Dear Prof. Brun:

I am writing this letter on behalf of Dr. Duncan Odom who has applied for a position in the Department of Biology, Indiana University. Let me begin by stating that Duncan's application has my enthusiastic support. I first met Duncan in December of 2001, when he and his postdoctoral advisor Dr. Richard Young contacted me with an offer to collaborate on characterizing the binding sites of the hepatocyte nuclear factor (HNF) transcription factors in human pancreatic islets. This was a natural fit since my group had a longstanding interest in the biology of the insulin-secreting cells of the pancreas, the beta cell, and had shown that mutations in three of the HNFs, HNF1α, HNF1β and HNF4α were the causes of a form of diabetes called maturity-onset diabetes of the young (MODY). Duncan and Rick were interested in looking at the genomics of how a beta cell is regulated. The possibility of exploring the regulation of gene expression in the pancreatic beta cell on a global scale was exciting and something I had only dreamed of doing previously. Duncan and I discussed the project over the next six months. These discussions were far ranging from questions of how we could obtain sufficient human pancreatic islets for our studies to discussions of the technology *per se*. During this period, Duncan was also making the promoter arrays and working out conditions in cell lines for performing chromatin immunoprecipitations (ChIP). He then began to generate the data that would become our first collaborative publication (Odom D, *et al.* Control of Pancreas and Liver Gene Expression by HNF Transcription Factors. *Science* **303**:1378-1381, 2004). Within three months, Duncan's experiments had largely recapitulated, in primary human hepatocytes, sizable portions of the prior 20 years of research on the role of HNF transcription factors on the regulation of hepatic gene expression. Three months later, he had extended this work to human pancreatic islet preparations, and applied techniques he used in dissecting yeast transcription to begin creating network maps for human hepatocytes and pancreatic islets.

Duncan's work has shown that it is possible to directly investigate transcriptional regulation in primary human tissues on a genome-scale rather than one gene at a time. This has revolutionized studies of transcriptional regulation of gene expression and Duncan has emerged as a leader in this nascent field.

Duncan is an outstanding young scientist. He is extremely smart and very articulate. He has an engaging personality and his enthusiasm for research is infectious. My interactions with him on mapping binding sites for the diabetes-associated transcription factors HNF1α and HNF4α in pancreas and liver have been a wonderful scientific and personal experience. The genome-scale approaches that he is using to study tissue-specific regulation of gene expression are at the cutting edge of biomedical research today and are the key to understanding the regulation of gene expression in normal and disease states. They are going to provide a new perspective on human physiology, perhaps revolutionize may be a better word. I enthusiastically recommend Duncan for a position in the Department of Biology.

Sincerely yours,
Graeme I. Bell, Ph.D.
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