

## Interview with Kenneth John Gollob

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We interviewed the Director of Translational Research of the Nucleus of Teaching and Research of the Mario Penna Institute, researcher at INCT- Tropical Diseases, and Founder of BRISA - Brazilian Research Institute for Scientific Advancement (BRISA Diagnostics), Dr. Kenneth John Gollob.



*Dr. Kenneth John Gollob holds a degree in Molecular Cellular and Developmental Biology - University of Colorado (1987), PhD in Immunology and Microbiology - University of Colorado Medical Center (1992), postdoctoral fellow at the DNAX Research Institute (1991-94) and Visiting Associate Professor Stanford University (2006-2007). He is currently Director of Translational Research, Teaching and Research Nucleus of the Mario Penna Institute, researcher at INCT- Tropical Diseases, and Founder of BRISA - Brazilian Research Institute for Scientific Advancement (BRISA Diagnostics). It works with applied research for the understanding of pathogen-host interaction and cancer, and the formation of protective immune responses. Pathogenic, directed towards the development of new therapies, diagnoses and biomarkers of disease progression. Using a number of approaches, including flow cytometry, molecular and cellular biology, it focuses on the research of infectious and parasitic human diseases such as Chagas disease, dengue, and leishmaniasis, as well as interaction between tumor cells and the immune system.*

**1) Dr. Kenneth, you have already taught at one of the most prestigious universities in the United States (Stanford University). What made you choose Brazil to develop your research?**

I chose Brazil for my research for a couple of reasons. First, I work with immunoregulation of human diseases to discover mechanisms of disease development, biomarkers and novel treatments to improve the life of those afflicted with these diseases, and Brazil is an excellent environment to study leishmaniasis, Dengue, and cancer. Second, the impact I can have on science by training talented young scientists is also an important aspect of working in Brazil.

**2) Tell us a little bit about your trajectory until you reach your academic position at the University and international research.**

I always knew I wanted to work in health research and during my undergraduate training I worked at a hospital research lab where I was exposed to immunology and cancer research. I performed my doctorate in immunology and microbiology at the University of Colorado Medical Center which allowed me to develop my career in the context of health. I then performed my postdoctoral training at DNAX Research Institute, with Dr Robert Coffman who discovered Th1/2 T cells. This experience translated directly into my work in human infectious diseases and more recently in cancer immunology.

**3) Your undergraduate, doctoral and postdoctoral degrees have been fully realized in the United States. You have been a professor at the Federal University of Minas Gerais and, currently in Brazil, you are director of an important teaching and research center (Mario Penna Institute). Did you observe, with all this experience, differences between Brazilian and American students (of scientific or scientific initiation)?**

That is an interesting question, and in general no, I don't notice a difference between students in the US vs. Brazil. Basically, students that are interested, dedicated and driven to gain knowledge are the same anywhere. What changes is the percentage of students that are driven to be scientists, however this changes between Universities in the US and Brazil, and between countries as a whole. I have always sought out talented students driven to make new discoveries.

**4) Tell us about the Mario Penna Institute, where you are currently Director of Translational Research. Does this institute offer internships or postgraduate programs?**

The Núcleo de Ensino e Pesquisa houses a several hundred square meter, state of the art research center adjacent to Hospital Luxemburgo - Instituto Mario Penna. Instituto Mario Penna is a 400 bed cancer hospital in Belo Horizonte, Minas Gerais, Brazil serving 20% of the State's needs and ~70% of new cases for the city of Belo Horizonte. Our goal is to improve the condition of those suffering from all forms of cancer and infectious diseases through a tightly aligned research and development program focused on important issues in treatment, diagnostics, and prognostic biomarker discovery. We accept Iniciação Científica students via FAPEMIG and Postdoctoral Fellows. We do not currently have a doctorate or masters program.

**5) Human visceral leishmaniasis (one of your lines of research) has become a growing public health problem in the country and in other areas of the American continent as an endemic geographic expansion. In your opinion, in the near future will we have a more effective treatment for this problem?**

The treatment options for leishmaniasis are few within the government SUS program, however, through increased research and development, new treatment options are being tested and it is possible that in the near future we will have more options for treatment. One important new treatment that was developed via Dr. Edgar Carvalho and our work together studying mucosal leishmaniasis is the use of Pentoxifylline for treatment. It has given favorable results and is an excellent treatment for this serious form of leishmaniasis.

**6) Describe some advantages for a Brazilian researcher who wishes to pursue his academic career (master's or doctorate) in the United States.**

Brazilian researchers interested in a job in the US should focus on strong publications, excellent relationships with other researchers ( letters of recommendation are very important), and of course, if they have spent time in the US as a graduate student or postdoctoral fellow, this makes their chances of getting a position in the US much higher.

**7) What are, in your opinion, the main characteristics and virtues that should have a candidate for future researcher.**

The burning desire to make new discoveries, honesty, integrity and the drive to never give up. Find joy in what they do.

**8) There is a great integration between the American and Brazilian researchers, even experienced by you. In your experience, what is the greatest virtue and what is the main difficulty of the Brazilian researcher?**

Brazilian researchers need to be highly flexible and creative to deal with the huge number of barriers that the Brazilian government bureaucracy places in the way of researchers trying to perform quality work.

**9) You are the founder of BRISA - Brazilian Research Institute for Scientific Advancement (BRISA Diagnostics). Tell us about this Institute.**

BRISA Diagnostics is a biotech company that performs consulting and innovations in diagnostics for cancer and infectious diseases. It has obtained funding via CNPq for studying leukemia diagnostics and residual minimal disease determination. BRISA works in close collaboration with Inst. Mario Penna, Hospital Santa Casa and UFMG to advance applied research to health.

**10) Leave a message of encouragement and motivation for our students of Scientific Initiation.**

Find a subject or research area that you don't want to stop reading about, and your time performing a IC project will be great! The most important thing is to pick a topic that you are passionate about, and that you enjoy talking about more than almost anything.

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Editora Executiva da revista Conexão ciência.*