

products have failed, no one of such products having been found to possess in perfection the property of acting upon fat in the manner described in this paper as peculiar to the pancreas. By the term "pancreatine," then, I desire to represent the *entire properties of the pancreas* extracted in a convenient form for keeping, for experiment, and for administration as a remedial agent.

One part of the pure pancreatine dried, without mixture with malt-dust, will digest at least sixteen parts of lard, and enable it to form a thick creamy emulsion, with about 100 parts of water. The emulsion thus formed presents in every respect the characters and qualities of the emulsion produced by the fresh pancreas already described. In this way therefore the active principles of the pancreas may be obtained and preserved in a form suitable for experiment in the laboratory and for administration as a remedial agent.

The third object of my investigations has especially occupied my attention in a long series of experiments at the Royal Hospital for Diseases of the Chest. Full details of these and of the results obtained have been published from time to time, during the last four years, in the medical journals; I shall not, therefore, occupy the time of the Society with any account of them in this paper.

II. "On a supposed Connexion between the Amount of Rainfall and the Changes of the Moon," being an extract of a Letter from J. H. N. HENNESSEY, Esq., First Assistant on the Great Trigonometrical Survey of India, to General SABINE, R.A., Pres. R.S. Communicated by the President. Received November 7, 1867.

Allow me now to say a few words in connexion with the enclosed paper. There appears to prevail a belief, more or less popular, to the effect that more rain falls at "the changes of the moon" than on the intermediate days of a lunation. As I happened to possess a record of the rainfall at the office of the Superintendent of the Great Trigonometrical Survey of Mussoorie, extending over thirteen consecutive years, I obtained Colonel Walker's permission to make use of the register, in connexion with this popular belief.

The results tabulated have been obtained by employing an *average daily* fall as the means for comparing the fall at "the changes" with that at intermediate intervals. The method of calculation adopted is explained in the footnote to the Table. The annual average result may be stated thus :—

	inch.
At "the changes" of the moon the <i>mean daily</i> fall of rain is. . .	0.466
Between "the changes" of the moon the mean daily fall is. . .	0.525

which is in opposition to the popular belief on the subject. I enclose the Table, on the chance of its proving sufficiently interesting to be noticed.

Average daily fall of rain between successive quarters and at each quarter of the moon from 1st of May to 31st of October of each year, measured at the Office of the Superintendent of the Great Trigonometrical Survey of India. The office stands in Mussoorie, on the most southern range of the Himalaya Mountains, lat. N. $30^{\circ} 28'$, long. E. of Greenwich $78^{\circ} 7'$; height above mean sea-level 6500 feet.

Year.	Average Daily Fall.								Total Fall from May 1 to October 31.
	☾ to ☉	☉	☉ to ☽	☽	☽ to ☊	☊	☊ to ☋	☋	
	inch.	inch.	inch.	inch.	inch.	inch.	inch.	inch.	inches.
1854	·644	·374	·813	·176	·630	·096	·512	·621	100·72
1855	·456	·204	·360	·918	·311	·356	·753	·733	85·85
1856	·732	·745	·703	·237	·397	·588	·347	·340	93·28
1857	·280	·319	·794	1·013	·521	·136	·368	·606	88·27
1858	·402	·448	·485	·298	·518	·157	·705	·373	84·61
1859	·665	·263	·253	·642	·306	·253	·570	·583	78·31
1860	·356	·228	·430	·719	·564	·205	·301	·073	65·81
1861	·685	·678	1·014	·372	1·332	·287	·577	·855	141·16
1862	·611	·620	·513	·651	·364	·852	·645	·530	93·91
1863	·348	·342	·862	·932	·511	·595	·291	·546	93·03
1864	·762	·409	·545	·292	·394	·328	·237	·352	82·19
1865	·543	·235	·276	·120	·443	·526	·518	·785	76·37
1866	·135	·360	·402	·580	·636	·809	·452	·483	81·15
Means of columns }	·509	·402	·573	·535	·533	·399	·483	·529	89·589

General mean of ☉ ☽ ☊ ☋ 0·466 inch.

General mean of ☾ to ☉, ☉ to ☽, ☽ to ☊, ☊ to ☋ 0·525 "

Note.—The rainfall during the *preceding* twenty-four hours was measured daily at mean noon. Suppose $m_1, m_2, m_3, m_4, m_5, m_6, m_7, m_8, m_9$ to denote nine such consecutive measurements of daily rainfall, registered at Mussoorie mean noon, respectively on the 1st, 2nd . . . 9th of the month, and that the moon entered her first quarter at an hour nearer to noon of the 1st than to the preceding or succeeding noons. In this case the arithmetical mean of m_1 and m_2 has been entered in column ☽ as the average *daily fall at the first quarter*. Similarly, if full moon occurred nearest to noon of the 8th, the quantity $\frac{m_8 + m_9}{2}$ has been reckoned as the average *daily fall at full moon*; and $\frac{m_3 + m_4 + m_5 + m_6 + m_7}{5}$ represents the average *daily fall from ☽ to ☊*. The foregoing Table has been prepared under these conditions by Baboo Dwarkanath Dutt, Computer to the Great Trigonometrical Survey of India.