DARRYN WELCH

Michael Eklund plays a developmental biologist in the film *Errors of the Human Body*.

GENETICS

Wayward genes and grieving scientists

Alison Abbott weighs up a believable cinematic treatment of genetics research and the personalities at the bench.

Developmental biologist Geoff Burton is a Canadian science star, regularly churning out high-impact research papers. His charmed life implodes when his baby dies of a rare and random genetic mutation that causes uncontrolled tumour growth. When Burton sets out on a grief-stricken search for the gene, his publication rate plummets. He transfers to a leading German research institute in Dresden, only to find it fraught with tensions. By the end of this unusual arthouse medical thriller, Burton has learned that no one should hope to fully control the healing process — neither the emotional nor the physical kind.

There is a believable scientific edge to the story and details of *Errors of the Human Body*. As the characters play out their sexual and professional jealousies, they inject their mice intraperitoneally, take blood samples from the animals' tails and peer intelligently down the most modern of microscopes. With its intense themes and dispiriting blue–grey tones, the film doesn't make for easy viewing. Still, its compelling and realistic representation of the daily grind of research gives it a very special interest.

Errors of the Human Body
DIRECTED BY ERON SHEEAN
Selected US cinemas: 2012.

Director Eron Sheean, an Australian living in Berlin, became familiar with the scientific process during his tenure as artist-in-residence at the Max Planck Institute of Molecular Cell Biology and Genetics in Dresden. Kai Simons, a research director at the institute, initiated the residency programme to promote understanding between intellectuals from different fields, after learning that artists had formed a key support group for a 1998 Swiss referendum that called to severely restrict genetic engineering.

At the Dresden institute, Sheean's discussions with scientists working on axolotls — a kind of salamander that can regenerate its limbs — helped him to realize the metaphorical potential of regenerative medicine in exploring human grief and healing, as well as the communication issues arising from those processes. He shot the film in early 2011, almost entirely in the institute's laboratories, animal houses and grounds, featuring scientists as extras.

Played by Canadian actor Michael Eklund, Burton arrives at the institute to find Rebekka Fiedler (Karoline Herfurth), his former postdoc and ex-lover, working as an independent group leader. She has discovered the 'Easter gene', which accelerates the speed at which axolotls can regrow detached limbs. But her ruthless and ambitious colleague Jarek Novak — played splendidly by Icelandic actor Tómas Lemarquis — is stealing her samples and experimenting secretly with the gene in mice. Novak wants the glory of translating the finding to the clinic, where it could help in human wound-healing. He has the implicit collusion of smarmy lab chief Samuel Mead, played by British comedian Rik Mayall. Trying to work out the various deceptions in his new environment, Burton steals one of Novak's mice. It has already been transfected with the Easter gene using a virus carrier so carelessly constructed that the gene is transferred to Burton when the mouse bites him.

The characters are three-dimensional. Novak lapses occasionally into Hollywood-esque mad-scientist territory, but is driven by genuine scientific curiosity and an impatience with Fiedler, who has run out of scientific ideas yet will not collaborate. Fiedler is not blameless — she is secretive about her science and manipulative in her relationships. Her Easter gene is the one that had affected Burton's baby: wound-healing and cancer are the good and evil sides of regenerative medicine. When Burton spectacularly recovers — his immune system learns to recognize his tumours as foreign — the relationship he had with his dying baby is revealed to be the most complex and heart-rending of all.

Inevitably, scientific accuracy is occasionally compromised for plot. More unfortunate, however, is that not enough scientific background is given, so many non-scientists may end up judging the film as standard science fiction. That aside, the plot is at times hard to follow, with flashbacks to Burton's pre-Dresden life unclearly signalled. The final scenes tend towards melodrama.

Screenings at the Dresden institute last October drew mixed reactions from researchers. Some were unable to suspend their disbelief. Others enjoyed the thought-provoking elements of the film and the novelty of seeing their own real science as the backdrop to a drama.

Sheean's real-life story, unlike his film, does have a happy ending. He fell in love with one of the scientists he interviewed at the institute. They married last April. ■

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