



*Consolato Generale d'Italia
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Italian Research Day in the World

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Ugo Ripamonti

Medical Scientist - Surgeon



UNIVERSITY OF THE
WITWATERSRAND

Professor Ugo Ripamonti, is **Director of the Wits Bone Research Laboratory** in the Faculty of Health Sciences.

Ugo Ripamonti is a leader in the field of tissue induction and differentiation in postnatal osteogenesis at the University of the Witwatersrand, Johannesburg, in the School of Clinical Medicine – Internal Medicine. He has systematically studied the **induction of bone formation in non-human primates as a prerequisite for therapeutic application in humans**. His labs were amongst the first to show that bone forms within macroporous spaces of biomimetic matrices when implanted in the rectus abdominis muscle, where there is no bone

INNOVATION: *Ripamonti used naturally derived bone morphogenetic proteins purified to apparent homogeneity from baboon bone matrices and implanted in *Papio ursinus* to regenerate craniofacial defects. This was translated in clinical contexts reconstructing human mandibular defects televised worldwide by Beyond 2000 in 1997.*

*Contrary to rodents and lagomorphs, Ripamonti has shown that the three-mammalian transforming growth factor- β isoforms (TGF- β s) initiate the induction of bone formation, but in primates only. **In the non-human primate *Papio ursinus* the induction of bone formation by the hTGF- β 3 isoform is unprecedented and far superior to the previously tested hBMPs.** This discovery has been patented and recently translated in clinical contexts.*