

Online Lecture Series

by

Prof. Dr. Richard L. Atkinson

(Emeritus Professor of Medicine and Nutritional Sciences, University of Wisconsin)

Introduction of the Speaker:

Richard L. Atkinson, M.D. graduated from the Virginia Military Institute and the Medical College of Virginia, Richmond. He took residency and fellowship training in Endocrine-Metabolism at UCLA Harbor General Hospital, Torrance, California, and fellowship training in Endocrine-Metabolism at Walter Reed Army Hospital. He has been on the faculty of the University of Virginia; University of California, Davis; Eastern Virginia Medical School; and the University of Wisconsin, Madison, where he is Emeritus Professor of Medicine and Nutritional Sciences. He currently is Affiliate Clinical Professor of Internal Medicine at Virginia Commonwealth University; Adjunct Professor of Molecular Medicine and Drug Research, University of Karachi, Pakistan; Visiting Professor of Molecular Medicine, Karolinska Institute, Stockholm, Sweden; Executive Director of the Virginia Obesity Research Institute; Medical Director, Veracis Laboratory; and President of Obetech, LLC, all of Richmond, VA. He is Editor of the International Journal of Obesity and Past Editor of Nutrition and Diabetes; Past President and Co-Founder of the American Obesity Association, Past President of the North American Association for the Study of Obesity (The Obesity Society), Past President of the American Society for Clinical Nutrition and former Member, Board of Trustees, World Obesity Federation. NAASO-The Obesity Society established the annual Richard Atkinson-Judith Stern Public Service Award in 2006 to honor their service to the field of obesity and he received the 2014 Stunkard Lifetime Achievement Award from TOS. Dr. Atkinson has been a consultant to the National Institutes of Health, National Academy of Sciences, US Department of Agriculture, Department of Defense, Department of Veterans Affairs, Food and Drug Administration, Federal Trade Commission, and numerous companies and foundations. He has been involved in obesity research and treatment for over 40 years. He is interested in obesity policy and has advocated for young investigator programs nationally and internationally. His research interests include causes and treatments of obesity, particularly obesity drugs and obesity surgery. Most recently, his research has focused on virus-induced obesity. He and his research group demonstrated that a human adenovirus (Adv36) produces obesity in animals and is associated with obesity in humans. Dr. Atkinson has over 200 publications and over 250 abstracts in the medical literature.

Online Lecture

“Evidence for a Role of Adenovirus 36 in Obesity”

by

Prof. Dr. Richard L. Atkinson

(Emeritus Professor of Medicine and Nutritional Sciences, University of Wisconsin)

Abstract:

The prevalence of obesity has increased dramatically since about 1980 in the United States and throughout the world in both developed and developing countries. The etiology of this rise is not clear but must have a strong environmental component and is compatible with an infectious disease. Human adenovirus 36 (Adv36) was discovered in 1978, just before the global epidemic started. Experimental infection with Adv36 in chickens, mice, rats, and monkeys produces a significant increase in adipose tissue, ranging from about 50% to 150%, depending on the experiment. Humans cannot ethically be experimentally infected, but prevalence studies in multiple countries in both children and adults reveal that an average of about 30% of obese humans and about 10%-20% of lean humans have been infected and infected persons are heavier and fatter. The mechanisms of the increased obesity are a series of changes in enzymes and transcription factors caused by Adv36 DNA entrance into the host cells. Adv36 DNA increases glucose transporters in fat and muscle cells resulting in increased glucose transport into the cells. Fatty acid synthase expression is increased which converts the glucose into fatty acids. Adipose tissue lipoprotein lipase is increased to further drive lipids into adipose tissue, and PPAR-gamma is increased, which stimulates adipose tissue stem cells to differentiate into adipocytes. The E4orf1 gene of Adv36 is responsible for these enzyme and transcription factor changes. This gene can be cut out of Adv36, inserted into other viruses, and produces the lipogenesis associated with Adv36. It appears that a significant portion of the worldwide epidemic of obesity since 1980 could be due to infections with Adv36.

Lecture no.	Topic	Day & Date	Time
Lecture 1	Evidence for a Role of Adenovirus 36 in Obesity	Saturday September 29, 2018	12:00 pm – 01:00 pm

Venue: Video Conference room, LEJ National Science Information Centre, ICCBS

Online Lecture

“How to Write and Publish a Paper”

by

Prof. Dr. Richard L. Atkinson

(Emeritus Professor of Medicine and Nutritional Sciences, University of Wisconsin)

Abstract:

Most research manuscripts begin with a good experiment. Elements of a good experiment are a clear hypothesis, a good research design, the use of validated assays and techniques to obtain data, careful collection of the data to insure accuracy, valid statistical methods to analyze the data, and clear, concise writing so the paper is understandable. A clear description of the type of study should be introduced near the beginning of the manuscript (eg randomized trial, cross-sectional, cohort, case-control, etc). Most journals have a set pattern in which the manuscript should be organized. This includes a title that clearly describes the experiment performed, an abstract to summarize the manuscript, an introduction to give the background, a detailed description of the methods, materials, and subjects that were used, an organized and concise description of the results, and a discussion of the findings including the importance and relevance of the study, how this fits into prior literature, and how it will alter thinking or practice. Usually some thoughts about the directions of future research should be included. Tables and figures are very useful to organize and present the data. When starting to write a manuscript, thought should be given as to what would be an appropriate journal for the paper and whether the data are sufficiently novel or impressive to command a highly rated journal or are sensibly submitted to a more inclusive journal. Read the Instructions to Authors carefully and follow the format of the journal including structure, components, and how tables, figures, and references need to be formatted. Writing should be original and not copied from prior literature unless properly cited. Most journals send manuscripts for peer review and it is important to answer the reviewer questions carefully. Proper use of English (or whatever language) is very important and careless errors can sink an otherwise acceptable paper. Use scientific language rather than language that is vague, inflammatory, or misrepresents your study. It is a reasonable idea to submit to a journal slightly higher than you expect to accept it. You may get lucky and if not, the reviews are likely to be very helpful in making the paper more attractive.

Lecture no.	Topic	Day & Date	Time
Lecture 2	How to Write and Publish a Paper	Monday October 1, 2018	11:30 am – 12:30 pm

Venue: Video Conference room, LEJ National Science Information Centre, ICCBS

Online Lecture

“How to Design, Write, and Conduct a Research Protocol”

by

Dr. Richard L. Atkinson

(Emeritus Professor of Medicine and Nutritional Sciences, University of Wisconsin)

Abstract:

It is critical to have a clear hypothesis, know what you want to do and have the expertise to perform the assays or carry out the techniques that will be required in the experiment. A thorough knowledge of the prior literature is important to prevent repeating what someone else has done or to insure that your experiment will further knowledge about your topic. The project should be well organized with a clear timeline and have adequate resources and collaboration from the beginning. It is very useful to obtain collaborators who bring expertise to the study in both knowledge of the field and experience in the techniques that will be necessary for the study. Design important studies that might win a Nobel Prize rather than doing “so what” or “me too” research. Write clearly and concisely using scientific language. Examine the research design to eliminate any bias that you or a co-investigator might bring, or that exists in the literature and for which you might be facilitating. Determine the type of subjects you need and consider all the confounders you can think of that might influence the results, then control for them. Have a sufficient number of subjects and if a control group is needed, make sure it is a valid control. Get a statistician involved early to insure your design is appropriate and to help you with the analysis of the data. Insure the data collected is accurate and entered into the computer accurately if transfer is needed. Insure confidentiality for human data. Above all, when done, publish the data or your efforts have been wasted.

Lecture no.	Topic	Day & Date	Time
Lecture 3	How to Design, Write, and Conduct a Research Protocol	Tuesday October 2, 2018	11:30 am – 12:30 pm

Venue: Video Conference room, LEJ National Science Information Centre, ICCBS