```
member_upto  THM

⊢  ∀n,i:ℕ. (i ∈ upto(n)) ⟺ i<n
  by Auto THEN All (Unfold ‘l_member‘) THEN ExRepD
     THEN
     Try (InstConcl [i])
     THEN
     All (RWO Thm* ∀n:ℕ. ||upto(n)|| ~ n    {length_upto})
     THEN
     Try
     (Inst Thm* ∀m:ℕ, n:ℕm. upto(m)[n] = n    {select_upto} [n;i]
      THEN
      Complete Auto)
     THEN
     Try
     (Inst Thm* ∀m:ℕ, n:ℕm. upto(m)[n] = n    {select_upto} [n;i@0]
      THEN
      Complete Auto)
END
```