

Research Education Conclave

The Osteopathic Heritage Foundation's President, Richard Vincent, convened a meeting of the Foundation's endowment scholars and select principle investigators at the American Osteopathic Association convention. The meeting brought together ten participants, the discussion facilitator, Dr. Patterson, and the Dean of the Michigan State University College of Osteopathic Medicine. The meeting began with presentations from the endowment and investigator participants, followed by an hour of open directed discussion. The participants uniformly felt that the meeting was useful and productive, and expressed the opinion that another meeting next year would be beneficial. The specific recommendations from the group will be summarized below.

The individual presentations from endowment participants are briefly summarized here.

1. Andra Amalfitano, DO, Ph.D., MSUCOM

(accompanied by William D. Strampel, DO, Dean, MSUCOM)

Dr. Amalfitano described his work on gene transfer and musculoskeletal disorders. He runs a large laboratory and has extensive facilities available within the extensive research facilities of MSU. He collaborates with a number of other researchers in various areas of biomechanics and musculoskeletal function, as well as osteopathic manipulative medicine specialists. He also works with vaccination programs and the college has established an extensive clinical research program in Sub-Saharan Africa in malaria vaccines. He trains DO-PhD students in his laboratories. He has an extensive list of publications and has active NIH support.

2. Brian J. Balin, Ph.D. and Michael L. Kuchera, DO, FAAO,

Philadelphia College of Osteopathic Medicine (Dr. Balin was not present).

Dr. Kuchera presented the activities of the PCOM Center for Chronic Disorders of Aging (CCDA) and the Human performance and Biomechanics Laboratory (HPBL). The CCDA conducts research on inflammatory and degenerative processes and diseases of aging populations and provides training

in research methodologies. The center has provided pilot grants for faculty, organized symposia and CME programs and is planning a faculty research retreat. There have been 32 peer-reviewed journal articles, 37 abstracts and presentations and 9 book chapters published in the 2007-08 years. The CCDA has focused on research projects involving osteopathic manipulative treatment, effects of various types of instruments and devices impacting carpal tunnel syndrome, strength-training effects and back pain. The center emphasizes the involvement of osteopathic students in its research projects and has produced 20 publications in the past 5 years.

3. Thomas A. Cavalieri, DO, FACOI, FACP, University of Medicine and Dentistry of New Jersey School of Osteopathic Medicine.

The Heritage Foundation endowment at the UMDNJ SOM has allowed five faculty and seven student projects to be funded recently. The endowment funds are leveraged by funds from the university to produce pilot projects that can be developed into efforts that can seek outside funding. A number of publications and presentations have resulted from these projects and as a relatively new effort the emphasis on primary care should result in a focus for the osteopathic profession as one of its major strengths. Areas emphasized in this program are collaborations between clinicians and basic scientists, especially in the areas of aging and OMT.

4. Frances Daly, Ph.D., Northwestern University Chicago College of Osteopathic Medicine, Costin Institute.

The Costin Institute for Medical Educators has been operating for four years. The goal of the program is to train physician/teachers to be more effective medical educators. Sixty-eight educators in five groups have completed the course. Emphasis is placed on osteopathic medical education in the programs. The course is held in the Chicago area with three of the four group meetings in the yearlong program. One of the four is held at the Northwestern University campus in Phoenix. Between the group sessions, participants learn and communicate through electronic means. There has been one focused session in Columbus, Ohio and this satellite session was very successful. Efforts at initiating other satellite sites are being studied. A survey of graduates found that the program was considered quite successful in initiating changes in teaching strategies and activities and that almost 90% found that it helped in enhancing teaching effectiveness. The program is highly successful and an important training resource for the osteopathic profession.

5. Brian F. Degenhardt, DO, C-SPOMM, C-OFPP & OMT, A.T. Still University of Health Sciences, Kirksville College of Osteopathic Medicine, A.T. Still Research Institute.

Dr. Degenhardt was not able to attend the meeting due to an obligation to present Multi-Center Osteopathic Pneumonia Study in the Elderly (MOPSE) study results at a national meeting. The A.T. Still

Research Institute has been successful in starting a vibrant research program focusing on osteopathic manipulative treatment and the difficult area of inter- and intra-rater reliability. The center was the major player in the MOPSE study on the effects of OMT with hospitalized pneumonia patients. Several papers have been published by the institute as a result of foundation funding and the institution has committed major internal funding to the effort.

6. John N. Howell, Ph.D., Ohio University College of Osteopathic Medicine, Interdisciplinary Institute for Neuromusculoskeletal Research.

Dr. Howell presented his work on the virtual haptic back (VHB) as well as his previous work on post-exercise muscle soreness and Achilles tendonitis and OMT. The haptic back project is the major focus of the work being done at present and is in collaboration with the college of engineering at the university. The VHB is a computer driven simulation device that simulates tissue feel of the back and can be programmed to include areas of heightened tone that the student feels as they “palpate” the simulated back. The project has evolved to the point that it is useful in training students in palpatory discriminations and early data suggest that the student response to the simulation is good. The device can be offered to other institutions for further research. In addition, Dr. Howell presented data from a pilot project using MRI to determine effects of OMT in low back pain patients that showed interesting changes related to a single treatment when there was asymmetry in the T2 signal prior to treatment.

7. Leonard Kohn, M.D. and Frank L. Schwartz, M.D., Diabetes Center of the Edison Biotechnology Institute of Ohio University College of Osteopathic Medicine.

The Diabetes Center has become a major player in diabetes research in the nation. One of the major thrusts of the multidiscipline research group has been the role of toll-like receptors in autoimmune/ inflammatory disease and diabetes. Dr. Kohn has developed data to suggest that toll-like receptors play an important role in autoimmune and inflammatory states that are present in all diseases and are likely primary in the development of diabetes. He is investigating the possible role of phenylmethimazole (C10) in disrupting the cascade of pathologic expression of toll-like receptors without influencing normal immune function. If the research is successful, it will be a major player in understanding inflammatory disease and in possibly treating it. This is potentially a major breakthrough in understanding a wide variety of diseases and can also be used in understanding the role of OMT in treating many functional states underlying disease. Notable on campus is the new research building that is nearing completion for these and other research efforts, made possible by funding from the university and the Osteopathic Heritage Foundation.

8. John C. Licciardone, DO, MS, MBA, University of North Texas Health Science Center at Fort Worth, Texas College of Osteopathic Medicine, Osteopathic Research Center.

Dr. Licciardone presented an overview of the Osteopathic Research Center (ORC) activities over the past four years. The center was started with funding from several organizations including the Osteopathic Heritage Foundation, the American Osteopathic Association, American Osteopathic Foundation and American Association of Colleges of Osteopathic Medicine. These organizations have continued to fund the ORC and the Foundation has established an endowed chair at the school. The ORC has received NIH funding for several programs, including a U19 Developmental Center Grant funding three large research projects that are related to various aspects of OMT. In 2007, there were 12 publications, 16 abstracts/poster presentations and 17 conference presentations from center work. Major initiatives have included development of a research training program, development of a dog model to study lymphatic flow and OMT, chronic low back pain, and effects of OMT on pregnancy and carpal tunnel syndrome. In the past year, the Osteopathic Heritage Foundation Physical Medicine Core Research Facility was established to extend ORC research into the area of spinal mechanics, upper extremity function and metabolic studies. In addition, the center has undertaken a number of literature surveys and metaanalyses of literature related to manual medicine and to aspects of patient satisfaction with osteopathic care.

The reports provide elegant evidence of the effects of Osteopathic Heritage Foundation support for these programs. Foundation funding has resulted in funding from the host institutions that would not have been available otherwise. The participants were universally supportive of the Foundation efforts and have produced much with which to be pleased.

Discussion

The discussion hour was facilitated by Michael M. Patterson, Ph.D., and focused on the areas of collaboration, priority research areas, expanding research opportunities and infrastructure, and a similar meeting next year. The following is the facilitator's summary of the discussion and the ideas put forth, along with facilitator's comments on each area.

Collaboration

The group had several ideas on ways to increase collaboration in research efforts of the osteopathic profession. One suggestion was that the Foundation considers developing a research clearinghouse type of database that could be accessed by any researcher to determine who and where various projects are being done and tap those for collaboration or help. A second was similar in the possibility of developing a database for osteopathy, similar to the plan being developed for an osteopathic "Framingham-type" study. This idea was similar to the suggestion for a biodepository or compilation of data on osteopathic issues related to OMT (facilitator comment: it should be noted that this is similar to the efforts of the

Louisa Burns Research Committee of the AAO with its electronic medical record project and the electronic depository at the Des Moines COM). Another series of suggestions had to do with sponsoring some sort of collaborative forum at the AOA Research Conference. This has been done to some degree with the luncheons with interest tables at last year's conference. A second suggestion in this area was to sponsor research presentations over the net, a sort of podcast that could be downloaded by interested researchers. Perhaps the most substantive suggestion was that the Foundation should require concrete evidence of collaboration in any research proposal submitted to it for funding consideration. This would require more than simply listing a collaborator from another department, but would mean real evidence of shared research effort between at least two groups. The participants agreed that this was a needed requirement.

Facilitator's Comments: The suggestions that the Foundation develop databases seem out of the Foundation's area of expertise. It could be that the Foundation could develop RFPs for such efforts. While it is not clear that the Foundation is ready to develop RFPs for these sorts of efforts, it could be something to consider. Requiring concrete evidence of collaboration seems like a very positive move.

Research Priorities

This area of discussion strayed from priorities to how institutions developed research. However, the group agreed that there should be a focus of research funding on a few promising areas for OMT, such as low back pain, and that such focus would be most likely to show large payoffs for the profession. This was also an area that the group wanted to focus on in a future meeting.

Facilitator's Comments: It was the consensus of participants that this be a major area of discussion should a similar meeting be held next year.

Research Opportunities and Infrastructure

The group spent considerable time on this subject. The suggestions here were varied:

- Develop a list of OMT experts that are willing to provide OMT treatments in research projects. There is currently a problem with having enough DOs experienced in OMT to deliver quality OMT in research projects. This would entail doing OMT at several sites in a large project, but this has statistical advantages as well as providing logistical problems.
- Provide more funds for training research oriented OMT experts in how to do research protocols. This goes along with the previous suggestion and would presumably enhance the pool of DOs capable of providing OMT in a research setting.

- Give more attention to salary support for the next generation of osteopathic researchers. Most DO students are heavily burdened with debt and simply cannot afford to take a low salary while developing a research effort.
- Provide funding only for institutions willing to put significant funds into the research effort, that is, make sure that the infrastructure is available prior to funding from the Foundation. This is intended to force the institution to make a significant commitment to a research effort.
- The Foundation should look into funding grants for osteopathic research that has been approved at a high score level, but not funded by the NIH. Often a grant receives a very high score, but does not reach the NIH pay line due to the intense competition. Such a grant could be funded by the Foundation, which would allow the researcher to begin the research without waiting for another NIH cycle.
- The Foundation could support development of roadmaps for various types of projects that would allow the novice researcher to navigate the project development maze more easily.

Facilitator's Comments: Within this list of suggestions, the first three are interrelated in that they enhance present and future OMT research efforts. They should be held in mind as grants are reviewed. The requirement that institutions provide infrastructure support makes a great deal of sense as more COMs vie for support. The suggestion that the Foundation fund high quality NIH submitted but not funded grants is an intriguing possibility that could encourage more NIH submissions. As to a roadmap, it is a bit unclear what that would entail and this needs more discussion.

Next Year's Meeting

The group felt this meeting was a great success. It allowed the various project directors an opportunity to get to know what was being done by Foundation-funded organizations. Several areas of collaboration came out of the discussions, such as MSU wanting to get a VHB to begin to expand its capabilities and perhaps conduct research with it. Participants began to see what was available at other sites that could help in their projects. The group felt strongly that another meeting next year would be beneficial. They felt the group should be kept small so that the interactions could be personal. They felt that presentations should be more limited with more time for discussion of a few targeted areas. The presentations should be limited to a few minutes to update the group on what has gone on in the past year.

Questions that were suggested for 2009 discussion included:

- Priorities in osteopathic research: This area was considered to be important: What should be the focus for research in the profession and how should this be accomplished? What should be the priorities for mechanistic research?

- Collaboration: What is the best strategy for fostering collaboration, especially with the major players in osteopathic research?
- Developing additional research centers: How should new research centers be identified and funded?
- Request for Proposal (RFP) issues for the Foundation: Should and if so, how should RFPs be developed by the Foundation and how should the responses be judged?

Facilitator's Comments: The strong consensus of the group was that the meeting was very useful and that the information exchanged was very important. The group felt that a future meeting should be kept at about the same size, with more time for focused discussion of a few important topics. The facilitator suggests that a meeting lasting for five hours (12-5 pm) with 45 minutes for lunch to start and a 15-minute break would be useful. While several participants bemoaned lack of a projector, the participants did a great job of presenting, and perhaps were more spontaneous, without one. Having no projector, but only handouts at the next meeting seems like a good thing to consider. Also, limiting any formal presentations to what has been accomplished in the past year would be appropriate. The discussion would then proceed with four or five topics that had been distributed beforehand, with the expectation that concrete recommendations would be the outcome for each area. This would necessitate developing a list of questions and providing the parameters for each before the meeting. Over the next year, Mr. Vincent and other Foundation leaders would presumably determine areas of priority that would benefit the Foundation from such discussion.

It was both a pleasure and an honor to be included in this meeting. If I can be of further help in these efforts, please let me know.

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