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“Acquiers toy parfaite cognoissance de l’aultre monde, qui est l’homme”: Rabelais, the History of Medicine, and Medical Humanism

Abstract

This essay aims to demonstrate how knowledge of the human body is acquired and displayed in François Rabelais’s medical practice, letters, scholarly editions, and fictional works. It recognises the importance of the human body in the fictional works and focuses on how Rabelais uses his characters to respond to controversies in Renaissance Europe over approaches to anatomy and pharmacognosy in different medical traditions. It also draws on evidence from his correspondence and from his editions of work by other scholars to show how for Rabelais, the ethos of medical humanism is one of tolerant, reasoned negotiation between disciplines, faiths, and eras, and that moderation is the foundation of health.

Keywords

Rabelais, history of medicine, medical humanism, anatomy, pharmacology, Renaissance.

What does it mean to ‘know’ the human body, and what critical enquiry leads to such knowledge? For David Greaves and Martyn Evans, one aim of the Medical Humanities was “to refocus the whole of medicine in relation to what it is to be fully human”

(2000, 1). Their editorial contributed to an ongoing debate over an adequate definition of the Medical humanities, from its origins in medical education to its contemporary transdisciplinarity. Whilst the hierarchical tussles between different fields within the Medical Humanities have been readily acknowledged (Fitzgerald and Callard, 2016, 35) approaches to charting the discipline have tended to be quite linear. Less attention has been given to doubling back, to investigating how reflective revisiting and reacknowledgement of the past may inform current scholarship and practice. There are notable exceptions; Jamie McKinstry and Corinne Saunders argue cogently that “taking a long cultural perspective not only reveals shifts in understanding, but also continuities and connections. The present is shaped by the past – but the past can open up powerful new ways of seeing” (2017, 140). This essay shares this intention to establish fruitful dialogue with the past, and its focus is an individual whose practice engaged in just this kind of flexibility.

For François Rabelais (1483/94?-1553) the body was simultaneously the focus of his medical practice and a consuming, generating, and fragmenting feature of his fictional works. This article examines three aspects of Rabelais’s investigation of the body and his critical engagements with medical history and medical humanism, which also provide insights into European Renaissance thought. Each will be illustrated by examples drawn from the many present in his works: first, the history of medicine, using Panurge’s praise of debt to investigate shifting attitudes in medical knowledge; second, the use of controversial pharmacological substances, here scammony and hellebore; finally, the commitment to medical humanism in Rabelais’s edition of volume two of Giovanni Manardo’s *Lettres médicales*. Some initial remarks will introduce the importance of the body in Rabelais’s works and will acknowledge differing reactions to bodily revelation, from creativity to curiosity, from laughter to fear.

The quotation in the title of this article comes from *Pantagruel*

chapter 8, in which Pantagruel receives a letter from his father, Gargantua, setting out his expectations for his son's education¹. Of the thirteen scholarly subjects in Gargantua's multidisciplinary programme, this recommendation refers to medicine. Portraying the human body as a microcosm, Gargantua instructs Pantagruel to study Greek, Arabic, Latin, and Jewish medical texts, and to supplement this knowledge of "l'autre monde" by "frequentes anatomies" (*Pantagruel*, 8: 245). The human body is to be opened for scrutiny, its secrets revealed, its internal processes externalised. In *Naissance de la clinique*, Michel Foucault considers how the medical gaze constantly negotiates the visible and the invisible, in "une réciprocité indéfinie" with the manifestation of disease, whether hidden or displayed by the patient (1963, 8). The autopsy magnifies this ambivalence, displaying the hidden workings of the body, but only once stilled by death, in a contradictory revelation: "La nuit vivante se dissipe à la clarté de la mort" (1963, 148). Rabelais's works show us inside the dead human body, but also the visceral processes of eating, birthing, and dying.

Voyages are undertaken into the bodies of the giants: Gargantua inadvertently swallows six pilgrims in his salad (*Gargantua*, 38), teams of men descend in copper spheres to excavate undigested matter from Pantagruel's stomach (*Pantagruel*, 33), and the narrator shelters inside Pantagruel's mouth during a rainstorm, finding there "un nouveau monde" (*Pantagruel*, 32: 331). The interconnectedness of internal bodily structures is traced in analytical detail: in Gargantua's fantastic journey to birth, from the womb, up the vena cava, past the diaphragm and the shoulders to the left ear (*Gargantua*, 6: 21-22); or in the descriptions of the bones of the skull and the meninges of the brain revealed when Frère Jean kills his guards during the Picrocholine War (*Gargantua*, 44: 120)². Mikhail Bakhtin used the openness of the Rabelaisian body to the world and to other bodies for his investigation of the grotesque body and its generative powers of humour. For him, the barrier between an individual body,

other bodies, and the world is overcome through the “convexities and orifices” (1984, 317) of the grotesque body, as it “displays not only the outward but also the inner features of the body” (1984, 318).

The membrane between inner and outer is breached by adventure, injury, birth, sex, elimination, and death, and by laughter. For Bakhtin this is a source of liberation and enhanced proximity, as “laughter demolishes fear and piety before an object, before a world, making of it an object of familiar contact and thus clearing the ground for an absolutely free investigation of it” (1981, 23). Proximity to the opened body, deprived of the energy and vitalism which Bakhtin celebrates, is not always so unambiguously positive. Kristeva considers the corpse as representing the utmost abjection (1980, 11-12), and abjection to be the successor, in twentieth-century literature, to the apocalyptic and the carnivalesque (1980, 165). Jane Macnaughton acknowledges the anxious conjunction of the open body, abjection, and humour in her discussion of dissection as a pedagogical tool. She notes how some medical schools have removed it from anatomy training and how a certain cynical, self-protective humour may develop amongst students when attempting to overcome their inhibitions about the dead (2009, 73).

Rabelais names himself “docteur en Medicine” on the title pages of the *Tiers Livre* of 1546 and the *Quart Livre* of 1552, in the almanacs for 1533 and 1541, and describes himself as “medecin du grant hospital dudit Lyon” in the almanac for 1535. The facts surrounding Rabelais’s medical training and professional practice are well-established, apart from the lacuna between 1526 and 1530 (Antonioli, 1976; Huchon, 2011). Briefly, he enrolled in the medical faculty at the University of Montpellier in September 1530 and received a baccalauréat a few weeks later, suggesting some previous years of study (Huchon, 2011, 110, 114-15). Montpellier’s renown as a centre for medical education is well-documented, with many scholars commenting on its openness to a range of medical

theories, including those of Arabic physicians, and the importance of botany under the leadership of Guillaume Rondelet. As I discuss below, both are important when considering how Rabelais situates himself within the evolution and application of medical knowledge in Renaissance Europe (Antonioli, 1976, 38, 40-43; Arber, 1938, 118; Huchon, 2011, 115; Siraisi, 1990, 14, 58). Public dissections were carried out there, being made statutory in 1340 (Siraisi, 1990, 73). Of particular importance for Rabelais are the three dissections carried out in 1531, the five in 1532, and those presided over by Jean Schyron in October 1530, when Rabelais signs his name as a witness, and the 1537 dissection in Lyon, where Rabelais himself presides (Huchon, 2011, 112, 116; Viel, 2004, 287). In 1531 Rabelais is teaching Hippocratic and Galenic medicine in Montpellier and the following year is working at the Hôtel Dieu hospital in Lyon. He edits Manardo's medical letters and works by Hippocrates and Galen and is received as a medical doctor in Montpellier in 1537 (Huchon, 2011, 117-18). He later becomes the personal physician to Jean du Bellay, the bishop of Paris, and accompanies him on diplomatic missions to Italy (Huchon, 2011, 193-99).

Rabelais's professional practice therefore meant that he was actively engaged with debates on the accuracy of medical knowledge past and present and from different traditions. His fictional works are in dialogue with his practice, frequently mixing serious debate with comic rhetoric. Chapters 3 and 4 of *Le Tiers Livre*, in which Panurge delivers a lengthy eulogy to debt in order to deflect Pantagruel's criticisms of his inefficient estate administration, provide one such example. In two intertextual echoes of Gargantua's letter, Panurge uses the image of the human body as microcosm, referring to "l'autre petit monde, qui est l'home" (*Tiers Livre*, 3: 364) and "nostre microcosme, *id est*, petit monde, c'est l'home" (*Tiers Livre*, 4: 365). In chapter 4 he shows how the conversion of matter (bread and wine) into blood, which he identifies as the seat of the soul, and ultimately the spirits of the *anima*, demonstrates that parts of the body are

hierarchically interdependent. Beginning with the hands, feet, and eyes, essential for sourcing and preparing sustenance, and the stomach and spleen which create appetite, Panurge traces the passage of bread and wine through the mouth, stomach, and mesenteric veins to the liver, where he claims blood is formed. He describes how the blood is purified by the kidneys, spleen, gallbladder, and the heart, where the vital spirits are extracted in the left ventricle, before travelling through the arterial vein to the rete mirabile, where the final stage of purification creates the animal spirits. This structure, a network of arteries and veins below the brain, is not present in humans, although it does exist in other vertebrates (Sugg, 2009, 40). Galen and Rabelais's contemporaries, Jacobus Sylvius and Ambroise Paré, argued for its existence in humans, whereas Vesalius, who unlike Galen had dissected the human body, argued against it (Antonioli, 1976, 227-28; French, 1985, 56; Siraisi, 1990, 91).

Indeed, Panurge bases his argument principally on Galen, particularly those theories developed in *De Usu Partium* (Antonioli, 1976, 225), which placed the seat of the soul in the liver, contrasting with the Aristotelian and Platonic view that the heart was the principal organ (Antonioli, 1976, 27; Boys-Stones, 2009, 20; Nutton, 2012, 117; Siraisi, 1990, 81; Sugg, 2009, 48), and on Galenic and Arabic medical views of the role of the blood (Antonioli, 1976, 226; Bylebyl, 1985, 223, 227-28). Galen's works constituted a major authority for Rabelais: he owned a copy of the 1525 Aldine edition of Galen (Nutton, 1988) and published a translation of his *Small Art of Medicine* and a commentary on the *Ars parva* (Huchon, 2011, 92, 112). Barbara Bowen and Michael Screech comment on the ambiguity of Panurge being a spokesperson for Galenism. Bowen describes the views he expresses as "perfectly orthodox medical theory of its time" and finds Panurge's misappropriation of medicine for his own ends humorous (1998, 138). Screech concurs with this assessment of Panurge's misuse of knowledge, but also interprets the episode from the perspective of a Christian Humanist of Rabelais's time

who, he maintains, would see these arguments as “stupides en soi” (1968, 44). Antonoli sees the mock encomium to debt as Rabelais distancing himself from Galenic theories in favour of Platonic and especially Hippocratic medicine (1976, 212). Rabelais’s choice of the untrustworthy Panurge to use Galenic theory as the foundation for his argument, marks his position in contemporary medical debate by undermining “le gentil falot, Galen” as Panurge later describes him (*Tiers Livre*, 7: 373). This episode reveals how knowledge of the body in Rabelais’s fictional works is in a dialogic relationship with the history of medicine from two chronological perspectives: Rabelais’s, as he adapts his practice through reassessing ancient medicine in response to contemporary medical debates, and ours, as we study changes in medical knowledge in the European Renaissance. The permeable approach to time and to culture seen in Rabelais’s reappraisal of medical knowledge and comparison of traditions is also to be advocated in the critical Medical Humanities. Macnaughton reminds us that “medicine is *itself* a culture constructed through language, technology, and particular kinds of professional training” (2017, 235). Pre-Cartesian medical thought has much in common with the holistic emphasis of the medical humanities (McKinstry and Saunders, 2017, 141), and recent initiatives in the global health humanities testify to broader cultural perspectives (Stewart and Swain, 2016).

Foucault describes the hospital as “ce jardin désordonné où les espèces s’entrecroisent” (1963, 16), and I will now address Rabelais’s interest in medical and horticultural botany. References to plants and their medicinal use proliferate in Rabelais’s works. Sometimes Rabelais abuses his own medical knowledge by having fictional characters, often Panurge, misuse pharmacological substances which had genuine therapeutic applications. At other times, Rabelais employs the same technique seen above of using fiction for critical medical debate and to challenge his contemporaries in his references to controversial pharmacological substances.

Botanical pharmacology flourished in the Renaissance, with new editions and translations of Classical authorities such as Theophrastus' *Historia Plantarum*, of which Rabelais owned a copy (Antonioli, 1976, 50), Dioscorides' *De Materia Medica*, and Pliny's *Historia naturalis* (Morton, 1981, 117; Reeds, 1976, 520-22). These texts had previously been expanded via Arabic medicine, as translators included plants native to the Iberian Peninsula, Persia, and the Indian subcontinent. Max Meyerhof estimates that about 400 drugs were added to the pharmacopoeia as a result of Arabic knowledge (1935, 2). The process of translation was not unidirectional. As Arabic medical treatises expanded into encyclopaedia, the most famous of which is Ibn Sina's (Avicenna) *The Canon of Medicine*, they were themselves translated into Latin in the Middle Ages and the Renaissance (Siraisi, 1985, 17). The original Greek texts are thus reintroduced having been modified by the Arabic tradition and circulate alongside new translations from Greek. Once again, we may note cyclical rather than linear movement, and cross-pollination between various learned traditions.

In addition to references in Rabelais's fictional works and the importance of botany and medical pharmacology in Gargantua's education under Ponocrates' tutorship (*Gargantua*, 23: 69-70; 24: 72), his private letters also demonstrate his passion for plants and his role in exchanging botanical knowledge. Rabelais admits that he had long yearned to travel to Italy, to consult with learned men over questions related to his art (i.e. medicine) and particularly those plants, animals, and remedies which he believed were abundant in Italy, but lacking in France (*Épître-dédicace de la 'Topographie de l'Ancienne Rome'*, 990). In 1534 he finally did travel to Rome as the private doctor of Jean du Bellay (Cooper, 1991; Cooper, 1977, 71-88; Huchon, 1994, 1742). In August that year Rabelais published an edition of Marliani's *Topographia antiquae Romae*, with a dedicatory epistle to Jean du Bellay, in which he records his disappointment on finding that the flora and fauna of Italy were much the same as

those of France, or were at least familiar to him: “Plantas autem nullas, sed nec animantia ulla habet Italia, quae non ante nobis et uisa essent et nota” (*Épître-dédicace de la ‘Topographie de l’Ancienne Rome’,* 991). A later stay in Rome from August 1535 to April 1536 proved more productive, as Rabelais discovered new seeds and new uses for plants, which he relates in letters to his patron, Geoffroy d’Estissac, bishop abbot of Maillezais, enclosing the seeds themselves. In his first letter from November 1535, he sends several types of seeds from Naples for growing salads, with the recommendation that these are the same seeds grown in the Pope’s private garden, but also cautioning that the Neapolitan varieties of cress and orache are hotter and less digestible than the French ones (*Lettres d’Italie*, 1011). He shares horticultural advice, turns his attention to flowers, and gives a frustratingly vague mention of “autres de medicine” (1012). In 1540-41 Rabelais corresponded with Guillaume Pellicier, bishop and diplomat, during the latter’s posting as ambassador in Venice, with two of the three surviving letters from Pellicier referring to him awaiting a delivery of alpine and medicinal plants from Rabelais, and to Pellicier sending plants from the Venetian Kingdom of Candia (Antonioli, 1976, 205; Huchon, 2011, 113, 248, 271-73).

The prescriptions in Rabelais’s fictional works are therefore based on genuine medical and botanical knowledge. But this does not mean that they are always prescribed with purely therapeutic aims, as pharmacognosy and surgical procedures are comically (mis) applied. Digestive disorders figure prominently in Rabelais’s fiction, with laxatives, astringents, antispasmodics, and especially purgatives being administered for the health of the patient, but also to enact vengeance. Scammony features as a purgative, alongside cassia and rhubarb, in the organ whose music cures the sick in the kingdom of the Quintessence (*Cinquième Livre*, 19: 768). When Pantagruel suffers from a digestive complaint (*Pantagruel*, 33) he is likewise prescribed a purgative containing the same ingredients. The narrator describes the cure as “une minorative” (*Pantagruel*, 33: 334), a mild purgative,

however, the quantities in which it is taken: four hundred weight of scammony alone, show Rabelais engaging with contemporary debate over dangerous medicines.

In Dioscorides' *De Materia medica* scammony is recommended for purging phlegm and bile and for loosening the bowel (2011, 323). Pliny devotes chapter 38 of Book 26 of his *Historia naturalis* to it, recognising its usefulness for stomach complaints, but also its strong purgative properties. Ibn Sina notes that it is harmful for the stomach and liver, warning that "its laxative action sometimes is so severe that it is fatal" (2012, 982). Given Ibn Sina's caution, it is ironic that scammony was one of the drugs, along with hellebore, which were targets of anti-Arabic sentiment in medical circles in the 1520s and 1530s. Symphorien Champier, whose career also took him to Montpellier and Lyon, and Leonard Fuchs, sometimes credited as establishing botany as a science, criticised the use in Arabic medicine of potentially dangerous drugs (Antonioli, 1976, 44-50, 71, 104-13; Bowen, 1998, 132-35; Hunkeler, 2007, 49-50; Siraisi, 1985, 22). Although some criticisms were prompted by the potential for misidentifying plants and by inaccurate translations, there were also theological motivations. Champier argued that such powerful, toxic substances were contrary to Christian doctrine, diabolical in fact, because they threatened to harm God's creation (Antonioli, 1976, 104). In his *Myrouel des apothiquaires et pharmacopoles*, Champier acknowledges the efficacy of scammony, but describes it as being "[une] médecine [...] dangereuse plus que Cerberus et bien Beelzebuth" (1894, 44). Why then does Pantagruel ingest such vast quantities of scammony? He is, of course, a giant, thus able to withstand its effects. Here Rabelais follows the advice of Dioscorides, who recommends that it be "taken in proportion to one's strength" (2011, 170).

Proportionality is similarly relevant in the case of hellebore, another contentious pharmaceutical, also renowned for its purgative effects. In Rabelais's *Quart Livre* it is described as a poison, used

by the ancient inhabitants of France to coat their arrows whilst hunting (34: 618-19). Dioscorides notes that the black form purges downward and the white form upward (2011, 307, 316) and, like Pliny in Book 25, chapter 21 of the *Historia naturalis*, advocates that those who harvest it should eat garlic and drink wine to protect themselves (2011, 317). However, for the giants and their companions hellebore is a purgative for the mind. The use of hellebore as a cure for madness is described by Dioscorides (2011, 316), Pliny (Book 25, chapter 22), and Ibn Sina, who warns that excessive use of hellebore can be fatal, but also states that “it is useful in treating evil thoughts, chronic migraine and other diseases of the head, epilepsy and melancholia” (2012, 538). Gargantua is given hellebore without any ill intentions to induce amnesia, thus cleansing him of the faulty education received in his youth, (*Gargantua*, 23: 64). Epistemon’s motives for recommending it to Panurge are somewhat more ambiguous. After having visited the dying Raminagrobis, Epistemon suggests that Panurge take hellebore to purge himself of his obsessive behaviour and to return to his old ways (*Tiers Livre*, 24: 424). Given that Panurge has just spent two chapters raving about heresy and devils in an increasingly frantic monologue, one may wonder whether Epistemon might not have both uses of hellebore in mind: a constructive relief from delirium and a vengeful temporary incapacitation. When Rabelais’s protagonists ingest such plants, he is demonstrating that the substance itself is not dangerous, ungodly, or unethical. Instead it is the intention with which it is prescribed and the physician’s knowledge of medicine and the body which should be interrogated.

Rabelais published an edition of the second volume of Giovanni Manardo’s *Medical Letters* in 1532, and the dedicatory epistle addressed to the lawyer and Humanist André Tiraqueau brings together the strands of ancient medicine and pharmacology considered thus far³. Manardo was a Humanist doctor from Ferrara and Rabelais evidently shared many of his approaches to medicine.

As Richard Cooper (1991, 15) and Roland Antonioli (1976, 73, 76-77) note, whilst pointing out some errors in, for example, Ibn Sina's *Canon*, Manardo did accept some Arabic medical doctrine and recognised that empirical techniques were valid in medical practice. He also acknowledged the importance of botany in therapeutics (Palmer, 1985, 101). Rather than condemning potentially dangerous substances and implicating them in religious conflict, he emphasised the physician's knowledge and the possibilities for using these remedies to treat apparently new diseases. In his dedication Rabelais identifies several ways in which medical progress, although advancing, is being hindered. Old habits die hard, and people are unwilling to reject the authorities to which they have long clung; more harm is caused by charlatans' treatments than by diseases; and at the heart of this is *philautia*, or self-love, which prevents the human mind from seeing or thinking clearly. Rabelais condemns poorly educated and unethical physicians whose actions disrespect the human body, and expresses his hope that adherence to ancient medicine will flourish and replace bad practice:

On a senti que certains hommes qui sont au nombre des médecins et qui passent pour tels, se révèlent, à un examen mené en profondeur, dépourvus de science, de conscience et de prudence, mais pleins de morgue, de jalousie et de bassesse. Ils mènent leurs expériences à force de morts [...] et les dangers qu'ils font courir sont passablement plus grands que ceux des maladies elles-mêmes. [...] Si cette conviction [la pratique de l'ancienne médecine] se répand et se fortifie, ces charlatans et ces saltimbanques seront sans doute dans peu de temps réduits à la besace, eux qui s'étaient attachés à appauvrir en long et en large le corps humain. (981-82)

Rabelais numbers Manardo amongst those doctors who have striven to reinstate "dans tout son éclat la médecine ancienne et authentique" (982) and views him as having an ideal combination

of skill and knowledge (ibid.). Rabelais admires this conjunction of sound knowledge and the flexibility to apply it with reflection and adaptability in Manardo, and it is evident in his own negotiation of the different currents of medical knowledge and practice.

Rabelais is often associated more with excess and exaggeration than with proportionality and moderation, but he returns to the concept of the golden mean several times, and, I argue, it also informs his view of medical knowledge. When Panurge is utterly confused by the philosopher Trouillougan's recommendation that he should be both married and unmarried, his companions attempt an explanation:

Ainsi [...] mettons nous neutre en Medicine, et moyen en philosophie: par participation de l'une et l'aultre extremité: par abnegation de l'une et l'aultre extremité: et par compartiment du temps, maintenant en l'une, maintenant en l'aultre extremité. (*Tiers Livre*, 36, 462)

Screech explains how medieval and Renaissance philosophers did not interpret the golden mean as a fixed middle way, but saw it as “an elastic position, consisting of an everchanging balance” (1979, 254). Rabelais returns to the idea of the golden mean in the prologue to the 1552 edition of the *Quart Livre*. He explores moderation and humility at length in a re-telling of the Aesopian fable of the woodcutter and the axe, but the key point of Rabelais's exposition is the belief that God will answer our prayers, providing that they are moderate, which he defines as follows: “Mediocrité a esté par les saiges anciens dicte aurée, c'est à dire precieuse, de tous louée, en tous endroitz agreable” (*Quart Livre*, Prologue, 525). It is surely no coincidence that the disquisition on the golden mean directly follows a praise of health, which Rabelais equates with life: “Santé est notre vie [...]. Sans santé n'est la vie vie, n'est la vie vivable [...]. Sans santé n'est la vie que langueur: la vie n'est que simulachre de mort. [...] saisissez vous de vie, c'est santé” (525). The golden

mean, moderation, and humility are, I suggest, at the centre of Rabelais's attitude to medicine and knowledge of the body. They are the antithesis of *philautia* and the basis of the acquisition of knowledge and its skilful application, allowing a recognition of both the extremes and of the balance between them, and the wisdom to know when each is appropriate.

This article aims to have shown how rich a field Rabelais's life and works are for the Medical Humanities. His practice and his texts focus on the human body and how to keep it well; he evaluates conflicting traditions in anatomy and pharmacology, sometimes mocking what he considers to be wrongheaded theories by allowing unreliable characters to articulate them or to use them with malicious intent, sometimes arguing for a selfless, moderate ideal to guide medical behaviours. Fitzgerald and Callard draw on Karen Barard's theory of entanglement in their appraisal of how the Medical Humanities bring scholars from different disciplines together: "we re-enter a long history of binding, tangling and cutting" (2016, 39). They further argue that "The Medical Humanities [...] need[s] [...] to understand how practices of making, breaking and shifting boundaries *constitute* illness and healing (2016, 42-43). I would suggest in conclusion that Rabelais entangles the art of writing and reading with the art of medicine and in so doing produces the creative hybrid of medical humanism.

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¹ All references to Rabelais's works are to François Rabelais, *Œuvres complètes*, ed. by Mireille Huchon with François Moreau (Paris: Gallimard, 1994).

² For more on the humour of these episodes see Williams (2006).

³ Translated from the Latin in *Œuvres complètes*, 979-82.

Works cited

Antonioni, R., *Rabelais et la médecine*, *Études Rabelaisiennes*, 12 (Geneva: Droz, 1976).

- Arber, A., *Herbals: Their Origin and Evolution. A Chapter in the History of Botany 1470-1670* (Cambridge: Cambridge University Press, 1938).
- Avicenna, *The Canon of Medicine*. Vol 2: *Natural Pharmaceuticals*, translated by Laleh Bakhtiar (Chicago: Great Books of the Islamic World, 2012).
- Bakhtin, M., *Rabelais and his World*, trans. by Hélène Iswolsky (Bloomington: University of Indiana Press, 1984).
- , *The Dialogic Imagination: Four Essays*, ed. by Michael Holquist; trans. by Caryl Emerson and Michael Holquist (Austin: University of Texas, 1981).
- Bowen, B., *Enter Rabelais, Laughing* (Nashville: Vanderbilt University Press, 1998).
- Boys-Stones, G., “Polyclitus among the Philosophers: Canons of Classical Beauty”, in C. Saunders, U. Maude, and J. Macnaughton (eds), *The Body and the Arts* (Basingstoke: Palgrave Macmillan, 2009), 11-24.
- Bylebyl, J., “Disputation and Description in the Renaissance Pulse Controversy”, A. Wear, R. French, I. Lonie (eds), *The Medical Renaissance of the Sixteenth Century* (Cambridge: Cambridge University Press, 1985), 223-45.
- Champier, S., *Le Myrouel des apothiquaires et pharmacopoles*, ed. by P. Dorveaux (Paris: Welter, 1894) retrieved from:
<https://gallica.bnf.fr/ark:/12148/bpt6k1269149p.texteImage>
- Cooper, R., *Rabelais et l'Italie*, *Etudes Rabelaisiennes*, 24 (Geneva: Droz, 1991).
- , “Rabelais and the *Topographia antiquae Romae* of Marliani”, *Etudes Rabelaisiennes* 14, 1977, 71-88.
- Dioscorides, P., *De Materia Medica*, translated by Lily Y. Beck (Hildesheim: Olms-Weidmann, 2011).
- Fitzgerald, D., and F. Callard, “Entangling the Medical Humanities”, in A. Whitehead, A. Woods, S. Atkinson, J. Macnaughton, J. Richards (eds), *The Edinburgh Companion to the Critical Medical*

- Humanities* (Edinburgh: Edinburgh University Press, 2016), 35-49.
- Foucault, M., *Naissance de la clinique: une archéologie du regard médical* (Paris: Presses universitaires de France, 1963).
- French, R., “Berengario da Carpi and the Use of Commentary in Anatomical Teaching”, in A. Wear, R. French, I. Lonie (eds), *The Medical Renaissance of the Sixteenth Century* (Cambridge: Cambridge University Press, 1985), 42-74.
- Greaves, D. and M. Evans, “Medical Humanities”, *Medical Humanities*, 26, 2000, 1-2.
- Huchon, M., *Rabelais* (Paris: Gallimard, 2011).
- Hunkeler, T., “Symphorien Champier: logique(s) du compilateur”, in A. Carlino and A. Wenger (eds), *Littérature et médecine: approches et perspectives (XVI^e-XIX^e siècles)*, (Geneva: Droz, 2007), 49-63.
- Kristeva, J., *Pouvoirs de l'horreur: essai sur l'abjection* (Paris: Seuil, 1980).
- Macnaughton, J., “The Past, Present, and Future of Medical Humanities”, *Postmedieval*, 8, 2017, 234-39.
- , “Flesh Revealed: Medicine, Art and Anatomy”, in C. Saunders, U. Maude and J. Macnaughton (eds), *The Body and the Arts* (Basingstoke: Palgrave Macmillan, 2009), 72-86.
- McKinstry, J., and C. Saunders, “Medievalism and the Medical Humanities”, *Postmedieval*, 8, 2017, 139-46.
- Meyerhof, M., “Esquisse d’histoire de la pharmacologie et botanique chez les Musulmans d’Espagne”, *Al-Andalus* 3 (1935), 1-41, repr. in P. Johnstone (ed), *Studies in Medieval Arabic Medicine: Theory and Practice*, (London: Variorum Reprints, 1984).
- Nutton, V., *Ancient Medicine* (London: Routledge, 2012). -----, “Rabelais’s Copy of Galen”, *Études Rabelaisiennes* 22, 1988, 181-87.
- Palmer, R., “Pharmacy in the Republic of Venice in the Sixteenth Century”, in A. Wear, R. French, I. Lonie (eds), *The Medical Renaissance of the Sixteenth Century* (Cambridge: Cambridge University Press, 1985), 100-17.

- Parkin, J., *Interpretations of Rabelais* (Lewiston: Mellen, 2002).
- Pliny the Elder, *The Natural History*, trans. by J. Bostock and H. T. Riley (London: Taylor and Francis, 1855), retrieved from <http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3atext%3a1999.02.0137>
- Rabelais, F., *Œuvres complètes*, ed. by Mireille Huchon with François Moreau (Paris: Gallimard, 1994).
- Screech, M. *Rabelais* (London: Duckworth, 1979).
- , “Aspects du rôle de la médecine dans la philosophie comique de Rabelais”, in H. Naïs, S. Dresden, M. Screech (eds), *Invention et Imitation*, (The Hague: Van Goor Zonen, 1968), 39-48.
- Siraisi, N., *Medieval and Early Renaissance Medicine: An Introduction to Knowledge and Practice* (Chicago: University of Chicago Press, 1990).
- , “The Changing Fortunes of a Traditional Text: Goals and Strategies in Sixteenth-Century Latin Editions of the *Canon* of Avicenna”, in A. Wear, R. French, I. Lonie (eds), *The Medical Renaissance of the Sixteenth Century* (Cambridge: Cambridge University Press, 1985), 16-41.
- Stewart, K., and K. Swain, “Global Health Humanities: Defining an Emerging Field”, *The Lancet*, 388, 2016, 2586-87.
- Sugg, R., “The Smoke of the Soul: Anatomy, Medical Spirits and the Rete Mirabile: 1538-1643”, in C. Saunders, U. Maude, and J. Macnaughton (eds), *The Body and the Arts* (Basingstoke: Palgrave Macmillan, 2009), 39-54.
- Viel, C., “Rabelais médecin et naturaliste”, *Bulletin de l'Association des amis de Rabelais et de la Devinière* 6, 2004, 286-92.
- Williams, A., “Sick Humour, Healthy Laughter: The Use of Medicine in Rabelais’s Jokes”, *Modern Language Review* 101, 2006, 671-81.