

Internationalism and nationalism: The Rockefeller Foundation, public health, and malaria in Italy, 1923-1951¹

Darwin H. Stapleton*

Abstract

The Rockefeller Foundation's support of malaria control and public health in Italy over three decades, the 1920s, 1930s and 1940s, was one of the foundation's most successful collaborations in its history. Outstanding research, a new and important institution, and decided improvements in public health were historically-significant results.

The three most important episodes of this American-Italian relationship were the operations of the *Stazione Sperimentale per la Lotta Antimalarica*, the founding of the *Istituto Superiore di Sanità*, and the campaign to eradicate mosquitoes in Sardinia. In each of these episodes there was a tension between the international aspects and national aspects of the partnership that to some degree limited its success.

Keywords: Rockefeller Foundation; Public health; Malaria; Italy; Nationalism; Lewis Hackett.

Internacionalismo e nacionalismo: a Fundação Rockefeller, a saúde pública e a malária na Itália, 1923-1951

Resumo

O apoio da Fundação Rockefeller às atividades de saúde pública e controle da malária na Itália, entre as décadas de 1920 e 1940, foi uma das colaborações mais bem-sucedidas na história da instituição norte-americana. A condução de pesquisas científicas de excelência, a criação de nova e importante instituição e avanços significativos na saúde pública foram resultados historicamente significativos. Os três episódios mais importantes desse relacionamento italo-americano foram as atividades da *Stazione Sperimentale per la Lotta Antimalarica*, a criação do *Istituto Superiore di Sanità*, e as campanhas de erradicação de mosquitos na Sardenha. Em cada um desses episódios houve tensões entre os elementos nacionais e internacionais que, em certa medida, vieram a limitar o sucesso alcançado.

Palavras-chave: Fundação Rockefeller; Saúde pública; Malária; Itália; Nacionalismo; Lewis Hackett.

The Rockefeller Foundation's collaboration with Italy can be understood in microcosm by considering the friendship of two men: Lewis Hackett and Alberto Missiroli. Hackett, a graduate of both the medical and public health schools at Harvard University, joined the International Health Board, a new Rockefeller philanthropy, in 1914. He first was assigned to hookworm control projects in Central America, and then was sent to Brazil to develop public health programs. There he first encountered malaria as an endemic disease. Hackett was posted to Italy in 1923 after a visit to Italy by Wickliffe Rose, a leading Rockefeller Foundation officer, led to an official invitation to commence collaborative activities.² Hackett arrived in Italy in January 1924 and immediately began a survey of the government's malaria program, which had been effective in reducing malaria incidence by instituting the widespread distribution of quinine, and by reducing mosquito habitat through land reclamation.³ Within a few days Hackett met Missiroli, and a few months later voiced his opinion that Missiroli was one of "only two men in all Italy [the other was

Grassi] who are interesting themselves in the scientific study of malaria control".⁴

Alberto Missiroli was only one year older than Hackett, and had a very similar education. He was a graduate of the school of medicine at the University of Bologna, and specialized in pathology. His true interests were laboratory research, particularly in bacteriology, and beginning in 1910 he carried out field research on several diseases, including cholera, Maltese fever, undulant fever. In 1914 he became associated with the government public health laboratories, and eventually Missiroli began to focus his attentions on malaria.⁵ By the time of Hackett's arrival, Missiroli had become convinced that the most successful attack on malaria would be through mosquito control, a view that Rockefeller public health officers already had taken as a basis for their anti-malaria program.⁶ When Hackett and Missiroli met, therefore, they found that they agreed completely that the future of malaria control was a matter of mosquito-killing; they had only to consider what approaches were likely to be the most productive. As a result, they quickly

* Endereço para correspondência:

Rockefeller Archive Center. Sleepy Hollow, NY 10591 USA

Fone: 914-631-4505 – Fax: 914-631-6017

E-mail: stapled@rockvax.rockefeller.edu

became collaborators in research and field malariology and, equally important, they soon demonstrated that they were very proficient in mediating between the Italian government and the Rockefeller Foundation. Careful study of their collaborative activities indicates that Hackett and Missiroli held the bonds of the international fraternity of scientists in higher esteem than the goals of national governments or international organizations.

Hackett, in particular, wanted to stay away from what he saw as destructive politics within the Italian educational system and government bureaucracy. He gladly turned over the administrative responsibility for the *Stazione* to Missiroli, because he observed that Missiroli had little interest in purely political battles but was skilled in getting what he needed from the government.⁷

The productive interpersonal relationship of Hackett and Missiroli was crucial to the early years of Rockefeller public health work in Italy, but the foundation's decision to make a substantial commitment there had other significant dimensions. The Rockefeller Foundation was drawn to Italy in part because its officers, like other Americans, seemed to observe in Italy of the latter 1920s a renewed desire for action, a willingness to play a role on an international stage, and an optimism about the future that was refreshing. Lewis Hackett summarized this view when he said in 1927 that "an ancient Roman [now] stirs in every Italian. The passwords are production, prosperity, prestige, and power."⁸ That these ideas were closely associated with the rise of fascism did not, at the time, seem to worry Hackett.⁹

The second factor that fostered collaboration between the foundation and Italy was the foundation's belief that it could noticeably improve the malaria situation there. The Rockefeller Foundation believed that it had a special opportunity to establish an anti-malaria program in Italy in the mid-1920s, because in the view of its officers any Rockefeller initiative probably would contribute to the improvement of the existing approach.¹⁰ Hackett found early in his mission to Italy that the prevalent view of public health officials in regard to malaria was one

*of extreme pessimism, in part because there are so many outstanding malariologists with widely differing theories and mutual jealousies, that they cannot be gotten together on any one plan.*¹¹

Given this division, the foundation thought that their anti-malaria program would insert an opening wedge in Italy because, in contrast to the more rigid government and educational bureaucracies in Britain, France, and Germany, the socio-political situation in Italy in the mid-1920s was "plastic" and could be molded.¹² Privately, Rockefeller officers shared with each other their

expectation that they could institute a plan of scientific-technical interventions for malaria control at the local level that would demonstrate the inadequacy of the top-down medical solutions imposed by national bureaucrats in Italy.¹³

Finally, the Rockefeller officers thought that Italy's intellectual and cultural connections with both northern Europe and the Balkans, and colonial presence in Africa, meant that any successes in Italy would affect a broad swath of nations and regions.¹⁴ This strategy of instituting demonstration projects that were expected to draw attention to new approaches to public health was utilized by the Rockefeller Foundation in the public health field throughout the world.

Let us return now to Lewis Hackett and Alberto Missiroli.

Stazione Sperimentale per la Lotta Antimalarica

In August 1924 Hackett proposed to the New York office of the Rockefeller Foundation that

what Italy evidently needs, to be able to attack with any possibility of success its major public health problem [i.e., malaria] is undoubtedly a malaria bureau or division, under competent direction, with a separate budget, and a trained and whole-time scientific and subordinate personnel.

Further, he argued that while this institution should be a "distinctly Italian enterprise", it should be separate from the existing bureaucracy in order to prevent it from becoming contaminated by the existing "network of intrigue" in Italian malariology. From the beginning, Hackett conceived of this new body as both a research center that would attract an international clientele, and a national training center that would be a significant school for malaria workers.¹⁵

Hackett's dream of a new center was based on his rapidly-developing collaboration with Missiroli. A month after broaching his scheme with the foundation, he wrote again to say that Missiroli was the person who could make the new institution a success, describing him as "capable, industrious, and enthusiastic." Equally important, Hackett found that Missiroli was willing to try out the mosquito-control approach to anti-malaria work, the methodology central to the Rockefeller Foundation's global program.¹⁶

Working closely with Missiroli and Alberto Messea, the director general of the public health department, Hackett promoted the idea of an institute that would begin to develop profiles of malaria endemicity, and the behavior and habitat of mosquito species, in specific locales, as a basis for experiments in mosquito control. There was disappointment in official quarters that

Hackett wanted to begin research on the basis of studies of malaria's local manifestations rather than developing a general scheme. Hackett's approach was derided as "small town stuff".¹⁷ But Hackett's experience in both North and South America had led him to the conclusion that "malaria is a local and highly technical problem", and he continued to push that view.¹⁸

Hackett had the full support of the foundation, and his request for funding for an institute was quickly approved.¹⁹ The central government was tardy in taking up this initiative, but the city of Rome offered its support, and later gave a building for the institute: early in 1925 Hackett and Missiroli established what they named the *Stazione Sperimentale per la Lotta Antimalarica*. They moved quickly to make agreements with local governments in Sardinia, Sicily, Calabria, and Ferrara, as well as Rome, to set up experimental mosquito-control areas and associated subordinate laboratories. The *Stazione's* general program of operations was approved jointly by the director general of public health and the minister of the interior, who was Mussolini.²⁰ The government appointed Missiroli the director of the *Stazione*, and paid his salary and expenses. At first Rockefeller funds paid for the rest of the staff and operations, but over ten years all costs were gradually shifted to the Italian government. It was the mutual goal of the foundation and the government that the *Stazione* would be an Italian institution and would eventually become an organ of the health department.²¹

The *Stazione* quickly became a focus of international training. The League of Nations Health Organization began sending trainees to the *Stazione* soon after it opened, and the Rockefeller Foundation began to channel its fellows in public health to Rome for exposure to what it regarded as the most advanced program of laboratory and field operations in the world.²² In summer of 1926 – when the *Stazione* was in operation less than two years – Hackett counted 19 malariologists who had visited for periods of two weeks to two months.²³ By 1930 the British Colonial Office and the London School of Hygiene and Medicine were requiring some colonial medical officers to make a pilgrimage to Rome to observe the work of Missiroli and Hackett. Some of these malariologists engaged in research during their residence, and publications began to appear in a range of scientific and medical journals that acknowledged the *Stazione*. The *Stazione* also began regular training of Italian public health personnel, and had visits at its central and regional laboratories by various Italian government and public health officials.²⁴ This connection with the public health bureaucracy gave Missiroli and Hackett the opportunity to evaluate potential future leaders, and they recommended a series of them for Rockefeller fellowships that provided

advanced training in the United States. Some of these fellows were specifically identified as being trained to work in Missiroli's laboratory in the future.

The *Stazione* set in motion a dramatic change in the strategy of Italian malaria officers. In 1931 Hackett told a gathering of malariologists in the United States that the major contribution of the *Stazione* was that it had

*proved over and over again, under all sorts of conditions, that in Italy mosquito breeding can be prevented for less money than it takes [...] to treat the acute malaria in the local population.*²⁵

Probably it was just as important that for the ten years of the *Stazione's* operation. Alberto Missiroli, the leading Italian malariologist of his generation, had the opportunity to fully develop his research program, paving the way for his leadership of the beginning of malaria's the final stage control in Italy after 1943.

Istituto Superiore di Sanità

The *Stazione* was intended from the beginning to be a temporary organization that would be wholly absorbed by the Italian public health system after it had the opportunity to fully demonstrate the Rockefeller approach to malaria control. But by the spring of 1928 Hackett had begun discussions with the Italian government about the founding of a permanent public health institute that would replicate, on a grand scale and for all areas of public health, the antimalaria work that the *Stazione* was doing on a small scale for demonstration purposes.²⁶

The founding of permanent public health institutions as training schools for government officials and as research facilities to study local problems had been a Rockefeller strategy since it began giving aid to the schools of public health at Harvard and Johns Hopkins universities in 1916. In the years immediately after World War I, the Rockefeller Foundation began to support the creation of institutes of public health and hygiene in eastern Europe and Latin America, and helped to found the London School of Tropical Medicine and Hygiene.²⁷ As historian Paul Weindling has noted, this program was based on the belief that there was a need to transplant the progressive American public health model that emphasized site-specific measures to stop emerging epidemics in order to supplant the tradition of long-term ameliorative measures.²⁸ In eastern and central Europe this strategy had the intended addition benefit of reinforcing the new central governments by associating them with improvements in public health as well as by erecting monumental buildings in the new capitals that were expected to enhance the prestige of the governments. It did not escape to the thinking of the Rockefeller officials that

they were aiding nations that might provide a buffer against both Soviet and German expansion.²⁹

The creation of the *Istituto di Sanità Pubblica*, now the *Istituto Superiore di Sanità*, followed this general pattern, but it was on a much larger scale, and was initiated from the Italian side. In the spring of 1928, Missiroli, working closely with Hackett and Messea, developed a step-by-step plan that would create a new organization to replace and reform the existing institute of hygiene. He wanted to develop an organization that would be dedicated to research leading to practical application, rather than research for its own sake.³⁰ The first step was to have the Rockefeller Foundation invite a commission of Italian officials to visit the United States, and certain European countries, to study public health activities and institutions, which it did in 1928. At the same time the foundation's trustees authorized foundation officers "to negotiate with the Italian authorities with a view to possible participation in the reorganization of the National Public Health Laboratory."³¹ Hackett and Missiroli wasted no time preparing a *memorandum* on the proposed extension of foundation collaboration with the public health department, stating that the foundation would be willing to assist in the creation of a new institute that would combine "a public health laboratory of the best modern type," and "a service school for the training of [public health] personnel." This *memorandum* was delivered to Mussolini under the signature of Prince Gelasio Caetani, formerly a private secretary to Mussolini and then undersecretary general of the League of Nations. Mussolini gave his approval by writing "Sono favorevole" on the document.³²

The process now moved quickly. Early in 1930 Hackett reported that the architects' designs suggested that \$658,000 would be needed for the building, and that the government had already reserved a site in Rome for it the new *Istituto di Sanità Pubblica*.³³ The Italian ministry of the interior had by this time officially described the school as incorporating:

1. The existing laboratories of the public health department.
2. A new physiological laboratory.
3. The *Stazione Sperimentale per la Lotta Antimalarica*.
4. A new school of hygiene and public health to train public health officers.
5. The existing Superior School of Malariology.
6. A school to train public health nurses.
7. A unit to study tuberculosis.
8. A unit for epidemiology and statistics.
9. Administrative support services, including a library and archives.³⁴

This plan was favorably received in New York, especially because the Italian government pledged to

provide adequate annual support for the operations of the institute.³⁵ A beautiful set of architectural drawings arrived in March 1930 that gave concrete expression to the plan.³⁶

The Rockefeller Foundation regarded the *Istituto* as

*a logical step in the elaboration of the program [...] in Italy [...] which should bring about an enormous improvement in the public health situation of Italy and her colonies, and also affect beneficially other countries.*³⁷

In April 1930 the foundation appropriated \$686,000 (or 12.5 million lire) for the construction of the *Istituto*, and an additional \$100,000 for its furniture and equipment.³⁸ The building and equipping in fact cost more than these sums, and the Italian government made a separate appropriation to complete the work.³⁹

Plans for the *Istituto* were slightly revised in 1931 and drawings were duly submitted to the Rockefeller Foundation.⁴⁰ The building itself was reported as "practically completed" in December 1932, but it was more than a year before it was fully equipped. The building was dedicated by Mussolini on 21 April 1934, the Roman holiday favored by the fascists. That day, the director general of public health sent a telegram of thanks to John D. Rockefeller, Jr., chairman of the trustees of the foundation, who by coincidence was on holiday in Taormina in Sicily.⁴¹ However, it was clear to the foundation by this time that, as a matter of public record, the *Istituto* was regarded "as a memorial of Fascist initiative and enterprise."⁴²

This understanding requires further comment. We know from the archival record that as early as 1923 the foundation had heard about fascist violence and suppression of the opposition, and that leading officers had dismissed the events as not to be considered as serious impediments to initiating work in Italy. When Hackett came to Italy he met Mussolini within two weeks of his arrival and found him to be "energetic in manner" and offering "every cooperation possible."⁴³ This interview gave Hackett the notion that he had the personal support of Mussolini, support that was important because, in addition to being prime minister, Mussolini was minister of the interior overseeing the health department. The annual proposed program of the *Stazione* went to Mussolini for his personal review, and Hackett transmitted Mussolini's approval to the Rockefeller Foundation.⁴⁴ Clearly the foundation knew it was working directly with the fascist government. Why did it do so?

There are two answers. First, throughout the world the foundation chose to work with governments willing to accept its programs, because it believed that having the opportunity to initiate long-term improvements in public health was on balance more important for the

improvement of the human condition than withholding support from particular classes of governments. The foundation also worked with the Mussolini government because, like many observers in North America and Europe, foundation officers thought that the various manifestations of fascism, such as suppression of opposition, emphasis on militarism, and glorification of leaders, were likely to be temporary phenomena as the world recovered first from the serious dislocations of World War I and then severe economic problems.⁴⁵ They did not anticipate, in Italy, in Germany, or in the Soviet Union, that these were irrevocable steps toward totalitarianism. In Germany, where the situation clarified rapidly in 1933, the foundation needed five years to fully extricate itself from its long-term commitments.⁴⁶

Regardless of the context of Rockefeller support, however, the early years of the *Istituto* were a disappointment in the eyes of the Rockefeller Foundation. In 1938 a foundation's officer stated that the building was not being "used functionally as planned". Late in the same year Hackett reported that

*the principal conditions on which we made the gift [for the Istituto] have never been carried out: (1) that the Institute should serve as a school for health officers, and (2) that it should be a tool in the hands of the Director of Public Health for the investigation and research into the causes which influence public health in Italy.*⁴⁷

In February 1939 Hackett reported on this failure in greater detail, noting that the instructional function of the *Istituto* was minimal, and was "far from the sort of School of Public Health with an organized faculty which we had in mind." He complained about this situation to the president of the fascist syndicate of Italian physicians, who agreed with his assessment, and told him that "it would be proper for me to bring this [matter] directly to the attention of the Minister of the Interior, who is Mussolini himself." Hackett declined to take this step, because at the moment, he remarked dryly, "relations between Italy and America are officially somewhat strained."⁴⁸ There was no further consideration of this matter at the Rockefeller Foundation until after the end of the war, when it was again reported that the *Istituto* still was not functioning as a training center for public health officers. Although the beginning of such training was reported to the foundation in 1948, three years later a foundation's official again recorded disappointment that much of the effort of the *Istituto* was directed to basic research rather than toward field operations.⁴⁹

This frequently expressed "disappointment" must in part be understood as the failure of the Rockefeller Foundation to recognize that any institution created in a

national framework such as a national public health institute tended to serve state purposes. These did not necessarily coincide with the long-term goals of the foundation. One might easily argue, based on the records at the Rockefeller Archive Center, that the 1920s and 1930s were decades in which the Rockefeller Foundation learned how quickly the programs of the institutions it established throughout the world could diverge from their originally-stated intents.

Ente Regionale per la Lotta Anti-Anofelica in Sardegna (ERLAAS)

The concluding phase of Rockefeller involvement in malaria control in Italy was the famous attempt to eradicate the anopheles mosquito from the island of Sardinia. The roots of the project were in the public health work of the allied forces that entered Italy late in 1943. Rockefeller Foundation officers, on duty with the United States Army, were major figures in the public health teams that followed in the wake of the military. They successfully dealt with two incipient epidemics, first typhus, and then malaria, by applications of the new insecticide, DDT, which the Rockefeller Foundation had played a significant role in testing.⁵⁰

In April 1944 Malaria Control Branch of the Public Health Subcommittee of the Allied Control Commission was operational, and by September 1944 the Malaria Control Branch was constituted as a mixed Italian-American team headed by Rockefeller Foundation officer Paul F. Russell, and advised by Missiroli. This unit mobilized the attack on the malaria threat that had arisen because the retreating German army had destroyed a variety of water-control systems; utilizing Paris green, pyrethrum, and DDT as insecticides, and restoring the hydraulic systems, the malaria threat was averted.⁵¹

As the war ended the subcommittee continued its work, focusing on demonstration work with DDT in the Tiber River delta.⁵² Missiroli in the meantime developed a five-year national plan for malaria control based substantially on the use of DDT, and implemented it successfully with substantial funds from the United Nations Relief and Reconstruction Administration (UNRRA).⁵³ The Rockefeller men with the subcommittee, looking for an opportunity to apply at the highest level the new techniques they had developed in Italy, proposed that as an internationally-observed experiment, the island of Sardinia be the site for an attempt to eradicate mosquitoes from a region using DDT.

The ERLAAS project began in 1946 with Rockefeller and UNRRA support, and was carried on for five years. Rockefeller men were primary leaders of the project, but some malariologists from other nations were on the team. During the course of the project

many observers came to see how the work was carried out, noting particularly the details of the monitoring of mosquito and larvae populations, and the application of DDT in both habitations and natural areas. The Sardinian experiment became a source of standards by which eradication programs throughout the world were measured.

The scientific-medical result of the project is well-known: malaria was eradicated, but the mosquito remained. It is perhaps less appreciated that the Sardinia project was essentially the last great act of the Rockefeller Foundation's malaria program. The Sardinia project was essentially the last act of its global malaria program. After a little more than twenty-five years of intensive work in Italy, only briefly interrupted in the early years by the World War II the foundation closed its malaria operations there with the exception of specific grants for research.

Conclusion

The Rockefeller Foundation's malaria program in Italy should not be judged entirely in terms of concrete results,⁵⁴ because it was in the broadest sense an act of philanthropy. The foundation's motto, "For the Well-Being of Mankind Throughout the World", expresses a faith in the improvement of mankind that cannot be quantified or objectified.

Still, it is clear that collaborative effort in Italy left behind a strong legacy. The Italian public health establishment was significantly shaped by rising young men and women who were given heightened education and experience through Rockefeller Foundation fellowships in the 1920s and 1930s, and then became leaders of the postwar generation. Italian malariology was connected more firmly with the international network of malaria research and practice through the creation of the *Stazione*. The *Istituto Superior di Sanità* was established. The Sardinian experiment became a point of reference for malaria programs throughout the world.

Italy, the cultural crossroads of the Mediterranean, was in the era I have described a global crossroads for issues, institutions, and individuals in malaria control.

Notas

¹ The views expressed here are those of the author, and are not intended to represent the current views or policies of the Rockefeller Foundation. The Rockefeller Archive Center is a division of The Rockefeller University, New York, NY. An earlier version of this paper was read at the inaugural session of the XX Congresso della Società Italiana di Parassitologia, Rome, Italy, July 17-20, 1998.

² Lutrario to Wickliffe Rose, 30 December 1922, Hackett files,

box 13, RG 9, Rockefeller Foundation Archives (hereafter RFA), Rockefeller Archive Center (hereafter RAC), Sleepy Hollow, NY, USA.

³ Fantini, Bernardino. *La Scoperta dei Meccanismi di Trasmissione e la Lotta Contro la Malaria in Italia. Medicina nei Secoli Arte e Scienza*, n. 6, p. 181-212, 1994.

⁴ Lewis W. Hackett [hereafter LWH] diary, 29 January 1924, folder 382, box 59, series 2, RG 5, RFA LWH to F. F. Russell, 2 August 1924, folder 3, box 1, LWH Papers, RAC.

⁵ English translation of the obituary notice for Alberto Missiroli that appeared in *Rivista di Parassitologia* 13 (January 1952) is in the "Missiroli, Alberto – Biography" folder, box 3, John Z. Bowers Papers, RAC.

⁶ Williams, Greer. *The Plague Killers*. New York: Scribner's, 1969. p. 110-122.

⁷ LWH to F. F. Russell, 13 April 1927, folder 3959, box 311, series 1.2, RG 5, RFA.

⁸ LWH to LER, 6 February 1927, folder 5, box 1, LWH Papers.

⁹ In December 1925 Mussolini told the Italian parliament that "life is about struggle, daring, and determination," and about the same time initiated various public campaigns for the increase of agricultural and industrial production. Duggan, Christopher. *A concise history of Italy*. Cambridge, U.K.: Cambridge University Press, 1994. p. 214-15.

¹⁰ Edward R. Embree to F. Elisabeth Crowell, 17 March 1923, folder 55, box 4, series 751, RG 1.1, RFA.

¹¹ LWH diary, 22 February 1924, folder 382, box 59, series 2, RG 5, RFA. See also LWH to W. V. King, 22 March 1924, and LWH to M.F. Boyd, 22 March 1924, folder 3, box 1, LWH Papers.

¹² LWH to F. F. Russell, 18 August 1927, folder 3961, box 312, series 1.2, RG 5, RFA.

¹³ E. g., F. F. Russell to LWH, 3 November 1927, folder 3962, box 312, series 1.2, RG 5, RFA.

¹⁴ E. g., Selksar M. Gunn to Max Mason, 11 March 1930, folder 5, box 1, series 751, R.G. 1.1, RFA.

¹⁵ LWH to F. F. Russell, 2 August 1924, folder 3, box 1, LWH Papers.

¹⁶ LWH to F. F. Russell, 2 September 1924, folder 4, box 1, LWH Papers.

¹⁷ LWH to F. F. Russell, 18 October 1924, folder 4, box 1, LWH Papers.

¹⁸ LWH to S. T. Darling, 18 October 1924, folder 4, box 1, LWH Papers.

¹⁹ F. F. Russell to LWH, 17 November 1924, folder 4, box 1, LWH Papers.

²⁰ LWH memorandum, "Stazione Sperimentale per la Lotta Antimalarica", attached to LWH to F. F. Russell, 19 January 1927, folder 3958, box 311, series 1.2, RG 5, RFA; "Annual Report of the Work of the International Health Board in Italy during 1925", box 257, RG 5, RFA.

²¹ LWH to F. F. Russell, 19 May 1927, folder 3960, box 311, series 1.2, RG 5, RFA; G. K. Strode diary, 17 February 1929, RG 12.1, RFA.

²² Selksar Gunn diary, 14 January 1927, 5 February 1930, RG 12.1, RFA; Wickliffe Rose to F.F. Russell, 2 May 1930, extract LWH files, box 13, RG 9, RFA; G. K. Strode diary, 11 May 1933, RG 12.1, RFA.

- ²³ LWH to S. R. Christophers, 7 January 1927, attached to LWH to F.F. Russell, 8 January 1927, folder 3958, box 311, series 1.2, RG 5, RFA.
- ²⁴ LWH *memorandum*, "Stazione Sperimentale"; "Annual Report of the Malaria Experiment Station in Italy (Stazione Sperimentale per la Lotta Antimalarica) for the Year 1926", box 247, RG 5, RFA; extract from the minutes of the Scientific Directors, "Control and Investigations of Specific Diseases: Malaria [1932]", c. October 1931, folder 72, box 6, series 751, RG 1.1, RFA.
- ²⁵ LWH. Recent Developments in the Control of Malaria in Italy. *Southern Medical Journal*, n. 24, p. 426-30, May 1931, quote from p. 8 of reprint copy of the essay.
- ²⁶ G. K. Strode to F. F. Russell, 6 April 1928, folder 5, box 1, series 751, RG 1.1, RFA.
- ²⁷ Raymond B. Fosdick, *The Story of the Rockefeller Foundation*. New York: Harper, 1952. p. 41-43.
- ²⁸ Weindling, Paul. "Public Health and Political Stabilisation: The Rockefeller Foundation in Central and Eastern Europe between the two World Wars. *Minerva*, n. 31, p. 255. Autumn 1993.
- ²⁹ Ibid., p. 253-54.
- ³⁰ G. K. Strode to F. F. Russell, 16 April 1928, folder 5, box 1, series 751, RG 1.1, RFA.
- ³¹ F. F. Russell to G. K. Strode, 25 May 1928, folder 5, box 1, series 751, RG 1.1, RFA.
- ³² LWH to F. F. Russell, 17 July 1928, with attached *memorandum* of conversations between A. Messea and LWH, 5-11 July 1928, folder 5, box 1, series 751, RG 1.1, RFA.
- ³³ LWH to G. K. Strode, 15 January 1930, folder 5, box 1, series 751, RG 1.1, RFA.
- ³⁴ R. Arpinati to LWH, 23 December 1929, attached to LWH to G. K. Strode, 15 January 1930, folder 5, box 1, series 751, RG 1.1, RFA.
- ³⁵ F. F. Russell to W. A. Sawyer, 8 February 1930, folder 5, box 1, series 751, RG 1.1, RFA.
- ³⁶ W. A. Sawyer to G. K. Strode, 6 March 1930, folder 5, box 1, series 751, RG 1.1, RFA. The plans are in the map and drawing collection in the RFA.
- ³⁷ Selksar M. Gunn to Max Mason, 11 March 1930, folder 5, box 1, series 751, RG 1.1, RFA.
- ³⁸ Minutes of the trustees of the Rockefeller Foundation, 16 April 1930, RFA.
- ³⁹ G. Patragnani to LWH, 29 September 1935, attached to R. Letort to George J. Beal, 22 October 1935, folder 7, box 1, series 751, RG 1.1, RFA.
- ⁴⁰ LWH to G. K. Strode, 12 May 1931, folder 6, box 1, series 751, RG 1.1, RFA.
- ⁴¹ Gaetano Basile to John D. Rockefeller, Jr., 21 April 1934, and John D. Rockefeller, Jr. to Gaetano Basile, 23 April 1934, folder 7, box 1, series 751, RG 1.1, RFA.
- ⁴² Excerpt, Jerome D. Greene to Max Mason, 20 October 1933, folder 6, box 1, series 751, RG 1.1, RFA.
- ⁴³ LWH diary, 2 February 1924, RG 12.1, RFA.
- ⁴⁴ LWH to F. F. Russell, 24 January 1927, folder 3958, box 311, series 1.2, RG 5, RFA.
- ⁴⁵ Laqueur, Walter. *Fascism: Past, Present, Future*. New York: Oxford University Press, 1996. p. 28; Weindling, Paul. The Rockefeller Foundation and German Biomedical Sciences, 1920-40: from Educational Philanthropy to International Science Policy. In: Rupke, Nicolaas A. (Ed.). *Science, Politics and the Public Good*. Essays in Honour of Margaret Gowing. London: Macmillan Press, 1988. p. 134-35.
- ⁴⁶ Ibid., p. 133-37.
- ⁴⁷ LWH to W. A. Sawyer, 9 December 1938, folder 7, box 1, series 751, RG 1.1, RFA.
- ⁴⁸ LWH to W. A. Sawyer, 7 February 1939, folder 7, box 1, series 751, RG 1.1, RFA.
- ⁴⁹ Extract from Trustees' Bulletin, October 1946; excerpt of G. K. Strode to Johannes Bauer, 29 October 1946; excerpt of J. B. Grant to C. C. Payne, 13 October 1948; excerpt, RRS diary entry, 18 January 1951, all in folder 8, box 1, series 751, RG 1.1, RFA; P. Moreshini and E. J. Pampana, "Commission for the Study of the Public Health Services in Italy: The Anti-Malaria Organization Report," 1949, folder 17, box 2, series 751, RG 1.1, RFA.
- ⁵⁰ Stapleton, Darwin H. The Dawn of DDT and its Experimental Use by the Rockefeller Foundation in Mexico, 1943-1952. *Parassitologia*, n. 40, p. 149-158, June 1998.
- ⁵¹ Russell, Paul F. "Memorandum on Malaria and its Control in Liberated Italy, 1 January - 30 September 1944", folder 101, box 12, series 700, RG 1.2, RFA.
- ⁵² Soper, F. L., Knipe, F. W., Casini, G., Riehl, L. A. and Rubino, A. Reduction of *Anopheles* density effected by the pre-season spraying of building interiors with DDT in kerosene, as Castle Volturno, Italy, in 1944-45 and in the Tiber Delta in 1945. *American Journal of Tropical Medicine*, n. 27, p. 177-200, 1947.
- ⁵³ "UNRRA Italian Mission: Proposed 5-Year Malaria Control Program", 2 October 1946, attached to Frederick W. Knipe to Charles N. Leach, 21 January 1947, folder 106, box 12, series 700, RG 1.2, RFA; Missiroli, Alberto. *Anopheles* Control in the Mediterranean Area. *Proceedings of the Fourth International Congresses on Tropical Medicine and Malaria*. Washington: U.S. Government Printing Office, 1948. v. 2, p. 1566-75.
- ⁵⁴ Nearly one-sixth of the funds the Rockefeller Foundation allocated for malaria programs was spent in Italy in those years. Cf. Mead, Pauline A. *The Rockefeller Foundation: Operations and Research in the Control and Eradication of Malaria*. New York: Rockefeller Foundation, 1955. p. 22-26, 68-70, 72. This typescript is in the library of the Rockefeller Archive Center.

Sobre o autor:

Darwin H. Stapleton é diretor do Rockefeller Archive Center, em Nova York, EUA.

