



THE EVOLVING HISTORY OF THE REVISTA DE INVESTIGACIÓN CLÍNICA

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"... destiny is something you look back at afterward,
not something to be known in advance"

Haruki Murakami, *The Wind-Up Bird Chronicle*

ABSTRACT

The *Revista de Investigación Clínica* (RIC) was established in 1948. It has been published continuously for 73 years. Until 2009, it was the journal of the *Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán* (formerly *Hospital de Enfermedades de la Nutrición*, and later named *Instituto Nacional de la Nutrición*), and thereafter it became the official journal of the Mexican National Institutes of Health. The history of this journal may be divided into four eras or periods, each distinctly characterized by the trends, and particular editorial policies imposed by the Editor-in-Chief and Editorial Committee in turn. The RIC, since 2015 known as RIC –*Clinical and Translational Investigation*–, is currently a nationally and internationally recognized scientific journal. This article briefly reviews the most outstanding historical features of the RIC since its foundation. (REV INVEST CLIN. 2021;73(5):270-9)

Key words: History. Revista de Investigación Clínica. Clinical and Translational Investigation.

INTRODUCTION

The *Revista de Investigación Clínica* (RIC) was first published in October 1948, as the official journal of the *Hospital de Enfermedades de la Nutrición* (HEN), currently known as the *Instituto Nacional de Ciencias*

Médicas y Nutrición Salvador Zubirán (INCMNSZ). It will therefore celebrate its 73rd year since its first issue. This is a great achievement considering the hundreds of medical and scientific journals that have seen the light and come to an end in that same period. Throughout its long and prolific life, the RIC has been

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Figure 1. The Editors-in-Chief of the Revista de Investigación Clínica from 1948 to date.



headed by four Editors-in-Chief (Fig. 1): José Báez Villaseñor, Founder of the Journal and Editor from 1948 to 1970; Rubén Lisker, between 1970 and 1998, with co-Editors Enrique Wolpert from 1974 to 1988, and Alvar Loria between 1989 and 1998. Gerardo Gamba became the Editor from 1999 to 2014, and since 2015, Alfredo Ulloa-Aguirre has managed its publication with Moisés Selman and Luis Oñate as Deputy Editors. Since its creation, the RIC has been published uninterruptedly. Initially every trimester, but it became a bimonthly publication in 1993. Figure 2 shows photographs of the journal's most diverse covers throughout its life. As expected, during its first 40 years, the journal had very simple and serious

covers, the acceptable format of medical publications at the time. The grey cover, released in 1990, reflected one of the journal's most significant changes when it became a bimonthly publication; this was flawlessly implemented without compromising its quality due to the growing influx of manuscripts submitted for review and eventual publication.

The RIC has changed throughout its lengthy existence, and its history can be divided into four eras, each with particular characteristics reflecting the corresponding historic moment in the development of medicine and medical sciences in Mexico, the prevailing world climate, and the particular orientation imposed by its

Figure 2. Covers of the Revista de Investigación Clínica during its different eras.



various editors and editorial committees. To inform readers on the most relevant historic features of the RIC, the authors have summarized in this article how over time, from a budding, predominantly local informative medium, its breadth has evolved to encompass a national and international medical audience.

THE DIFFERENT ERAS OF THE REVISTA DE INVESTIGACIÓN CLÍNICA

The first era: the birth of the RIC

The eminent hematologist, José Báez Villaseñor, oversaw the era in which the periodical publication of a journal of clinical investigation began in the Mexico of yore in which biomedical research and the application of generated knowledge in clinical practice was

practically nonexistent. The concept of *Physician-Scientist* that as a matter of fact was created in the '50s when the first M.D.- Ph.D. students were first trained in the USA, was also yet to be established¹. This first era, therefore, represents the birth of clinical research in Mexico, where at least 30 articles per year were now being published in the RIC, most of which (approximately 90%) were written by physicians from the HEN. On the first page of the first number of the RIC², a brief editorial was written by the founder of the HEN, Salvador Zubirán Anchondo, describing his thoughts on the idea of creating the journal and its objectives. Following is the literal transcription of that editorial:

"This publication has as its fundamental aim, to present to the Republic's (Mexican) Medical body, the clinical research studies conducted at the Hospital de

Enfermedades de la Nutrición, an Institution attempting to contribute to the development and growth of those disciplines that with special care, are cultivated within, and that if achieved, will also translate in the necessary proportions, into an indubitable impetus to Mexican Medical Science.

Upon the initial publication of the “Revista de Investigación Clínica,” we have also borne in mind the compelling duty to decisively address the study of those problems affecting our people, studies whose results will have to be broadly diffused, without waiting for investigators in other countries to attempt and undertake those duties.

Finally, the “Revista de Investigación Clínica” extends a cordial invitation to all medical institutions in the Republic, in general, and to all physicians interested in clinical research, in particular, to honor our columns by granting them the privilege of publishing their work and studies, which will certainly signify that this publication has a destiny to fulfill and a goal to reach.”

As mentioned at the top of this article, the first volume and number of the RIC were published in the month of October 1948. Aside from serving as its Editor and Founder, Báez Villaseñor convened an editorial council represented by Salvador Zubirán, Bernardo Sepúlveda and Roberto Llamas. Other than the mentioned Editorial penned by Salvador Zubirán², this first number also reproduced the inaugural speech of the HEN, also by Salvador Zubirán, delivered on October 12, 1946, and the critical judgment by Carlos Franco Sodi, published in the *El Universal* newspaper on July 9, 1947. Aside from publishing original articles and reviews written by experts in various medical fields (many of them, leaders in the HEN, such as Báez Villaseñor, Luis Sánchez Medal, Manuel I. Fierro, Rafael Rodríguez, Manuel Campuzano, Bernardo Sepúlveda, Luis Landa, Manuel Cárdenas Loaeza, and Salvador Zubirán himself, to mention a few), the RIC published important news pertaining to the HEN, including educational courses (such as that published in vol. II, number 2, in April-June, 1950), and reported visits from prominent physicians and investigators. In number 4, dated July, 1949, the affiliation of the School of Graduates of the UNAM (National Autonomous University of Mexico) was mentioned, as well as a visit from the distinguished foreign physicians, Andrew C. Ivy, Morris Fishbein, Lester Dragstedt,

Theodore Gillman, and E.C. Dodds, some of whom presented conferences during their stay in Mexico; of note, volume I included articles by Dragstedt on vagotomy³, and by Houssay (Nobel Prize in Medicine, 1947) on the sexual function of “*Bufo Arenarum*” Hensel⁴ and later, in volume 7, on academic freedom and scientific research in Latin America⁵. We must also mention the contributions made by Francisco Gómez Mont, including his publications in 1951 with Jorge Maisterrena on the adrenal cortex stimulating hormone (ACTH), and the use of cortisone in hematology, as well as those of Federico Gómez, founder of the *Hospital Infantil de México*, the very first National Institute of Health in Mexico. Some contributions in an original article format or as reviews by different leaders in Mexican medicine published in the RIC, are extensively described in the chronicle published in 1991 by Enrique Cárdenas de la Peña⁶. The publications in the RIC in this first era included those on the effects of malnutrition on different systems and constituted Zubirán’s and his collaborators’ classic studies^{6,7}. They also included articles (some written in english) by Fernando Quijano-Pitman, Jesús Kumate-Rodríguez, Julio Hernández-Peniche, Guillermo Soberón, José Antonio García-Reyes, Rubén Lisker, José Laguna, Rafael Muñoz-Kapellmann, Francisco Esquivel, José J. Villalobos, Javier Robles-Gil, Horacio Jinich, Eduardo Barroso, Edmundo Rojas, José Ruioba, Carlos Gual, and others, all pioneers that paved the way to what Mexican medicine is today. The RIC in the first era was, therefore, a journal considered by national and international leaders as an option to publish their manuscripts, particularly because at the time, the current exorbitant amount of scientific journals (particularly clinical) did not exist throughout the world.

The second era: the RIC becomes consolidated as a journal for research

In 1970, José Báez Villaseñor retired from his activities at the *Instituto Nacional de la Nutrición*. The General Director, Doctor Salvador Zubirán recognized his collaboration as Editor of the RIC, and wrote an editorial on the uninterrupted release of the Journal for 22 consecutive years: “*The RIC has constituted the medium through which the Instituto Nacional de la Nutrición has informed the medical body on the fruit of our studies and investigations, and of those by investigators from other educational and*

healthcare institutions in the Republic". When he designated Rubén Lisker as head of the Editorial Committee, he mentioned that the Journal's circulation would be triplicated with the purpose of reaching the entire medical body throughout the Republic, and the libraries of hospital centers and universities, national and foreign.

Rubén Lisker faced a Mexico that had awakened to clinical research, with investigators of the scientific stature of Carlos Gual, Ruy Pérez-Tamayo, Donato Alarcón-Segovia, and Rubén Lisker himself, albeit never underestimating the previous contributions of renowned clinical and biomedical investigators that had previously published original research articles of utmost relevance (see above and also ref. 7). Hence, the Journal saw a progressive increase in the number of articles published every year, and grew to about 50, while articles signed by authors from the *Instituto Nacional de Nutrición* decreased by 50%. At that time, the *Science Citation Index* was born, an idea conceived by Eugene Garfield, then the *Journal of Citations Reports* (JCR), a source of information defining the influence of journals in the scientific world, and that would aid libraries in deciding which journal subscriptions to obtain, and which to postpone. This index then became a very controversial referent when judging the quality of investigators, and to date, it still prevails in Mexico and many other countries. Since the RIC already existed when the JCR appeared, it was relatively easy for it to be registered, and opened the doors for authors to publish in Spanish or English, as they wished. Precisely during this second era, the RIC obtained its first impact factor (IF), which varied between ~0.25 and ~0.5, and reached 1.51 in 2018.

In 1974, Rubén Lisker invited Enrique Wolpert to collaborate as co-editor of the RIC in the period between 1974 and 1988, and subsequently, Alvar Loria between 1989 and 1998. One of Wolpert's first actions was to include a section in charge of the Institute's residents, and that would be coordinated by Leonardo Viniegra supported by a committee of residents with the responsibility of selecting articles that corresponded to their section. Another measure was to modify the Journal's cover, based on a photograph by Donato Alarcón-Segovia that depicted the Institute's initials in a painting. Wolpert published an editorial in 1974, describing how in the previous 3 years, 126 original articles had been published, 13 of which

(10.3%) were in English. These were the harbingers of what the RIC would become in the future, particularly in its third era.

In its second era, the RIC published very relevant articles that included methodology characteristics of research⁸, perspectives on human genetic manipulation⁹, historical reviews¹⁰, articles on medical education, and teaching at the *Instituto Nacional de la Nutrición*^{11,12}, and articles on medical therapeutics in psychiatry¹³⁻¹⁵. Articles were also published describing clinical experiences and extensive surgeries¹⁶⁻²², including common diseases such as diffuse toxic goiter²², and hemorrhagic portal hypertension^{19,20}, all penned by experts in their respective fields. This second era also saw the publication of 2 supplements, one in 1986 on nutrition in Mexico²³, and another in 1987 on the pathophysiology, clinical manifestations, and histopathological characteristics of AIDS²⁴. This was undoubtedly, an era in which the RIC became consolidated as a research journal.

The third era: the RIC becomes the journal of the Mexican National Institutes of Health

This era began in 1999. In those years, scientific knowledge was advancing at an impressive pace, and biomedical research was using, almost routinely, molecular and cellular biology technology; at that time, the human genome sequence was published (in 2001), and that of a significant number of animals²⁵. Mexico was not alien to this technology, and it was at this point that the RIC witnessed the birth of genomics (see article by Gamba in this number). The Editor-in-Chief's proposal included the development of functions that at the time were essential, such as maintaining the journal's status as a diffuser of the institute's educational activities, since it was broadly consulted by physicians, medical and nursing students, and could be found in over 50 libraries in Latin America. During this era, the RIC had its own logo that characterized it until 2015, reflecting the journal's own personality, and that the source of the manuscripts published reflected the fact that it did not exclusively belong to its parental Institute, but to the entire Mexican medical community. In fact, in that era, the RIC further emphasized the acceptance of articles that could be of particular interest to national readers, by mainly publishing articles with a

local impact and that could potentially impact diagnostic and/or therapeutic behaviors in Mexico, and continue the country's physician's training. However, its intention was not to exclusively publish original articles but for the journal to become the ideal link for the communication of clinical experiences in Mexico. The analyzed data as of 2008 revealed that a very large percentage of the articles published (53%) were original research studies²⁶. We must mention that albeit its multi-thematic medical nature in which articles encompassing all possible specialties are published, this is a very large percentage when compared with similar journals such as *The Lancet*, the *New England Journal of Medicine*, or the *British Medical Journal* whose annual percentage of published original articles is approximately 15.6%, 22.5%, and 12.5%, respectively²⁷. At the time, the journal also became open-access online, and the numbers published since 1993 were included. Hence, by 2014, it was visited by thousands and was downloaded hundreds of times daily. Since increasing the journal's IF was not a goal at the time but rather to increase its readership, it was close to 0.45, still lacking to be considered by the *Sistema Nacional de Investigadores de México*.

As of issue number 4 in 2009, the journal increased its plurality, becoming the official medium of the *Institutos Nacionales de Salud de México* (INS), thus increasing the number of contributions from investigators in other national institutes. In fact, by the end of that period, close to 70 articles per year were published, and less than 20% were signed by investigators of the INCMNSZ. Now, as the official communication channel of the INS (see article by Gamba in this number), many changes ensued. Although the journal was still published in Spanish, it was translated into English when the first number of the official information conduit of the INS appeared for its free upload and access on the internet.

The RIC's achievements in its first 60 years, until the publication of the first number of the now established journal of the INS, were carefully analyzed retrospectively and in great detail, by the then Editor-in-Chief who concluded that the RIC had wholly fulfilled the expectations of the founder of the INCMNSZ, Salvador Zubirán. These data can be consulted in two editorials published in the RIC in 2008, and 2014^{26,28}. In fact, one of them²⁶ describes how over the years, the

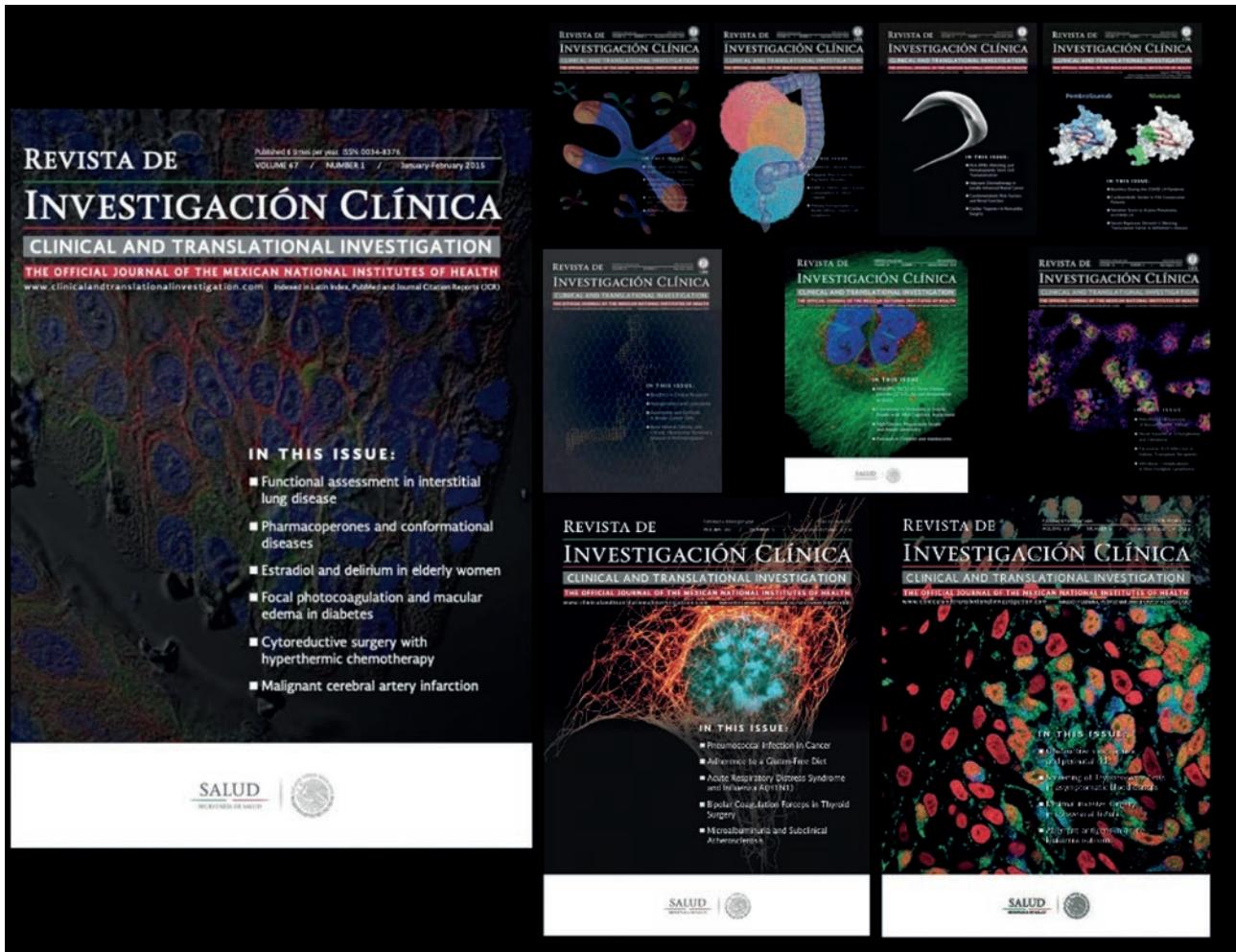
RIC had mainly served as a publication forum for investigators and health professionals in Mexico, whose contributions represented 85% of all articles published between 1998 and 2008.

The current era

The fourth and current era of the RIC began with the first number of 2015, initiating volume 67. Again, this era coincides with very relevant technological advances in biomedical research including, in general, genomic, and postgenomic technologies²⁵ with which we can obtain highly precise and detailed information at the cellular and molecular levels, and at a large scale with bioinformatics tools and computational biology for data analyses.

The purpose of the changes to the RIC hinged on the need for the *Comisión Coordinadora de los Institutos Nacionales de Salud* (i.e., the Commission in charge of coordinating the National Institutes of Health and High Specialty Hospitals in Mexico) of the Ministry of Health, to provide financial and diffusion support to the journal to increase its international reach and make it more attractive to Mexican investigators. The program posited by the Editor-in-Chief and his Deputy Editors on the new version of the journal was primarily based on its internationalization to increase its IF; this would help adjust it to the criteria of the *Sistema Nacional de Investigadores* and other institutions and universities, and be taken into account when evaluating the articles published by Mexican investigators. With that purpose in mind, some modifications were made, including: (a) The journal's name was changed to *Revista de Investigación Clínica – Clinical and Translational Investigation* – to prioritize biomedical research with a translational angle; (b) The Editorial Committee was substantially modified, creating the figure of Deputy Editors, and the type of articles was broadened to include, aside from original articles, brief and deep reviews, perspectives, thematic series, rapid communications, research letters, and letters to the editor; (c) The contents' language changed from being bilingual to complete publication in English, including its online platform (www.clinicalandtranslationalinvestigation.com) for the upload of articles, and to facilitate communication between Editors, reviewers, and authors; (d) Impression on paper was limited to prioritize online free access publication; (e) the number of articles in each

Figure 3. Different covers of the Revista de Investigación Clínica –Clinical and Translational Investigation–.



issue was considerably decreased, with 6-9/number (39-51 articles/year), and peer-reviews were programmed as expeditiously as possible (a maximum of 30 days), with which the average time from reception of an article to approval also decreased to 60 days; (g) Online ahead-of-print publication of accepted articles was established, including their indexation in PubMed; and (h) The cover was again modified to make it more attractive to readers (Fig. 3), and advertising from the pharmaceutical industry was completely eliminated.

With these changes, in 3 years (2015-2017), the journal's IF increased to 1.360, and in 2018, to 1.513 (Fig. 4A), only below *Annals of Hepatology* and *Archives of Medical Research*. In 2019, the IF decreased to 1.192, an important effect of the

financial, diffusion, and bibliographic withdrawal and limitations established by the *Comisión Coordinadora de los Institutos Nacionales de Salud*, as of January 2019. The current IF of the RIC is tending to increase, whereby at the moment, it is 1.451. Although the IF decreased in 2019, the Scopus CiteScore index (an additional IF measure) of the RIC increased from 1.29 to 2.7. This score represents the ratio between the number of references of original and review articles over an established period (for example, 2016-2019), and the number of documents published during that period; in the RIC's case until the end of 2019, 437/162 (Fig. 4B). Another contributing factor to the RIC's – *Clinical and Translational Investigation* – increase in IF and CiteScore has been the periodic publication of thematic issues, including one on COVID-19 (number 3, May-June) (Fig. 5).

Figure 4. (A) Impact factors of medical research journals in Mexico. The impact factor of *Annals of Hepatology*, which is not shown in the graph, is currently 2.125. Also shown, is the trend in the impact factor of the *Revista de Investigación Clínica* from 2004 to 2020, and the number of visits to and users of the journal's page in the last 2 years. (B) CiteScore 2019 of the *Revista de Investigación Clínica –Clinical and Translational Investigation–*. Note that the CiteScore tracker is updated until April 2021.

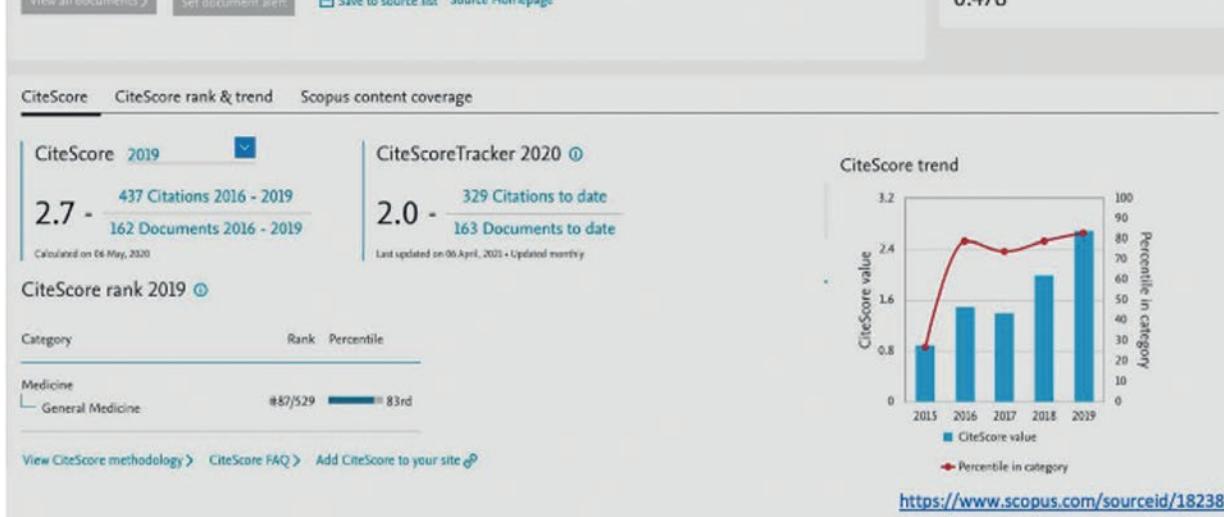
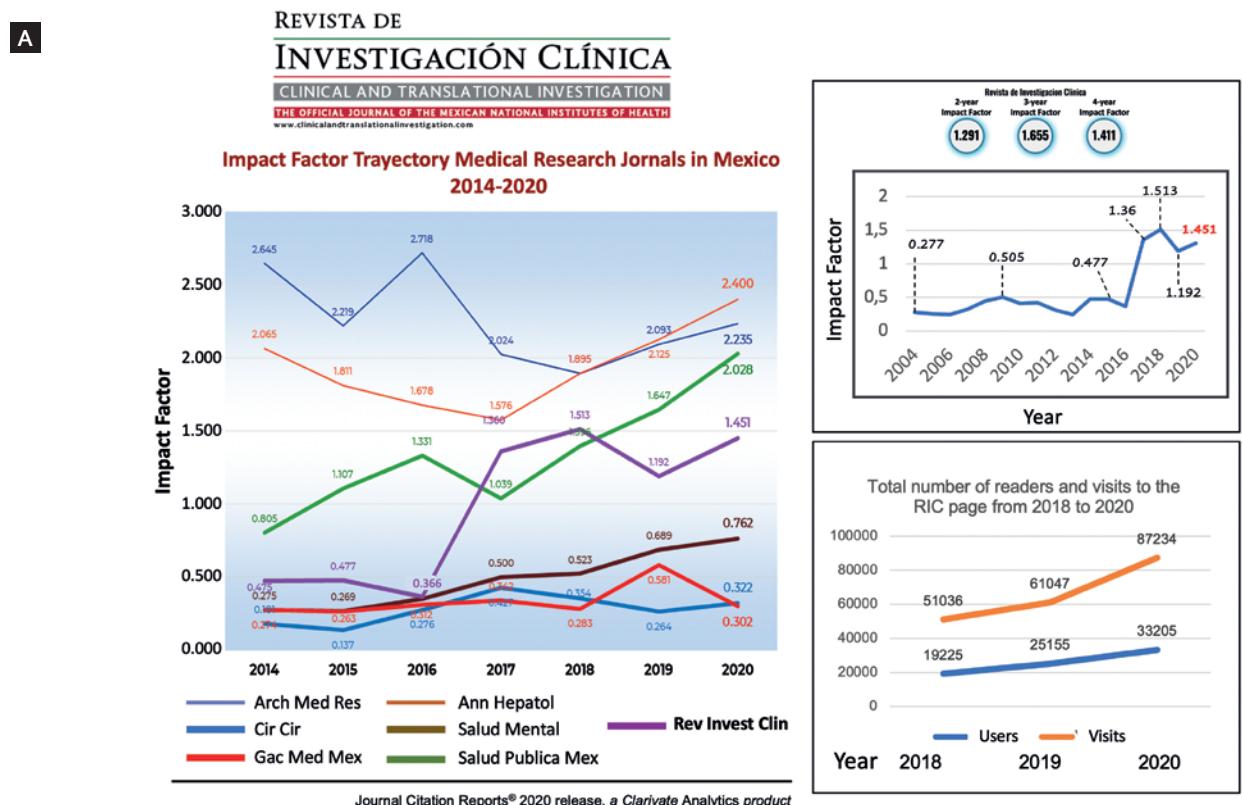
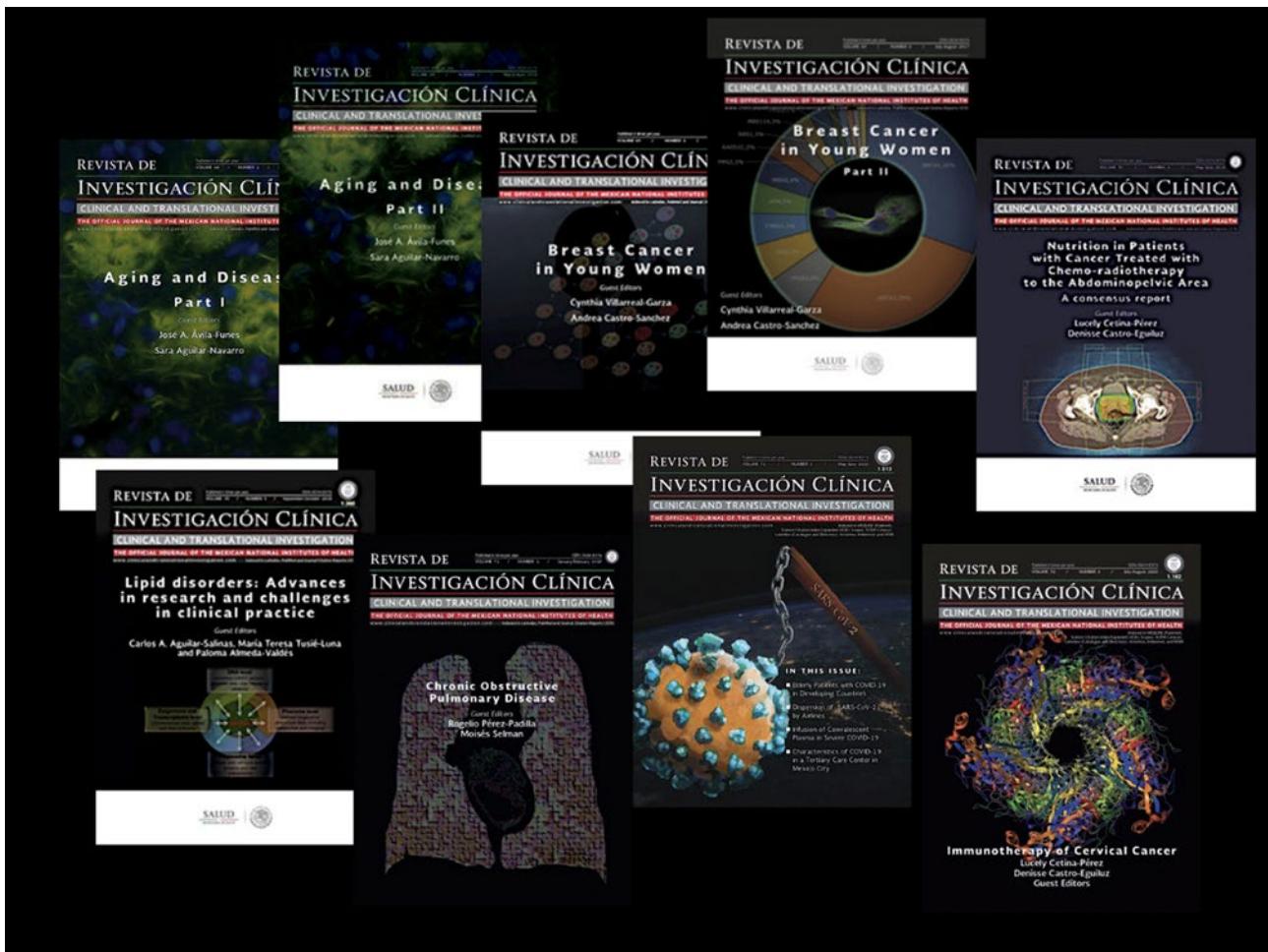


Figure 5. Thematic issues published to date in Revista de Investigación Clínica –*Clinical and translational Investigation*–.

During 2018 and 2019, the number of users was 19,225 and 25,155, respectively, increasing to 33,205 by December 31, 2020. The number of sessions on the journal's website by December 2020 was 87,234 and originated from 50 countries, mostly from Mexico, the United States, China, Brazil, and Spain, among others. In 2020, 312 manuscripts were processed and 223 were rejected for publication, representing 71.50% rejections, an 8% increase in comparison with the previous year; this reflects the journal's high selectivity in article publication.

Between 2015 and 2020, a total of 262 articles were published, 73% of which were original articles (including *Research Letters*, *Brief Communications* and extensive articles), 19% were review articles (including those published in thematic issues and thematic series), 4% were *Perspectives*, and the rest were

Comments and Letters to the Editor. The RIC is currently placed at number 87 (83rd percentile) among the 529 General Medicine journals taken into account by the Scopus-Elsevier CiteScore. The RIC (ISSN: 0034-8376 and ISSN: 2564-8896) is currently indexed in MEDLINE (PubMed), Science Citation Index Expanded (JCIE), Scopus, SCRM Conacyt, Latindex, Artemisa, Imbiomed, MIAR (Information Matrix for Journal Analysis, University of Barcelona, Spain – *Matriz de Información para el Análisis de Revista, Universitat de Barcelona, España*), and in the Directory of Open Access Journals (DOA).

CONCLUSIONS

In this article, the authors have briefly described the most outstanding features of the history of the

Revista de Investigación Clínica during its different stages, from its creation to its current state, having faced particularities and challenges, proper to the spirit of the moment, and the historic, social, scientific, and humanistic context of each era.

We do not doubt that the first three eras thoroughly fulfilled the goals of the founder of the INCMNSZ and the RIC, Salvador Zubirán Anchondo, and that until the publication of this issue, in particular, the 4th era of the journal has done so most satisfactorily, complying with those who initiated its change, not only in format but in content and its internationalization. The RIC – *Clinical and Translational Investigation* – is currently a solid journal as reflected in its uninterrupted publication for over half a century, and it figures among the seven scientific-medical journals in Mexico with a respectable IF according to the JCR (Fig. 4A)²⁹. The RIC remains present in the national and international medical scenarios and faithfully fulfills its purpose of being the organ of diffusion of clinical and biomedical research of excellence of our country's National Institutes of Health.

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