

<sup>25</sup> Sostenuta ad es. da ALCMEONE (24 A 17), IPPONE (38 A 17), DIOGENE DI APOLLONIA (64 A 25) e DEMOCRITO (68 A 144).

<sup>26</sup> Anche Aristotele osserva che, sebbene di rado, talora i nati di otto mesi possono sopravvivere (*De gen. an.*, 772b9-10).

<sup>27</sup> Cfr. HIPP., *Septim.*, cc.1, 2, 3, 6, 7 (VII, 436sgg. L) e *Nat. puer.*, c.30 (VII, 530sgg. L). In seguito, gli *lhwān* spiegano la relazione che c'è tra lunghezza della vita e durata della permanenza in utero (p.426, 21-24); quindi, accennano allo sviluppo dell'essere umano anche dopo la nascita, e sempre sulla base di motivazioni astronomico-astrologiche (p.429, 6-15). Seguirà poi l'analisi dell'influsso degli astri, periodo dopo periodo, per tutta la vita dell'uomo, né mancheranno nuovi approfondimenti delle caratteristiche della gestazione, a seconda degli influssi degli astri, mese dopo mese (cfr. rispettivamente p.434, 7-18; 441, 6-7 e 442, 9-15).

<sup>28</sup> Più oltre viene ripreso, ancora in chiave provvidenzialistica e sempre spiegandolo in termini astronomico-astrologici, il problema della durata della vita nel mondo (cfr. p.445, 8-12 e 451, 2-452, 5).

<sup>29</sup> Cfr. rispettivamente *Leg.*, 788a-791c e *Pol.*, 1335b14 sgg.

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Articoli/Articles

## ABŪ BAKR MUḤAMMAD AL-RĀZĪ'S (RHAZES) MEDICAL WORKS

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### SUMMARY

*A-Rāzī (Rhazes, with variants, in Medieval Latin), Abū Bakr Muḥammad ibn Zakariyyā' (al-Rayy, close to modern Teherān, Irān, A.D. 865-925), is rightly considered one of the greatest medical practitioners and writers in the period between Galen and the renaissance reemergence of medicine as an empirical discipline (apart from his ranking as one of the most original and independent-minded philosophers of Islām). The following biobibliographical survey - in the format of an encyclopaedia article - will focus on those of his medical works which either had the greatest impact on posterity and/or attest most solidly to al-Rāzī's outstanding combination of textual scholarship and clinical observation, outstanding at least with reference to the horizon of his culture.*

Al-Rāzī, Abū Bakr Muḥammad ibn Zakariyyā' ibn Yaḥyā (al-Rayy [its old Persian name Ragā transcribed into Greek as Rhagai, near present-day Teherān], 1 Ša'bān 251 - 5 Ša'bān 313 [A.H.]/28 August 865 - 26 October 925), medical practitioner and prolific author in medicine and allied fields, in alchemy, in logic and philosophy as defined by medieval Islamic Aristotelianism; ever since his lifetime and subsequently, along with Avicenna, the most renowned medical authority in Islām as well as in 'Latin' Europe and among the Jews of either cultural realm; in Europe variously

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known as Abubekr and Rhazes (both frequently subject to distortion).

After a brief bio-bibliographical introduction, the following discussion will focus on al-Rāzī as physician and medical author; for complete references, see bibliography at end.

Typically for the culture in which he was raised—and especially of men not from Baǧdād and who made non-religious disciplines their calling—biographical information about al-Rāzī is quite scarce; however, the commercial and political importance of his hometown al-Rayy at the time and al-Rāzī's own sojourn in Baǧdād, where he acquired a certain prominence, gained him early recognition among biographers and historians. Again not atypically for the biographical genre, his prominence led to the accretion around him of all manner of fanciful anecdotes. Needless to say, his treatise *The philosophical life* (*K. al-sīrah al-falsafīyyah*, aptly translated by Arberry as *Apologia Pro Vita Sua*) does not make up for the lack of concrete detail although the aggregate of data extracted from his own works as well as from the available bio-bibliographical sources does permit the drawing of a broad outline.

The notable fact that the date of al-Rāzī's birth was recorded and transmitted would seem to suggest a certain level of education and material comfort for his family (al-Bīrūnī, *al-Fihrist*); the tradition according to which he had originally been a *moneychanger* (*ṣayrafī*) is not inherently implausible either (Ibn Abī Uṣaybi'ah). At any rate, a family background of interest in learning would have facilitated his own access to scholarship and to the wide-ranging erudition his works attest to. Assured social standing and the high reputation he came to enjoy sufficiently account for the precise recording of his death. He was survived by family who inherited his papers; a sister is mentioned as possessing his scrapbooks and notes, which formed the basis of the monumental collection to be known as *al-Hāwī*, Continens ('Ubayd Allāh ibn Ġibrā'il *apud* Ibn Abī Uṣaybi'ah). Al-Rāzī clearly spent most of his life in his hometown al-Rayy, although he

did travel to Baǧdād, in order to study, as some sources would have it, and established residence there for several years; he also travelled to Nishāpūr for an extended period, attending its governor in a medical capacity.

The sources agree that al-Rāzī only took up the study of medicine at a mature age (in his thirties, according to Ibn Abī Uṣaybi'ah), whereas before he is alternatively said to have been an alchemist, open flames and pungent fumes doing permanent and, with age, increasingly bad damage to his eyes (al-Bīrūnī, *op. cit.*), or to have been a lute player and—incidental?—poet (Ibn Ġulǧul). It is not clear either, whether his interest in philosophy developed in consonance with his medical expertise or preceded it; also, the man from Balkh (classical Baktra [from old Persian Baḫtri]) whom al-Rāzī himself named as his teacher in philosophy cannot be unequivocally identified. He could be either of three roughly contemporary scholars from Balkh, Abū Zayd Aḥmad ibn Sahl, Abū'l-Qāsim 'Abd Allāh ibn Aḥmad, or Abū'l-Ḥusayn Šahīd; al-Rāzī knew all of them and engaged in literary debates with the latter two (cf. Ibn al-Nadīm, I 299<sup>12-19</sup> FLÜGEL). Among the other, fortuitously obscure, scholars with whom al-Rāzī engaged in 'academic' correspondence, two may be singled out even if only because of a whim of transmission; Abū Sahl Muḥammad ibn al-Layṭ al-Rasā'ilī is exclusively known today by his association with al-Rāzī and al-Bīrūnī, and Abū'l-'Abbās al-Īrānšahrī's role as al-Rāzī's master is attested by one additional author only, viz. Nāṣer-e Khosrow.

The reports concerning al-Rāzī's activity as a clinician and instructor in medicine would seem to deserve credence as they are broadly corroborated by his actual writings in the areas concerned. Thus he is said to have been in charge of 'the' hospital both at al-Rayy and at Baǧdād, the latter supposedly that which was subsequently reorganized by and named for 'Aḍud al-Dawlah (Ibn Ġulǧul). Evidently al-Rāzī was much sought after both as a

practitioner and as a teacher of medicine; however, the correctness of accounts anecdotally implying an elaborate ranking of his students and assistants cannot be ascertained. According to the gravity of their complaints, patients are reported to have been attended by junior students or to have been referred to progressively more advanced ones so that only the most intractable cases reached the master himself (Ibn al-Nadīm). In any case, al-Rāzī won praise for his generosity towards indigent patients; his concern for the health needs of simple people is documented by more than one work of his, among them *Everybody His Own Doctor* (Arberry's translation of *Man lā yaḥḍuruḥu al-ṭabīb*).

It stands to reason that al-Rāzī's medical competence also won him recognition among the governors and princes of al-Rayy, and of Northern Iran generally. His relationship to the Sāmānid amīr Abū Šāliḥ Maṣṣūr ibn Ishāq ibn Aḥmad ibn Asad (died 302/914-15) was even termed *friendship* by Ibn al-Nadīm (wrote 377/987); whatever that may imply, two of al-Rāzī's best known works were inscribed to Maṣṣūr, the famous medical compendium *Book for Maṣṣūr* (*al-Kitāb al-Maṣṣūrī*), and its philosophical companion piece, *The Spiritual Physick* (Arberry's translation of *Al-ṭibb al-rūḥānī*). Maṣṣūr was Sāmānid governor of al-Rayy for six years from 290/903 and of Nīshāpūr from 300/913 to his death two years later; nothing permits of a more precise dating of the two books al-Rāzī dedicated to Maṣṣūr (note that Maṣṣūr also figures in his *Antidotarium* [Aqrābādīn]). It would seem plausible to date al-Rāzī's travel to Nīshāpūr in order to attend its governor to the years of Maṣṣūr's tenure of office there. Maṣṣūr's cousin Aḥmad ibn Ismā'il ibn Aḥmad, Sāmānid overlord 295-301/908-14, also availed himself of al-Rāzī's services and consulted with him, as witness the titles of two treatises, *Exposition of Ġarīr's, the physician's, error in rejecting his [al-Rāzī's] advice to the amīr Aḥmad ibn Ismā'il* (*Maqālah fī ḥaṭa' Ġarīr al-ṭabīb fī inkāriḥ mašwarataḥ 'alā'l-amīr Aḥmad ibn Ismā'il*) and *On the excellence of bloodletting* (*Fī šaraf al-faṣḍ*). The Justānid emir 'Alī ibn

Wahsūdān had, plausibly during his tenure as governor of al-Rayy in 307/920, al-Rāzī's *Medicine for princes* (*al-ṭibb al-mulūkī*) dedicated to him, and the titles of further 'essays' and 'epistles' indicate al-Rāzī's relations with other princes and pretenders active in the region around al-Rayy at the turn of the fourth/tenth century.

Lively contacts with contemporary scholars—other than those mentioned above—are evidenced by al-Rāzī's epistles to and debates with, the Ismā'ilī Abū Ḥātim al-Rāzī, Abū Bakr al-Ḥusayn al-Tammār and al-Ḥasan ibn Muḥārib al-Qummī; these works can be seen as extensions of al-Rāzī's continuous critical reading of the authorities of the past, as witness such titles as, e.g., *Doubts concerning Galen* (see below), *On criticism and warning against the Mu'tazilah*.

Al-Rāzī's tireless scholarly activity, unanimously attested by the biographers, is most convincingly borne out by the number and quality of his works; in his Apologia he specifically refers to fifteen years of ceaseless labor on his *magnum opus*, *al-Ġāmi'*, resulting in declining eyesight and 'paralysis' of his hand. This selfstatement confirms the more or less anecdotally embellished reports on his impaired vision, or even blindness, later in life. However, by al-Rāzī's own account, he persevered in his studies in spite of failing health, employing assistants to read and write for him. Apart from al-Bīrūnī's allusion to the fumes of his alchemical operations, al-Rāzī's predilection for the broad bean (*bāqillā*) is cited as causing damage to his eyes; the cataract he is said to have suffered from provided the central motif in an anecdote playing on the reversal of the roles of doctor and patient. As is to be expected, al-Rāzī is made to decline the proffered treatment, either expressing tedium at the visible world or, pointing to his age, a preference of comfort over pain.

Al-Rāzī's bibliography of some twohundred titles—'books' (*kutub*), 'essays' (*maqālāt*) and 'epistles' (*rasā'il*)—covers—besides medicine-alchemy, logic and the entire course of Aristotelian

philosophy, including *physics*; mathematics, however, were relegated to a subordinate position. A title transmitted by al-Mas'ūdī, *The lives and maxims of the caliphs* (*Kitāb siyar al-ḥulafā'*, not extant[?]), would appear to have drawn on the pre-Islamic Iranian tradition of normative royal historiography; however, at present this is no more than speculation. As for the formal difference between, 'books', 'essays', and 'epistles', indicated here on the basis of Ibn Abī Uṣaybi'ah, it does not have al-Rāzī's authority. In his auto-bibliography, the compilation of which may have been suggested to him by Galen's example and which Ibn al-Nadīm incorporated into his *Fihrist*, al-Rāzī distinguishes between 'epistles' and 'books' only, the latter category also including the 'essays' listed separately by Ibn Abī Uṣaybi'ah. Neither list is fully reliable, al-Rāzī's own being incomplete, and Ibn Abī Uṣaybi'ah's census inflated by variant repetitions of identical titles.

In the century following his death, al-Rāzī won a certain notoriety for his rejection of revealed religion and the concomitant dogma of prophethood. According to al-Rāzī, the divine intellect, which informed the entire creation, achieved awareness of itself and its transcendental origin in man who could thus dispense with the mutually exclusive and often sanguinary claims of Islām, Judaism and Christianity to prophetically transmitted divine truth. His doctrine occasioned a number of rebuttals, predominantly by Ismā'īlī authors who were provoked by al-Rāzī's equalitarian opposition to their dogma of the charismatically gifted, infallible imām, and in this way, at least fragments of al-Rāzī's metaphysical and anti-religious works have been preserved. His metaphysics, as illustrated by a cosmogony which posits five eternal entities, a creator god, universal soul, prime matter, absolute time and absolute space, exhibits features linking it to gnostic and *zurvanist* traditions in addition to those derived, predictably, from late classical neoplatonizing Aristotelianism (doctrinal interest may have been his motive in composing an apparently lost treatise,

mentioned by al-Mas'ūdī, on the *schools* [*madāhib*] of the Ḥarrānian cryptopagans, ).

Beyond a dependence on identifiable sources, al-Rāzī's philosophy betrays a remarkable, even astonishing boldness of spirit; in all due respect, he did not see the pursuit of truth as consummated by the great teachers of the past, but rather as open-ended. This attitude as well as some of the specific solutions he proposed assure him of a well-nigh unique place among medieval philosophers, be they Muslim, Jewish or Christian. On the other hand, his very originality also isolated him in a culture which in the course of time, turned progressively less tolerant of individual metaphysical speculation.

In medicine, on the other hand, al-Rāzī's independent-mindedness did not overshadow his unassailable scholarship in the eyes of subsequent generations; his works won him permanent fame within Islām and without (see below). Here, his immense production in the field will be represented by a few outstanding examples; for a complete list of his extant and lost medical works see Sezgin, *GAS* III, 278-94, 413, V 411-12, VII 382-84, and cf. bibl. below. The works to be discussed here are chosen for their intrinsic merit, illustrating al-Rāzī's medical acumen, and for the impact they had for many centuries on the theory and practice of medicine; it is a truism that such impact does not in all cases correspond to the rank of the works concerned.

Perhaps the single most influential of al-Rāzī's books was his *Book for Manṣūr* (*al-Kitāb al-Manṣūrī*), with slight variations of the title), a medical compendium in one hefty volume; its ten treatises comprise theory as well as practice ([I] Introduction and anatomy; [II] Humoral physiology and physiognomy; [III] *Materia medica*; [IV] Dietetics [*preservation of health*]; [V] Cosmetics; [VI] Regimen of travellers; [VII] Bonesetting, wounds and ulcers; [VIII] Poisons and venomous animals; [IX] Localized diseases *a capite ad calcem* [*min al-qarn ilā'l-qadam*]; [X] Fevers and their

treatment). The book owed its popularity to the author's felicitous combination of 'literary' erudition and clinical experience and to his success in treading the fine line between excessive concision and unwieldy discursiveness. It is extant in a large number of manuscripts, the oldest of which date from a good hundred years after al-Rāzī's death. The Jewish contribution to the diffusion of this work is attested by Arabic manuscripts in Hebrew characters as well as by Hebrew translations, done both directly from Arabic and from Gerard's of Cremona Latin version. Called *Liber Almansori(u)s* (or *L. ad Almansorem*), it gained wide currency in Europe; its *liber nonus*, therapy of localized ailments, was often copied and, later, printed separately. Among the numerous Latin commentaries and paraphrases of all or part of *L. Almansoris*, that by Andreas Vesalius of *Nonus* deserves special mention.

The most monumental of al-Rāzī's medical works is the gigantic torso of his notebooks, posthumously published at the instance of the famous Būyid vizīr Abū'l-Faḍl ibn al-'Amīd (d. 360/971; see Ġibrā'īl ibn 'Ubayd Allāh *apud* Ibn Abī Uṣaybi'ah and cfr. Daiber, *Briefe*, p. 16) and generally known as *al-Hāwī* or, in the medieval Latin, *Continens*; it contains, in very rough order (particular diseases *a capite*; fevers; etc.), excerpts from all sources al-Rāzī had ever had access to and so witnesses that he himself abided by the requirement he laid down in one of his aphorisms, that serious study of medicine was contingent upon thorough familiarity with existing scholarship. His authorities range from the Hippocratic corpus to Paul of Aegina and John of Alexandria among the Greeks; from Caraka to Vāgbhaṭa and the *Siddhasāra* among the Indians; from Saḡīs of Ra's al-'Ayn (Sergius of Resaena) to Bar Serāpyōn among Syriac writers, and among *Islamic* authors from Tiyādūq to his own contemporaries, such as Yūsuf al-Sāhir, Tābit ibn Qurrah and Quṣṭā ibn Lūqā, not ignoring unattributed current hospital practice and *wise women* either. Interspersed with these—not always clearly demarcated excerpts—are found the fruits of al-Rāzī's own experience, such as tested cures, case histories, etc.;

especially in his clinical records, al-Rāzī was, by his own admission, following the example of Hippocrates' *Epidemics*.

In contrast to the compactness of the *Manṣūri*, which favored its transmission, the sheer bulk of *al-Hāwī* had the effect that no one preserved set contains the entire 25 volumes; the work can be put together, though, from the existing copies. Jewish interest in the book is documented by at least one copy in Hebrew characters and also by its Latin translation, whose date of 1279 puts it roughly a century later than Gerard's *Liber ad Almansorem*; the Jewish scholar Faraḡ ibn Sālim of Girgenti (modern 'reclassicized' Agrigento, Sicily) submitted, under the title *Continens* and with the addition of a glossary of terms, his version of *al-Hāwī* to Charles of Anjou, king of Naples and Sicily. It is worth noting that even this voluminous work found a publisher-printer as early as 1486, which *editio princeps* was followed by several others during subsequent decades.

If *al-Hāwī* as it stands today was never meant to be published, but served as his personal reference file, al-Rāzī was still engaged in writing a big medical *encyclopaedia* for which his files provided the basis. He himself consistently refers to it by the title *Colligens* (*al-Ġāmi'*) and as a work unprecedented among his predecessors and contemporaries. The synonymy of the two titles *al-Ġāmi'* and *al-Hāwī* has led to some confusion among subsequent authors as to their exact relationship; however, it appears clear that *al-Ġāmi'* refers to a work al-Rāzī published himself, volume by volume, whereas *al-Hāwī* refers to his files as described above. Hitherto, A. Z. Iskandar has identified three sections of the *Colligens*, and a review of all manuscripts supposedly containing sections of *al-Hāwī* may result in further reattributions; in this way, it will be possible to test the reliability of Ibn Abī Uṣaybi'ah's list of the constituent parts of the *Colligens*. The question will also have to be asked of whether some of the titles on Ibn Abī Uṣaybi'ah's list may not refer to extant works of identical title—e.g., his work on

*Succedanea* (*Abdāl al-adwiyah*); in that case *al-Ġāmi'* would be the name of a series, as it were, of separate individual monographs which at the same time formed parts of an organic whole.

In addition to his advanced practitioner's handbook, *al-Manṣūri*, his unfinished-complete physician's encyclopaedia, *al-Ġāmi'*, and a handy tabulation of diseases, *Liber divisionum* (*Kitāb al-taqsim wa'l-tašḡīr*), al-Rāzī composed a large number of specialized treatises on all aspects of practical and theoretical medicine, ranging from detailed expositions to brief memoranda and addressing all different audiences, from the tyro to the accomplished scholar. While al-Rāzī shared the profound respect of his age—of the entire late classical and medieval periods—for the great 'classical' authors and 'founding fathers', he did not automatically disregard his own experience either. The relationship in his own thought of received wisdom and well-considered personal experience has not been adequately examined yet.

The problem of scientific change (to avoid such a fraught notion as *progress*) is notably highlighted in two of al-Rāzī's works of quite different format. At the clinical level, the question posed itself of whether or not Galen took cognizance of smallpox and measles, and at a more fundamental level Galen's authority as such was at issue. Al-Rāzī addressed either problem; his concise tract *On Smallpox and Measles* (*Fī'l-ḡudarī wa'l-ḥaṣbah*) clearly illustrates the quandary he found himself in. It was well-nigh inconceivable that Galen should not have discussed epidemic diseases of such gravity in his massive oeuvre, and al-Rāzī duly found the evidence he was looking for; skeptically aware of the risk of distortion in translation, he consulted linguists but was assured of his correct understanding of Galen's words. Surprisingly enough, however, the master had neglected to indicate either causes or cures of the two ailments, and al-Rāzī now set out to remedy the situation. He was confronted by a double problem here; the intrinsic, and exasperating, vagueness of Galen's notions concerning transmissible and epidemic diseases was compounded

by the Syriac and Arabic versions of his works because the translators, and al-Rāzī himself, tended to read Galen in light of contemporaneous medical conditions. Thus notions of diseases they were familiar with either from their own experience or from the tradition of the Islamic period, such as the plague, smallpox and measles, were projected back onto Galen; given the prevalent reliance on textual authorities, the result of this retrojection was the neglect of sound, if unsystematic empirical knowledge in favor of an empirically inferior, but 'academically' sanctioned text.

Al-Rāzī's *On smallpox and measles* was for long hailed as a major advance in medical learning; particularly, he was credited with distinguishing between the two diseases. However, M. Ullmann's cautionary note deserves to be taken seriously; only thorough study of all texts concerned, such as of the pertinent sections in *al-Hāwī*, can provide a solid basis for an assessment of al-Rāzī's contribution.

The other work to be mentioned here is a more general criticism of Galen the logician as well as the medical scientist; the very title proclaims its intention of *Disputing Galen* (*K. al-šukūk 'alā Ġālīnūs*, lit.: *Doubts about Galen*); notably, al-Rāzī does not adopt the superior attitude of philosophers such as Alexander and his own younger contemporary al-Fārābī in rallying to the defence of Aristotle against the charges of mere specialists in a particular discipline—the line later criticism of al-Rāzī himself frequently took. Al-Rāzī boldly likened medicine to philosophy, terming it *a kind of philosophy* and thus elevating it to the rank of a full-fledged *science* rather than relegating it to the mere status of a practical *art*. He programmatically stipulated the infinitude of knowledge and its progress in time; this automatically gave him a superior position vis-à-vis his predecessors in the field, provided his study of previous scholarship was adequate. The debate engendered by al-Rāzī's openly declared disagreements with Galen is proof positive that his scholarly self-confidence was considered disrespectful and

somewhat deviant; moreover, it would seem that the debate never rose above terms of 'academic' manners and propriety to the level of engaging the epistemological issues he had raised.

Al-Rāzī's relative independence from transmitted learning is also documented by his treatise on vision (*Fī kayfiyyat al-ibṣār, On the functioning of vision*), in which he refutes the doctrine of *visual rays* emanating from the eye and takes issue with some theorems in Euclid's *Geometry*. Al-Rāzī's insistence on the indispensability of medical practice, his interest in alchemy and the 'specific virtues—ḥawāṣṣ'—of drugs, which science could not account for, and other instances of his rejection of conventional wisdom will have to be examined more closely in the future before such sweeping terms as *empiricism* can be applied to him.

One more example of al-Rāzī's acute clinical observation may be mentioned here; he describes a case of allergic rhinitis caused by the fragrance of roses in his *Essay on the cause of why Abū Zayd al-Balḥī is subject to rhinorrhea in springtime when smelling roses* (*Maqālah fī 'l-'illah allatī min aḡlihā ya 'ruḍu al-zukām li-Abī Zayd al-Balḥī fī faṣl al-rabī' 'inda šammihī li 'l-ward*).

Al-Rāzī's interest in psychology is documented in various writings; while some of them are clearly philosophical in scope, such as his treatises on the substantiality of the soul, others belong with medicine; notable among these is his short tract on passive anal eroticism and its cure ('On Pathicisṃ', *Risālah fī 'l-ubna wa-'ilāḡihā*). The relationship of al-Rāzī's views of the subject and both earlier and contemporaneous discussions, such as in *Problemata Physica* and Qusṭā ibn Lūqā's *Kitāb fī 'ilal iḡtilāf al-nās fī aḡlāqihim* (*Book on the causes of the differences of human character*), remains to be elucidated; by subscribing to the notion of natural, not psychological causation, though, al-Rāzī defined the condition as a medical, not moral disorder.

The role of psychological factors in medicine and their impact on therapy forms the subject of several of al-Rāzī's writings; thus he discusses the common preference for quacks over competent

doctors, the reasons of the success ignorant doctors, common folk and women in the cities rather than the scholars have in curing certain diseases, and the physician's excuse for that. He also advises against the rigid imposition of a strict regimen and generally, against excessive harshness in dealing with patients.

In addition to his more technical works on medicine, al-Rāzī devoted numerous writings to its defence as a noble art and science; his arguments concern the epistemological and deontological foundations of theory and practice as well as medical administration and the education of the public. It does not come as a surprise to see him honored by the title *Galen of his age* in the medieval tradition. Even to a modern observer as critical as M. Ullmann, the breadth of al-Rāzī's oeuvre suggests the attempt to emulate Galen; indeed, embracing his station as the master's disciple as a privilege rather than as encumbrance, he may even have entertained the notion of outdoing him.

## BIBLIOGRAPHY AND NOTES

Select Bibliography [in addition to the titles listed here under (A) and which include extensive bibliographies, the reader is referred to the current listings in *Index Islamicus*]

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Articoli/Articles

## IBN SĪNĀ, OU LA RAISON MEDICALE MAITRISÉE

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### SUMMARY

#### *IBN SĪNĀ OR THE CONTROL OF MEDICAL REASONING*

*This article analyses the context in which Ibn Sīnā produced his works and the terminologic and conceptual material used by him to write his medical and philosophical texts and to become generally acknowledged as a sage or learned scholar. Between the prince and the theologian, he is a physician-philosopher who uses reason to create his own space. The Qānūn fi'l-ṭibb is the consequent expression of medical reasoning typical of the early XI century; if, on one hand, it is indebted to objective conditions, we remark also that it is structured around an epistemological project which organizes its expression and transmits its knowledge in a technical, codified language.*

L'apparition, dans l'Irān du X<sup>e</sup> siècle, d'une figure de l'ampleur d'Ibn Sīnā (970-1037) qui s'imposa à ses contemporains en tant que philosophe et médecin, ne tient pas au hasard, mais bien à la conjonction d'un faisceau de conditions de formation et de production tout à fait favorables. Il est clair, en effet, qu'Ibn Sīnā a vécu dans un contexte intellectuel qui, du fait de l'affirmation de la

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