RAD Croatian Academy of Sciences and Arts – Medical Sciences. Celebrating its 70th Anniversary

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ABSTRACT:

RAD Croatian Academy Sciences and Arts (RAD CASA) is one of the oldest Croatian scientific journals, published in continuity from 1867. In this paper, we will present the historical context relevant to the establishment of the first Croatian scientific journals and explore their importance for Croatia's nation-building process. Our emphasis will be on medical journals, among which an important place belongs to RAD CASA – Medical Sciences. This journal, which was established as a separate series within RAD CASA in 1951, had issues with continuity until 2006, when new editorial board was elected. Since then, the journal has been included as an open access journal on HRČAK, the portal of Croatian scientific and professional journals, and is being published in English, which contributes to its international visibility and availability. Since 2019 the journal is being published in two double issues per year and has an expanded number of different sections and an increasing number of contributions. In the journal's 70-year history, RAD CASA – Medical Sciences published 582 articles authored by 1012 researchers and occupying 8010 pages. During this time, nine members of the Academy's Department of Medical Sciences served as editors of the journal. At the end of 2022, RAD CASA – Medical Sciences has more than 500.000 visits on the HRČAK portal, and its international visibility is also rising, especially on Google Scholar.

KEYWORDS: anniversary, history of medicine, medical journal, RAD CASA, RAD CASA – Medical Sciences

SAŽETAK:

RAD Hrvatske akademije znanosti i umjetnosti – Medicinske znanosti. Proslava 70. obljetnice RAD Hrvatske akademije znanosti i umjetnosti (RAD HAZU) jedan je od najstarijih hrvatskih znanstvenih časopisa koji izlazi u kontinuitetu od 1867. U ovome radu prezentirat ćemo povijesni kontekst relevantan za utemeljenje prvih hrvatskih znanstvenih časopisa i istražiti njihovu važnost za proces stvaranja hrvatske nacije. Naš će fokus biti na medicinskim časopisima, među kojima važno mjesto zauzima RAD HAZU – Medicinske znanosti. Ovaj časopis, koji je ustanovljen kao posebna serija u sklopu časopisa RAD HAZU 1951. godine, imao je problem s kontinuitetom izlaženja do 2006., kada je izabrano novo uredništvo. Od tada, časopis je uvršten na HRČAK, portal hrvatskih znanstvenih i stručnih časopisa te se tiska na engleskom, čime se postiže veća međunarodna vidljivost i dostupnost. Od 2019. godine RAD HAZU – Medicinske znanosti tiska se godišnje u dva dvobroja i ima sve veći broj rubrika i priloga. U 70 godina izlaženja u časopisu je 1012 autora objavilo 582 članka na ukupno 8010 stranica. Tijekom navedenog vremena časopis je uređivalo devet akademika članova Razreda za

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medicinske znanosti. Krajem 2022. na portalu HRČAK časopis ima preko 500.000 pregleda, a raste i vidljivost časopisa na međunarodnim portalima, osobito na Google Scholaru.

KLJUČNE RIJEČI: medicinski časopis, obljetnica, povijest medicine, RAD HAZU, RAD HAZU – Medicinske znanosti

In the history of *RAD CASA*, formerly *RAD YASA* (*Yugoslav Academy of Sciences and Arts*), one of the oldest Croatian scientific journals, an important place belongs to one of its separate series: *RAD CASA – Medical Sciences*. Following the Symposium "Oldest Croatian Journals: Continuity, Challenges and the Future", which was dedicated to both *RAD CASA*, published in continuity for 155 years, and *Liječnički vjesnik*, published in continuity for 145 years, we wanted to show the historical development of *RAD CASA – Medical Sciences*, first published as a separate series in 1951 (Figure 1).



Figure 1. RAD CASA and Liječnički vjesnik are among the oldest Croatian journals published in continuity to this day.

As parts of cultural and scientific history of a nation, scientific journals are strongly determined by the social, economic and political context. For Croatian scientific publishing, the relevant context primarily involves the rise of nationalism in Europe in the nineteenth century, when feudalism was finally defeated by capitalism and when mass consumption of media started (1). The process of creating nation states assumed different forms, from bloody and revolutionary to more elaborate and diplomatic. From the mid-nineteenth century Croats also sought the creation of their own nation state and grappled with the building of modern civil society within the bounds of the Habsburg Monarchy. Given this limitation, their fight was not revolutionary but rather tended towards opportunistic balancing between Budapest and Vienna in order to secure favorable position for Croats in numerous political and social aspects. The process for Croatia's independence within the Monarchy was paralleled with the aims to achieve national integration, primarily through the development of Croatian language, culture, education and science (1). As the sociologist Dinko Tomašić emphasized, Croatian civil nationalism focused on cultural unity, national language and national culture as designations of distinctiveness and as features by which nationality could be identified (2).

One expression of these aims was the "Illyrian" movement for intra-Croatian and Croato-Serb linguistic unity launched by Ljudevit Gaj in the 1830s, which had provided a modern basis for aspirations towards the reunification of the Croatian lands (3). The "Illyrian movement" was established to cultivate a cultural heritage consciousness shared by all South Slavic groups, particularly through establishing a shared formal language (4). As Robin Okey points out, under the name of Yugoslavism it took a more explicitly political form in the 1860s under Bishop Josip Juraj Strossmayer, who championed the cause of a federal Monarchy against Austro-Magyar Dualism (3). The South-Slav propaganda found more and more supporters as the Magyarization took hold in the latter part of the nineteenth century (5). The results were evident: in 1847, Croatian parliament proclaimed the Croatian language the official language, Matica ilirska was established in 1839, Yugoslav Academy of Sciences and Arts was founded in 1861, and the University of Zagreb was transformed in 1874 in a modern institution (1).

One aspect of this cultural revival was the establishment of first Croatian scientific journals. Some of them paved the way for others and provided a fertile soil for the development of Croatian science, philosophy, literature and economy. Kolo: članci za literaturu, umjetnost i narodni život aimed to inaugurate aesthetic and critical criteria which would help it achieve the level of contemporary European literary magazines (6). Arkiv za povjestnicu jugoslavensku is considered the first Croatian scientific journal that engaged in history, archeology and art on the territories occupied by South Slavs (7). Another important journal was Napredak, the oldest Croatian professional and scientific journal published in continuity from 1859 (8). Finally, Književnik was a journal that was published in Zagreb from 1864 to 1866. It was started with the support by Matica hrvatska, and among its editors were Franjo Rački and Vatroslav Jagić. It paid special attention to linguistic discussions and national history, and is considered a forerunner of RAD CASA (9).

According to the Rules of the Academy which were approved in 1866, one of the chief tasks of the institution was to publish scientific and professional papers, and in 1867 a decision was made that the new journal would be named RAD Jugoslavenske akademije znanosti i umjetnosti or, in a shorter version, RAD JAZU (RAD Yugoslav Academy of Sciences and Arts or RAD YASA). The person most responsible for the establishment of RAD was Franjo Rački, the first president of the Academy. The journal was supposed to publish papers presented at the meetings in the Academy about various topics in history, philology, philosophy, law, mathematics, natural history and arts, papers sent to the Academy for review, various reports, obituaries about members of the Academy and book reviews. The first book of RAD was published at the end of 1867 with a circulation of 1.000 copies (Figure 2) (10). In its early years, RAD's mission closely followed the statement given by Rački on 28 July 1867: "The Academy will not support the development of science in idealistic fashion, but taking into consideration the needs and the benefit of our people and our homeland" (11). From 1882, RAD was split into two separate series, but both of them followed the single numeration. The first series was published jointly by the Department of Philology and History and the Department of Philosophy and Law, and the second series by the Department of Mathematics and Natural History. After the Second World War, new departments were established in quick succession in the Academy, so in 1951 the first issue of RAD was published by the Department of Medical Sciences.

Up until that moment, Croatian medical journalism developed solidly, but with substantial delay in comparison to the industrialized European countries. The first medical journal in which exclusively medical articles were published was *Acta medica et philosophica Hafniensia*. This journal, which was published from 1673 to 1680 in Copenhagen, did not attract the attention of broader medical circles. The one which did was the French monthly *Journal solution*.



Figure 2. Front page of the first book of RAD YASA from 1867.

nal des decouvertes en medecine, launched in Paris in 1679 (12). In Britain, the first medical journal was the *Edinburgh Medical Journal*, peer-reviewed since 1733 (13). Other most important English-language journals were *The Lancet*, started in 1823, and *The British Medical Journal*, founded in 1857 (14).

The oldest Croatian medical journal was named *Slovinski prvenci o naravi i zdravlju*, launched in 1860 in Vienna where its editor, a retired physician and writer Gjuro Augustinović (Glina, 1816 – Zagreb, 1870) lived (12). The primary mission of *Prvenci* was medical education and the development of medical terminology. After moving to Rijeka in 1861, the journal was published under the name of *Rvacki prvenci o naravi i zdravlju*, but the following year its publication was terminated due to financial constraints. As many other cultural projects of the time, Augustinović's *Prvenci* were motivated by the desire for nation-building, especially from the viewpoint of Illyrism. Its pioneering role notwithstanding, the journal did not manage to attract attention of the wider medical community at the time (15).

The most important year for Croatian medical periodicals was 1877, when separated by only a few days, Glasnik Društva slavonskih liječnika was initiated in Osijek, and Liječnički vjesnik was founded by the Croatian Medical Association in Zagreb. Before their establishment, Croatian physicians published their articles in Croatian non-medical periodicals, such as Zora dalmatinska (1844–1849; whose editors A. Kuzmanić and I. A. Kaznačić were physicians), Književnik (1864–1868) and Vienac (1869–1903; one of its editors was physician I. Dežman) (16). While Glasnik was short-lived, Liječnički vjesnik is published in continuity to this day. In contrast to Prvenci, which was mostly the result of a very motivated individual, Glasnik and Liječnički vjesnik, as Stella Fatović-Ferenčić argues, gradually evolved in response to the foundation of medical societies, changes in the development of medical education, and growing importance of research in the late 19th century (12).

The intensification of medical publishing was particularly noticeable in the interwar period with the establishment of *Praktični liječnik* (1927), *Veterinarski arhiv* (1931), *Folia stomatologica* (1937), *Radiološki glasnik* (1937), *Arhiv za kemiju i farmaciju* (1938), *Apotekarski vjesnik* (1940) and *Vjesnik ljekarnika* (1941), as well as in the first ten years following the Second World War, when 15 medical journals were established, such as *Medicinar* (1947) and *Arhiv za higijenu rada i toksikologiju* (1950) (17). It is precisely in this period that *RAD CASA – Medical Sciences* (then *RAD YASA – Medical Sciences*) was established.

The journal RAD CASA – Medical Sciences is in its 71st year of publishing as a standalone series within the journal RAD CASA. The series was established only a year after the Department of Medical Sciences was founded within the Academy in 1950. According to the rules of numerating the journal, i.e., with respect to its continuity regardless of the series to which the book belonged, it was published as book 284 (Figure 3). Therefore, in 2021 we celebrated the 70th anniversary of the establishment of RAD CASA - Medical Sciences, the fact that was highlighted on the front page of the journal (book 548, issues 56 and 57) (Figure 4). It was mentioned on that occasion that the anniversary could actually be celebrated together with the Department of Natural Sciences. Namely, in 1948, book 273 of RAD was published by the Department of Natural and Medical Sciences (edited by Vale Vouk) (Figure 5), and in 1950 two books of RAD were published by the same Department: book 274 (edited by Vale Vouk and Drago Perović) and book 280 (edited by Vale Vouk). In all three books authors were predominantly physicians, such as Franjo Kogoj, Drago Perović and Jelena Krmpotić-Nemanić, who are regarded as among the most prominent Croatian physicians of the twentieth century. The same can be said regarding the nine members of the Academy's Department of Medical Sciences who served as editors of the journal throughout its 71 years of publishing (Table 1).



Figure 3. Front page of the first issue of RAD CASA – Medical Sciences in 1951.

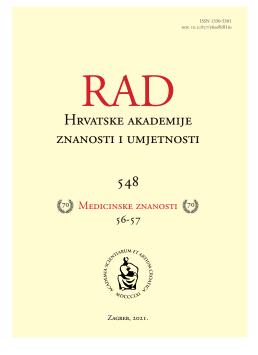


Figure 4. The design of the front page of RAD CASA – Medical Sciences on the occasion of its 70° anniversary

Table 1. The list of editors of RAD CASA – Medical Sciences from 1951 to 2022.

Editor	Issues	
Drago Perović	1 – 3	
Franjo Durst	4	
Drago Perović	5 – 11	
Radoslav Lopašić	12	
Eugen Topolnik	13	
Nenad Grčević	14 – 15	
Mirko Dražen Grmek	16	
Nenad Grčević	17 – 25	
Dragan Dekaris	26	
Dragan Dekaris, Drago Buneta	27	
Dragan Dekaris	28 – 29	
Marko Pećina	30 – 59	

The scope of work involved in editing the journal in different and financially challenging times is evident from Table 2 which shows the number of published articles, the number of pages and the number of authors in two time periods: the first from 1951 to the end of 1991, and the second from 1992 until today, as well as the total number for each category from the book 284 (1951) to book 552 (2022). The table also demonstrates the differences in editorial policies in the two time-periods. In the first period 204 articles that occupied 4213 pages were published, while in the second period 378 articles were published that occupied 3797 pages. Therefore, in the first period articles were longer and were written by a smaller number of authors compared to the second period. The anecdotal proof of this claim can be found in two papers written by the same author and one of the authors of this paper (Marko Pećina). Article entitled "Biomechanical research on the functional adaptation of fibula" published in RAD 402 (1982) was a single author paper and was 57 pages long (18). In sharp contrast, article entitled "Meralgia paresthetica. Lateral Femoral Cutaneous Nerve Entrapment' published in RAD 547 (2021) was written by four authors and was seven pages long (19). Overall, RAD CASA - Medical Sciences published 582 articles on 8010 pages, which were written by 1012 authors.

Table 2. The number of published articles, pages and authors in the history of RAD CASA – Medical Sciences

Time period	Articles	Pages	Authors
1951 – 1991	204	4213	325
1992 – 2022	378	3797	687
1951 – 2022	582	8010	1012

In its 70-year history the journal had trouble with continuity until 2006. That year, the Academy's Department of Medical Sciences elected a new editorial board of the journal, which has recently been slightly expanded. This editorial board, therefore, led the journal from book 496 (2006) to book 552 (2022). A tectonic change occurred in 2007, when from book 497 the editorial board decided to publish the journal in English (Figure 6). Previously, there were instances of publishing individual papers in English starting from 1981, and it also occurred in 1985, 1987, 1988, 1989, 1991 and 2000.

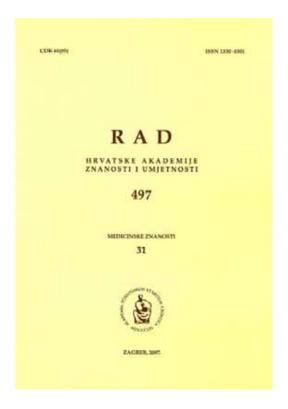


Figure 6. The first issue (book) published entirely in English.

Until 2006, 29 issues had been published in discontinuity. Since 2006, *RAD CASA – Medical Sciences* (starting with book 496=30) is published continuously (one or two issues per year), and has been included as an open access journal on HRČAK, the portal of Croatian scientific and professional journals. Since 2007 (book 497=31), when it was decided to publish the journal in English, it has become visible and recognizable within the international scientific community. The next step for the journal was taken in 2019, when after her election as the head of the Department of Medical Sciences of the Croatian Academy of Sciences and Arts, Vida Demarin, Fellow of the Croatian Academy, initiated within the Department a reorganization related to



Figure 7. Current Editorial Board and Advisory Board of RAD CASA – Medical Sciences.

the publication of the journal. All the members of the Department of Medical Sciences, as well as the members of the Editorial Board, supported this initiative. In cooperation with Marko Pećina, Editor-in-Chief, new members of the Editorial Board and Journal Council have been nominated and elected (Figure 7). Furthermore, changes to the format and the layout, and all the other changes necessary for the journal to fulfil the criteria set for the inclusion in the highly valued international quotation bases, have been proposed.

The book 537 published in 2019 also marked a new development, since it represented a first double issue (46-47) and because some new names were added to the Editorial Board and Journal Council (20). We would especially like to point out that Filip Derke, MD, who has joined the Editorial Board as its Secretary, has done the lion's share of the work related to the redesign of the journal and the improvements with regard to editing and publishing. The website of the journal was created at www.rad-med.com, and all communications with the authors were transferred to the digital platform. Unlike some other series of RAD CASA, the journal RAD CASA - Medical Sciences publishes not only the scientific and professional papers, but also an increasing number of articles in sections such as News and Education, Book Reviews and Interviews. Every new double issue (2 books are published annually, making a total of 4 issues) has additional number of contributions (Figure 8). Apart from



Figure 8. Contents of RAD CASA – Medical Sciences 552=58-59, 2022.

an increasing number of contributions, everyone involved with the journal can be satisfied with the reach of published papers. Since its inclusion on portal HRČAK, the articles published in *RAD CASA – Medical Sciences* have reached more than 500.000 hits, which means more than 17.000 hits per issue. In this paper, we have focused on the historical context and the development of *RAD CASA – Medical Sciences*, which was initi-

ated as a separate series within *RAD CASA* in 1951. Its current editorial board is dedicated to the improvement of the quality of contributions to the journal and to its technical aspect, and are trying to achieve the inclusion of the journal in as much internationally renowned citation bases as possible. So, we conclude optimistically: *Vivat, crescat, floreat RAD CASA – Medical Sciences*.

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