

Doctor Rino Rappuoli

*VP Vaccines Research & Chief Executive Officer
Chiron Vaccines*

Dr. Rappuoli is Vice President and Chief Scientific Officer of the biotech company Chiron. As such, his mandate involves overseeing the review of key research and development programs across Chiron's three global business units. He is credited with co-founding the field of "cellular microbiology", a discipline which combines cell biology and microbiology, and has pioneered the genomic approach to vaccine development called "reverse vaccinology".



Born in Siena, Italy in 1952, Rino Rappuoli studied biological sciences at the University of Siena before becoming staff scientist at the Siena Sclavo Research Center. He then crossed the Atlantic to carry out research work at Rockefeller University and the Harvard Medical School, where he worked on the molecular biology of bacteriophages. In 1983 he returned to his roots and was made responsible for the Vaccines Division of the prestigious European vaccine company Sclavo. By 1988 Dr.

Rappuoli was head of the Sclavo Division of Vaccine Research and Development.

Dr. Rappuoli joined Chiron as Head of European Research in 1992 when Chiron acquired Sclavo. In 1996 he was made Vice President Vaccines Research of Chiron Corporation in Emeryville, USA, and in 2005 he was promoted to Chief Scientific Officer.

Dr. Rappuoli has accumulated awards throughout his career such as the Paul Ehrlich and Ludwig Darmstaedter Prize (1991), the Mangia d'Oro (1995) and the Dr. Friedrich Sasse Award (1998).

In 2005 Dr. Rappuoli was delighted to receive the "Medaglia d'Oro al Merito della Sanità Pubblica" from the President of the Italian Republic. This prestigious prize – awarded annually since 1946 to Italian scientists and institutions involved in the improvement of global health - was conferred to Dr. Rappuoli in recognition of his studies on a vaccine against a future pandemic influenza, and especially for the results of his research on a vaccine based on an H9N2 strain of avian influenza virus.

Later the same year, he was elected to the prestigious U.S. National Academy of Sciences, which is considered one of the oldest and most authoritative American scientific societies as a result of its strategic role in supporting the formulation of research in the field of human sciences.

He sits on a number of boards, such as the European Molecular Biology Organization (EMBO) and the American Society for Microbiology (ASM), and is co-Chairman of the R&D Task Force of the Global Alliance for Vaccines and Immunization (GAVI). He has published 321 original papers and written 60 reviews and 39 book chapters.

Chiron – and Dr. Rappuoli in particular – has been involved in pandemic preparedness activities for many years, including the production and clinical testing of potential pandemic vaccines. In October 2005, Chiron won a \$62.5 million contract to provide the United States Department of Health and Human Services (HHS) with a stockpile of H5N1 vaccine. The vaccine, which will contain Chiron's unique MF59 adjuvant, is

based on an inactivated influenza strain similar to the H5N1 avian subtype that has circulated throughout Southeast Asia and, more recently, in Central Asia and parts of Europe.

A number of clinical studies show that adding the MF59 adjuvant to avian influenza vaccines may provide broader protection and enhance the immune response to the vaccine. These clinical studies show that MF59-adjuvanted vaccine induces antibody levels believed to be protective with less than a third of the vaccine dose used against a single strain of seasonal influenza and that it therefore helps capacity “stretching” as part of pandemic preparedness.

Chiron is also a leader in the development of influenza vaccine manufacturing using cell culture, an important advance for both seasonal and pandemic influenza vaccine supply. With the final phase of testing underway in Europe and clinical studies ongoing in the United States, Chiron is pioneering this next-generation approach, which eliminates the dependence on chicken eggs for production, enabling flexible and faster start-up of vaccine production.

A fervent believer in cross-cultural and trans-national collaboration, Dr. Rappuoli fully endorses the EU's research into avian flu. Chiron Vaccines is preparing a project to participate as coordinator for the development of innovative and effective vaccines for pandemic flu, as part of the EU's Framework VI Program.

Dr. Rappuoli sees the significance of this project as a great opportunity for European scientists to form a common European front against the avian flu crisis – something which would also coincide with the Lisbon strategy, which aims to put Europe at the forefront of innovative science.

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