

XVIII. *A Letter from Edward Wilmot, M. D. F. R. S. and one of His Majesty's Physicians, &c. to the President of the Royal Society, serving to inclose the two following Papers :*

1. *Of the extraordinary Effects of Musk in Convulsive Disorders; by J. Wall, M.D.*
2. *Of the Effects of the Tunquinese Medicine; by Alex. Reid, Esquire.*

S I R,

Read Dec. 20. 1744. **I**nclosed you have some Observations upon the Virtues of Musk, from Dr. *Wall*, an eminent Physician at *Worcester*. I have likewise sent you an Account, I have procured from my ingenious Friend Mr. *Reid*, of the Event of some Experiments made by him with the same Drug; which, being communicated to his Friends, gave Occasion, probably, to the liberal Use of Musk, of late Years in Practice here. As both these Accounts well merit the Attention of the Public, I could wish they might be both printed in the same Transaction. I am, with great Respect,

S I R,

Fermyn-Street,
Nov. 22.
1744.

Your most obedient,
most humble Servant,

E. Wilmot.

I.

I.

Of the extraordinary Effects of Musk in Convulsive Disorders ; by J. Wall, M.D.

IT seems highly probable, that the Virtues of several Articles in the *Materia Medica* are not hitherto fully discovered, or well ascertained, from Want of due Attention to their proper Doses. The Success of some Medicines, we know, depends upon This; *viz.* That a determinate Quantity be given within a certain Space of Time; so that if Less than that be used, it seldom proves of Use. Of this the *Bark* is a well known Instance; and the ingenious Dr. *Hales* has observed the same of Soap (*a*). It is not improbable, that the like might be found to hold good in many other Medicines, were their Operations carefully enough attended to: A Discovery this, much to be wish'd for, as it would probably furnish us with a new Set of Specifics; and thereby enable us to cure several Distempers, which at present, baffle our Skill. Of the Reasonableness of which Conjecture the Subject of this Paper seems no contemptible Instance.

Musk, and other Perfumes of the same Tribe, have been long celebrated as excellent Antispasmodics; but, as they are usually ordered in very small Quantities, they are seldom found to answer the Expectations of the Prescriber. The Mistake seems to have taken its Rise from hence; That most Persons imagining

(a) Account of some Experiments on Mrs. *Stephens's* Medicines.

gining the medicinal Virtues of these Drugs to consist in their Fragrancy ; and finding that a very small Quantity in Substance would communicate its Smell to a very large Vehicle ; in their Prescriptions therefore they have usually order'd so much only as was requisite to give the whole Composition an agreeable Perfume. But the Case is widely different ; for as a very small Quantity of Musk, Civer, &c. when properly open'd and diluted, will yield a much greater, as well as a more agreeable Fragrancy, than a large Parcel without such Preparation : So the Smell of the Perfume is often found to be of Disservice, where the Substance, inwardly taken, produces the happiest Effects ; as *Etmuller* and others have observed.

Most of the Writers on Pharmacy seem extremely cautious about the Use of Musk ; and therefore direct it only in exceeding small Quantities. In very few of their Compositions does the Dose of it reach so high as a Grain ; and the highest that I meet with is not above five Grains (a). But the *Chinese*, who are much better acquainted with the Nature and Uses
of

(a) In *Fuller's Julap. Moschat. & Mistur. Moschat.* the Quantity for a Dose is not half a Grain : In the *Pill. Solenandri & Syncopales* only two Grains. *Bates*, in all the Compositions where Musk enters, orders it only in the Quantity of half a Grain to a Dose ; excepting only in the *Julap. Hysteric. Moschat.* He gives it to the Quantity of five Grains. In this Quantity *Etmuller* once orders it in the like Case. In the College, *Augustan*, and other Dispensatories, the Quantity of Musk in the great Compositions, such as the *Conf. Alkermes Elect. de Sassafras* ; *Conf. de Hyacinth. Conf. liberans* ; *Spec. latifolians* ; *Diarrhodon Abbat.* ; *Diabr. c. od. &c.* is very trifling ; in very

of this excellent Drug, order it in much larger Quantities; the usual Dose amongst them being the tenth Part of an Ounce (*b*). In the Powder mention'd by Dr. *James*, at the End of his Treatise on the Cure of the Bite of a mad Dog, which is said to have been brought from *China*, the Quantity of Musk in each Dose is sixteen Grains, and two of these are order'd to be taken at two Hours Distance.

The Prescription last mentioned had, to my own Knowledge, been given to several Persons with great Success: Two in particular; the one an Acquaintance of mine, a Student at *Oxford*; the other (*c*) a Servant-Maid to Mr. *Rogers*, an Innkeeper in this City.

In

very few of them amounting to half a Grain in a Dose. *Schroder* makes the highest Dose of Musk four or five Grains. *Lemery* but four Grains. *Hermannus* gives five Grains; but his Commentator *Boecler* gives great Caution about its Use: '*Circa Moschi Usum* (says he) *caute procedere debemus; praesertim in Mulieribus. Sanguinem impetuosum admodum reddit, & Haemorrhagias Narium facile excitat.*'—And *Juncker, Consp. Therapiae general.* TAB. 18. seems not a jot less fearful of it. For, after he has told us, that it is wonderfully extoll'd in nervous Disorders, and many others, he adds — '*Sed notandum est internum Moschi Usum, nisi parcissimus sit, saepe noxias Humorur: Commotiones inferre; caterum non adeo probatum, nedum tam gravibus plerisque Malis superandis parem reperiri,*' &c. &c.

(*b*) Vide *Du Halde* on the Physic of the *Chinese*.

(*c*) This Girl had been bitten about a Year before the Symptoms came on; and had, immediately after the Bite, taken the usual Precautions of being dipp'd in salt Water, &c. She continued well for the Interval; but, about twelve Months after the Accident, she began to be dull, and to have an extreme Dread of the Consequences of the Bite. The Part where she was bitten (which was the lower Part of the Cheek) began to give her great Pain, attended with frequent convulsive Catching therein: At last the Wound broke out, and gleeted a thin Ichor, with all the Symptoms mentioned above.

In both these the Symptoms of the Bite were come on; *viz.* an ichorous Gleeting from the Wound, with extreme Pain in the Part; frequent Convulsions, and *Subsultus Tendinum*; extreme Anxiety, Horror, and Want of Sleep. After the second Dose of the Powders, each of them fell into a gentle Sleep, and broke out into an universal breathing Sweat, both which continued for near eight-and-forty Hours (except only whilst they were taking some Refreshment); after which time they awoke perfectly well; their Sores being healed, and they chearful, and free from all Complaints. In all the Persons (which are several) to whom I gave these Powders, I constantly found them to have the same Effects; procuring Ease, quiet Sleep, and a copious *Diaphoresis*.

These surprising and sudden Effects I could not but attribute, in a great measure, to the Musk (because we well know, that the Cinnabar alone never produces the like): And, from the Safety and great Success with which this large Quantity had been taken, I saw little Reason to be so scrupulous or fearful about its Use, as most Authors appear to have been. On the contrary; I was rather induced to think, that it had hitherto been usually under-dosed; and that very great Advantages might be expected from it, if given in an increased Quantity. Nor was it long before I had an Opportunity of trying it in another Case, where the Success justified my Conjectures, and more than answered my utmost Expectations.

Being called to a Patient at *Bewdley*, a Market-Town in this County, I was desired by Mr. *Malpas*, a very ingenious Apothecary of that Place, to visit a poor Man there, who had lain some time ill. I
found

I found him afflicted with a terrible Hiccup, which had continued on him four or five Days without a Minute's Intermission; so that he had had no Sleep all this time. His Pulse was exceedidg quick, small, and unequal: The Blood, which had been several times, and in large Quantities, taken from him before I saw him, was cover'd with a prodigiously thick buff Coat; his Urine limpid; his Face of a leaden Hue, and ghastly: his Extremities cold, and cover'd with a clammy Sweat; and whenever the Hiccup return'd, which it did at almost every Inspiration, the *Hypochondria* were strongly convuls'd and drawn upwards. — Recollecting that *Fuller* recommends his *Julap. Moschat.* in the like Cases (*d*), but thinking the Quantity of Musk, therein prescribed, too small to be depended on in one so desperate (more especially having before seen the surprising Success of a large Dose), I order'd him a Bolus composed of Musk, Nitre, Crabs-eyes, of each twelve Grains, Camphire one Grain, Mithridate a sufficient Quantity; to be taken immediately, and repeated in eight Hours, taking a Spoonful or two of *Fuller's* Julap, occasionally, once in two or three Hours. He had no sooner swallow'd the Bolus, which I staid to see him take, than his
Hiccup

d In Febribus mali Moris, quæ Vapores deleterios ad Stomachum descendunt; Spiritusque labantes irritant; in Confusiones & Spasmos adigunt; & Singultum inde excitant; nondum hactenus præstantius novi Remedium: aliquando enim divinitus succurrit, & Singultum superat. Ut ingenue tamen fatear, tam funestum hoc sæpe notavi esse Symptoma, ut neque hoc neque aliud quodcumque vel excogitare vel invenire, mihi adhuc datum sit, quod mihi par esset; sed totis licet Viribus certavi, Fatis tamen frustra obnoxius sum.

Fuller. Pharmacop. ex-emporan. sub Tit. *Julap Moschat.*

Hiccup stopp'd: In less than an Hour, he broke out into a general breathing Sweat, and fell into a quiet Sleep, which lasted six or seven Hours, when he awaked much refresh'd.--- The Hiccup never return'd again, but the Man soon recovered.

The next Person to whom I gave this Medicine was a Gentleman, who had been ill eleven or twelve Days of a petechial Fever. I found him delirious, with convulsive Catchings in the Tendons; and an Hiccup very frequent, and so loud, that I very plainly heard it at the Bottom of the Stairs, before I went into his Chamber: His Pulse was, at the same time, very weak, but exceedingly quick. I immediately order'd him a Bolus with ten Grains of Musk mixed with Camphire (e), as in the former Case; and stay'd an Hour by him to see the Effect of it.— In less than two Minutes the Hiccup left him; in about half an Hour his Skin grew moist, and soon after he fell into a sound Sleep. The Hiccup, as I was inform'd, returned again the next Morning, though with much less Violence; but both that, and the *Subsultus Tendinum* went off intirely, upon a Repetition of the Bolus,

(e) I added the Camphire mixed with Nitre, on account of the Character given of it by *Hoffmann*; but, upon further Experience, I found the Musk succeed as well without it. *Hoffmann*, I find, touches upon the Virtues of this Drug, which he considers as a Sedative: ---
 ‘ *Sedantia hæc variis modis efficaciam suam perficiunt. ---- Quædam*
 ‘ *Antispasmodica Sulphure quodam tenui vaporoso ex Regno animali;*
 ‘ *adeoque magis amico effectum persequuntur ut Lumbrici terrestres,*
 ‘ *&c. nec non Moschus & Zibethum, quæ in convulsivis ac epilepti-*
 ‘ *cis Motibus, ac in ipsa etiam chronica Epilepsia, insigni cum Fructu*
 ‘ *usurpantur.*’

Bolus, and never return'd again; so that in a few Days he was able to go out of his Chambers.

In these Persons the *Hiccup* was the Symptom that induced me to give the Musk; but, observing that this Convulsion, which, every one knows, affords but a melancholy Prognostic, was so speedily removed by it; and that, in the last-mentioned, the *Subsultus Tendinum* also gave Way to it; I have since order'd it in many other convulsive Cases, and always with Success. I shall mention two or three.—

About two Months ago, I was called to a Daughter of one Mr. Carter, Haberdasher of Small-Wares in *Bewdley*. She was about seven Years of Age, and had been ill of a Fever (proceeding, as it was imagined from Worms) for about four Weeks. At the time I saw her, she had been senseless and speechless for several Days; as I remember, not less than ten or twelve. A great Part of this Time she had had strong Convulsions, and could scarce swallow any thing at all; so that they every Hour expected her Death. Mr. M —, the Apothecary, told me, That, the Day before I saw her, she had had a general *Tetanus*, her Joints being quite inflexible: When I saw her, every Muscic was, by turns, convuls'd; her Head, in particular, was so forcibly drawn backwards, as, at different times, to raise her Body from off the Bed. — As she swallow'd with so much Difficulty, there was little Hope of giving her any Medicine by the Mouth; I therefore ordered twelve Grains of Musk, ground with Oil and Sugar to be mix'd with some thin Broth, and thrown up by way of Clyster; and this to be repeated at two or three Hours Distance. In an Hour's time after the first Clyster, the Convulsions, as I was inform'd, manifestly abated,
and

and the second intirely removed them. After this the Child gradually recovered its Understanding and Speech, and is now perfectly well.

About the same Time, I was called to a young Girl in this Town, about ten Years of Age, who had been seized with Convulsions about three Days before. At the Coming on of the Fit, she usually complain'd of a violent Pain in her Belly and Loins, which, she said, seem'd to draw her Bowels on an Heap: After this, she soon lost her Senses, and was variously convuls'd; not much unlike one in an epileptic Fit. When the Violence of the Paroxysm began to abate, and she a little recovered her Senses, she likened the Pain to a Sword running through her. From the first Seizure, she had seldom had an Hour's Interval betwixt the Fits.—I order'd twelve Grains of Musk to be given her in a Clyster, which was thrown up in the Decline of the Paroxysm: Upon this she instantly recover'd, and has never been so affected since; proper Care being taken to remove the *Stimulus* which occasioned these Spasms.

Mr. *Malpas*, whom I have mentioned already, tells me, That, since he has seen the good Effects of Musk, he has twice tried it himself with great Success. — A Gentleman's Groom, having been kick'd by a Horse on the Pit of the Stomach, was thereby immediately thrown into a violent Hiccup, with great Difficulty of Breathing, and incessant Reachings to vomit, the Stomach and Diaphragm being greatly convulsed. After Bleeding, &c. the Musk removed the Hiccups, &c. immediately.—The other Case is more remarkable: A Farmer's Wife in the Country, as she sat at Table, was suddenly seiz'd with an Inability

lity of swallowing. She said, When the Meat or Drink came to a certain Part of the Gullet, she was immediately affected with the Sensation of a tight Cord round her Neck, which seemed almost to strangle her, so that she was obliged to throw her Food back again. — As this was manifestly a Spasm of the *Oesophagus* and Muscles of Deglutition, he order'd her our Antispasmodic, mixing two Scruples of Musk (as I remember) in a six-ounce Phial, and order'd her to take this by Spoonful. Several of the first Doies she rejected, as she did other Liquids; but, perceiving that the Disorder gradually abated upon the Use of this Medicine, she persever'd in it, and, at last, could swallow freely and easily as before. This single Bottle completed the Cure.

I could cite many more Instances to the same Purpose, both from my own Practice, and that of the other Physicians of this Place, to whom I communicated my Observations. One I cannot omit, which my very learned and ingenious Friend Dr. *Mackenzie* has furnish'd me with. I beg Leave to transcribe his own Words:— ‘ Musk, (says he) given, according
 ‘ to your Method, in a proper Dose, that is, from six
 ‘ Grains to sixteen, is the best antispasmodic Medi-
 ‘ cine that I know. The Efficacy of it in Hiccups,
 ‘ arising from any nervous Disorder, (and not from
 ‘ any Wound or Inflammation) is surprisngly great
 ‘ and sudden. Of many Instances I have seen, I shall
 ‘ only mention one:

‘ A young Lady, reduced to an extreme Degree
 ‘ of Weakness, by a slow wasting Fever, attended
 ‘ with a great Disorder and Lowness of Spirits, had,
 ‘ when I first saw her, the most frequent Hiccup I
 ‘ ever

' ever heard; it returning with every Inspiration. I
 ' order'd her a Bolus with six Grains of Musk, and
 ' the Apothecary stay'd to give it. The Moment she
 ' had swallowed it, she screamed out so violently,
 ' that she alarmed the whole House, and rais'd such
 ' an Outcry, that Mr. *Holyoake*, of *Henly* in *War-*
 ' *wickshire*, the Apothecary, with all his good Sense,
 ' found it difficult to compose the Tumult. From
 ' screaming she fell into a laughing Fit: Soon after
 ' she grew calm, and fell into a Sleep, which lasted
 ' several Hours. The Hiccup ceased from the Mo-
 ' ment she took the Bolus: It returned some Weeks
 ' after from taking Cold, but was quickly removed
 ' by the same Medicine.'

Those who are acquainted with the learned *Hoff-*
mann's Writings, well know of what extensive Use
 Antispasmodics are; and the Instances here given, are,
 as I imagine, sufficient to prove, that *Musk* is a Me-
 dicine of *uncommon Efficacy* in convulsive Disorders.
 I can boldly affirm, that, when given in its due Dose,
 it has never once fail'd my Expectations. I have
 sometimes indeed been obliged to repeat the Doses
 three or four times; but it has always answer'd at
 last, in all Cases where I had Reason to expect it
 should. ----- It is not to be imagined, that where the
 Spasms proceed from any *Stimulus* fixed in a certain
 Part, that *This* or any other Medicine can absolutely
 cure the Convulsion, if the Cause be not removed (f);
 yet

(f) The celebrated *Hoffmann's* Rules, regarding the Use of Spe-
 cifics, are most certainly just, and must necessarily hold in respect to
This, as well as any other: ' *Monendum quod quum hæc ipsa* (i.e.
 ' *specifica*

yet I think it appears, from some of the foregoing Histories, that, even without That, it may greatly alleviate them, and gain Time for other Remedies.

Under the Quantity of six Grains I never found much Effect from it; but it succeeds best, when given to ten, and upwards. In the larger Quantities, it never fails to produce a mild *Diaphoresis*, without at all heating, or giving any Uneasiness to the Patient (how much soever it has been decried by some Writers on these Accounts): On the contrary, it raises his Spirits, and eases his Pains. After the Sweat breaks out, he commonly falls into a sweet refreshing Sleep. Some Persons I have given it to have observed, that their Sweat is affected with the Scent
of

‘ *specifica Remedia* neutiquam *Viribus* polleant *absolutis*, sed *relati-*
 ‘ *vis*, & *certis Conditionibus* ac *Circumstantiis limitatis*, in eorum *Ufu*
 ‘ *harum imprimis exquisita habenda sit Ratio*, quo *speratus respondeat*
 ‘ *Effectus*. Deinceps *singularis Efficaciæ hæc quidem recte userpata*
 ‘ *sunt Remedia*; sed *nihil certe juvant*, nisi *prius Corpus fuerit præ-*
 ‘ *paratum*; & *Obstacula*, quæ *Virtutem infringere* aut *impedire possunt*,
 ‘ *remota*. Hinc *quando Sanguis in Venis redundat*, & *primæ Viæ Sen-*
 ‘ *tina Sordium obsessæ*, *neesse est*, ut *Sanguis prius subtrahatur*, &
 ‘ *prima Corporis Regio a crudorum, biliosorum, recrementitiorum Suc-*
 ‘ *corum Saburra repurgetur ac depleatur*. ** Denique in *Specificorum Ufu*
 ‘ *accommodo servanda Methodus*; *ita quidem*, ut *Artifex non solum*
 ‘ *Tempus, Dosis, ac Regimen teneat*; sed *etiam quamdiu iisdem insisten-*
 ‘ *dum*, & *quæ Victus ac Vivendi Ratio, simul injungenda, exacte calleat*.
 ‘ *Etenim medendi Methodus specialissima, quæ unice in Medentis Pru-*
 ‘ *dentia, Judio, diligenti Attentione, Meditatione, & Observatione*
 ‘ *Naturæ Ægrotantis consistit, tanti ad ipsum Effectum est Momenti,*
 ‘ *ut ipsis Specificis & appropriatis solis longe sit anteponenda; & sine*
 ‘ *ea, Remedia quantumvis egregia, alienæ & infructuosæ sint Operati-*
 ‘ *onis; nec quicquam solidi in Arte præstare possint. Et hæc qui-*
 ‘ *cunque studiose observat omnia, is certe desiderato potietur Fine, quan-*
 ‘ *tum scilicet malo plus valet Ars nostra salutaris.*

Mcd. rational. Systemat. Tom. 3. Sect. 2. Cap. 8.

of Musk. ---- When it is taken in the Quantities and Manner order'd in the Prescription mentioned by Dr. *James*, the Sweat it procures is very copious, and seldom goes off under thirty or forty Hours; yet, tho' it continues so long, it gives not much Fatigue to the Patient, on account of the easy Sleep and Spirits which the Medicine gives at the same time. In these respects, the Operation of Musk much resembles that of *Opium*; but is, in This, much preferable, that it leaves not behind it any *Stupor* or Languidness, which the latter often does; so that it seems rather to approach what is said of *Oleum animale*. Musk, therefore, seems likely to answer in those low Cases where Sleep is much wanted, and Opiates are improper.

I always chuse to give it in a Bolus, if that Form be not disagreeable to the Patient; because the Perfume in that Way is not near so strong as in any other: Indeed when given in a large Quantity, it is rather fetid than fragrant; and I never yet met with any hysterical Person, how averse soever to Perfumes, but could take it in that Form without Inconvenience.

I cannot deny but I have once or twice prescribed Musk, and not found the usual Success after repeated Doses; but this, upon a more exact Scrutiny, I found was owing only to some Sophistication of that which had been used: For, after having tried three or four Doses from one Shop without Success, upon sending for the same Quantity as had been before order'd, from another Person, whose Musk I had before experimented, I found the very first Dose answer as usual. ---- Indeed it is much to be lamented, that a
Medicine

Medicine of this Consequence should be so liable to Adulterations, and the *Criteria* of its Genuineness so ill settled. It is therefore to be wish'd, that some Gentleman, who has Skill and Leisure enough, would oblige the World with an accurate *Analysis* of it, and settle the Characteristics of that which is genuine; discovering, at the same time, the Frauds and Artifices, by which it is adulterated and counterfeited, and a certain Method of detecting them: For, where the Musk is not genuine, all that is hitherto said will prove but of little Service, either to the Patient or Physician.

Worcester, Oct. 21.
1744.

J. Wall.

II.

A Letter from Alex. Reid, Esq; to Dr. Wilmot, concerning the Effects of the Tonquinese Medicine.

Dear Sir,

London, Nov. 5. 1745.

AS your Zeal and Abilities for promoting the Good of Mankind are my principal Inducements, they must be my only Apology, for troubling you with the following Account of what I know concerning the internal Use of Musk in large Quantities.

About 15 Years ago, I learn'd in *China*, that the *Tonquinese* had an infallible Cure for the Bite of a mad Dog; and, being very desirous of possessing so

valuable a *Recipe*, I was, two or three Years after, favoured with it by the late Mr. *Hart*.

They take of the best Musk about sixteen Grains; of the purest native Cinnabar, and finest Vermilion, each about twenty-four Grains; and, having reduced them separately to impalpable Powders, mix and administer them in about a Gill of Arrack; which, in two or three Hours, generally throws the Patient into a sound Sleep, and Perspiration; if not, they repeat the Dose, and think the Cure certain.

As I had no room to doubt the Fact, I began to consider attentively the Symptoms of the Distemper, and the Nature of the Remedy. The former seem'd to proceed immediately from the Irritations of the Nerves by the Acrimony of the Juices; which, being constantly and violently hurried about, are, by that Motion, and the Heat attending it, broken, colliquated, and gradually rendered rancid, putrid, corrosive, and even caustic: In the mean time, the Nerves, being more and more vellicated by the increasing Sharpness of the Humours, become proportionably more rigid and constricted; at once augmenting the Velocity of the Blood, and shutting up all the Pores and Passages of the natural Excretions and Secretions; while what should, but cannot, pass off by them, exasperates the Disorder, till the Juices become so corrosive and caustic, as to produce mortal Convulsions.

Believing this Theory to be just, so far as it goes, I readily concluded, that a Medicine capable of relaxing the nervous System could not fail of relieving it from the above-mention'd Effects of Irritation, and thereby putting a Stop to Convulsions, opening the constricted Passages of Nature, moderating the Velocity

city of the Blood, and procuring Sleep; imagining also, that, by the same soothing Quality, the Juices themselves might, not improbably, be rendered more mild and innocent when impregnated with the Medicine. And such a Medicine I judged Musk to be, on account of its known, and almost instantaneous, Effects on Persons of a lax Habit; whose Nerves are so suddenly slacken'd, and the Motion of their Blood so diminished by the least Smell of it, that many of them faint away: Besides, its Odour is so exceedingly subtil, as to penetrate thro' the closest Substances; and may therefore be supposed easily to pervade the minutest Vessels of the human Body, and to diffuse its softening balsamic Virtue thro' all the Juices thereof.

The Arrack seem'd also a very proper Vehicle for the Musk; not only as they make together a very agreeable Bitter, but also because inflammable Spirits resist Putrefaction, and also, in some measure, coagulate animal Juices, which are not already corrupted; by which Effects the too much rarefied Blood is condensed, and hindered from putrefying further; while the bad Juices, being separated from the sound, are plentifully thrown off by the Passages, which the Musk has relaxed, and opened for them. The native Cinnabar seem'd to be sufficiently recommended by its known Uses in Physic, against Acrimony, Obstructions, and Convulsions: But of the Vermilion I can only say, That tho' it be a Preparation of the former, yet, as the *Tonquinese* seem to think its Virtue different, it were to be wished, that we knew their Method of preparing it, in which they certainly excel.

After

After I had long considered and examined these Principles in my Mind, I satisfied myself, that they might justly be applied to many other Cases; and that the Medicine would be of especial Service in malignant putrid Fevers, and Convulsions: And having, in the Year 1739. contracted with the Government for the Transportation of Convicts, I communicated my Opinion to Mr. *David Ross*, an ingenious and sensible Surgeon, whom I had employed to take care of their Healths; and prevail'd on him to make the Experiment in a very desperate Case; for I did not care to venture on any other. Please, in the mean time, to observe, that, as *Tonquin* Vermilion was not to be had, I substituted an equal Quantity of factitious Cinnabar in its stead, and sometimes gave Rum or Brandy instead of Arrack; in other Things I generally adher'd to the original Prescription.

CASE I.

In *December* 1739. two Convicts in *Newgate* were at the same time very ill of the putrid, infectious, malignant Fever, commonly call'd the *Gaol Distemper*. All the usual Methods of Practice having been tried in vain, their Condition appear'd to be quite desperate. One of them died in the Evening, and the other was not expected to survive till Morning, being covered with flat petechial Spots, and delirious. Mr. *Ross* therefore administered to him the above described Medicine about 9 or 10 o' Clock at Night; and, next Morning, to his great Surprise, found him quite free from the Fever, eating
ing

ing Water-gruel, and crying out for Meat, after having slept well, and perspired plentifully. The Spots on his Skin rose, and the next Day scaled off.

CASE II.

Soon after this, a Convict, who had lived in good Credit, laid his Condition so much to Heart, and drank so freely of spirituous Liquors to drown his Care, that he fell into a violent Fever. He was on the Master's Side, where his Relations look'd after him; so that I heard nothing of his Case till it was very desperate. He was delirious to a high degree, and had Catchings in his Hands and Face. He took the above Medicine at Night, slept and perspired well, and next Morning waked intirely free from his Distemper, excepting that he had such a Tremor left in his Hands, that he could not carry a Glafs to his Head; on which account I ordered him a second Dose, and he was perfectly cured.

Encouraged by these Successes, we administer'd the Medicine to a great many other Transports, who had the *Gaol Distemper*; and generally found it to have the same salutary Effects; more especially where the Patients were delirious or convulsed; as can be attested by Mr. *Louttil*, Apothecary, who made up the Medicines for my Surgeons; and was himself a Witness of several surprising Cures perform'd by it. Nor did I ever hear of any bad Effects from it.

CASE III.

Mr. *Rofs*, the Surgeon above-mentioned, having caught the *Gaol Distemper*, by attending those who were sick of it on board, came ashore at *Gravesend*, and desired me to provide another Surgeon; for that he was so ill he could not go the Voyage. He was blooded, and took 16 Grains of Musk in a Glass of Rum, without the Cinnabars, which were not to be had ashore, nor easily to be fetch'd from on board. This was at Night; he slept, perspir'd, and waked about 10 in the Morning so well, that he went on board directly, and continued his Voyage.

CASE IV.

Encouraged by many Instances of the first Case, I ventured, about three Years ago, to give half the *Tonquin* Dose (but without the Spirits) to my own Child, then about three Years old, who was seized with the Small-Pox and Convulsions. She slept sound, and perspired plentifully after it: The Small-Pox rose kindly, and she did very well, having never had a single Fit of Convulsion since, though extremely subject to frequent and dangerous ones before.

CASE V.

About two Years ago, Mr. *Rofs* gave much the same Dose to my Servant's Child, who was then about eight Months old, and had Catchings in her Hands, occasion'd by a violent Teeth-Fever. She slept, perspired, and waked perfectly well.

CASE VI.

About the same time, Mr. *Gordon*, a Clergyman, who lived near *Greenwich*, having come from thence to *London* with a Fever upon him, became quite delirious, if he was not so before he set out. Mr. *Ross* gave him the *Tonquin* Remedy, which made him sleep and perspire, so that by next Morning he was perfectly cured.

CASE VII.

A Lady of my Acquaintance, being very subject to violent hysterical Convulsions, was seized with a Fit, as I sat at Supper with her about three Years ago, by which every Part of her Body was terribly agitated. Happening to have in my Pocket a Bolus made of the Musk and Cinnabars, I bruised it in the Palm of my Hand, and clapp'd it to her Nose, which suddenly relieved her. I left it with her, and she has since told me, that she never goes abroad, nor to Bed, without it.

CASE VIII.

Observing the Efficacy of this Medicine in curing *Deliriums*, I conceived that it would be of Use against Maniacal Distempers; and happened, about two Half-years ago, to say so, in the Presence of a Gentleman of *Oxford*, whose Son had been, for some time, exceedingly disordered in his Senses, by a Disappointment in Love; being unable to sleep, refusing Sustenance, and attempting to throw himself out of the Windows of a high Room where

he was confin'd. The Father begg'd me to give him the *Recipe*, and assur'd me he would make use of it, as the Methods formerly tried had proved unsuccessful. He soon returned me a Letter of Thanks, acquainting me, That the Medicine had made his Son sleep sound for 23 Hours, that he had perspired plentifully, and waked in his Senses. I have since heard, that he continues well, and, from a Skeleton, is grown fat.

CASE IX.

A particular Friend of mine went mad about a Year and half ago, by too intense Thinking. I mention'd the preceding Case to Dr. *Armstrong* and Mr. *Ferguson*, who attended him; and, with their Approbation, gave him Musk, native and factitious Cinnabar, of each a Scruple, in about a Gill of Arrack. In about three Hours, he fell, or seem'd to fall, asleep; upon which, supposing the Medicine had taken Effect, we left him: But, soon after we were gone, he waked; and, next Day, seeming very little, if at all, better, was removed to a private Mad-house. There nothing else was done to him; but at Night he slept tolerably well, appeared much better next Day, and continued mending, till he was in a little time quite well, as he is now. How much of this Cure may be attributed to the Medicine I do not know, as it did not operate immediately, nor in the usual Manner. I mention it chiefly to shew, that even twenty Grains of Musk had no *bad* Effect upon him, if they had not a *good* one.

CASE X.

Not long after, Mr. *Louttit* and I gave the same Dose to a Gentlewoman, whose Brain had long been turn'd by religious Terrors, which first affected her about the Time that her *Menses* ceased. I was, at first, surpris'd to find her suddenly become quite gentle, obliging, and reasonable; but these good Effects, as she slept but little, went off next Day, and she soon appeared neither better nor worse than she was before; and in the same Condition she still continues: So that neither in this Case did the large Dose of Musk do any Mischief.

These, Sir, are some of the many Experiments made with the above recited Prescription by myself, and the Surgeons under my Direction. You may depend on the Facts as near as I can recollect them; and if you desire to be further satisfied, Mr. *Louttit*, my Apothecary, and Mr. *Mackenzie*, one of my Surgeons, now in Town, shall wait upon you. Give me Leave only to observe, that, where I thought the Case required it, I have given as far as 24 Grains of Musk to Convicts, and never found any ill Effects from it, tho', on some Occasions, it disappointed my Hopes. Whether there was any Error in altering the *Tonquinese* Proportions, the Cause of which I cannot recollect, or whether the Medicine would have succeeded in the Instances where it miscarried, had the original Prescription been kept to, and repeated as directed, I leave to your Judgment and Experience.

But I cannot help asking your Opinion and begging you to consider, Whether, upon the Whole, the Virtues of this Medicine may not reasonably be thought to extend to many other Cafes; and particularly to the Epilepsy and Plague. But, whatever Judgment you may form of the Medicine which common Good-will to my Fellow-creatures obliges me to recommend to your Thoughts, I intreat, and hope, you will pardon my Presumption in going so far beyond my own Province; seeing I shall always be, with the highest Esteem, and sincerest Respect,

Dear Sir,

Your most obliged, and

and most obedient Servant,

Andr. Reid.

XIX. De Planta minus cognita, & haecenus non descripta, Commentarius: Auctore *Gulielmo Watson*, REGIÆ SOCIETATIS SODALE.

GEASTER Volvæ Radiis & Operculo elevatis.

*Read in English
Dec. 20. 1744.
here printed with
Alterations.*

GEASTER appellatur plantarum genus a *Michelio* constructum; cujus quinque species accuratissimus idem auctor detexit, atque in tractatu suo de novis plantarum generibus