

MEDICAL INCUNABULA
and the
DIFFUSION OF SCIENTIFIC KNOWLEDGE

Incunabula in the National Library of Medicine



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Incunabula in the National Library of Medicine

by

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All illustrations are from original works in the incunabula collection of the National Library of Medicine. The zodiacal illustration on the front cover is from Anianus: *Compotus cum commento*. [Lyons] Matthias Huss [ca. 1492]. The portraits on page 1 were taken from Schedel, Hartmann: *Liber chronicarum*. Nuremberg, Anton Koberger, 1493. Initial "T" is from Montagnana, Bartolomeo: *Consilia medica* [Venice] Bonetus Locatellus, 1497.



he computer terminals that serve patrons in a medical library are one result of the electronic revolution that has completely changed the field of health science communications. Computerized literature retrieval systems produce needed information in a matter of minutes. A somewhat comparable revolution occurred about 530 years ago. In 1454, one year after the fall of Constantinople, the first European book printed with movable type (and bearing a date) appeared.

From the beginning of our civilization man has searched for methods of communication. Cave drawings and paintings were followed by carvings in stone, then by writing on vellum and on paper. Thousands of scribes spent lifetimes writing to spread the word. Even so, by the end of the Middle Ages the manuscript trade could no longer keep up with a greatly expanded reading public. The answer to increased literacy and to the growing demand for religious, artistic and instructional matter was movable type.

Incunabula is the term used to identify texts printed with movable type before 1501. The Latin word *incunabula* means the apparatus of a cradle, regarded as the symbol of infancy. The child, the printed book, was born in Mainz or in that area around 1450, and the next 50 years constitute its period of "infancy."

Johann Gutenberg's invention spread quickly, first to neighboring towns and then to many European cities. Albrecht Pfister introduced printing to Bamberg, Johann Mentelin to Strassburg, Ulrich Zell to Cologne. Two German clerics, Konrad Sweynheim and Arnold Pannartz brought printing to Italy — printing first in Subiaco, and by 1467 in Rome. Printing was introduced to Switzerland around 1468, to France in 1470, to Spain and the Low Countries in 1472. William Caxton introduced printing in England in 1476-7. These printers initially concentrated on theological and legal works as well as on classics in demand at the time. In 50 years approximately 40,000 editions were printed, totalling 6,000,000 copies. Science and medicine reached readers mainly after the market has been glutted with other works. This enormous escalation of output, referred to by many as the *diffusion of knowledge*, may be compared only with the computerized *dissemination of information* of our time.

The earliest printed medical book is generally accepted to be Jean Charlier de Gerson's tracts on self-abuse titled *De pollutione nocturna*, printed in Cologne by Ulrich Zell in around 1466. The National Library of Medicine owns the second edition of this work, also printed by Zell around 1467. In the latter year Hrabanus Maurus' *De sermonum proprietate; sive, Opus de universo* was printed by Adolf Rusch in Strassburg. The work describing the universe includes a chapter on medicine titled *De medicina*. The Library has the first edition of this work.

Hippocrates medicus



Aristoteles



Galienus medicus



Arnaldus de villa nova



Petrus de abano plicator



**Incipit Tractatus venerabilis Magistri
Johannis Gerson cancellarii parisiensis tractans
de pollucione nocturna . an impediatur celebra-
tio vel non.**

Vbitatu est apud me frequenter
et diu p̄fertim post susceptu sacer-
dotiu . si quis nocturno pollutus
sopno a celebra do missam cessa-
re deberet. Exptus su similit̄ multos p̄fertim
religiosos . a noviss̄e quosda pre cetis tali
dubitacois scrupulo no parū turbatos . dū
ex vna pte eos ad celebrandū trahit deu-
tio . ex altera timor offense reprimat . Tandē
effed̄ sup hac re certior . tū ex doctorū factio-
nū lectioe . tū exptorū a virtuosorū cōsul-
tione a exēplo tū postremo ex ipa racōnis a
experimentalis cōgnicōis attestacōe induc̄
tū ut cōsideracōes aliq̄s breues a nō p̄fus
inutiles sup hac celebracōis mateia opone-
rem . eas iudicō melius a sincerius sapiētū
supponēdo . Consideracōnū hmoi qued erut
accessorie . a qued p̄ directū r̄siue . Precor
autem dari veniā si forsan impurius loquē-
dum erit quomā morbus talis est qui vir
aliter detegi vir pulchrioribus medicamen-
tis sanari potest

Sequitur Consideracō prima

Gerson, Jean Charlier de. *De pollutione nocturna. De
cognitione castitatis et pollutionibus diurnis.* Cologne,
Ulrich Zell, ca. 1467. Title page of second edition.

From 1467 on, medical books, and books in related fields, appeared in a growing number of European cities. Arnold C. Klebs' *Incunabula scientifica et medica* lists 1060 individual works (in approximately 3000 editions in all), of which some 900 can be classed as medical. The National Library of Medicine has 516 works, in 537 editions, printed before 1501. Most of these medical and scientific books were printed in prospering cities that were close to universities. It is therefore not surprising that the printers of Venice published more than 550 editions. Rome followed Venice, producing about 227 editions, Paris 214, Leipzig 204, Augsburg 179, Cologne 156, Lyons 136, Strassburg 101, Antwerp 95, and Nürnberg about 93 scientific and medical editions. In 50 years the printing of scientific and medical books spread to more than 120 cities.

The output of medical works was decided by the printers, and the printers were businessmen, whose goal was to meet the needs of their customers. The public's demand can be determined by the output of the manuscript trade, which was well established

**Capitis prioris. Particula prima.
Modus cognoscendi probemialis.**

- Ita breuis/ars aut longa/tēpus acurū ex
perimētū fallax/iudiciū vero difficile 1
Et vine z egestiones z sudores z discrasias
z eucritas/lōgas et breues egritudines ap-
parentia declarant. 13
Paroxisimos z cōsistentias declarāt egritudines et
tēpa anni z circuitū adinuicē icremēta siue p̄ diem siue
post triduū siue p̄ amplius tempus fiant. 13
In exercitantibus ad summū bone habitudines fal-
laces si i vltimo fuerint:nō enim p̄nt manere in eodem
neq̄ quiescere/qui vero nō quiescūt nequaq̄ possunt
addere in melius/relinquūtur igitur ad peius. Horū
ergo causa bonā habitudinē solue cōfert/nō tarde/vt
rursus p̄ncipiū nutrimēti accipiat corpus/ neq̄ com-
pressiōes ad vltimū facere/fallaces enim sūt Sed qua-
lis fuerit natura sustinere debētis.ad hoc ducere/vt vi-
res possint tolerare. Similit̄ z inanitiōes ad vltimum
fallaces:z iterū resumptiōes i vltimo fallaces. 3
In omni egritudine confortari mente et bene se ha-
bere ad oblatiōes/bonū:contrarium vero malū. 33
Nō plenitudo/nō indigētia neq̄ aliud:quodcuq̄
magi natura fuerit nihil bonum. 4
Que multo tempore extenuantur corpora/tarde re-
uerri consueuerūt que vero modico/modice. 7
Nō fm rōnē alleuiatis nō optet credere nec vereri
mala valde que sūt irrōnabilr.m̄ta enī taliū sūt icerta
z nō valde p̄manere neq̄ morari cōsueuerūt 27
In morbis minus periclitātur egrotātes quibuscū-
q̄ pp̄ria nature etiā z habitudinis z hore egritudo in-
est magi quā quib̄ nō pp̄ria fm aliq̄ horū inest. 34
Crassū valde fm nām cito moriūt magi sc̄lib̄. 44

Hippocrates. *Aphorismi, sive Sententiae.* [Nuremberg,
Caspar Hochfeder, 1496.] Third page of second edition.

by the middle of the fifteenth century. The printer had some estimate of the quantitative demand for books and had some idea of what kind of books the public was interested in. Thus the printer was essential not only in the *diffusion of books* but also in the *diffusion of knowledge*.

In the field of science the two most-published authors were Albert the Great (Albertus Magnus) and Aristotle. Albert the Great's popularity was based mainly on his *Secreta mulierum* (a work on cosmetics) and his *Liber aggregationis* (a book on the virtues of herbs, stones and animals). Of the latter, the Library has 5 editions, the earliest published in 1483. The *Secreta mulierum et virorum* is represented by 7 editions, the first printed by Adam de Rottweil in Venice, in 1478. The richness of the Library's collection is reflected in other important works by Albert the Great, including his *De anima*, *De animalibus* (both in 2 different editions), *De generatione et corruptione*, *Mariale*, *De mineralibus*, *Philosophia pauperum* in 3 editions,

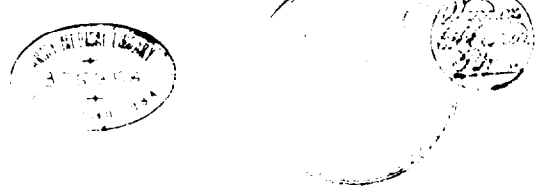
Epistola Rabani ad Ludouicum regem
inuictissimū &c. incipit feliciter.



DOMINO excellē
tissimo & omni ho
nore dignissimo lu
douico regi Raba
nus vilissimus ser
uoz dei suus eter
ne beatitudinis i
xpo optat salutē.
Audita bona opi
nione vestra : que

pdicatur p totas prouincias germanie atq
gallie & pene in cunctis ptibus europe cre
bris laudibus inonat satis exulto. & domi
ni misericordiā imploro . quatinus hoc cum
bono augmēto ad salubrē finem puenire con
cedat. Ob hoc quippe laboris mei opuscula q̄
i furcibus xpi ipsius largiente gracia sacras
scripturas exponēdo put potui expendi non
sine v̄ra cōmuniōe habere volui : sed aliquos
tra statos atq; cōmentarios in diuinis libris
cōscriptos v̄re venerationi direxi. Nuper q̄
quia vos q̄ndo in p̄sencia vestra fui cōptum
vos habere dixistis aliquid opusculū me no
uiter cōfecisse de f̄monū pprietate. & misti
ca rerū significacione. Quod ecia a mea par
uitate postulastis vob̄ dirigi. Feci libent̄ qd
petistis. & ipsū op̄ vobis in viginti duobus
libris termiatū trāsmisi : vt si serenitati v̄re
placuerit corā vobis relegi illud faciat. &
si aliquid in eo dignū emēdacione reptū fue
rit cū v̄stris sagacissimis lectorib; put ra
tio dicat illud emēdare curetis. Sunt enim
in eo plura exposita de rerū naturis : & ver
boz pprietatibus. nec nō ecia de mystica re
rū significacione. Quod ideo ita ordinan
dum estimavi. vt lector prudens continuatī
positā inueniret historicā & mysticā singula
rum rerum explanacionem : et sic satisfacere
quodāmodo posset suo desiderio in q̄ & hy
storie & allegorie inueniret manifestacionē
Vnde mihi non melius aliud videbat huius
opis sumere iniciū quā ab ipso cōditore no
stro qui omnū rerū est caput & principium
quia quicqd naturaliter subsistit : aut auctor
& creator omnū est : aut ab eo condita crea
tura. quia ex ipso & p̄ ipsū & in ipso sūt om
nia : qui fecit celum & terrā mare & omnia
que in eis sūt . Sic ergo p̄mum de ipso sumo
bono & v̄e cōditore nostro : hoc est patre et
filio & spiritu sancto. vno & solo omnipoten
te deo iuxta paruitatē ingenii mei q̄ntum di
uina grā me posse concessit scribendo aliqua
dissertui. Postea vero de celestibus & t̄restri

bus creaturis non solū de natura sed ecia de
vi & effectibus eaz. sermonem habere insti
tui. vt lector diligēs in hoc ope et nature p
prietatē iuxta historiā et spiritālē significa
cionē iuxta mysticum sensū simul posita inue
niret . Et quia de sanctis hominibus : qui in
veteri & nouo testamēto cōmemorant eoz
actionibus mysticis necnon & de locis in qui
bus habitabant. silere me : nō cōuenit. nomia
ipsoz simul et locoz ex hebraica lingua in la
tinam trāsferre placuit. vt inde facilius my
sticam significacionē explanare possem. Ad
didi q̄ in presenti opusculo non pauca. de fi
de catholica & religione cristiana. & cōtra
rio. de gentiliū supersticione. & hereticorū
errore d̄ philosophis & magis atq; falsis diis
de linguis genciū. de regnis militum cuius
q; vocabulis atq; affinitatibus. de homine &
ptibus eius. & reliquis animātibus. de lapi
dibus lignis & herbis : que in tra gignuntur
de variis artibus atq; artificijs & aliis mul
tis : que omnia in p̄bemo enumerari longū
est. Proinde quod de his hic posui nūc suffi
ciat. ceterū autē in capitulis singuloz libroz
diligēcius ea enumerare curavi. Decreui enī
hoc totum op̄ vt sup̄ dixi in vigintiduos li
bros dispartiri. sub quo numero vetus testa
mētum legis diuine interpres beatus hiero
nimus cōplexum se asseruit : ex cuius interp
tacione et expōsicionē quedā obfcura in hoc
ope elucidavi. Tu autē electe dñe & regum
karissime. acceptis his que tibi transmisi vt e
re eis vt decet. et tā tibi quā illis qui sub tuo
regimine sūt cōstituti. ea vtilia esse pmitte
quatinus tuū bonum studium multis pueni
at ad spiritālē p̄fectum. et fiat tā tibi quam
illis spiritale exerciciū atq; celestis gaudiū in
cremētum. Imitare illius sapiētis viri exem
plum : qui de sapiēcie laude ptulit tale p̄co
nium dicens. Inuocavi et venit in me spiritus
sapiēcie. & preposui illā regnis et sedibus et
diuicias nihil esse dixi in cōpaciōe illius nec
cōparavi illi lapidem p̄ciosū. quoniam omne
aurū in cōparacione illius harena ē exigua.
& tanq; lutum estimabit argentum in cōspec
tu illius. Sup̄ salutem et speciē dilexi illā. et
pposui p̄ luce habere illā. quoniam inextin
guibile ē lumen illius. Venerunt autem mihi
omnia bona pariter cū illa . & innumerabilis
honestas p̄ manus illius. Et letatus sū in om
nibus quoniā antecedeat me ista sapiēcia .
Qua sine fictione didici : et sine inuidia com
munico. & honestatem illius non abscondo .
Infinitus enim thesaurus ē hominibus. Quo
qui vli sūt. participes facti sūt amicitie dei.
quomodo ipse sapiēcie dux est. & sapiēcium



Hrabanus Maurus. *De sermonum proprietate. sive Opus de universo.* [Strassburg, Adolf Rusch, 1467.]
First page with initial "D" colored in black, blue and red.

Doctrina.III.

Itud qd supat canula caute
rit, at z loca alia canula que
frigida est a leione defidit.



C⁶ m^o di dactilare: eo qd est ferri ad forma ossis dactilozz
cauterizaf ide ancha: z est istri ferri sic vna tabula ad for
ma tucture acbe magnez det. v. emlnetiao: sic ossa dacti
loz scas: qru vna e i medio: due sup: vna infer: vna ab
utraq: parte siue latere sic.



Ita qn calefit istri: h: possit sup
achpi mediate vna tabula su
peri^o posita sca bz me furā. v. emlnetiaru^o apposita pforata
z qd tabula ista sic frida z e sic sca
z nati vna impfioe. v. caute
ria sup achpita qd duo sint ex
pre supiori tucture duo a laterib^o z vnu vere sup (bz lu
ctura: z aliud in pre inferiori. C⁷ m^o fo cauteriu di triaga
lare: qd pnt fieri tria cauteria vno tactuz habet istri lo
com in ancha: est sic factuz.



C⁸ m^o di aculeio: eo aliqn
sic cu acuz: h: locu ad caute
ricandum in palbeo: de qbus plu supstut sunt euul
fi: z est factum sicut acus sic.



C⁹ m^o cauteriu di lingualerz
est factum sicut vna lingua sic:
z by locu ad cauterizadu^o carnē
supstut palpebz. C¹⁰ m^o cau
teriu valet ad sectionē z fit cuz
tenaculo pforatis: in qru foraminib^o possit irare instri
acutu hns fenestra ut acuz: forma tenacule est sic facta.



Et forma acus qui ha
bet intrare per fora
ramina tenacule est
facta sic.



Et pelles appbēdē cū
tenaculo fridiorz ubi
uolum^o sectionē ponē iter tenaculo pellic illā frigit^o: z
ferru calz p tenaculo foramina inuenim^o z pellē cōburim^o
a tenaculo cōpblā. Deide cōdā lenē floz scāz i sagu
ticia mūtū^o i foramiēz cōdā f uob^o captū^o postea
necum^o z dūm^o dōc uolum^o sigillare: h: ē mū^o cōe cau
teriu: z by locū i ore siat sup epar z sple z testicolz burā



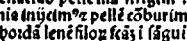
formo istroz z eoru^o positio nomib^o ad qd z
ubi z qn debeāt fieri puctoria cauteria videā
m^o. C¹¹ m^o in antiq cephalca qn purgatiōe q p mediciaz la
morbus deuter defidam^o. C¹² m^o Scia q: cauteria nu
plima in dūsis pūbz corpis: z fm dūstiatē locoz querte
forme puenit istroz: modus uari^o impmēdi. C¹³ m^o For
me fo cauterioz qd fm Albucaim ualde mspicent
psequer bonū eēt illos oēs repetē: in qd liber iste bz ut
tate diligit: put pōt reducā oēs cauteriu^o tomas ad. r. qd
hic vidē poteris de pūbz z signara. C¹⁴ m^o Dūmus qd est
magis cōe z magis in usu di anodulu seu pūctualerz: est
istri qd ponit p vnu toramē qd est in alio ferro plano
qd nō calefit est ua factuz: qd ferru fridū nō pmitit calz
ultra irare nisi fm qd medici placeat nolūtāt. Ferru enī
qd calefit hēt vnu additāmū^o pū^o ad uolūtātē medicī sic.



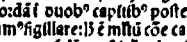
Ferru planū in quo irat illud
additāmē^o z fridū ponit sup
locū cauterizadū: est sic ferri.



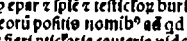
Additāmē^o est calm donec al
beicat z pūctat scintilla: z im
pūctat in foramine istri lati sup
mēbz: fac ibi uenā: q remota remanet ibi ulc^o. C¹⁵ m^o Itē
vo bz ē modus. Facto cauterio ponit ibi assūgia antiq
uel butyrū: uel assūgia pūctate cū solūo caulū: qd est me
h^o donec crusta cadat quā calidū facit ferru: postea ponit
tur in ulcē pūctā pua facta de pāno lino z rotunda sans
dura que vngif in sagimine uel oleo. Sup pillam pont
tur solūo caulis rub. uel vitis uel bedē arboree: qd alyo ē
mel^o: z qnti placent dimitte opari. C¹⁶ m^o cauteriu rotun
dūz h: nō hēt additāmē^o ita lōgū: qd est necū: qn solā
cutē visū sūgē: tūmē ne neruū iāgas. Et hēt locū cū mēbz
neruofū visū cauterizaret z sic scy
ut possit a duob^o cauterizare capi
tib^o: fm qd magnā uel pūā de fide
ras cocturā. C¹⁷ m^o cauteriu est pūctuale seu radiale: z est
necessariū ubi ualde stricte uolueris facere cauteriu ut
in pillis: sic est factum.



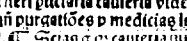
C¹⁸ m^o cauteriu est ualde cōe:
z oticū cūhellare: z est necessa
riū cū lōgā visū facē cocturā ut per trāsfuerim captio: z
quando visū ultera rotunda eruo ad formam reducere
longam: z est sic factum.



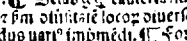
C¹⁹ m^o uocat subtilerz hoc est
necessariū ad coquendū fistu
las pūctū oculi z malā carnē exritē i nāsoz ponit p vna
canulā scāz ut audierz ē sic scy
h^ooc sūle calefit: z calefactuz
ponitur in canula sic.



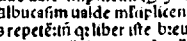
C²⁰ m^o cauteriu est ualde cōe:
z oticū cūhellare: z est necessa
riū cū lōgā visū facē cocturā ut per trāsfuerim captio: z
quando visū ultera rotunda eruo ad formam reducere
longam: z est sic factum.



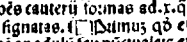
C²¹ m^o uocat subtilerz hoc est
necessariū ad coquendū fistu
las pūctū oculi z malā carnē exritē i nāsoz ponit p vna
canulā scāz ut audierz ē sic scy
h^ooc sūle calefit: z calefactuz
ponitur in canula sic.



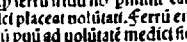
C²² m^o cauteriu est ualde cōe:
z oticū cūhellare: z est necessa
riū cū lōgā visū facē cocturā ut per trāsfuerim captio: z
quando visū ultera rotunda eruo ad formam reducere
longam: z est sic factum.



C²³ m^o uocat subtilerz hoc est
necessariū ad coquendū fistu
las pūctū oculi z malā carnē exritē i nāsoz ponit p vna
canulā scāz ut audierz ē sic scy
h^ooc sūle calefit: z calefactuz
ponitur in canula sic.



C²⁴ m^o cauteriu est ualde cōe:
z oticū cūhellare: z est necessa
riū cū lōgā visū facē cocturā ut per trāsfuerim captio: z
quando visū ultera rotunda eruo ad formam reducere
longam: z est sic factum.



C²⁵ m^o uocat subtilerz hoc est
necessariū ad coquendū fistu
las pūctū oculi z malā carnē exritē i nāsoz ponit p vna
canulā scāz ut audierz ē sic scy
h^ooc sūle calefit: z calefactuz
ponitur in canula sic.



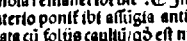
C²⁶ m^o cauteriu est ualde cōe:
z oticū cūhellare: z est necessa
riū cū lōgā visū facē cocturā ut per trāsfuerim captio: z
quando visū ultera rotunda eruo ad formam reducere
longam: z est sic factum.



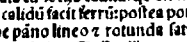
C²⁷ m^o uocat subtilerz hoc est
necessariū ad coquendū fistu
las pūctū oculi z malā carnē exritē i nāsoz ponit p vna
canulā scāz ut audierz ē sic scy
h^ooc sūle calefit: z calefactuz
ponitur in canula sic.



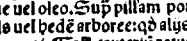
C²⁸ m^o cauteriu est ualde cōe:
z oticū cūhellare: z est necessa
riū cū lōgā visū facē cocturā ut per trāsfuerim captio: z
quando visū ultera rotunda eruo ad formam reducere
longam: z est sic factum.



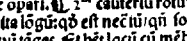
C²⁹ m^o uocat subtilerz hoc est
necessariū ad coquendū fistu
las pūctū oculi z malā carnē exritē i nāsoz ponit p vna
canulā scāz ut audierz ē sic scy
h^ooc sūle calefit: z calefactuz
ponitur in canula sic.



C³⁰ m^o cauteriu est ualde cōe:
z oticū cūhellare: z est necessa
riū cū lōgā visū facē cocturā ut per trāsfuerim captio: z
quando visū ultera rotunda eruo ad formam reducere
longam: z est sic factum.



C³¹ m^o uocat subtilerz hoc est
necessariū ad coquendū fistu
las pūctū oculi z malā carnē exritē i nāsoz ponit p vna
canulā scāz ut audierz ē sic scy
h^ooc sūle calefit: z calefactuz
ponitur in canula sic.



C³² m^o cauteriu est ualde cōe:
z oticū cūhellare: z est necessa
riū cū lōgā visū facē cocturā ut per trāsfuerim captio: z
quando visū ultera rotunda eruo ad formam reducere
longam: z est sic factum.



C³³ m^o uocat subtilerz hoc est
necessariū ad coquendū fistu
las pūctū oculi z malā carnē exritē i nāsoz ponit p vna
canulā scāz ut audierz ē sic scy
h^ooc sūle calefit: z calefactuz
ponitur in canula sic.



two printed by the Brescian Baptista Farfengus and one in Venice by Georgius Arrivabenus. In addition, the Library has the *Logica* published in Pavia around 1490. The *Logica* is not in Klebs, but is generally considered to be a scientific work. Aristotle is represented in the collection by the first edition of his *Opera* (in Latin, without the commentary), published in Augsburg by Ambrosius Keller in 1479. The Library has 3 of the 4 existing editions of *De animalibus*, including the first edition published in Venice by Johannes de Colonia and Johannes Manthen in 1476. The *Problemata* is present in the collection with 3 editions, and the *Secreta secretorum* with 2 editions.

These two authors dominated the western spiritual and scientific world. Hippocrates ranks a distant third among popular authors of scientific and medical incunabula, based on the number of editions printed. Such a giant of early medicine as Galen ranks twenty-eighth and Guy de Chauliac, the most distinguished authority in the field of surgery, ranks forty-eighth based on the number of their books printed before 1501.

Some of the most popular authors were Arnaldo de Villanova (among other works by him the Library has three editions of his popular work titled *Breviarium practicae medicinae*), Anianus (whose *Compotus manualis cum commento* was published in 37 editions in 3 series) and Rhazes (the Library has the first edition of his *Liber ad Almanasorem*, published in Milan in 1481).

No doubt the most popular medical book, based on the number of editions printed, was the *Regimen sanitatis*. The regimen contains a series of hygienic and dietetic instructions dedicated to either the King of France or the King of England. The Library has the first edition of the work, printed in German in 1472, in Augsburg. The origin of the work is unknown, but according to Sudhoff it may have been based on a pseudo-Aristotelian epistle to Alexander the Great.

Guy de Chauliac. *Chirurgia*. Venice, Simon de Luere. 1499. Surgical instruments from the second Latin edition.



Prologus

The second, third and fourth numbers on the best seller list of scientific incunabula are all attributed to Albert the Great. These are the *Liber aggregationis*, *De mirabilibus mundi* and *De secretis mulierum*. Albert von Bollstädt, the Dominican monk who later became Bishop of Ratisbon and was called Albert the Great or Albertus Magnus, did not write on medical practice, as that was forbidden to the Dominicans, but he was probably the most outstanding naturalist of the 13th century. The Library has the second edition of one of his most important works, *De animalibus*, published in Mantua, in 1479. The fifth best-seller is *Somnia Danielis*, the book of dreams, passed down from the Middle Ages and still popular at the threshold of the *Rinascimento*. It was printed 39 times before 1501. The Library has one copy, the eighth edition, printed in Rome, in 1480. The *Somnia* is followed by Wenzel Faber's astrological predictions, Anianus' *Compotus*, Mandeville's *Itinerarius* and a great number of *Herbals*.

Pedacius Dioscorides is generally accepted as the originator of the materia medica. During his travels he described approximately 600 plants, one hundred or so more than Theophrastus. Hippocrates knew around 150 of these. Out of the 600, close to 100 are still in use today. The Library has the 1499 Venetian edition of Dioscorides' *De materia medica* in Greek. Most herbals were picture books, usually with hand colored illustrations that added to their great popularity. The Library has the first edition of the *Hortus sanitatis* printed in Mainz, in 1491. Because of the success of this popular work, printers produced more scientific books on botany.

ΠΕΔΑΚΪΟΥ ΔΙΟΣΚΟΡΙΔΟΥ ΑΝΑΖΑΡΒΕΩΣ
ΠΕΡΙ ΎΛΗΣ ΙΑΤΡΙΚΗΣ ΒΙΒΛΙΟΝ
ΠΡΩΤΟΝ.

Ολλών ἑμόνον ἀρχαίων ἀλλὰ ἠνεὺν σὺνταξα μόνον πρὶ
τῆς ἡΐ Φαρμάκων σκευασίας τε καὶ δυνάμεως καὶ δο-
κιμασίας ἕλτι τε Ἄρειε, πειρασμοῖσιν πρῶσθησαι μὴ
κνήν, μὴ ἄλοπον ὄρμην ἐχθέραι πρὸς τὴν δὲ τὴν πρῶ-
γματείας διὰ τὸ τὸν μόνον ἔχει, μὴ τε πελῶν κέραι· τοὺς δέ,
ἐξ ἰσθρίας πὰ πλῆσαι ἀναγράφαι. Ἰόλασ μὲν Ἰόβιθουός
ἢ Ἡρακλείδης ὄπα ραντίνος, ἑσπλίγον ἢ φαντο τῆς πρῶ-

γματείας, τὴν βοτανικῶν τελεῶν ἐκασόντες πρῶσθησαι μόνον δὲ ἔμεταλλικῶν ἢ
ἀρωματικῶν πάντες ἐμνημόρυσαν. Κράτιδας ἢ ὁ ριζοτόμος ἢ Ἀμφρέας ὁ ἰατρός, οὗ-
τοι γὰρ δοκῶσιν ἀκριβέστερον ἡΐ λοιπῶν πρὶ τούτου τὸ μέρος ἀνεστῆ Φθῆ, πηλλῆς
εἰζας διχρηστικάς καὶ τῆς βοτανίας, ἀπρῶσθησαι τοῦ ἑασόν· πηλλῆ τῆς μὲν ἀρ-
χαίσι μῆτρῆταιον μετὰ φιλόλιπότητος ἔπρῶσθησαι, καὶ τὴν ἀκριβέσαν πρὸς παρῶ
λαβῶσι· τοῖς μὲν γὰρ νέοις ἐσυγκρατεῖον ὡν ἐστὶ Βάσος ὀτυλαίος ἢ Νικήρατος ἢ Πε-
τρῶν Νίγερτε ἢ Διόδωρος ἀσκληπιάδου πάντες, οἱ τὸ μὲν πᾶσι σύμφυλλῶσιν ἐπι-
ύλλω, ἢ ζῶσαν ἐπὶ τῶν ἀναγραφῶν ἀκριβοῦς· τὰ δὲ ἡΐ Φαρμάκων δυνάμεις καὶ δο-
κιμασίας, ἐξ ὠιδρομῶσιν πρῶσθησαι οὐτῆ πείρα τὴν ἐν ἰσθρίας αὐτῶν κωνορίζοντες, τῆ
δὲ φιλαιτίας κωνοφωνία, ἐξ ὄρμον ἀναφέροντες μετὰ τῶ καὶ ἄλλα αὐτῶν ἄλλων γρα-
φῶν ὡν διὰ πρῶσθησαι δοκῶσιν ἐπιῶσιν αὐτοῖς Νίγερ, τὸ ἐφόρβιον φησὶν ὅπῃ εἶναι χυμ-
λαίας, γυνω μὲν ἐπιῶσιν αὐτοῖς, τῶν ὡν ὑπὸ χεῖν ὑπὸ κω, ἀλλῶ δὲ ὀ-
ρμηκῶν ἐν ἰσθρίας γυνῶσιν, ἢ ἄλλα τοῖς ὁμοια πηλλῆσαι πρῶ τὴν ἐν ἰσθρίας ἐκ-
πίτεται ἰσθρίας, ἀπρῶσθησαι ἐκ αὐτοῦ φασ, ἀλλῶ τῆς ἐκ πρῶσθησαι ἰσθρίας
ἢ μὲν τῶν δὲ πρὶ τὴν τῶ ξιν, οἱ μὲν, ἀσμφύλλους δυνάμεις συγκρατεῖον, οἱ δὲ κα-
τὰ σοι χεῖον καταγράφαντες διὰ ζῶσαντες φιλῶσιν ὁμοιοχρησίας, τῶν γυνῶ τὰς ἐν ἰσθρίας
αὐτῶν, ὡς διὰ τῶν δὲ μνημόρυσαν γινεαδῶσιν ἢ μῆσιν δὴ εἰπὴν ἐκ πρῶσθησαι ἡλικίας, ἀλλῶ
τῶν πρῶσθησαι ὠιδρομῶσιν πρὶ τὴν ἐπιῶσιν φιλῶσιν, ἢ πηλλῆ τῶν ἐπιῶσιν τῶσιν οἱ δὲ
ἢ μὲν γραπῶσιν τῶν βίον, σὺν γυνῶσιν τὴν πρῶσθησαι ἐν ἐξ βιβλίοσιν, σὺν πρῶσθη-
σαι μόνον, ἢ τὴν σὺνταξιν ἀναπείρα μὲν ὡσθῶσιν ἐκ πηλλῆ τῶσιν πᾶσιν, δὴ τὴν ἰσθ-
πρὸς ἡμῶσιν διαθεσιν, φησὶ μὲν πρὸς πάντας τοὺς ἀπὸ πηλλῆ τῶσιν ἀναπείρα οἱ δὲ
μὲν τῶσιν, μάλα δὲ πρὸς τῶσιν ὁμοιοχρησίας, ἰδιαιτέρον δὲ πρὸς ἡμῶσιν, δείγμα δὲ οὐ μῆ-
κρὸν φιλῶσιν κωλοκαζαθίας, καὶ τῶ κρῶσιν Λικινίς Βάσιν πρὸς σὲ διαθεσιν.
ὡν ἐκ γυνῶσιν σὺν διαθεσιν ἢ μὲν ἀξιοζήλων τὸ πρῶσθησαι φερότων ἢ μὲν πρὸς ἀλλήλους
ἐννοῖ ὄρωντες, πρῶσθησαι μὲν δὲ σὲ καὶ τῶσιν ἐν πηλλῆ τῶσιν τῶσιν ὑπὸ μῆσιν, μὴ τὴν
ἐν ἰσθρίας δυνάμειν ἢ μὲν σκεπῶσιν, ἀλλῶ τὴν ἐν τῶσιν πρῶσθησαι σκεπῶσιν πηλλῆ τῶσιν
αὐ, μετὰ γὰρ πηλλῆ τῶσιν ἀκριβείας τὰ λοιπὰ διὰ τῶσιν ἐν ἰσθρίας σὺν
φῶσιν τῶσιν πᾶσι ἢ ἀναπείρα ἢ πρῶσθησαι ὠιδρομῶσιν ἀκριβοῦσιν, πειρασ-
μῶσιν καὶ τῶ τῶσιν ἀφορῶσιν ἰσθρίας, καὶ τῶ γυνῶ τῶσιν δυνάμειν αὐτῶν ἀναπείρα ὡσθῶσιν.

α

Dioscorides, *De materia medica*. Venice, Aldus Manutius, 1499. Page following index of first Greek edition.

The next best seller was probably Aristotle's *Problemata*. Aristotle is at his best—wrote Garrison—in logic, ethics, embryology, and natural history. His *Problemata* was published 28 times between 1473 and 1500. The Library owns the 1493 and 1500 editions of the work with the text beginning *Omnes homines*, including also the *De vita et mortis Aristotelis*.

George Sarton, evaluating the most popular scientific works of the incunabula period, found that the two leading classes were medicine (with 16 works) and astrology (11 works). These were followed by encyclopedic works (6), cosmographies, marvels (6), ethics (5). Others were astronomy, grammar, mathematics and physics, witchcraft, mnemonics, agriculture, chemistry, dreams, herbals, histories, metaphysics, physiognomy and chiromancy.

During the Middle Ages the population of Europe was decimated by epidemics. Approximately 130 incunabula pest tracts are known. One of the first plague treatises appeared in print by Heinrich Steinhöwel in 1473. The Library has the fifth edition of his *Büchlein der Ordnung* printed in Ulm about 1482. The *De arte cognoscendi venena*, by Arnaldo de Villanova, was published five times between 1473 and 1475. The Library has three editions of the work, including the first one. The book also includes Valesco de Tarenta's *De epidemia et peste*. The first treatise on syphilis was written by Konrad Schellig (Heidelberg, 1495); the second, by Joseph Grünpeck, appeared in 1496 in Augsburg and was entitled *Tractatus de pestilentiali scorra sive mala de Francoz*. Another important work is Niccolò Leonico's work on syphilis, titled *De morbo Gallico* and first published in Venice by Aldus Manutius in 1497, and in the same year in Milan by Le Signerre for Legnano. The Library owns both editions.

Incipit regimen sanitatis Salernitanū excellentissimū pro conseruatione sanitatis totius humani generis perutilissimū. necnon a magistro arnaldo de villa noua cathelono omnium medicorum diuētū gemina vtriter ac secundu omnium antiquorum medicorum doctrinā veraciter et positū nouiter correctū ac emendatū per egregiū mos ac medicine artis peritissimos doctores monti pē sulani regentes anno millesimo quadringentesimo octuagesimo predicto loco actu moriam trahentes.

Tertius.
 Regiorum regi scripsit lēta tota salerni:
 Si vis incolumē si vis te reddere sanū:
 Curas tolle graues. irasce crede prophanū
 Parce mero. cenato parū. nō sit tibi danū
 Surgere p'epulas. somnū fuge meridianū
 Non multum retia. nec compelle fortiter animum
 hec bene si serues tu longo tempore diues.

Comentum
 Iste est libellus editus a doctoribus salernitanis in quo inferibunt multa et diuersa pro conseruatione sanitatis humane. et editus est iste liber ad vsum regis anglie Et in textu lecto auctori ponit octo documenta generalia pro conseruatione sanitatis de quibus postea specialiter per ordinē determinabitur. priūm ergo documentū est qd homo sanus volens diuere debet ab eo remouere graues curas. Nam cure exsiccant corpora. ex quo tristicant spiritus vitales. modo spiritus tristes exsiccant ossa. Et sub isto documento etiā comprehendit debet tristicie que similiter corpora exsiccant et infrigidant. maciem et extenuationem inducunt. cor constringunt et spiritū obtenebrāt in genū ebrietant et rationē impediunt. iudiciū obscurant et memoriā obfundunt. Veritatem aliqui pingues et car

D: iustitio d. r. ad. p. n. f. r. b. o. n. i.

Regimen sanitatis Salernitanum. Paris, Antoine Caillaut, 1483. Incipit of the edition with commentary of Arnaldo de Villa Nova. Corrected by Doctores regentes of Montpellier, 1480.

TRACTATVS MAGISTRI ARNALDI DEVILLANOVA DE ARTE COGNOSCENDI VENENA CVM QVIS TIMET SIBI EA MINISTRARI

Omens de uenenis caueat sibi de manu cuius recipiet cibos & potus suos. & maxime potum uini. & attēdat de colore odore & sapore oblatorum.

Nam quicquid non fuerit dulcis & delectabilis saporis puta amari acuti acetosi stiptici & pōtici erit suspectum. At tamen dolosi decipiunt addendo modicum ex uenenis cum cibis delectabilis saporis & maxime dulcibus acetosis & acutis. Cum insipidis autem sicut cū carnibus & aqua & brodio carniū simplici non possunt sic uenena addi sine mutatione saporis. Quicquid etiam odorem habebit horribilem fetidum & illaudabilem suspectum erit & uitandum. necnon ea que uariolorum colorum sunt. sicut farsitia limonia & omnia lassamenta uariis coloribus colorata Aqua etiam iuxta quam inhabitant animalia seu reptilia uenena est multum uitanda

De ingenio resistēdi uenenis & nocuentis eorū priusq̄ assumantur

Oxpedit etiam tunc ut ueneno resistētia preassumāt sicut ficus nux auellana pistate per se uel cum ruta simul iuncta Ex his etiam sunt cortex pomi citri & limonis allia & cepe que omnia calida sunt. & ideo tutius sumi possunt tempore temperato & frigido quam tempore calido & estiuo.

De signis certis hactibus q̄ quis iā uenenu assumpsit aut aiali uenoso iā mortuus fuit & de regimine eorū in uniuersali. & primo de modo puocadi uomitu & reitēdi uenenu.

Arnaldo de Villa Nova. *De arte cognoscendi venena*. Mantua, Johannes Vurster, 1473. Incipit of first edition.



Brunswick, Hieronymus. *Das Buch der Vergift der Pestilentz*. [Strassburg] Hans Grüninger, 1500. First edition. Woodcut from leaf VI.

One of the most sought-after *Regimen pestilentiae* was that of Johannes Jacobi's work (the prose version appeared frequently under the name of Canutus) which appeared in 23 editions on the continent and in three editions in England in English. The Library has three editions of the work. It also owns a copy of Simon Pistoris' rare *Declaratio defensiva cujusdam positionis de malo Franco* (Leipzig, 1500) and a copy of the similarly rare work of Bartholomaeus Steber's *A malafranczos morbo Gallorum praeservatio ac cura* (Vienna, 1497-8). The National Library of Medicine's copy of this latter work would appear to be the only one in the United States. The many books and pamphlets describing, arguing about, and offering "sure" treatments for epidemic diseases were not completely useless. These works helped initiate embargos during epidemics and called attention to hygiene.

Medical practice in the 15th century was characterized by quackery and superstition, and a

physician usually believed in astrology. One of the best sellers in this field was Marcus Manilius' *Astronomica*, first published in Nuremberg, in 1473-4. The Library has the 1498-1500 Venetian edition. During the second half of the fifteenth century, Marsilio Ficino was the favorite philosopher-astrologer of both Cosimo and Lorenzo Medici, and he is represented by several incunabula in the Library's collection. At the same time, much interest attended editions of the freedman of Augustus Caesar, C. Julius Hyginus. His *Poetica astronomica* printed in Venice in 1482 by the famous Erhard Ratdolt is present in the Library's incunabula collection. Johann Müller, known as Regiomontanus, is a familiar name to astrologers because of the system of "house division" to which he gave his name. In Nuremberg he published his trigonometrical tables and in Venice, his *Calendarium*, helpful for astrologers and astronomers.

The Library has a copy of the latter published in 1485.

Secundus

CAII PLINII SECVNDI NATVRALIS HISTORIAE LIBER SECVNDVS.



An Finitus Sit Mundus. Et An Vnus. Cap. i.

MVNDVM ET HOC QVOD NOMINE ALIO CAELVM appellari libuit: cuius circūflexu tegūtur cuncta numē eē: credi p̄ est: eternum: immēsum: neq; genitum: neq; iteritū: unq; Huius ex tera idagare: nec iterest: hominū: nec capit hūanā cōiectura mētis Sacer est: aeternus: imēsus: totus ī toto: imo uero ip̄e: totū finitus & infinito similis omniū reꝝ certus: & similis incerto. Extra intra cū & a cōplexus in se: idemq; rerum naturæ opus: & reꝝ ip̄a natura. fu tor est mēsurā eius animo quosdā agitate: atq; p̄dere ausos. Alios rursus occasiōe hinc sumpta: aut his data innumerabiles tradidisse mūdōs: ut totidem reꝝ naturas credi oporteret. Aut si ūa oēs īcubaret: totidē tamen soles totidēq; lunas: & cætera etiā ī uno & im

mensa & innumerabilia sydera: quasi nō eadem q̄stione: semper in termio cogitationis occursura de syderio finis alicuius. Aut si hęc īfinitas naturæ omnium artifice possit assignari: nō illud idem ī uno facilius sit intelligi tanto p̄sertim opere. Furor ē p̄fecto: furor: regredi ex eo: & tanq; interna eius cūcta plane iam sunt nota: ita scrutari extera: quasi uero mēsurā ullius rei possit ager qui sui nesciat: aut mēs hominis uideræ quæ mundus ipse non capiat: De Forma Eius. Ca. ii.

Formam eius: in speciem orbis absoluti globatam esse: nomē ī primis: & cōsensus ī eo motu talī orbem appellatū: Sed & argumenta rerum docent: nō solum quia talis figura omnibus sui partibus uergit ī sese: ac sibi ip̄sa tolerāda est: seq; includit & continet nullā: egēs compaginū: nec finem aut initium ullis sui partibus sentiēs: nec quia ad motum quo subide uerti de beat (ut mox apparebit) talis aptissima est: Sed oculorum quoq; probatione: q̄ conuexus medius q̄ cūq; cernatur: cum id accidere in alia non possit figura.

De Motu Eius. Cap. iii.

Anc ergo formā eius: aeterno & irrequieto ambitu īenarrabiliceleritate: xxiii. horarum spatium circumagi solis exortus & occasus haud dubiū reliquer: an sit immēsus: & ideo sensum aurī facile excedens. Tātæ molis rotate uertigine asidua sonitus nō equidem facile dixim: non hercle magis q̄ circūactorum simul tinnitus sydeꝝ: suosq; uolentiū orbes. An dulci quidē & incredibili suauitate cōcentus nobis qui intus agimus iuxta diebus noctibusq; tacitus labitur mūdus: esse innumeras ei effigies aialium rerumq; cūctāq; impressas. Nec ut ī uolucrum notamus ouis leuitate conuata lubricum corpus: quod clarissimi auctores dixere tenerum. argumentis indicatur quoniā inde deciduis rerum omnium feminibus innumeræ ī mari præcipue: ac plerūq; confusus mō strifice digenerantur effigies: præterea uisus p̄batione alibi plaustrī: alibi ursi: tauri alibi litteræ figura candiore medio super uerticem circulo. Cursu Mundus Dicatur. Cap. iiii.

Quidem & consensu gentium moueor. Nam quem cosmon græci nomine ornamenti appellauerūt: eum & nos a perfecta absolutaq; elegātia mundum. Cælum quidem: haud dubie cælati argumēto diximus: ut interpretatur. M. Varro. A diuuat rerum ordo descripto circulo qui signifer uocatur i. xii: animalium effigies: & per illas solis cursu cōgruens tot sæculis rō.

De Quattuor Elementis. Cap. v.

Ec de elemētis uideo dubitari quattuor ea esse: igniū summo: inde tot stellarum collucētium illos oculos: proximū spiritus: quem græci nostriq; eodem uocabulo aere appellant Vitalē hunc: & p̄ cūcta rerum meabilem: totoq; cōsertum. Cuius ui suspensam cū quarto aquarum elemēto librari medio spatii tellurē. ita mutuo complexu diuersitatis effici nexum: & leuia ponderibus inhiberi: quo minus euolent. Contraq; grauiā ne ruant suspendi leuib; in sublime tendentibus Sic pari in diuersa nisu ui sua queq; cōsistere irrequieto mundi ipsius cōstricta circuitu: quo semper in se corrente inā atq; mediā in toto terram eademq; uniuerso cardine stare pendente librātem p̄ que pendeat ita solam immobilē circa eam uolubili uniuersitate: eademq; ex omnibus neq; eidemq; omnia inuiti.

De Septem planetis. cap. vi.

Xnter hanc celumq; eodem spiritu pendēt certis discreta spatiis. vii: sydera que ab icessu uocamus errantia: cū errent nulla minus illis. Quorum medius sol fertur āplissima magnitudine ac potestate: nec temporum modo terrarumq; sed syderum etiam ipsorum celiq; rector. Hūc mundi esse totius animum: ac planus mentem. Hunc principale nature regimen ac numē credere decet opera eius extimātes. Hūc lucē rebus ministrat: ausi etq; tenebras. hic reliqua syderū oc

Problemata Aristotelis determinantia multas

questiones de varijs corporis humani dispositionibus valde audientibus suas et cum eiusdem Aristotelis vita et morte metricè descripta Subiunctis metrorum cum in retineali glofa sententia libus opposicionibus.



Aristotle. *Problemata*. Cologne, Heinrich Quentell, ca. 1493. Fifth edition, with the *Vita*, text beginning: Omnes homines. Title page.

Tractatus de pestilentia

li Scorra siue mala de francos Originē Remediaqz eiusdem continens. cōpilatus a venerabili viro Magistro Josepho GrünspECK de Burckhausen sup carmina quodā Sebastiani Bianci vniuersiqz iuris professoris

Scorra de François



GrünspECK, Joseph. *De pestilentia scorra*. Cologne, Cornelis de Zieriksee, ca. 1500. Fifth edition. Title page.

A Malafrancos morbo galloꝝ preservatio ac Cura a Bartholomeo Steber Tiennensi artium & medicīne doctore nuper edita.



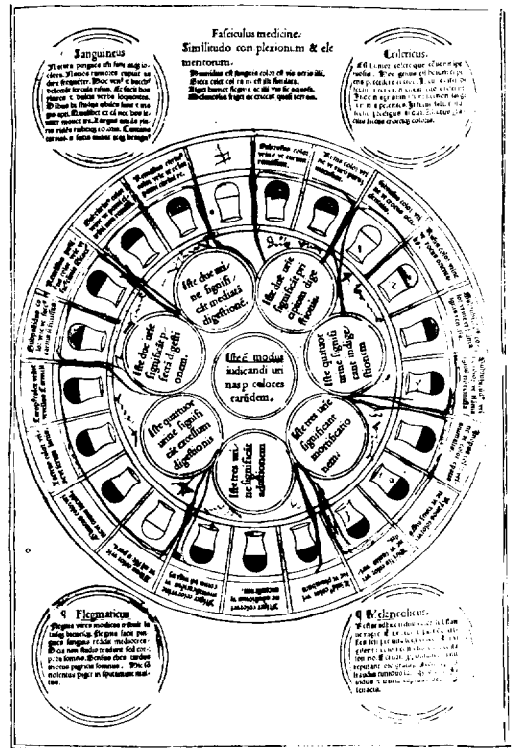
Steber, Bartholomaeus. *A malafrancos morbo Gallorum praeservatio ac cura*. [Vienna, Johann Vinterburg, 1497-8] First edition. Title page.

Numerous almanacs were printed, usually on one sheet, helping both physician and members of private households to plan the year in advance: to know what to do, and what to fear, in certain months of the year. The almanacs usually included short medical instructions, depending on the months of the year and the standing of the constellations. One of the early printed almanacs in the Library's possession was published in Nuremberg in Latin in 1487 and is the only copy in the United States. Another almanac of which there is only one copy in the country is in German published by Jakob Honiger in around 1493.

At the end of the century more and more "specialized" works appeared, discussing one or two parts and functions of the human body. These included Gilles de Corbeil's *De urinis* (Padua, 1483), *De pulsibus* (Padua, 1484) and *De urinis et de pulsibus* (Venice, 1494-5) all present in the Library's incunabula collection. Benevenuto Grassus' *De oculis* (Ferrara, 1474), Matteolo de Perugia's *De memoria* (Rome, about 1474, Milan 1475, Rome about 1490) are also present in the Library's collection. Michele Savonarola's *De febribus* was published once in Bologna (1487) and twice in Venice (1496, 1498). The Library has the latter two editions.

The most important author on surgery was Guy de Chauliac. His *Chirurgia* appeared in several French, Italian, Spanish, and Latin editions. The Library owns the Venetian 1480, 1493, 1498 and 1499 editions of the work. Another author of surgery, Guglielmo da Saliceto, is represented in the collection by the French edition of his *La cyrurgie* (1492) and the Italian edition of the same work entitled *La ciroxia vulgarmente fata* (1486).

The works specializing in surgery were adequate for the average surgeon of the time. The "general practitioner's" instructional works were the *Practica* and in old German the *Versehung*. A representative work in this field is Valasco da Tarenta's *Practica* (the Library has the 1490 and the 1500 Lyons editions) which discusses the symptoms of sickness followed by the description of the suggested cure. The anonymous *Versehung von Leib, Seele, Ehre und Gut* tries to be more comprehensive. The Library has all three known editions of the work. We may classify as "practica" Johannes de Ketham's *Fasciculus medicinae* even if it does not follow the usual pattern of the practica. It was very popular because of its folio-sized anatomical illustrations which are clear and instructive for the period. The incunabula years witnessed four Latin, one Italian and three Spanish editions. The Library has the 1495 and 1500 Venetian editions in Latin.



Ketham, Johannes de. *Fasciculus medicinae*. Venice, Joannes and Gregorius de Gregoriis, 1495. Uroscopy chart.



Versehung von Leib, Seele, Ehre und Gut. Nuremberg [Peter Wagner, 14]89. First edition. Verso of title page and leaf 1.

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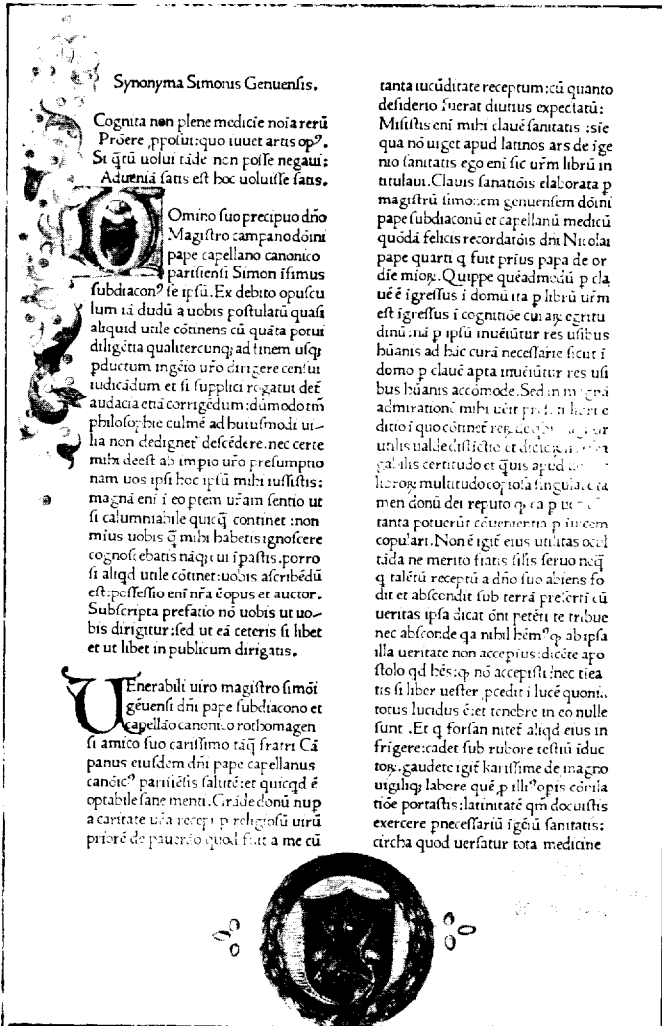


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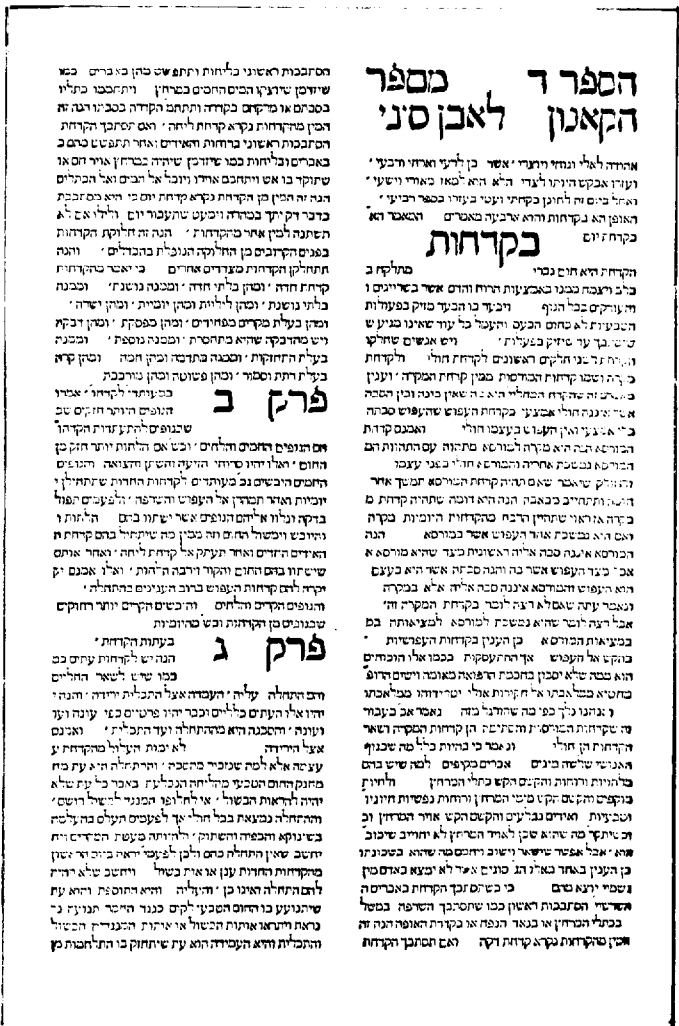
Some of the most sought after and enjoyed readings of the 16th century were encyclopedias, chronicles, and histories. Rhazes (Muhammad ibn Zakariyā, Abū Bakr, al-Rāzī) was the author of one of the great medical encyclopedias of the Arab-speaking world. The Library has a good copy of this incunabulum, the only edition printed in the 15th century, entitled *Liber Elhavi id est Continens artem medicinae* (Brescia, 1486). This work is larger than the popular *Canon* of Avicenna. The most important scientific incunabulum in Hebrew was the *Canon medicinae* by Avicenna (Ibn Sīnā), published in 1491, in Naples. A leading historical work on the "best seller list" is Pliny the Elder's famous *Historia naturalis* published in 18 incunabula editions. This work was one of the main sources of scientific knowledge until the end of the sixteenth

century. The Library has 4 Latin and 2 Italian editions of the work. A very popular work with visitors to the Library is Hartmann Schedel's *Liber Chronicarum*, published in Nuremberg by Anton Koberger in 1493. It contains several hundred illustrations depicting Medieval cities, popes, philosophers, and the most famous medical doctors from the beginning of Western civilization until 1480.

The publication of important collected works of scientific and medical authors began slowly. Not only was there little demand for them, but also the costs of producing the *opera* of voluminous authors were great. For example, Galen's *Opera omnia* (in Latin) was published late (in Venice in 1490) and



Simon of Genoa. *Synonyma medicinae, sive Clavis sanationis*. Milan, Antonius Zarotus, 1473. Large initial "D" in gold, red and blue and coat of arms of owner.



Avicenna. *Canon medicinae*. Naples, Azriel ben Joseph de Gunzenhausen, 1491. First page of Hebrew text in vol. III.



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Hortus sanitatis. Mainz. Jacob Meydenbach, 1491. First edition. Chopping of herbs. Colored in pink, yellow and green.

Gart der Gesundheit. Mainz. Peter Schoeffer, 1485. The male mandragora. Colored in brown, green and yellow.

only once during the incunabula years partly because of the great expense. While we have no knowledge of the exact price of the first Latin edition, A. Asulanus, who edited and published the first Greek edition of the same work (Venice, 1525), charged 30 golden florins for the three large unbound volumes in Basel in 1526. By comparison, a physician earned an average of 16 golden florins a year, a baker 12, and a schoolmaster 3.5 during the same period. The National Library of Medicine has both the 1490 (Latin) and the 1525 (Greek) Venetian editions.

Aside from its historical and scholarly importance, any incunabula collection is a great treasure for a library: a treasure in the sense of "first," in the sense of "old" and in the sense of "rare." Fine contemporary or later bindings and illustrations add to the esthetic feeling of holding such a book. From the scientific point of view, however, these works often have shortcomings. First, as has already been mentioned, the early printers did not publish the

best ancient and mediaeval literature, but only what seemed likely to sell best. Second, during the Middle Ages many Greek authors were available only in corrupt Latin translations. The world had to wait another century or so until better-educated printers, including famous humanist-printers, republished the Greek works in new translations by humanist scholars such as Niccolò Leonicensi, Gulielmus Copus, Guillaume Plancy, Johann Reuchlin, and others. Items in the National Library of Medicine's incunabula collection have been selected with great care by scholar librarians since the end of the last century. Consequently the Library has one of the finest collections of medical incunabula in the world. The Library's History of Medicine Division continues to build the collection, albeit at a slow rate because of the rarity and cost of such works. The collection is an invaluable resource for scholars studying the history of ancient, medieval and Renaissance medicine and science.

