An Address delivered by Professor Irvin Korr
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Foreword:

"Osteopathy - Taking its Rightful Place" serves most appropriately as the theme for my address. I shall show that current and future predominant health and healthcare problems, brought by the continuing epidemiological and demographic (age-distribution) changes of this century, require precisely the strategy inherent in the principles and practice of osteopathy. This offers the osteopathic profession an historic opportunity to take leadership in urgently needed healthcare reform - a reform for which it came into existence more than a century ago.

Irvin Korr

AVANT-PROPOS

« L'Ostéopathie – prenant sa place légitime », c'est ce qui décrit le mieux le thème de ma conférence. Je vais démontrer que les principaux problèmes de santé et de soins de santé présents et futurs, provoqués par les changements épidémiologiques et démographiques de notre siècle, exigent exactement la stratégie inhérente aux principes et à la pratique de l'ostéopathie. C'est une opportunité historique pour la *profession ostéopathique* de prendre la tête d'un mouvement de réforme urgemment nécessaire des soins de santé, une réforme qui a été le motif de sa naissance il y a plus d'un siècle.

Irvin Korr

Osteopathy: Taking its Rightfull Place

Introduction

It is a very special honour to be your keynote speaker on this august occasion and I must say it has a special personal meaning for me. This is almost precisely the 20th anniversary of my first visit to Britain, when I was guest lecturer at the British School of Osteopathy.

The purpose of my address this morning is to try to show you what a great and historic opportunity you have to lead the reform for which your profession came into existence. I think we need to be reminded that this was the main purpose: to reform the practice of medicine. The strategy that is inherent in the osteopathic principles and the implementation of those principles seems to me to be precisely what is required at this stage of our epidemiological history with the changes that have taken place just within this century in the health and disease patterns of the advanced industrial nations and also the changes in the demography, the increase in the percentages of people over the age of 65 in all these nations.

Before coming here I finished reading a book entitled 'How and Why We Age' by Leonard Haflick. He has a table listing 20 advanced nations that have high percentages of population aged 65 and over. First came Sweden with almost 18%, next was Norway with 16.3% and third was the United Kingdom with 15.6%. At the bottom of the 20 nations was the United States with 12.6% of its population over 65. I shall use the statistics for the United States. The numbers will be different from yours but the patterns are essentially the same.

I want to show you how your principles and your practice are really what are required in view of what has happened in the past century and is projected to happen well into the next century.

In 1900 in the United States, 3% of the population was 65 and over. At the present time 12.6% of the population is 65 or over. It is projected that by the year 2030, 20% of the American population will be 65 years of age and over, onefifth of the population. In this country, you are already well on the way to that.

Phase 1: The Lower the Morbidity, the Lower the Mortality

How did these changes come about? I remind you that there were two overlapping periods in this century. The first was from 1900 to mid-century when the predominant diseases were the acute infectious diseases and the victims were mainly infants, children and young adults. As an example, in the United States in 1900, 14% of live born infants died in the first year of life,

86% surviving. By mid-century the acute infectious diseases had declined substantially, only slightly for reasons of medical intervention of any kind. The main causes were improved living conditions: the purification of water, the development of pasteurised milk, improved nutrition, child labour laws and the rise of trade unionism which improved working conditions. All these factors conspired to decrease the incidence of acute infectious diseases which meant more and more people surviving to later decades of life.

By 1950, 89% of live born infants were surviving not only to the first year but to the 50th year of life. The phenomenon can be visualised as a hurdle race. In the first half of this century, the first few hurdles were so high that many people did not make it over them. Now those hurdles have been lowered and more and more people leap over the first few hurdles of life to run more and more of the race. The race itself is no longer. The human life span has not been expanded but more people are living into later decades of the lifespan. With a reduction in morbidity there has been a reduction in mortality. This is what characterises the first half of this century. As the morbidity, mainly acute infectious diseases declined, more and more people were surviving.

Phase 2: **The Lower the Mortality, the Greater the Morbidity**

So what is the state of health of all these older people? Not very good. In the United States 80% of senior citizens have one or more chronic disease. They are hospitalised twice as frequently and their length of stay is twice as long. Their use of medication is twice as great and the per capita cost of health care is three and a half times that of people under the age of 65. The patterns are the same in Britain although the numbers may differ.

As a result of the increased use of the healthcare system as it is called in the United States (actually it is a disease care system) the 12.6% are responsible for 30% of the nation's total healthcare bill which now exceeds one trillion dollars (one thousand billion dollars). An incredible number.

By the year 2030 20% of the population who will be 65 years of age or over will, if things continue as they are now, be responsible for 50% of the total national healthcare bill. I characterised the first half of the century as "*the lower the morbidity the lower the mortality*." Now, *"the lower the mortality the greater the morbidity*". This is what has happened and it has happened in Britain also.

Now what is the nature of the diseases with which we are predominantly confronted? They are not the acute infectious diseases of the first half of the century but are chronic degenerative diseases. At least in the United States, the prevailing though not often spoken assumption is that these diseases are a natural concomitant of the ageing process. In other words, that ageing itself is pathological. The evidence is convincing, however, that this is not true and that these diseases are largely preventable. They are products of minor, seemingly inconsequential deleterious factors that have more and more time to take their toll. The longer we live, the greater the toll they take.

By the chronic diseases I mean of course the cardio-vascular diseases, cancer, stroke, rheumatoid arthritis and so forth. This is the reason for the great upsurge in the chronic degenerative diseases among elderly people. The health care system is now almost totally preoccupied with the accumulation of these chronic diseases requiring long term care. A substantial portion of the health care bill goes into keeping people into a last year or two of life, just prolonging life another few days, another few months, another year if possible. While our health care system is so absorbed in late-stage irreversible disease, millions of infants, children and young people are already embarking on the same life paths that culminate in those same diseases. We simply have to move up-stream and get people off those paths and onto healthier ones.

Relevance to Your Profession

This is what I see as the role of osteopathy in this stage of our history, that it begins to show leadership in moving up-stream in the promotion of health. We have to take a preventative

approach. I have coined a little slogan recently, that "*health is the best defense against disease*". Health promotion is indeed the most effective and the most comprehensive form of disease prevention.

I want to examine with you now how this relates to your profession. In doing this, I want to remind you of some things that are implicit in the principles of osteopathy. One of the most important things Andrew Taylor Still said was `To find health should be the object of the doctor. Anyone can find disease.' That, to me is what we need to look into today.

A first question: What is health? I offer a definition developed by the World Health Organisation in 1947 (quoted from memory): 'Health is more than the absence of disease and infirmity. It is total physical, mental and social well-being'.

Second question: What are the origins of health? This tends to be forgotten in the osteopathic profession in the United States and perhaps here too. Health comes from within. Each of us is endowed with a most miraculous health care system which far excells anything that has ever been conceived by man. It is the ultimate source of health if it is permitted to operate unencumbered. Nobody, whatever the skills and technology, can impart health to another person. Health cannot be transfused like blood or transplanted like a kidney. It comes from within or it does not come at all. Each person is the owner and therefore the custodian of that health care system. It is not only a healing system, it is not only a defensive system, it is a health maintenance system. Its tendency is always toward health. Permitted to operate unimpeded, as I repeat, it is the very source of health. This is fundamental and we are forgetting it as we marvel at the great break-throughs in medicine; but they do not begin to compare with our in-built health care system which performs routine miracles by the thousands day in and day out.

When, as a physiologist, I think about all the sensory and regulatory mechanisms involved in homoeostasis, the regulation of my arterial blood pressure or my blood sugar, it is so complex that the probability of breakdown is enormous. To me the wonder is not that one may develop hyperglycaema or hypertension etc., but that so few people do. That is the tribute to this wonderful health care system built into each of our bodies. "Take care of the physician within and the physician will take care of you". Remove the impediments to that system and it will serve you well. Another example: the billions of cell divisions that take place between the moment of conception and the production of a full-grown adult. The probability is so high for developmental errors to appear, for chromosomal breakage, for mutation, that to me the miracle is that *everyone* doesn't have cancer and is not a grotesque monstrosity of some kind.

What are the causes of health? Health promotion is the most effective and comprehensive form of disease prevention. The more whole I become the better my parts operate. This is inherently the osteopathic approach. The man who has a peptic ulcer is not sick because he has an ulcer. From the allopathic viewpoint the illness is where the ulcer is and that is what has to be treated. The osteopathic viewpoint is that the man has an ulcer because he has not been well. He has not been taught healthful living. He does not understand his responsibility for the care of this in-born health care system. Or he is a victim of his environment, including gravity. The more whole I become, the better I live, the better I nourish myself, the better my interpersonal relationships, the better my occupational conditions, the better the physical environment, the better my socio-economic conditions etc., the more competent my health care system becomes. All these things enter into determining the competence of this in-dwelling health care system. This is the osteopathic approach.

I remind you further of another principle. You do not treat a symptoms, you do not treat pain, you do not treat diseases, you do not treat parts of a body, you do not treat the musculoskeletal system, you treat persons, you treat human beings. It is they who get well or not depending on the competence of their built-in health care systems. I would like to hear you saying this more and more, that you are treating more than a musculo-skeletal system.

So we need to look, not merely at the peptic ulcer or the osteopathic lesion but at the factors in the person that have rendered him vulnerable, the factors that have made his health care system less competent than it could have been had those factors been more favourable. The holistic approach of osteopathy is to modify all the factors in a person's life in a more favourable direction so as to disencumber that in-built health care system, to support it and make it more competent - and to teach patients to do the same for themselves. This is the ultimate role of the osteopath. This is the reform, as I interpret Andrew Taylor Still, for which this profession came into existence more than a hundred years ago. It has to be brought about.

As complex as we human beings are in our personal health care systems, in our bodies and minds, we have in addition a whole multiplicity of factors impinging upon us that do not exist for so-called lower levels of life. Other species live more uniform, stereotypical lives. We have an enormous range of options because of the brain we have developed. Society evolves much more rapidly than our bodies can adapt to the changes we keep imposing upon ourselves. No other animal deliberately, knowingly, poisons itself, eats food that is harmful or not supportive of health, inhales things that are known to be deadly, behaves in a way that is stressful and damaging to the health care system built in to it. As I drove into London I could not but help but feel the weight of the fumes that saturate your atmosphere. It cannot help but be harmful and deleterious to the competence of the health care systems of the entire population. How can we deal with all these factors? There are so many.

Why the Focus on the Musculoskeletal System?

Moreover, one of the unique problems of being human is that we have the musculo-skeletal system that we do have. I remind you that we are the product of evolution. If we take the billion years or so in which the biological evolution has taken place and convert it to a day, Man appears on the scene in the very last few minutes. In those few minutes, he took the magnificent cantilever bridge structure of the quadruped body framework with its low centre of gravity, its flexible spine with its pelvic end supporting no weight and being free to move with its broad base of four legs and, in a moment, he converted the bridge to a skyscraper. Now the body structure has a high centre of gravity and a narrow base of two feet instead of widely spread four, and is subject to compressive forces due to gravity, shearing forces and torsional forces. We have a highly vulnerable musculo-skeletal system. This unique vulnerability of the musculoskeletal system is what you are specialised to deal with but you are doing more than that: you are treating a human being.

There is one thing I want to bring to your attention and here I can refer to the research in which it was my honour to participate and eventually to lead at Kirksville for a period of almost 30 years. The musculoskeletal strains that take place, what we used to call the osteopathic lesions, cause related segments of the spinal cord to become hyper-irritable so they are hyper-responsive to impulses coming from any source. Their effect is to exaggerate the impact of other negative factors in a person's life and even to convert some positive, non-harmful factors into detrimental ones. Those segments of the spinal cord, as I wrote in the very first paper I published in The Journal of the American Osteopathic Association in 1947, behave like a neuro-logical lens which magnifies the impact of other influences impinging upon it and focuses them on organs and tissues through neural pathways to affect other organs that happen to be innervated from those segments. In 'de-facilitating', if I may coin a term, a facilitated segment you are, to various degrees, protecting and shielding the whole patient against the impact of all other negative factors in his or her life. Are there guarantees that it will work all the time? No, but you can be certain that you are decreasing the negative impact that reduces the competence of the in-built health care system, thus making the person less vulnerable to disease. This, to me, is a beautiful strategy and it is precisely what is required at this time to move up-stream. De-facilitate all of the facilitated segments that you can.

Relation to Ageing Populations

In the 30 years that I remained in Kirksville

and conducted research in which we examined literally hundreds of healthy young people we never found a single person who did not somewhere have sighs of facilitated segments due to the unique vulnerability of the human framework. We all have them, we live with them and the longer we live the greater the toll they take on the competence of the in-built health care system to cope with those other factors in our lives, the tensions that are unique to our personalities, our personal relationships, occupations and environmental and socio-economic conditions. The manipulation of the body is a crucial and strategic approach to increasing the ability of the patient himself to maintain health by decreasing the impact of continually evolving high technology. Our cultural evolution proceeds so much more rapidly than biological evolution and makes new challenges every year to which we have to adapt. The older we get the more difficult it is to make those adaptations.

This, it appears to me, is the central osteopathic strategy. What you do with your hands is much more than relieving pain, much more than fixing osteopathic lesions. You are treating the whole person and, in de-facilitating those facilitated segments, you are to some degree shielding the patient against such negative factors as I have indicated, and therefore decreasing the probability and severity of illness.

It is time, it seems to me, that your profession becomes better acquainted with research on another neural mechanism that is deleteriously affected by biomechanical disturbances of the musculoskeletal system, and that contributes to patho-physiology of tissues and organs. Unlike segmental facilitation, which is based on the phenomena of excitation, impulse conduction and neurotransmitters, this one is based on the axonal transport of proteins and other macromolecules.

In every axon there is a continual transport of proteins synthesised in the cell body, replacing those continually metabolised in the axon. This axonal transport is essential for the survival of the axon, which undergoes degeneration when the flow is obstructed.

In research conducted at the Kirksville College of Osteopathic Medicine in the years 1965 to 1975, we demonstrated, with the use of radio active tracers, that a selected few of the many proteins moving down the axons of motor neurones cross the myoneural junction and enter muscle cells. They turned out to be proteins that muscle cells cannot synthesise for themselves. Deprived of them by obstruction of axonal transport, as by compression of the nerve, the muscle begins to undergo degenerative trophic (morphological, biological and functional) changes that eventually culminate in atrophy. Trophic changes have also been reported in other tissues following interruption of axonal transport.

Of special interest is the fact that the synthesis and delivery of these proteins may be impeded not only by mechanical deformation of nerves but also by their sustained hyperactivity - as in facilitated segments.

These, also, are mechanisms that you profoundly influence with your manipulative skills on behalf of your patients' health. Unfortunately, these trophic, non-impulse mechanisms have yet to be assimilated into osteopathic thought and practice.

I would like to invite more and more of you to move into yet another area, that of cranial osteopathy. Although I can speak with much less authority about the mechanisms involved, I have richly benefited from it myself. As a physiologist I have my own hypotheses about how it works, I have not tested them in research but in almost half a century - a little later this year I shall be celebrating my 50th anniversary with the osteopathic profession - I have had great opportunity to experience cranial manipulation and see its effects upon members of my family, upon children with severe behaviour problems and upon new born infants who have been through prolonged and difficult labours. I cannot help but believe that this is an extremely important part of osteopathy and I would love to see this taught in your schools and practised more widely. I urge you to develop your skills in this area. It is a most valuable contribution to human health and I think an important preventative, as well as therapeutic, part of your total strategy.

My challenge to you

So recommendation number one: continue to develop your manual skills, to keep in mind that you are treating a whole person and not merely the musculo-skeletal system or relieving pain, and that you are doing something to the whole person which is going to have beneficial effect and shield him against the negative impact of all other harmful factors in his or her life.

Next point: as I said before, each of us is the owner and therefore the custodian of a most miraculous health care system. Obviously each person as custodian has primary responsibility for the maintenance of the competence of his or her own health care system. It is your duty to remind your patients of their responsibility. It is they that recover or not depending upon the competence of their health care systems. It becomes your obligation to remember that, although you may not have the *title* `doctor' that you *are* doctors. The word originally meant teacher. Your role is to teach personal responsibility for health and how to take that responsibility. That means nutrition, it means all aspects of behaviour, it means attitude change, it means appropriate use of the body and mind and minimal abuse of body and mind. All of these things enter into determining our vulnerability, especially in the later years.

Does this mean you have to become experts in psychology and psychotherapy, exercise and in nutrition and so forth? No, but collectively you can begin organising programmes and bringing in experts in these fields as adjuncts to the practice of real osteopathy in which you treat the whole person. We should grow up with the understanding that we have this miraculous health care system built into our bodies for which there is no substitute. This must be taught to our children. Parents must be taught to impart it to their children. This is the leadership that you can take. It is leading the way up-stream that I referred to earlier. And I presume to remind you: The best way to teach is by example.

These are my challenges to you. I hope you will consider them. This is really what the profession was founded for, to reform the practice of medicine. It was not Dr Still's intention to found a new profession. He wished to reform the existing system, but then encountered road block after road block. Pasteur had already discovered microbes and viruses were on their way. It looked to practitioners of conventional medicine that they were going to be the conquerors of disease and so they said your approach is absurd; we are already on the right road. So the early osteopaths saw that they would have to set up their own schools and hence the founding of the American School of Osteopathy in 1892. This was not Still's original intention. Your strategy should continue to be that which Andrew Taylor Still began to develop, of reform and leadership. In view of the research that has been done, it is more valid and more urgently needed today and for the next century than it has ever been.

One final thing. You cannot, as osteopaths, change many of the factors in a person's life that are detrimental but there are some that depend upon social and governmental agencies. It is time that your voice was heard in saying that the pollution in our environment is unacceptable and the existence of whatever social and economic factors exist which are detrimental to health must be changed. Let your political voice be heard and make sure that the public hears you taking their side on behalf of their health. Do this and I think you will find your profession becoming solidly entrenched as leader of a great revolution.

I want to express my deep gratitude to your profession for what it has taught me, those principles which I have converted to a way of life. I have had for 50 years the benefit of osteopathic care. That I am at the age approaching 86 and regarding this is the best time of my life I owe entirely to osteopathic teaching and to osteopathic practice. I want to see them extended as widely as possible.

Professor Korr then took questions:

Roderick MacDonald: You have spoken in the past about the need for osteopathy to found itself on incontrovertible fact and you set an example for the profession by assisting it in providing some of those facts. Has it been a source of disappointment to you in subsequent years how little incontrovertible facts have actually been produced? We have heard recently that the osteopathic profession in the United States has finally set up an outcome study for manipulation in low back pain. You have asked us to take considerable note of cranial osteopathy as a further extension of the osteopathic principle and you are clearly very enthusiastic for this. We see a considerable dearth of incontrovertible fact in this area as well. In our presentation to the world of what we think of ourselves, are we not heaping up more and more opinions? Would you like to see a more solid base of incontrovertible fact?

Professor Korr: Yes, of course. But I am on the Bureau of Research of the American Osteopathic Association and I was opposed to the project to which you referred to study the effect of osteopathy on low back pain. As the study is set up it treats manipulation as though it does not matter who is administering it and who is receiving it, as though it were comparable to a prescription. To me, having experienced osteopathy for so many years from so many different hands, it is an interaction between two human beings, each of whom is unique. What goes on in the mind affects us. Body and mind are so interpervasive of each other I do not know how they ever got separated in our thinking and our practice. We treat a person and a person is more than body and mind in the same way that water is more than hydrogen and oxygen. It obeys the laws of water and not the laws of oxygen and hydrogen. To rile manipulation is like a wordless dialogue, a complex interaction between two human beings.

Brian Hounsfield: Have you got any thoughts on the origins of the cranial rhythmic impulse?

Professor Korr: I was at a conference with Dr Edna Lay at the Colorado Academy of Ostepathy recently. She perceived, according to what has been taught, that the origin is in the head. I said that is not where it is coming from.

There is no possible mechanism that could account for the volume fluctuations in the whole body. Considering the size of the head, there must be a lot of fluid moving in to cause this expansion. She sees it as a contraction and a relaxation but this is what has been taught and I think, it is what has become a dogma. The cranial rhythm is felt all over the body as has been well demonstrated to me. For this contraction of the head to shove cerebrospinal fluid out through all those thousands of nerve fibres would take an enormous amount of fluid whereas we are dealing with fractions of a millilitre. My personal theory is that there is one area where the rhythm is comparable to that of the cranial rhythm and that is the great veins, one of the main reservoirs of the cardiovascular system. When those veins contract they are shoving lots of fluid out to all the tissues including the brain which is participating passively along with all the other tissues. So we are concerned with the mobility between the bones of the cranium but I think the origin is elsewhere than in the head. But this is something I cannot confirm. Let us see what future evidence emerges. There was a paper recently - a Swedish paper as I recall - in which the author attributed the cranial rhythm to the contraction and relaxation of intra-cerebral blood vessels but I do not think that this would be great enough to produce that rhythm all over the body. So I am looking for some other central source of fluidfluctuation in the entire body, the brain going along passively together with the other tissues.

To go beyond your question: In improving the mobility of the cranial bones you also improve the movement of blood and cerebrospinal fluid through the brain. I believe this has the effect of improving the synthesis and secretion of some of the most important of the “body's own medicines” such as pituitary hormones, a large assortment of neuropeptides and other humoral agents.

And let us not forget the intimate functional relationship between the brain and the immune system. But all these issues and hypotheses await investigation.

Raymond Perrin: I am involved in osteopathic research at a university and there are new establishments for research taking place now in the profession in Britain, notably the Post Graduate Department of the European School of Osteopathy. Do you not feel that the only way the medical world will ever accept any of our treatments is by more and more clinical research to prove our point? Even though anecdotal research is very important we do need more and more practising osteopaths to be involved in research.

Professor Korr: I agree, very much but it has got to be well-designed research. Using the old clinical trial as though we were dealing with a medication taken by mouth or by vein is not appropriate. The new paradigm in clinical research is so-called outcomes research where you do not look for single factors. It is absurd to think of any disease as having a single cause. There is a whole conspiracy of countless factors that is involved and yet that is what clinical research is. When you have a clinical trial you must also have control for placebo. Well the osteopathic physician depends on the placebo response, on the patient expressing through his body his confidence in his doctor - or not. I have another saying - `my body always strives to meet my expectations of it - good or bad'. How you talk to your patient, how you put your hands on the patient, your facial expression, the tone of voice, all this enters into determining the patient's re-sponse. You simply cannot deny that. Using manipulation as though it were a chemical entity is absurd. It is a non-verbal conversation between human beings. So I think the old design of the clinical trial is not appropriate and we may need to design new ways of testing the efficacy of osteopathic manipulation, bearing in mind that it is the patient who is getting well and not you or the treatment that is making him well.

just said, people tend to talk of cranial osteopathy or describe themselves as cranial osteopaths. Do you not think that osteopathy includes cranial technique.

Professor Korr: Yes. The fault today is mine. I was thinking as a scientist, not as a clinician. I can only guess at the mechanisms involved, why improving the relationship of the mobility among the cranial bones should improve my health, but I know what it did for me. It changed my personality, I hope for the better. I watched my little boy, who is now fifty-one years of age, when he was a youngster under two develop what the doctors called cyclical vomiting. Once a month, twice a month all of a sudden he would go into a deep torpor and vomit. I have never understood it. It went on year after year until after one cranial treatment it ended. I have seen hundreds of things like that happen. But, yes, it is an artificial separation.

Jane O'Connor: Perhaps in considering research we are looking at too short a term. Perhaps we should look at creating research projects that would last for a life time.

Professor Korr: When I was at Michigan State University College of Osteopathic Medicine, in a great industrial area of automobile manufacture with large plants and large numbers of working people I proposed a project whereby a group of osteopathic doctors would go into a plant and have half the working population receive traditional allopathic care, the other half receive osteopathic care. We would observe the incidence of headaches, colds, flu, backaches, absenteeism, heart disease etc., over a period of time to see how differently these two populations fared. It has never been set up but it would be wonderful to do. Is that something that is feasible in this country?

Irvin M Korr PhD

Professor Emeritus Kirksville (1975) and Texas (1990)

Colleges of Osteopathic Medicine

Dr Irvin Korr began his association with osteopathy in scientific research and, through a long and distinguished career, he has become recognised as a major contributor to the modern scientific understanding of the profession's distinctive contribution.

He is a Fellow of the American Association for the Advancement of Science, a Life Member of the Harvey Society and an Honorary Life Member of the American Academy of Osteopathy. He is listed in "American Men of Science" and the "World of Science" and is the recipient of an Honorary Doctor of Science Degree from the Kirksville College of Osteopathic Medicine.

Dr Korr's writings include over one hundred articles in scientific journals, ranging from reports of research to essays on the philosophy of medicine.

Le Dr Irvin Korr s'est engagé avec l'ostéopathie dans la recherche scientifique et, au cours d'une carrière longue et éminente, il a été reconnu comme un intervenant majeur de la contribution distinctive de la profession à la connaissance scientifique moderne.

Il est fellow de l'Association Américaine pour l'Avancement de la Science, Membre à vie de la « Harvey Society » et Membre Honoraire de l'American Academy of Osteopathy, Il fait partie de la liste des « American Men of Science » et du « World of Science » et est récipiendaire du diplôme « Honorary Doctor of Science from the Kirksville College of Osteopathic Medicine.

Le Dr Korr a publié plus d'une centaine d'articles dans des revues scientifiques, répartis entre rapports de recherches et dissertations sur la philosophie de la médecine.

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