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## Samuel Cnoll in Tranquebar and establishment of the first ‘pharmacy’ – Laboratorium Chymicum – in India in 1732

One early, Europe-trained medical doctor to work in Tranquebar (Tarangampādi, 11°1’N, 79°50’E) near Tanjāvur, Southern India, was Samuel Benjamin Cnoll (1705–1767). Some articles refer to him as Knoll. He was trained in medicine in Halle, Germany, and recruited to work at the Royal Danish Mission, Tranquebar, from 1732 (ref. 1). Cnoll worked in Tranquebar until his death. Jensen<sup>1</sup> indicates that Cnoll supervised the Royal Danish Mission Hospital, Tranquebar from the 1740s and published a short article on the preparation of borax in *Acta Medica Hafniensis* in 1753 (ref. 2) (note 1). After his death in 1767, the herbal garden he had created in Tranquebar was bequeathed to his successors, who were doctors at the Tranquebar Mission<sup>1</sup>, one of who was Johann Gerhard König<sup>3</sup> (1728–1785), a surgeon, who had studied botany under the famous Carl Linnaeus in Sweden.

In Tranquebar, Cnoll established Laboratorium Chymicum, where he compounded and dispensed medications using locally available raw materials, but following the then popular Danish Pharmacopeia *Dispensatorium Hafniense* by Thomas Bartholin (note 2). Possibly Cnoll’s Laboratorium included the herbal garden, wherein he could grow local plants of medicinal value. In high likelihood, it is this garden which Jensen<sup>1</sup> refers as the ‘botanical garden (or plantation)’. Gottlieb August Francke<sup>4</sup> remarks that the medications compounded and dispensed by Cnoll were effective in curing illnesses of the sick in Tranquebar. Differing from his predecessors, viz. Bartholomäus Ziegenbalg (1682–1719),

Heinrich Plütschau (1676–1752) and Johann Gründler (1677–1720), Cnoll rejected local medical knowledge<sup>5</sup>. However, Cnoll’s Laboratorium Chymicum, although was small, impresses as the earliest, formally set up laboratory, which could also be seen as the earliest western-medicine based pharmacy in the whole of India.

We need to recognize here that in ancient and medieval India, due to its enormous variety in terms of people, beliefs, languages and cultures, medical systems such as Ayurveda, Siddha, and because of the Arab–Persian influence Unani–Tibb flourished. These systems continue to be supported by many – estimated at 70% of rural Indian population<sup>6</sup>. The practitioners of these medical systems (*vaidyan-s*) of those days may have run small-level dispensaries – equivalent of modern pharmacies. In the present-day Chennai *marundu-kadai-s* (small stores that sell dry and wet medicinal herb materials) exist, which do not compound medicines as the *vaidyan-s* may have done.

The arrival of Cnoll and the establishment of Laboratorium Chymicum flag a pioneering connection between Tranquebar Halle Mission and scientific inquiry. This moment unpacks the plethora of complex connections between medicine, science, religion, and economy in Southern India in the early decades of the 18th century<sup>7</sup>. With the arrival of Cnoll, the Tranquebar Halle Mission metamorphosed into a fountainhead dispersing and circulating new knowledge, especially new science, says Jensen<sup>7</sup>.

I could track no further details of either Cnoll or his Laboratorium in Tran-

quebar, except that Johann Anton Niemeyer<sup>8</sup> refers to him in page 773. The website of Franckesche Stiftungen (= The Francke Foundation), Halle, includes a letter (*ein Brief*) from Cnoll to Francke<sup>9</sup>.

Laboratorium Chymicum (= pharmacy) as a global concept was not something novel. Many European nations included several of them in the late 17th and early 18th centuries<sup>10</sup>. Obviously Cnoll was inspired by that idea that prevailed in Europe of his times. But in India, Cnoll’s Laboratorium was the first of its kind, which heralded a new concept of pharmaceutical dispensaries.

Francke’s *der Königlischen Dänischen Missionarien aus Öst-Indien eingesandte Ausführlichen Berichten*<sup>4</sup> includes a communication by Cnoll to Friedrich Christian Juncker in Halle (pages 1071–1075). Juncker taught medicine at the University of Halle and Cnoll studied medicine with Juncker at Halle.

I can read and write German. But reading Francke<sup>4</sup> and Niemeyer<sup>7</sup> was difficult because the text is presented in Gothic fonts (Blackletter, Textura). However, I have provided relevant bibliographic information in this note for those interested in following these trails.

### Notes

1. *Acta Medica Hafniensis* was a medical journal published by the Collegium Medicum Hafniense, Copenhagen<sup>11,12</sup>.
2. Thomas Bartholin (1616–1680) was a well-known name in the 17th century European medicine. Names of 10 physicians

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