

cognomen; that is to say, that without any inflammatory reaction resulting, without secondary exulcerative revulsion, without destruction, without radium dermatitis, in a word, by the "dry method," certain tumors can be made to disappear, certain pathological tissues can be changed, can be turned from their pathological action, and be forced to give place to new tissues.

Having come, in the course of our fourth year of research work, upon the therapeutic action of radium in external pathology, it seemed interesting to us to separate from our general conclusions, which rest on our observation of six thousand or so applications of the radium apparatus to a great number of cases, the facts which bear on the specific action of radium.

This is our aim in the following report.

In certain neoplasms this specific action is exceptionally clear.

Since the time of his first research work in 1905, long before the opening of the "Laboratoire Biologique du Radium," M. Wickham has been able to prove this action on cancers of the outer skin (epithelioma) and on cheloids.

He placed cushions of hydrophillum wadding (thickly heaped up, about one centimetre, sheathed by two plates of Hamilton gold-beater's skin) between the part treated and the apparatus, making a filter, which allowed only a small quantity of the very penetrating radium rays (B strong and Y) to pass through. By this means he saw the first cancers of the skin that he treated change and actually become cured without any super-added inflammation resulting.

In his article<sup>3</sup> published in the "Annales de Dermatologie," in October, 1906, in which for the first time in cutaneous radium-therapeutics really therapeutic quantitative analyses<sup>4</sup> were formulated and proved by the positive results, he ascertained that in cases of budding epithelioma their regression without a period of ulcerative reaction even after direct applications of strong radio-active power, is possible.

Since then our research has confirmed these first observations<sup>5</sup>, and by pushing forward into the realm of external pathology we have been able to establish and put into definite form the regular use of the different methods by which the specific action of the rays of radium has been utilized.

Among these processes it is necessary to pay chief attention to:

1. Those which make use of very strong rays B and rays Y by means of suitable "filterings" or screens.
2. Those which make use chiefly of rays B by direct<sup>6</sup> application of the apparatus (the applications being short in length).
3. Those which combine the action of the rays B by multiply-