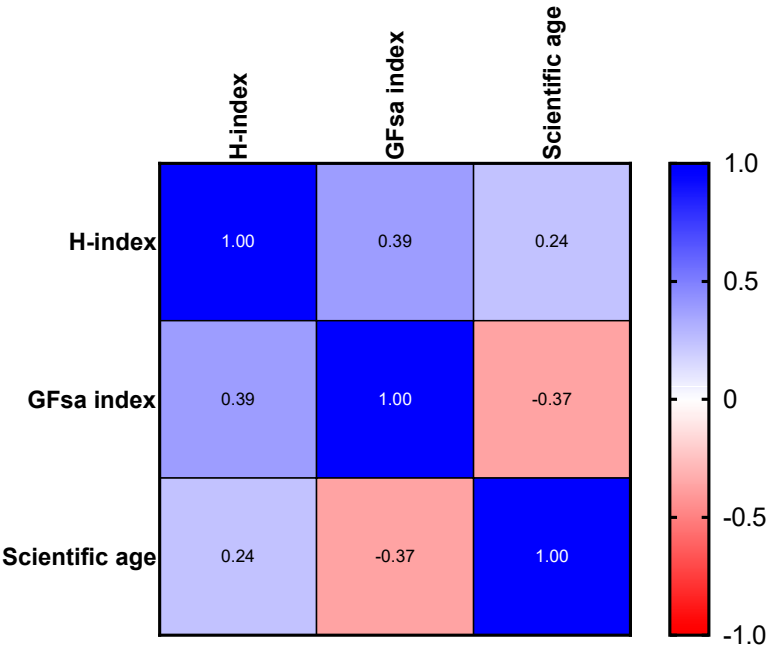


Figure 1. Pearson correlation (r) demonstrates a negative association between GFsa and “scientific age” and a positive correlation between H-index and “scientific age.” Moreover, a positive correlation was observed between both indices (H-index and GFsa).

Discussion

Essentially, the number of publications and the impact factor are widely regarded as measures of the researchers’ qualifications and hence their reputation. It has also been implemented to promote the standing of scientific journals around the world. Guraya et al.’s study reported that some

universities can offer generous grants to researchers who have a high H-index and more publications, mainly if the studies are published in leading well-reputed journals, in order to ensure more reliability and chances of more citations and, consequently, higher position in scientific ranking [21]. The use of the H-index in this article was due to be the most currently used, observed, and accepted index.

While the current evaluation of a researcher's productivity evaluates the number of publications alone according to the article publication, it does not indicate any quality or impact. A researcher's standing (ranking) and reputation depend on how the author impacts the researcher community or field; this fact is easily observed through the citations that a study receives. Thereby, along with the growing number of articles published, a question arises: how a researcher's influence, standing, reputation, and research impact can be fairly measured? Then, in an attempt to overcome the shortcomings of the H-index, some authors postulated complementary indexes through the elaboration of mathematical models and proposed new "Hirsch-type" indexes. These are grouped into two broad categories: (1) Productive Output Core (describe the number of published papers): H-index, Egghe's G-index [22,23], Kosmulski's H(2)-index [24], and m-quotient; and (2) Impact of research papers: m-index, HW-index, R-index, Jin's A-index [25], and AR-index. Both groups, even though different, can complement each other [26].

Moreover, in order to try to normalize the H-index across disciplines, some authors proposed mixed results. It can be observed at the G-index that aimed to improve it considering with more weight the highly cited articles [27]; the E-index differentiated scientists with similar H-indexes considering different citation patterns [28]; the AW-index considered to adjust the relevance according to the age of each individual paper ("the older you are the higher your h-index will be") [19]; and the multi-authored H-index modified the original metric considering shared authorship of articles.

Even though all of them are providing improvements on the initial H-index, this original metric is still the most widely used. Then, due to a possible lack of simplicity presented by the abovementioned indexes, they were not implemented routinely. This fact extimulated us to propose the GFsa, which utilizes the total number of citations and the new concept proposed, the "Scientific age". It was possible to confirm, observing the results of the study, that these criteria, when applied, brought a fair assessment of the researchers, avoiding trending of "the older, the higher index".

Limitations of the Study

It is strongly recommended that the Google Scholar author's page be revised for all authors to obtain the correct "Scientific age". A potential limitation was found in the collection of the authors "scientific age," with many wrong and old articles included on the Scholar page, due to similar names; moreover, many authors are receiving credits from other researchers on Google Scholar (articles wrongly included), leading to an incorrect or misinterpretation of the "researcher's birthday". Furthermore, it is necessary to avoid any manipulation of the first article published (to obtain a better GF index); this fact can be considered unfair, unethical, and hence, can bring misinterpretation of the "researcher's birthday"/"scientific age". We also verified that Google Scholar generally under-reports the number of authors for publications with large author sets. Through the manual access and inspection, it was assessed that Scholar does not record all authors in all articles; it is an important limitation of the Scholar data but does not interfere in the GFsa.

Conclusion

Within the limitation of this study, it is possible to conclude that the new variable reported ("Scientific age") and the use of the total citations brought a fairer and feasible evaluation among the researchers. Thus, we are launching for the first time in the literature, the new GFsa index and the new information named "Scientific age". The future perspective of the GFsa application will be (1) the evaluation of the 9,093 researchers in Dentistry (total initially registered) including more authors/researchers in the Dentistry field, (2) expanding the exposition of this new index for other

areas of the knowledge, and (3) provide free access of all data through the website (<http://gfindex.us.to>).

Supplementary Materials: The following supporting information can be downloaded at the website of this paper posted on Preprints.org.

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