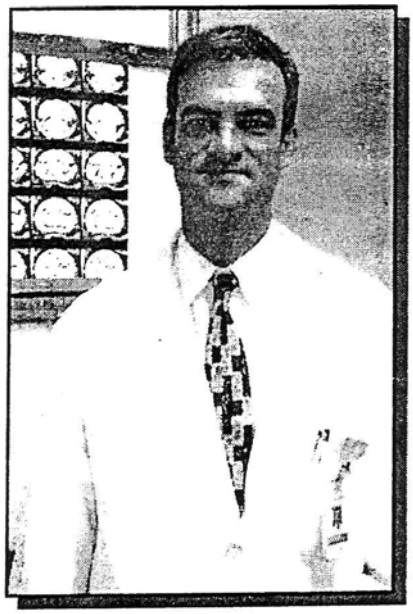
space and equipment, will enable over 300 researchers to complete innovative programs that could not be achieved by any single discipline. Over 7,000 square metres of research space will house 8 core equipment facilities, to be shared at any given time by 35 of the 45 principal Vancouver-based investigator groups and up to 12 visiting research teams.

The Directors

ICORD's Principal Investigator is Dr. **John Steeves**, Director of the CORD research group at UBC. Associate Director for Clinical Investigation is Dr. **Marcel Dvorak**, Medical Director of the Combined Neurosurgical and Orthopaedic Spine Program at VGH. Three more Associate Directors have been appointed: Dr. **Anne Carswell** for Rehabilitation Research, Dr. **Christopher McBride** for Communications and Training, and Dr. **Wolfram Tetzlaff** for Discovery Science.



Dr. Marcel Dvorak, ICORD Associate Director for Clinical Investigation

The Research Themes

Theme 1: Development of valid outcome measures for SCI as the foundation for an interactive patient registry. Using the combined expertise of clinicians and scientists, ICORD will complete the first multidisciplinary assessment of acute and chronic SCI. It will generate reliable outcome measures to form the basis of a National and International Patient Registry that will facilitate clinical investigations to validate any new therapies as effective standards of treatment or care.

Theme 2: SCI molecular screening and therapeutic target identification. Coordinated with partners at the U. of Toronto, UBC Brain Research Centre, UBC Biomedical Research Centre, and Genome BC, ICORD will screen human and animal SCI to identify which genes and proteins change after SCI, or as result of a therapeutic intervention. Laser micro-dissection will isolate specific cellular phenotypes. Comparison of cell-specific genetic profiles with tissue-specific data will refine selection of appropriate therapeutic targets.

Theme 3: Development of more accurate experimental spine/spinal cord injury paradigms. ICORD will develop novel animal models of SCI where damage can be induced within an enclosed vertebral column, thereby more accurately mimicking human SCI. This can only be achieved through the combined efforts of spine surgeons, biomechanical engineers and neuroscientists working side-by-side.

Theme 4: Real-time *in vivo* imaging of combinatorial approaches to experimental treatment of the injured cord. Effective therapeutic repair of SCI requires a combination of therapies delivered in the correct temporal and spatial sequence. Animal SCI models will highlight which combinations of experimental therapies are the most likely candidates for translation into clinical interventions. This is dependent on accurate tracking of therapeutic actions at a cellular level (e.g. multi-photon laser scanning microscopy enables real-time visualization of regenerating axons in living tissue).