The Swiss Connection
Arnold Theiler and Swiss colleagues an early example of a successful international veterinary cooperation

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The Swiss Connection

• Introduction

• Theiler`s Swiss team
  • Prior to 1908
  • 1908 - 1914
  • 1920 -
Arnold Theiler:

- Veterinary studies at Bern and Zurich 1887-1889
- 1889: Veterinary practice at Beromünster, Switzerland unsuccessful
- 1891: Departure to Transvaal, first attempt to run a veterinary practice
- On the job training working as a farm hand at the local farm Doornkloof.
- An accident made him lose his left hand in a chaff cutter, he tried to hide the artificial hand he received for the rest of his life
1897/1898: Zurich veterinary students and Prof. Erwin Zschokke (1)
Prof. Erwin Zschokke, Zurich:
- Highly influential on Theiler
- They kept lifelong contact
- Students admired and loved him and called him «Papa Zschokke»
- During his young years he practiced “Schwingen” and “Steinstossen”
- In 1916 he became the 1st veterinarian as Rector of the University of Zurich
1893: Theiler successfully produced smallpox vaccine for an epidemic in Johannesburg
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  • 1908 – 1914
  • After 1908
Swiss working with Arnold Theiler on smallpox vaccine

<table>
<thead>
<tr>
<th>name</th>
<th>function</th>
<th>year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brenzikofier, A.</td>
<td>assistant for the production of small pox vaccine</td>
<td>1898</td>
</tr>
<tr>
<td>von Bergen, Alfred</td>
<td>assistant for the production of small pox vaccine</td>
<td>1898</td>
</tr>
<tr>
<td>Favre, Charles</td>
<td>assistant for the production of small pox vaccine, assistant at Daspoort</td>
<td>1898, 1904</td>
</tr>
<tr>
<td>Schroeder, D.G.I.G.</td>
<td>assistant for the production of small pox vaccine</td>
<td>?</td>
</tr>
<tr>
<td>von Berlacher, ??</td>
<td>assistant at Daspoort</td>
<td>1904</td>
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</table>
Charles Favre (veterinary graduate Bern 1897)
Rinderpest in Southern Africa (1896)
In 1896 the Cape Government called for international help to fight the rinderpest epidemic, the German Imperial Government sent a team (Robert Koch and Wilhelm Kolle). De Beers Mining Company sponsored Koch.
They used a subcutaneous inoculation of bile from infected animals as vaccine and reported this method in 1897.
The Institute Pasteur, Paris sent a team (Jules Bordet, Jan Danysz) to the Transvaal for 12 months.
This team focused on serotherapy collecting sera from surviving animals for passive immunization. Theiler adapted this method for future use.
1899: Theiler was sent as official delegate to the 7th International Veterinary Congress at Baden-Baden, Germany. He visited family, Erwin Zschokke, Robert Koch and the Institute Pasteur Paris

1899: Back to South Africa: participation in the 2nd Boer War
The Swiss Connection

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  • Prior to 1908

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  • 1920 –
Transvaal Department of Agriculture.

THE

VETERINARY BACTERIOLOGICAL LABORATORIES.
1910: Robert von Ostertag (1864-1940) sent by the Imperial German Government to the German colony Southwest Africa (Namibia) to eradicate sheep pox met Theiler at Onderstepoort and praised his success and the new laboratory in a book in 1912.
The Staff of the Veterinary Bacteriological Division.

In 1905 Theiler hired from Switzerland for the new laboratory:

Karl Friedrich Meyer (1884-1974), Walter Frei (1882-1972)
Walter Frei

- 1905: qualified from the Zurich Veterinary Faculty
- 1906: Dr. med. vet. Zurich
- 1907: Training to prepare rabies vaccine with Jules Bordet at the Pasteur Institute in Brussels arranged by Theiler
- 1907: Arriving at Daspoort production of this vaccine at the with the Pasteur vaccine strain
- 1908: At Onderstepoort in charge of the physical laboratory, working on horsesickness, piroplasmosis and lamsiekte.

Frei's work was not highly appreciated
- Return to Switzerland in October 1910
- 1911 elected professor for veterinary pathology in Zurich, retirement in 1952
1932 /1933: James Walkers thesis on «Swine Fever» under the supervision of Walter Frei accepted by the University of Zurich

Worked in Prof. Dr. Walter Frei's laboratory I wrote a thesis on S. a. Swine Fever which was accepted by the faculty for the degree of B.V.Sc. Zurich University; on my return to the Union of South Africa in March 1933 I accepted an appointment in the Transvaal Land and National Administration on foot and mouth control duty.

I have been occupied, in twenty-five of the thirty-seven years since graduating in veterinary science, it is gratifying to realize the notable achievements which have been made in topical veterinary science, it is now possible to bring under control diseases which in former years confronted South Africa. I made about farming a hazardous industry.

I will always retain the happiest memories of my visit to Zurich of my Professor and his staff. Courteous and cordially; James Walker
Karl Friedrich Meyer (KF)

- 1907: qualified from Bern and Zurich Veterinary Faculty
- 1908: Dr. med. vet. Zurich
- 1908: At Onderstepoort in charge of the pathology laboratory
Karl Friedrich Meyer (KF)

- Until 1910 performing hundreds of routine diagnostic post-mortems. Publishing scientific reports without Theiler as co-author which caused a severe dispute among them.

- KF described the situation: "Theiler was a typical Lucerne square-head (although he was actually not from Lucerne but from Frick, Canton Aargau, Switzerland), and a Lucerne square-head cannot get along very well with a Basel square-head." as he ironically called himself self-critically.

- After an intermezzo as assistant professor of pathology and bacteriology at the School of Veterinary Medicine, University of Pennsylvania he became professor of bacteriology and experimental pathology at the University of California from 1913-1969.
After W. Frei and K.F. Meyer left the laboratory Theiler was hurt by the “failure” of his Swiss recruits. In the pioneering days, his compatriots had served him well when he had engaged them as lay assistants and trained them as laboratory technicians (Gutsche).

World War I brought a dramatic effect on the staff at Onderstepoort. Eight of Theiler’s men had enlisted. Due to the obligatory military service in Switzerland no more applicants were available any more.
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In preparation for establishment of the Veterinary Faculty in Onderstepoort Theiler went to Switzerland in 1919 again to recruit veterinarians

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<thead>
<tr>
<th>name</th>
<th>training at</th>
<th>function</th>
<th>year</th>
<th>later</th>
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<tbody>
<tr>
<td>Werner Steck (1893-1977)</td>
<td>Veterinary medicine Bern (1917)</td>
<td>Research officer, lecturer in pathology</td>
<td>1922-1926</td>
<td>1926-1965: Professor internal medicine, pharmacology, equine medicine, Veterinary Faculty Bern</td>
</tr>
<tr>
<td>Gerhard G. Kind (1893-1942)</td>
<td>Veterinary medicine Zurich (1918), Dr. med. vet. Zurich (1922)</td>
<td>Research officer (anthrax laboratory)</td>
<td>1919-1922</td>
<td>private practice in Pretoria and Johannesburg (1922-1942)</td>
</tr>
<tr>
<td>Markus Zschokke (1893-1972)</td>
<td>Veterinary medicine, 1919, Zurich</td>
<td></td>
<td>1919-1922</td>
<td>State Veterinarian Southwest Africa (Namibia; 1926-1953 (1965)</td>
</tr>
<tr>
<td>Joseph R. Scheuber (1892-1975)</td>
<td>Veterinary Medicine, 1918, Zurich</td>
<td>Bacteriologists</td>
<td>1919-1952</td>
<td></td>
</tr>
<tr>
<td>Hans (Jakob) Meier (1892-1975)</td>
<td>Veterinary Medicine, 1917, Zurich, Dr. med. vet. Bern 1919</td>
<td>Government Veterinary Officer</td>
<td>1919-1921</td>
<td>Return to Switzerland (1921); colonel cavalry Swiss Army</td>
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The Swiss connection continued for several years in reverse direction. Several newly appointed professors went to Switzerland for postgraduate training and further degrees.

<table>
<thead>
<tr>
<th>Name</th>
<th>Position (professor)</th>
<th>Further training</th>
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<tbody>
<tr>
<td>A. Theiler (1867-1936)</td>
<td>Pathology, Tropical Medicine, Dean</td>
<td>Dr. med. vet. Bern (1901), Human pathology Basel (1927/28)</td>
</tr>
<tr>
<td>P.J. du Toit (1888-1967)</td>
<td>Infectious Diseases (1920-1948), Dean (1927-1948)</td>
<td>Dr. phil. (Zoology), Zurich (1912); Dr. med. vet., Berlin (1918)</td>
</tr>
<tr>
<td>H.H. Green (1885-1961)</td>
<td>Biochemistry (1920-1930)</td>
<td>University of Leipzig (biochemistry)</td>
</tr>
<tr>
<td>G. van de Wall de Kock (1889-1973)</td>
<td>Anatomy (1923), Pathology (1920-1949)</td>
<td>Dr. med. vet., Bern (1921)</td>
</tr>
<tr>
<td>P.R. Viljoen (1889-1964)</td>
<td>Veterinary Science (1920-1933)</td>
<td>Dr. med. vet., Bern (1921)</td>
</tr>
<tr>
<td>E.M. Robinson (1891-1982)</td>
<td>Bacteriology (1920-1958)</td>
<td>Dr. med. vet., Bern (1921)</td>
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</tbody>
</table>
Robert Roessle (1876-1956) Professor of Pathology in Basel in an
obituary remembered Theiler`s time at Basel (1927/1928):

“We had many discussions to find out how closely related and
how different human and veterinary pathology are. He
(Theiler) left a notice stating “I am attending (at Basel) the
post-mortem-diagnoses, the conferences and demonstrations
and I see, that I am learning daily.”