contains scarcely any traces. The arsenical compound is also eliminated by the urine in the form of arseniate of ammonia and magnesia.

M. Roussin concludes from his experiments, that substances isomorphous chemically are assimilated and eliminated in a like manner from the animal economy, and may be regarded as isomorphous in a physiological point of view.—*British Med. Journ.*, March 12, from *Journ. de Pharm. et de Chem.*, and *Gaz. Méd. de Paris*, Jan. 16, 1864.

2. *Physiological Researches on the Motor Nerves of the Bladder.*—M. JOSEPH GIANNUZZI draws the following conclusions from his researches:—

1st. That there are two different nerves to the bladder; the one set coming from the spinal cord go directly to constitute the hypogastric plexus, in order to distribute themselves to the bladder; the other set, which originates likewise in the spinal cord, traverse the great sympathetic and mesenteric ganglia before going to the hypogastric plexus.

2d. That the difference which is observed between the excitation of these two sets of nerves does not consist in the form or the place of contraction, but rather in its intensity and rapidity: for, whilst the nerves which go direct to the bladder produce a rapid and energetic contraction, those which pass through the sympathetic ganglia produce a slow and feeble action, and require to be strongly excited.

3d. That, in irritating any part of the lumbar region, we produce in some animals contraction of the bladder.

4th. That in all cases there are in this region two principal centres, which preside over the contractions of the bladder; one of these corresponds to the third, the other to the fifth lumbar vertebra.

5th. That the point corresponding to the third vertebra transmits its influence by the fibres which traverse the mesenteric ganglia, so that, after division of these fibres, irritations at this point do not give rise to contractions of the bladder.

6th. That the point of the spinal cord corresponding to the fifth vertebra transmits its action through the fibres which go directly to form the hypogastric plexus.

These researches were made in Bernard's laboratory.—*Journal de Physiol.*, Jan. 1863.

3. *New Researches on the Functional Nature of the Roots of the Pneumogastric Nerve and of the Spinal Nerve.*—M. E. VAN KEMPEN's experiments prove—

1st. That the roots of the pneumogastric nerve contain the motory fibres which preside over the movements of the constrictor muscles of the pharynx, muscles of the larynx, and the muscular coat of the œsophagus.

2d. That the roots of the spinal nerve, on the contrary, contain sensitive and motory fibres which preside over the movements of the muscles of the shoulder, to which the external branch of this nerve is distributed.

3d. That these results are the same as those which Van Kempen obtained in 1842 by the application of electricity to the roots of these nerves; that, consequently, these effects are not attributable to derivation of the electric current, as they may be produced by other irritants, such as pinching, cutting, etc.

These conclusions are at variance with those of Longet, but seem to be based on rigorous observation.—*Journ. de Physiol.*, April, 1863.

4. *Physiology of the Cerebellum.*—DR. P. LUSANNA, directing attention to two experiments on birds, in which the usual appearances of irregular and disordered motions were manifested on injuring their cerebella, the author commences his lecture by citing the opinion of Flourens, that co-ordination of the voluntary movements is the function of this organ. Clinical observation on man has not favoured this view; paralysis or powerlessness of voluntary movement, rather than disorder, characterizes lesions of the cerebellum. In a turkey, which Lusanna had succeeded in preserving some months after removal of the cerebellum, this powerless condition of the motor faculties was very manifest. At