

of you, you will, I believe, serve both that Human and his or her Human Animal well.

While our Human aspect tries to follow an agenda derived from its 'church of thought', it should be appreciated that our Human Animal has a longer-term agenda that needs to be acknowledged. The two will often be in conflict, leading to social or physical distress and disease, from wars to cancer and a myriad in between. Enhancing our own, and our client's, intra-being channel of communication can only do good.

### Ancillary Thoughts

We can never know what is on either side of life. Is it the Big Black of Nothingness, or another way of being? If there is some other form of existence before conception or after death, then it probably doesn't matter what we do in our lives, as it will be the same for all of us.

Our Human Animal has the capacity to remember.

Our Human Person has the capacity to dream. Our Animal remembers our dreams.

Our body does not breathe, Our Animal breathes.

Our body does not learn to explore and be curious, Our Animal learns from its genetic roots to explore and be curious.

Our body does not live and die, Our Animal lives and dies.

Our Spirit cannot die, it can only cease to be.

Is it possible that with one little word shift we can open a subtle door to the possibility of recognizing and deepening a relationship between our two beings – our Animal Being and our Human Being?

Change your perspective and you can change your perception.

What might the cultural/spiritual shift be if we were to consider all doctors of medicine to be veterinarians?

Our Person will cease to be.

Our impact on the world  
and in the minds of others  
will be our spirit's remains.

*Carpe diem, memento mori*

# An Overview of the Fourth International Fascia Research Congress

*Reportage from Washington D.C.*

**By Szaja Gottlieb, Certified Advanced Rolfer™**

I begin with a disclaimer and an apology. Since I did not attend the three previous congresses, this overview of the Fourth International Fascia Research Congress, which I attended on a scholarship from the Ida P. Rolf Research Foundation and the Rolf Institute® Research Committee, lacks historical perspective. One of the principal organizers of the Fascia Research Congress (FRC), Certified Advanced Rolfer Dr. Tom Findley, advised me to get the CDs from the previous congresses and run them at 70% of their speed to really absorb the themes and trajectory of information since the first congress in 2007. Having time constraints to complete this article, I apologize to Dr. Findley in advance for the inadequacies of my submission. I thus write about this congress as a visitor who has dropped in midstream. But even for a newcomer such as myself, one could not help but feel the energy and commitment that has driven the approximately 3,000 researchers, clinicians, and therapists from all over the world who have attended and contributed to these congresses the past eight years.

All this over fascia, once a poor and distant relation in the anatomical family. The story of fascia is like a myth or fairy tale similar to Cinderella or the Ugly Duckling or even Superman. Once shunned by the scientific and medical establishment as incidental and useless, hardly noticed in anatomy books, in dissections at medical schools, and on operating tables, fascia has now, largely due to the efforts of the FRC organizers, taken on an increasingly important status among scientists, especially those whose research papers now are investigating fascia's far reaches. Whereas submissions concerning fascia once numbered only in the hundreds on a yearly basis, they now number in the thousands. Listening to some of the presentations during the three-day congress, fascia took on an almost superhuman heroic quality: for example, in embryology, when in the third week

of a fetus's life, fascia shapes the body's future internal space for the remainder of its lifetime – this according to anatomist Jaap van der Wal MD PhD). The Dutch anatomist, who described himself as a Holistic Organicist, expounded this point of view on the second day of the Congress. The title of his workshop entirely captures fascia's transcendent, almost otherworldly quality, "Fasciasophy: Philosophical Aspects of an Organ of Innerness." (Please refer to Naomi Wynter-Vincent's article on page 49 of this issue for a discussion of this workshop.)

As a general overview of the FRC, this article serves as a snapshot of the many presentations offered. Even if one tried, the FRC could not be experienced in its entirety because most of the afternoon presentations and workshops took place concurrently, thereby forcing an attendee to pick and choose. And one must remember that even the papers presented were only a smattering of the total number submitted. Well over 100 articles and poster presentations were accepted for this FRC in many diverse areas relating to fascia, such as Fascia and Cancer, Fascia and Manual Therapy, Veterinary and Animal Models of Fascia, Tool Assisted Therapy, Fascia in Surgery and Scars, Fluid Dynamics and Fascia, Fascia in Low Back Pain and Innervation, and more. For those interested, there is a list of accepted submissions at [www.fasciacongress.org/abstracts\\_2015.php](http://www.fasciacongress.org/abstracts_2015.php). Truly, the fascial universe, to paraphrase an aphorism from chess, is large enough for a gnat to drink and an elephant to bathe.

### Day 1

In one of the FRC panel discussions, an audience member, a manual therapist, rose, approached the microphone, and began talking about her experience of "dancing with fascia." The ensuing silence was palpable before one of the panelists politely explained that from a scientific point of

view he could appreciate that she thought or felt she was dancing with fascia, but that her experience could not be scientifically validated. Entering the scientific arena, the mythos of fascia takes on the Cartesian demand of quantifiable experience: in other words, definition and measurement. At the very outset of the conference, Friday morning, the definition of fascia in scientific terms was taken up by Dr. Carla Stecco, Professor of Anatomy and Movement Sciences at the University of Padua. This problem of nomenclature was initiated in July 2014 in an editorial by Stecco in the *Journal of Bodywork & Movement Therapies*, which received many editorial responses. The problem, as Stecco explained, is that many terms can indicate the same structure, and there is a need to find agreement between different terminologies.

A meeting had been held among a number of the FRC presenters, and the following definition had been arrived at: *Fascia, a sheath, a sheet of any number of other dissectable aggregations of connective tissue that forms beneath the skin to attach, enclose, separate muscles and other internal organs.* There were some murmurings at this announcement, and she then calmly explained that a second definition would also be forthcoming which would include fascia as not only tissue but as a whole interactive system within the body.

The overwhelming emphasis during the many presentations during the congress was not on definition, however, but function, beginning with the subject of innervation within fascial tissue. Is cold or heat more beneficial for back pain? This question was presented by Dr. Siegfried Mense from Heidelberg University in his talk "Innervation of Fascia." He, along with several others, including Andreas Schilder, also from Heidelberg University, emphasized the role of the thoracolumbar fascia (TLF) in relation to back pain. While Mense concluded that there was no obvious conclusion in terms of recommending either heat in the form of capsaicin or cold in the form of menthol, the researchers pointed to the source of lower back pain as the thoracolumbar fascia area rather than muscle. Furthermore, experiments indicated that while only a local area of the TLF may be affected, the influence of the fascia is enormous, spreading pain into a much larger area through a few localized neurons.

Dr. Robert Schleip from the University of Ulm, and a Certified Advanced Rolfer,

then followed, amplifying on the subject of sensory aspects of fascia, dividing its innervation into three types: sympathetic, nociceptive, and proprioceptive. Reminding the audience that the vast amount of nerves end in the fascial system, he announced that, at least in his view, the argument between Ida Rolf and Moshe Feldenkrais was seemingly resolved since fascia is extraordinarily rich in sensory stimulation. Simply put, adhesions in the fascial tissue affect proprioception while healthy fascia translates into kinetic elegance.

Dr. Peter Huijing from Vrije University in Amsterdam followed up this talk with a discussion of inflammation of fascia and pain, reinforcing the findings of the critical relationship of back pain to the innervation within the TLF, but casting some uncertainty as to exactly how pain was processed through its various layers.

The afternoon began with a panel discussion with the morning speakers that included questions from the audience, then various workshops, each with several speakers, were held simultaneously.

The workshop I attended covered several different subjects. The first speaker, a physical therapist from Israel, Natalie Brettler, presented her paper on Achilles tendon issues, usually referred to as tendinopathy. The key ingredient, she explained, was not the tendon proper, but the *paratenon*, the fascial compartment surrounding the tendon. Using ultrasound measurement, the researchers found a direct correlation between thickening of the paratenon and Achilles tendon issues, thereby suggesting using ultrasound measurement of the paratenon as a method of anticipating and diagnosing Achilles tendon problems.

Treating scarring and adhesions using myofascial techniques to eliminate pain was the subject of the next group of presenters. One of those was Certified Advanced Rolfer Sharon Wheeler, who discussed her paper "Integrating Scar Tissue into the Fascial Web." Her study, using ultrasound measurement, indicated that scars could be reduced in size and be reintegrated as normal tissue by using manual therapy techniques.

The last speaker, on the subject of exercise therapy, Jan Wilke from the Department of Sports Medicine at Goethe University in Frankfurt, discussed how strain transfer experiments in his lab had demonstrated

the validity of several of the fascial meridian lines espoused by Tom Myers in *Anatomy Trains*, in particular the Superficial Back Line. In their experiments with live subjects they observed that lower extremity stretching induced improvements in cervical range of motion. Their findings were confirmed when tracing fascial force transmission lines in cadaver studies.

The first day of the Congress ended in the evening with beautiful images of living fascia in a lecture by Dr. Jean-Claude Guimberteau entitled "In Search of Our Interior Architecture." The presentation was a result of the surgeon's twenty years of exploration of living fascia using an endoscope. Guimberteau's view represents a revolutionary shift in how fascia is considered from 'connective' to what he calls 'constitutive' tissue. For Guimberteau, this fascial interconnectivity extends even to vital organs, indicating not only fascia's structural role, but its importance as it ensures mobility and elasticity. His endoscopic images of fascia reveal a world that defies the traditional verbal description of fascia being stratified and layered and replaces it with a fibrous, fractal, chaotic world. Much of the material presented is in his newly published book, *The Architecture of Human Living Fascia* by Handspring Press. I am planning on doing an extensive review of this book in a forthcoming issue. Please visit [www.cerap.org/fasciath%C3%A9rapie-mdb/search-our-interior-architectures-introductive-workshop-given-pr-guimberteau](http://www.cerap.org/fasciath%C3%A9rapie-mdb/search-our-interior-architectures-introductive-workshop-given-pr-guimberteau), if you would like a greater exposition of his lecture.

## Day 2

There was a great deal of emphasis in this congress on the role played by the TLF in back pain, and the second day was no exception – but the emphasis shifted from pain to how force was transmitted through the fascial layers of the TLF. Dr. Andry Vleeming from New England University and Medical University in Ghent described how pelvic stabilization is required in order to allow movement through arms and legs. The focus of the lecture was to demonstrate that the effective stability of the spine depends on the interplay between the paraspinals and deep abdominal muscles through its interrelated myofascial components, which he referred to as a sling. His lecture explored the various layers of the TLF and their interaction. Significantly, Vleeming emphasized the importance of the lateral raphe, a complex of dense connective tissue parallel to the

quadratus lumborum, in load transfer and by implication its importance in treatment of lower back dysfunction.

Guimberteau expanded upon the concept of load transfer with a talk about the adaptive quality of fascial fibers. This load-transfer system is dependent on what Guimberteau has named the Multimicrovacuolar Collagenic Absorption System (MCAS), which allows simultaneous sliding and force diffusion without damage to fibers. While the collagen fibers and fibrils provide the frame within the tissue, gel composed of glycosaminoglycans that attract water fill the volume of the microvacuoles. Please refer to this video at [www.facebook.com/247330191983662/videos/496035783779767/](http://www.facebook.com/247330191983662/videos/496035783779767/) for Guimberteau's explanation of the importance of the microvacuole.

The next speaker, Dr. Raghavan Preeti from the New York School of Medicine, who is also Director of the Motor Recovery Research Laboratory, continued the discussion concerning the slide and glide capacity of fascia, particularly her interest in the extracellular matrix (ECM) of the fascia and the potential of hyaluronan to remedy spasticity after stroke. Hyaluronan is a glycosaminoglycan and is vital in fascial mobility. In laboratory experiments, Preeti used human recombinant hyaluronidase to reduce muscular stiffness, resulting in dramatic improvement of hand and finger movement of post-stroke subjects. This journal will publish more on Preeti's work in one of our next issues.

The next two speakers took up the subject of what happens within fascia when trauma, specifically wound healing, occurs. Dr. Boris Hinz of the University of Toronto emphasized the importance of TGF-β1 (transforming growth factor beta 1), a protein that is stored in the ECM and that controls many cellular functions, and how it increases after an injury when fibroblasts are transformed into myofibroblasts.

Dr. Michael Kjaer, a Danish clinician, revisited the subject of Achilles tendinopathy, one of the most common sports injuries, recommending slow resistance training rather than high-intensity exercise in treating tendon issues.

The morning presentation ended with a lecture by Dr. Mark Scheunke, an anatomist from New England University, on the relationship of fascia with embryological

development. While the development of mesoderm to mesenchyme is common knowledge, Scheunke remarked on the importance of fascia in that it forms an embryological skeleton that directs organogenesis.

In the afternoon, after a panel discussion of the morning's speakers with the audience, there were concurrent workshops, including the previously mentioned Fasciasophy by van der Wal, and several others including Veterinary Aspects, Surgery and Faciatherapy, and Research/Animal Studies.

Besides oral presentations, the FRC included poster presentations. Again, please refer to [www.fasciacongress.org/abstracts\\_2015.php](http://www.fasciacongress.org/abstracts_2015.php) for a list of both oral and poster submissions that were accepted at the congress. Several of the poster booth presentations were recognized at the awards dinner Saturday night. The three winning posters were: "Influence of Manual Myofascial Techniques on Normalization of the Voice Organ in Patients with Professional Dysphonia," "Considerations for Recommended Treatment Intervals Following Osteopathic Manipulative Treatment," and "Self-help Treatment with a Myofascial Manipulation Tool: A Randomized, Double Controlled, Standardized, Clinical Study." At the awards ceremony Saturday night, several individuals, among them Findley, were also given achievement awards.

### Day 3

The last day of the FRC began with a number of speakers discussing fascial dysfunction. The first, Julie Day, a physical therapist from Australia, extolled the virtues of the Stecco fascial manual method, developed by Luigi Stecco forty years ago, in treating musculoskeletal issues. In 2011, Certified Advanced Rolfer Russell Stolzoff wrote a review of Stecco's work from a structural integration viewpoint that I highly recommend; it can be found online at the Ida P. Rolf Library of Structural Integration (<http://pedroprado.com.br/>). Day was followed by Dr. Caesar Fernandez from Rey Juan Carlos University in Madrid. He reiterated fascia's contribution to back pain and talked about assessment techniques such as palpation (adhesive quality) and techniques (cross-hand mobilization) to improve movement. An important footnote in both of these presentations was the use of ultrasound in imaging and assessment. Indeed, a noticeable theme within this

congress was the increasing use of imaging techniques, particularly ultrasound.

Whereas Day and Fernandez took a micro approach to fascial dysfunction, Dr. Serge Gracovetsky, a physicist from Montreal, took a macro one and was skeptical of the varieties and different approaches to treatment. Referring to the Cochrane collaboration, a global independent network of 37,000 researchers, professionals, and patients from 130 countries who work together to find credible medical methodologies, he asked, "Do we need a plethora of treatments and is there a common feature?" Gracovetsky, however, did emphasize the importance of fascia in its critical role in protecting the musculoskeletal system, distributing the stress that gravity incurs. Gracovetsky, as one of the closing speakers in the afternoon, later amplified this idea using the second law of thermodynamics as backdrop. All matter, including life forms, moves towards entropy, and fascia acts and functions as a significant bulwark by minimizing overall energy usage.

The next speaker, Dr. Geoffrey Bove from the University of New England, returned the conversation to localized pain, presenting detailed laboratory results. He boldly announced, "It's not the fascia, it's the interfaces." Bove, whose expertise is the causes and effects of nerve inflammation, pointed to the 'interfaces' forming a boundary between adjacent areas and regions such as muscle to skin, organ to abdominal wall. The problem is lack of glide rather than the fascia tissue itself. His work relates well with the peripheral nerve work that many Rolfers are now practicing and exploring.

Bove was followed by Leon Chaitow, the English osteopath closely associated with Muscle Energy Technique (MET). Chaitow covered a variety of topics including MET, trigger points and their vascular environment, use of ultrasound, and KT taping. In reference to fascial loading, Chaitow commented that studies showed that 3%-6% loading for manual therapists was optimum for results. His recommendations were to meet tissue tension, "but as soon as you feel the tension you are probably past it."

After the lunch break, Findley gave a comprehensive assessment of the various avenues fascia research was taking, of which many had been discussed at this congress. He took this opportunity to

present the subject matter of an upcoming (November 2015) Fascia Congress taking place in Boston: fascia and cancer ([www.fasciacongress.org/2015/conference/joint-conference-fascia-cancer/](http://www.fasciacongress.org/2015/conference/joint-conference-fascia-cancer/)). Findley noted the relationship between fascia and cancer in that a stiffer mechanical environment lends itself to metastatic growth. In that sense, commented Findley, cancer can be considered a disease of the collagen. Stating that resistance training reduces cancer risk, Findley introduced the 'progressive exercise system' that Dr. Thomas DeLorme developed in the mid-1940s when he was treating American servicemen. It is a method of softening fascia by loading muscles, specifically in a shortened position. For more on this, search for Findley's profile at <http://find.rolf.org>.

Gracovetsky ended the Congress. Saying that tradition slows down progress until future generations, he called for "out of the box" thinking. Humorously, in line with the French tradition of his ancestry, he suggested revolution: "When you hit a brick wall – use the guillotine!"

## Epilogue

On Monday, the day after the FRC ended, there were many post-conference half-day and full-day workshops. I chose the more plebeian ankle-sprain workshop, since I am on the basketball court just about every day and see plenty of ankle sprains that I treat, often immediately. Entitled "The Treatment of Acute Ankle Sprains According to the Fascial Distortion Model™ (FDM)", the workshop was taught by Stefan Anker, an osteopath from Vienna. FDM was created by an American osteopath, Dr. Stephen Typaldos, in the early 1990s. I found the system interesting in two ways. First, fascial 'distortions' are broken down into six different categories: Triggerbands™, Continuum Distortions™, Cylinder Distortions™, Herniated Distortions™, Folding Distortions™, and Tectonic Fixations™. Triggerbands, for example, are twisted bands of fiber that run along a linear pathway. The second interesting aspect of this work is that the practitioner asks the client to show and describe his injury and pain. All depending on the client's gesture, the practitioner makes an assessment as to probable cause. So, for example, if a client has a Triggerband injury at the ankle, he or she might show a *pathway* of pain as opposed to a Folding Distortion, where the client might point to a particular

*place* like the anterior talofibular ligament. Both localized points of impact and pain pathways are common in ankle sprains.

Unquestionably, this work falls into what Rolfers would call 'fix-it' work. It is especially attractive for sports injuries where a trainer would need to treat a trauma on an immediate basis. Klaus Eder, a German physiotherapist who is a trainer for the German national soccer team that won the World Cup last year, has adopted FDM in his work. Schleip bemoaned this publicly and with humor, as Eder previously had been for many years a devotee of Rolfing® Structural Integration (SI).

For a Rolfer the shortcomings of such a system were obvious. Local work without global thinking is simply neither holistic nor effective in the long term, which was brought up in the workshop and acknowledged to some extent by Anker, who was a delightful and very encouraging teacher. Next to me, an Israeli structural integrator named Dror

Raz whispered, "You see, we [structural integrators] do the best work in the world." I nodded slightly in agreement. But that was not the thought on my mind. I was thinking of how, in my fourteen years of practicing Rolfing SI, I had never really thought about the specific distortions of the fascia as FDM presented them. Suddenly, new images of fascia appeared – tangled coils of fascia; twisted fibers of fascia; stiff fascia; bulging fascia; fascia mashed, folded, or pulled apart.

An anecdote comes to mind for my closing. On the second day of the FRC I met Graham Scarr, the author of *Biotensegrity: The Structural Basis of Life*, a book I had reviewed for the July 2015 issue of this journal. I could not help myself, and made the admission that I had found the book terribly difficult and understood perhaps only half of it. Scarr's reply: "That's okay. When I wrote it, I only understood half of it too. I was just trying to push the limits." Simply put, maybe that's what these FRCs are all about: just pushing limits.

# Integrating the Fourth International FRC

## *Reflections on Embryology, Relationship, and Rolfing® SI*

By Naomi Wynter-Vincent, Certified Rolfer™

Earlier this year I had the good fortune to be awarded a scholarship from the Ida P. Rolf Research Foundation and the Rolf Institute® Research Committee to attend the Fourth International Fascia Research Congress (FRC) in Washington, D.C. I would like to start by expressing my gratitude to both organizations for their support.

My report will offer some general thoughts about my experience as well as a more detailed focus on the two presentations given by Dr. Jaap van der Wal. The second and longer of these was a whole-day workshop that provided a whistle-stop tour of some highlights from a longer (four-day) course he offers on embryology, Erich Blechschmidt, and a phenomenological approach to understanding movement and form. In the meantime, I am aware that Tom Myers has also written about van der Wal's presentation (his post, "A

Day with Jaap van der Wal," is available at [www.anatomytrains.com/news/2015/09/30/a-day-with-jaap-van-der-wal/](http://www.anatomytrains.com/news/2015/09/30/a-day-with-jaap-van-der-wal/)), so in what follows I will aim to give the briefest flavor of van der Wal's ideas whilst also seeking to place them in a more critical context. I will also briefly introduce the work of Wilfred Bion, whose elaboration of the idea of the 'caesura' can add a note to Rolfing Structural Integration's 'embryological turn' and provide an additional pointer for clinical practice.

This question of clinical implication – how does this affect me, as a Rolfer? – was my constant companion (along with my jetlag) throughout my stay in Washington. The FRC is a curious affair, both nourishing and alien, that brings together lab scientists and somatic practitioners in one place (I like to think that it was the Rolfers who were slowly migrating to sitting on the floor as