An ancient Arabic medical encyclopedia written in the eleventh century provides a model for practicing individualized medicine, says a Georgetown University Medical Center (GUMC) scientist who, with two colleagues, has translated the original text into English. Credit: Hakima Amri, PhD, Marc Micozzi, MD, PhD and Mones Abu-Asab, PhD

The "Canon of Medicine," written by the Persian scholar ibn S?n? (Latinized as Avicenna), is the definitive work of Unani medicine, which is based on the teachings of the Greek physician Hippocrates and the Roman physician Galen. The "Canon" was further developed into a systems approach to health by Arab and Persian physicians.

"Earlier translations were not carried out directly from the original Arabic text; they deviated from that text and contain inaccuracies," says Georgetown's Hakima Amri, PhD, an associate professor in the department of biochemistry, cellular and molecular biology.

"Avicenna's Medical—A New translation of the 11th-Century Canon with Practical Applications for Integrative Health Care" was published in July by Amri, Marc Micozzi, MD, PhD, an adjunct professor of pharmacology and physiology at GUMC, and Mones Abu-Asab, PhD, a senior scientist at the National Institutes of Health.

Avicenna's medical writings aimed to rid medicine of superstition and base it on empirical observation, objectivity and rationalism, Amri says.

"Avicenna established the six essential requirements for health as fresh clean air, food and drink, movement and rest, sleep and wakefulness, eating and exercise, and healthy mental state," she explains. These are the prerequisites for healthy living and preventive medicine as emphasized by today's physicians, Amri points out.

"He also declared that health parameters should be considered according to race, gender, age and geographical adaptation," she adds. "This is what physicians today are discussing when talking about personalized medicine. It is only in the last decade that the medical community reported that men and women could present different symptom constellations."

Amri says the new book provides commentary and explanations not included in other texts, such as translating the body's four "humors" and "temperaments" into modern-day medical terminology.

Humors refer to biomolecules such as proteins, lipids, organic acids and other macromolecules, and temperaments often refer to energy production and hydration balance in cells and tissues—concepts known today as homeostasis and allostasis, says Amri.

Given that understanding, she says, "as scientists,
we are finding the biomedical knowledge of today is proving the insights into health and disease detailed in the 'Canon.'"

Amri dedicates the book to "the continuum of people who have kept alive the quest for knowledge over thousands of years."

She says, "The 'Canon' set the stage for Western medicine and could provide a paradigm to our systems medicine, a framework to personalized medicine, and a foundation to preventive medicine and integrative health, today."

**About Georgetown University Medical Center**

Georgetown University Medical Center (GUMC) is an internationally recognized academic medical center with a three-part mission of research, teaching and patient care (through MedStar Health). GUMC's mission is carried out with a strong emphasis on public service and a dedication to the Catholic, Jesuit principle of cura personalis—or "care of the whole person." The Medical Center includes the School of Medicine and the School of Nursing & Health Studies, both nationally ranked; Georgetown Lombardi Comprehensive Cancer Center, designated as a comprehensive cancer center by the National Cancer Institute; and the Biomedical Graduate Research Organization, which accounts for the majority of externally funded research at GUMC including a Clinical and Translational Science Award from the National Institutes of Health.

Provided by Georgetown University Medical Center


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