

1. Nuclein made from yeast.
2. Another preparation of nuclein taken from the animal organism by chemical methods.
3. The third form, protonuclein, is a product taken directly from the lymphoid tissues of the healthy animal, the thyroid and thymus glands, the brain substance—within the area in and about the corpora quadrigemina, the pituitary body and pineal gland—the pancreas, spleen and liver. No chemicals are used in this process, the methods of extraction being purely physical, and the protonuclein is kept active by an investment of gum benzoin and milk sugar, which preserves it indefinitely, just as the germ of a grain of corn is kept potentially active by its environment. The activity of the protonuclein may be easily shown by dissolving some of the powder in distilled water. After the sediment has settled, draw off the supernatant fluid and apply a drop of it to a drop of freshly-drawn blood. You will see a most beautiful physiological panorama, instantaneous photographs of which I have here for your inspection. Protonuclein is richer in nitrogen than the ordinary nuclein of the text-books. Its formula, as far as it is possible to be chemically accurate in quantitative analysis, is  $C_{25}H_{43}N_{10}P_5O_{32}$ , differing by about one equivalent of nitrogen. It will be noticed how rich in phosphorus this wonderful physiological agent is.

So much therefore for its preparation and extraction. The most important factor in the problem is the answer to the questions, "What will it do?" "What can it cure?" "What will it prevent?" in the great battle between science and death. Were I to give free range to my own confidence in the therapeutic power of protonuclein as observed from day to day for the last six months, under the most favorable circumstances and under the direction of experienced and authoritative clinicians, you would discredit even the demonstrations of this report. But if you will consider for a moment what a sweeping therapeutic power must belong to any agent which is the normal tissue-builder of the organism and the direct antagonist of its invading toxic germs, you will see how difficult it is to limit its indication as a therapeutic agent.

Its most pronounced results have been observed in tuberculosis, sarcoma, diphtheria, tonsillitis, and la grippe. In the hospitals in New York it has been used with general success in the following diseases, besides those already mentioned: Abscess, anæmia (pernicious), Bright's disease, carcinoma, colds, malaria, tuberculosis of bladder, ulcers, and many others.

As to dose and mode of administration, I subjoin to this paper full