Case: Intellectual Property

Joe was a starting graduate student in the laboratory of Professor Gout, a famous scientist that started the field of nano-sized self-assembling systems. He was learning to conduct experiments with the help of other post docs and visiting scientists. It was a lab with many members sprawled over two floors of different buildings.

Nothing Joe had touched had been working the way he expected. One of his main projects was making carbon nanotubes. One day, he was asking for input from visiting scientist Pat on an electron micrograph of some samples he had made. Pat exclaimed, "This is exactly what we need to prove Ann's theory! We haven't been able to make this configuration before!". Joe and Ann came from different backgrounds, so they often brainstormed together over coffee. Pat and Joe discussed the relevance of the nanotubes to actualize Ann's theory, and asked Joe if it was OK if he could show the images to Ann. "Yeah, sure." For Joe's application, the shape and size of the nanotubes was useless, and he went home depressed.

Later in the week, Pat asked Joe if he wanted to work with the nanotubes Joe had shown him. As Joe was interested in focusing on his thesis project, he told Pat that he wasn't interested.

Joe's Ph.D. took much longer than expected. Three years later, he was still struggling when a junior graduate student who was interested in technology start-ups came by, excited. "Hey did you hear how much the start up of Professor Gout and Dr. Ann Parsons was sold for?". Joe didn't know that there was a start up company based on the nanotubes he had shown Pat, and the startup was bought out by a major company QBC for 5 million dollars. It came as a shock to Joe. As he needed to finish his thesis, he just avoided Ann and anything to do with this topic until she left for a professorship position at a respected university. As he prepared to graduate nearly 2 years later, he took all of his lab notebooks and images with him, leaving nothing in the lab.

Ten years later, Joe received an email from Ann, asking if he remembered if he'd used nitrogen compounds in making the nanotubes. Two days following that email, the chief technology licensing officer (TLO) of QBC emailed again, asking whether he had any copies of the notebook where he first made his micrograph. He knew exactly the pages he needed, and copied the pages and sent it to the TLO. Then he was asked if he had the original images and the notebook. Joe wasn't thinking, so he sent the relevant material including the notebook to the TLO.

Few days later, the TLO emailed asking for a phone conversation to understand Joe's notebook. It was a conference call with an outside legal counsel. In this conversation, they confirmed that Joe had accidentally came upon this specific nanotube formulation, and that no one else had been able to make them before him. Also, it was confirmed that this was the first time that nitrogen doping was used in making the nanotubes in the lab, as Joe was the only person using nitrogen doping, as he had a specific application in mind. Joe also found out why he was being called up now. There was a competitor company in Europe that was contesting the presence of doping agents in the nanotubes in the first patent. There were some legal actions taken against the patent that QBC was licensing. It was being contested that while Ann's patent was the first to outline the theory and the size and shape of the nanotube, the European patent had been the first to claim nitrogen doping.

Questions:

* Should Joe have been on the patent that is licensed to QBC? Why/ why not?
* Should Joe have taken his lab notebooks at the end of his Ph.D.?
* What actions could he have taken to protect his intellectual property at the point when
  + he first makes the discovery and has the conversations with Pat?
  + he finds out that there was a sale of the start up company?
  + when he gets the call from the TLO of QBC?
* Why doesn't he taken steps to protect the IP in the time points above?